General Notes

- The construction shall not restrict a five-foot clear and unobstructed access to any water or power distribution facilities (power poles, pull-boxes, transformers, vaults, pumps, valves, meters, appurtenances, etc.) or to the location of the hook-up. The construction shall not be within ten feet of any power lines—whether or not the lines are located on the property. Failure to comply may cause construction delays and/or additional expenses.
- An approved seismic gas shutoff valve will be installed on the fuel gas lie on the down stream side of the utility meter and be rigidly connected to the exterior of the building or structure containing te fuel gas piping (per ordinance 170, 158) (separate plumbing permit is required).
- Plumbing fixtures are required to be connected to a sanitary sewer or to an approved sewage disposal system (R306.3).
- Kitchen sinks, lavatories, bathtubs, showers, bidets, laundry tubs and washing machine outlets shall be provided with hot and cold water and connected to an approved water supply (R306.4).
- Bathtub and shower floors, walls above bathtubs with a showerhead, and shower compartments shall be finished with a nonabsorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet above the floor (R307.2).
- Provide ultra low-flush water closet for all new construction. Existing shower heads and toilets must be adapted for low water consumption.
- Provide 70-inch-high non-absorbent wall adjacent to shower and approved shatter-resistant materials for shower enclosure (R308).
- Unit skylights shall be labeled by a LA city labeling agency. Such label shall state the approved labeling agency name, product designation, and performance grade rating (research report not required) (R308.6.9).
- Water heater must be strapped to wall (California / Health and Safety Code - HSC / ARTICLE 8).
- Smoke detectors shall be provided for all dwelling units intended for human occupancy, upon the owner's application for a permit for alterations, repairs, or additions, exceeding one thousand dollars ($1000) (R314.6.2)
- Where a permit is required for alterations, repairs or additions exceeding one thousand dollars ($1000), existing dwellings or sleeping units that have attached garages or fuel-burning appliances shall be provided with a carbon monoxide alarm in accordance with section R315.1. Carbon monoxide alarms shall only be required in the specific dwelling unit or sleeping unit for which the permit was obtained (R315.2)
- Every space intended for human occupancy shall be provided with natural light by means of exterior glazed openings in accordance with section R303.1 or shall be provided with artificial light that is adequate to provide an average illumination of 6-foot candles over the area of the room at a height of 30 inches above the floor level (R303.1).
- A copy of the evaluation report and/or conditions of listing shall be made available at the job site.

- Heater shall be capable of maintaining a minimum room temperature of 68°F at a point 3 feet above the floor and 2 feet from exterior walls in all habitable rooms at the design temperature (R303.8).
- Glazing in the following locations shall be safety glazing conforming to the human impact loads of section R308.3 (see exceptions) (R308.4).
- Glazing in enclosures for or walls facing hot tubs, whirlpools, saunas, steam rooms, bathtubs, and showers where the bottom edge of the glazing is less than 60 inches measured vertically above any standing or walking surface.
  - Fixed and operable panels of swinging, sliding, and bifold door assemblies.
  - Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24-inch arc of the door in a closed position and whose bottom edge is less than 80 inches above the floor or walking surface.
  - Glazing in an individual fixed or operable panel that meets all of the following conditions:
    - Exposed area of an individual pane greater than 1 square foot.
    - Bottom edge less than 18 inches above the floor.
    - Top edge greater than 36 inches above the floor.
    - One or more walking surfaces within 36 inches horizontally of the glazing.
- Construction waste reduction of at least 50 percent.
- Ducts penetrating the walls or ceilings, separating the dwelling from the garage shall be constructed of a minimum no. 26 gage sheet steel or other approved material and there shall be no openings from the ducts into the garage (R302.5.2).
- Other penetrations of garage/dwelling ceilings and walls are to be protected as required by section R302.11, item 4 (R302.5.3).

- Approved smoke alarms shall be instated in each sleeping room & hallway or area graving access to a sleeping room, and on each story and basement for dwellings with more than one story.
- Smoke alarms shall be interconnected so that activation of one alarm will activate all the alarms within the individual dwelling unit. In new construction, smoke alarms shall receive their primary power source from the building wiring and shall be equipped with battery backup and low battery signal (R314).
- An approved carbon monoxide alarm shall be installed in dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units that have attached garages. Carbon monoxide alarm shall be provided outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s) and on every level of a dwelling unit, including basements (R315).
- Buildings shall have approved address numbers, building numbers, or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property (R319).

Submittal documents for deferred submittal items shall be submitted to the registered design professional in responsible charge, who shall review them and forward them to the building official with a notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general conformance with the design of the building. The deferred submittal items shall NOT be installed until their design and submittal documents have been approved by the building official.

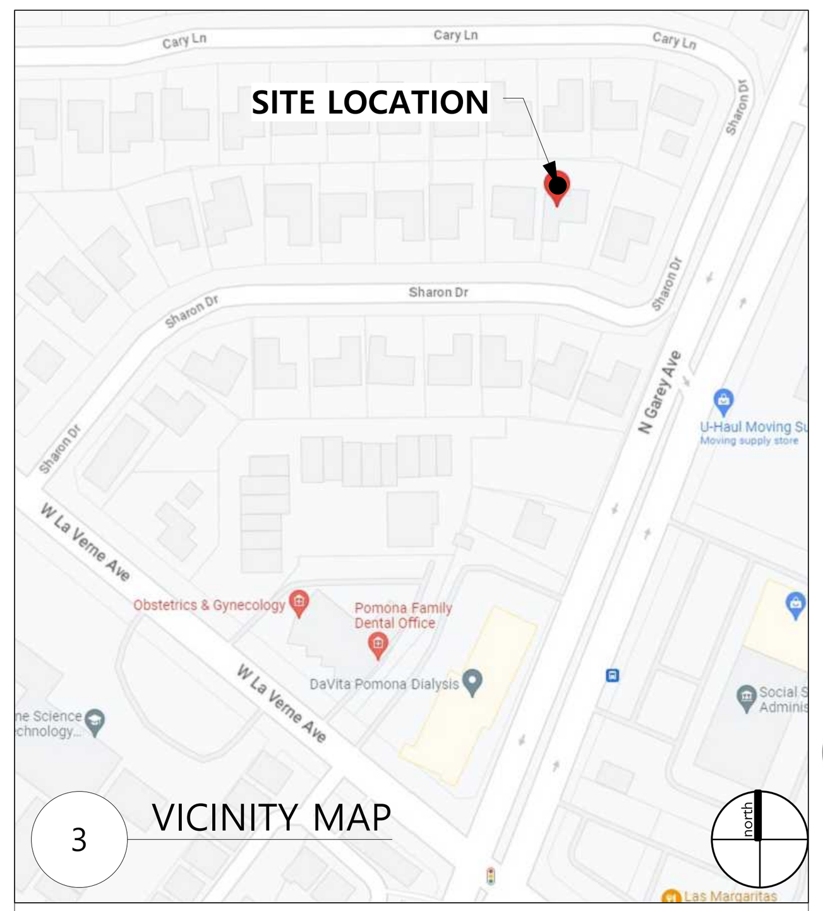
Interior Environment

- Provide under floor access opening is through a perimeter wall or a minimum 18" x 24" when the opening is through a floor.

Building Envelope

- Glazing in the following locations shall be safety glazing conforming to the human impact loads of section.
  - Fixed and operable panels of swinging, sliding, and bi-folded door assemblies.
  - Glazing in an individual fixed or operable panel that meets all of the following conditions:
    - Exposed area of an individual pane greater than 9 sq. ft.
    - Bottom edge less than 18" above the floor.
    - Top edge greater than 36" across the floor.
    - One or more walking surfaces within 36" horizontally of the glazing.
  - Glazing in railings.
  - Glazing in enclosures for or walls facing hot tubs, whirlpools, saunas, steam rooms, bathtubs, and showers where the bottom edge of the glazing is less than 60" measured vertically above any standing or walking surface.
  - Glazing in walls and fences adjacent to indoor and outdoor swimming pools, hot tubs, and spas where the bottom edge of the glazing is less than 60" above a walking surface and within 60" measured horizontally and in a straight line, of the water's edge.

prior to final inspection the licensed contractor, architect or engineer in responsible charge of the overall construction must provide to the building department official written verification that all applicable provisions from the Green Building Standards Code have been implemented as part of the construction. CGC 102.3.



3 VICINITY MAP

AREA CALCULATIONS

ZONE ; R-1-7,200
ADDRESS: 113 SHARON DR. POMONA, CA 91767
BUILDING TYPE: SINGLE FAMILY DWELLING
CONSTRUCTION TYPE; Residential Wood frame Type V
APN: 8371-017-041
LOT: 34
TRACK NO: 18444
LOT SIZE: 8,744 SF

(E) SINGLE-FAMILY HOME SF: 1,288 SQ FT
(E) TWO CAR GARAGE: 390 SQ FT
(E) STORAGE SHEDS: 184 SF (120 SF + 64 SF)
(E) GAZEBO: 49 SF

(P) 1ST FLR ADDITION: 158.2 SQ FT
(P) 2ND FLR ADDITION: 566.3 SQ FT
(OVER EXISTING GARAGE)
(P) TOTAL ADDITION: 724.5 SQ FT

(E) TOTAL HABITABLE SPACE; 1,288 SQ FT
(E & P) TOTAL HABITABLE SPACE; 2,012.5 SQ FT

(E) TOTAL NON HABITABLE SPACE; 623 SQ FT
(2 CAR GARAGE, STORAGE SHED & GAZEBO)
(E & P) TOTAL NON HABITABLE SPACE; NO CHANGE

(E) BUILDING FOOTPRINT:
MAIN HOUSE & GARAGE - 1,678 FT
(P) BUILDING FOOTPRINT:
MAIN HOUSE & GARAGE - 1,836.2 FT

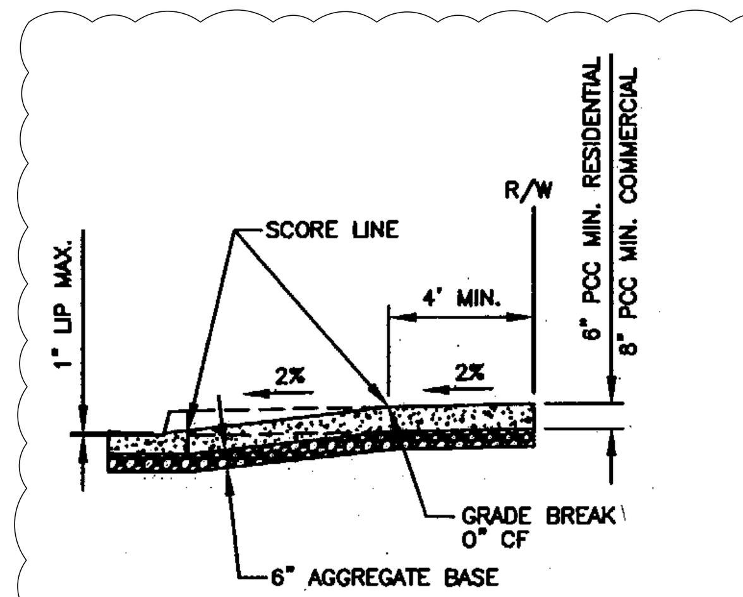
LEGAL DESCRIPTION	
ADDRESS	113 SHARON DR, POMONA CA 91767
BUILDING TYPE	SINGLE FAMILY DWELLING
CONSTRUCTION TYPE	One story Residential Prescriptive Wood frame Type V
TRACK NO.	18444
LOT NUMBER	34
ASSESSOR'S PARCEL NO. (APN)	8371-017-041
LOT AREA ESTIMATE	8,744 SQ FT
(E) BUILDING SQ. FOOTAGE	1,288 SQ FT
ZONING DISTRICT	R-1-7,200 (RN1-T)
CONSULTANTS	
OWNER	Sophia Chavez-Zavala & Barbara Chavez 113 SHARON DR, POMONA CA 91767 Phone No: (909) 706 - 5361 Email: MatthewnSophia@gmail.com
ARCHITECT	Gregory Geslicki OCGG@MSN.com (847) 716- 0774
CONTRACTOR	AGC (American General Corporation) 34941 Calle Del Sol, Capistrano Beach, CA 92624 (949) 542-8777 / 101
SCOPE OF WORK	
NEW 1ST FLOOR ADDITION COVERTING (E) DETACHED GARAGE TO ATTACHED, AND 2ND FLOOR ADDITION OVER (E) 2CAR GARAGE AND THE ADDITION	
APPLICABLE CODES : All construction shall comply with the CITY OF POMONA Municipal Code.	
Plans shall comply with the following: 2022 California Residential Code (CRC) 2022 California Electrical Code (CEC) 2022 California Mechanical Code (CMC) 2022 California Energy Code (CEC) 2022 California Plumbing Code (CPC) 2022 California Fire Code (CFC) 2022 California Green Building Standard Code (CGBSC) 2022 California Fire Code 2022 California Historical Building Code City of Pomona Municipal Code	

113 SHARON DR. POMONA, CA 92646

NEW 1st FLOOR ADDITION CONVERTING (E) DETACHED GARAGE TO ATTACHED, AND 2ND FLOOR ADDITION OVER (E) 2 CAR GARAGE AND (N) ADDITION

DRAWING SHEETS INDEX:

REVIEWED FOR CODE COMPLIANCE
CITY OF POMONA
Building & Safety Division
Permit # C-000121-2024
This issuance or granting of a permit based on approval of these plans shall not be construed to permit or approve any violation of the applicable codes or ordinance. No permit presumed to give authority to violate or cancel the provisions of such codes shall be valid.
Signature CH FOR IW
Approval Date 4/3/2024
CONDITIONS/REQUIREMENTS
☐ Construction Waste Management
☐ Water Department Conditions
☐ Public Works Conditions
☐ Planning Conditions
☐ Other:



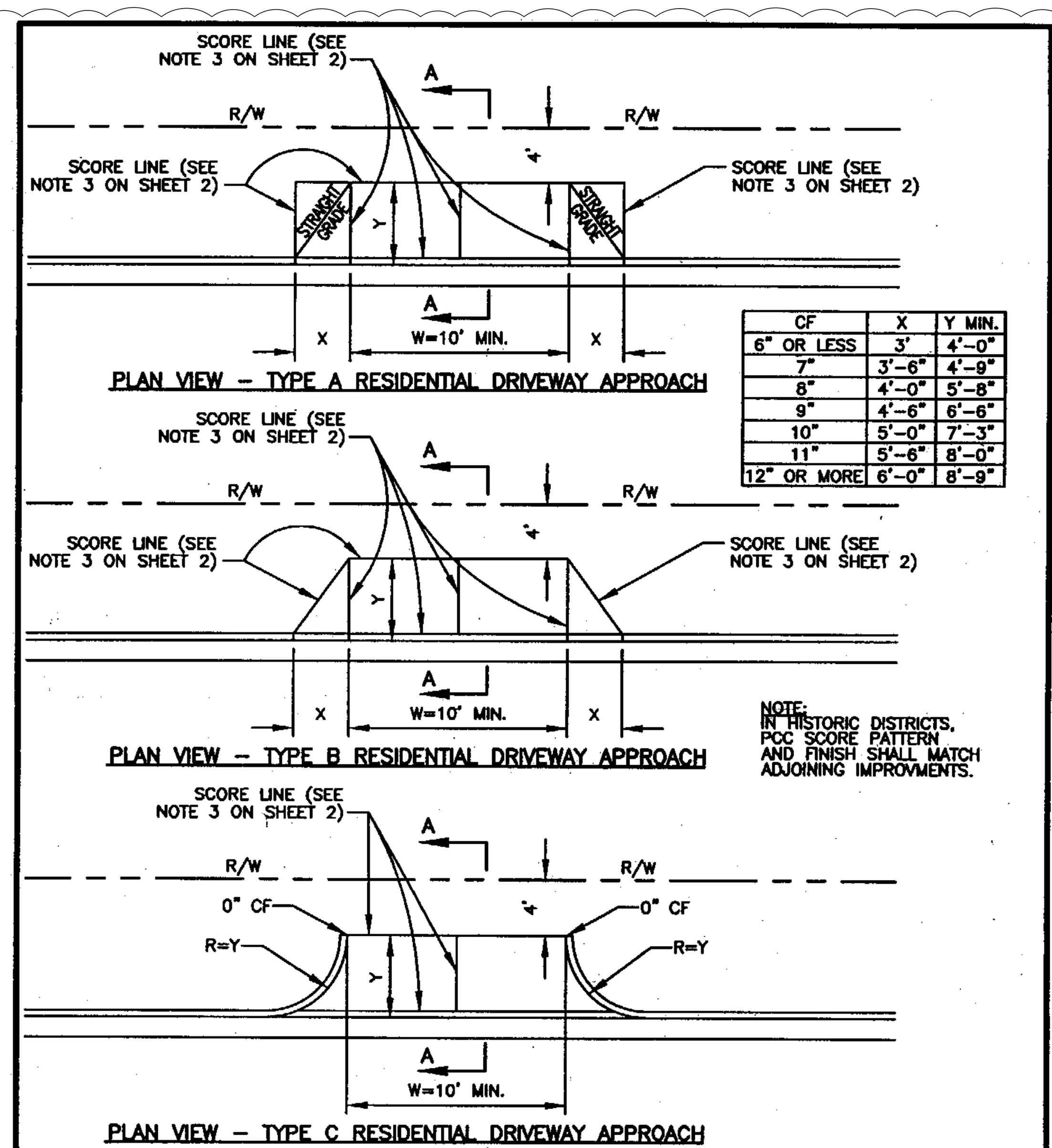
SECTION A-A

GENERAL NOTES FOR ALL DRIVEWAY APPROACHES:

1. DRIVEWAY APPROACH SHALL BE CLASS 520-C-2500 PCC (6" MIN. THICKENESS RESIDENTIAL AND 8" MIN. THICKNESS COMMERCIAL) AND SHALL UTILIZE CURING COMPOUND. ALL NEW PCC WORK REQUIRES TAMPING PER SSPWC "GREENBOOK".
2. DRIVEWAY APPROACH SHALL BE CONSTRUCTED ON 6" C.A.B. OR 6" C.M.B. OVER 6" SUBGRADE AT 90% RELATIVE COMPACTION.
3. DRIVEWAY APPROACHES SHALL BE SCORED 1 1/2" DEEP AT THE CENTER OF THE APPROACH AND EQUALLY SPACED AT A MAXIMUM 10'-0" ON CENTER.

GENERAL NOTES FOR ALL DRIVEWAY APPROACHES (CONT.):

4. WHEN ABUTTING SOIL HAS HIGH SULFATE CONTENT, SPECIAL CONSIDERATION SHALL BE CONSIDERING INCLUDING BUT NOT LIMITED TO 6 MIL PLASTIC SHEETING A MINIMUM OF 2' BEYOND EDGE OF CONCRETE (SEE SSPWC "GREENBOOK" FOR FURTHER REQUIREMENTS).
5. FOR NEW DRIVEWAY APPROACHES ADJACENT TO EXISTING PAVEMENT, A MINIMUM OF 2' OF EXISTING PAVEMENT SHALL BE REMOVED AND REPLACED FULL-DEPTH ADJACENT TO NEW PCC.
6. DRIVEWAY APPROACH DESIGN SHALL PROVIDE FOR ADA ACCESSIBLE PATH OF TRAVEL (2% MAX. CROSS SLOPE, MINIMUM 4' WIDE).
7. NEW DRIVEWAY APPROACHES REQUIRE THE INSTALLATION OF ONE 2" PVC STREET LIGHT CONDUIT 2' BEHIND CURB AND SHALL EXTEND A MIN. OF 3 FEET BEYOND BCR/ECR OF DRIVEWAY APPROACH.
8. MAX. DRIVEWAY SLOPE IS 10% MEASURED FROM THE 1" CURB LIP AT THE FLOWLINE TO THE GRADE BREAK AT THE FRONT OF THE ADA PATH OF TRAVEL.
9. DRIVEWAY SLOPE AREA REQUIRES MEDIUM BROOM FINISH PARALLEL WITH CURB. DRIVEWAY SIDEWALK AREA REQUIRES MEDIUM BROOM FINISH PERPENDICULAR TO CURB LINE.
10. DRIVEWAY SIDEWALK SHALL BE SCORES AT 5' ON CENTER WITH WEAKENDED PLANE JOINTS EVERY 10'.



CF	X	Y MIN.
6" OR LESS	3'	4'-0"
7"	3'-6"	4'-9"
8"	4'-0"	5'-8"
9"	4'-6"	6'-6"
10"	5'-0"	7'-3"
11"	5'-6"	8'-0"
12" OR MORE	6'-0"	8'-9"

SEE SHEET 2 FOR GENERAL NOTES FOR DRIVEWAY APPROACHES AND SECTION A-A

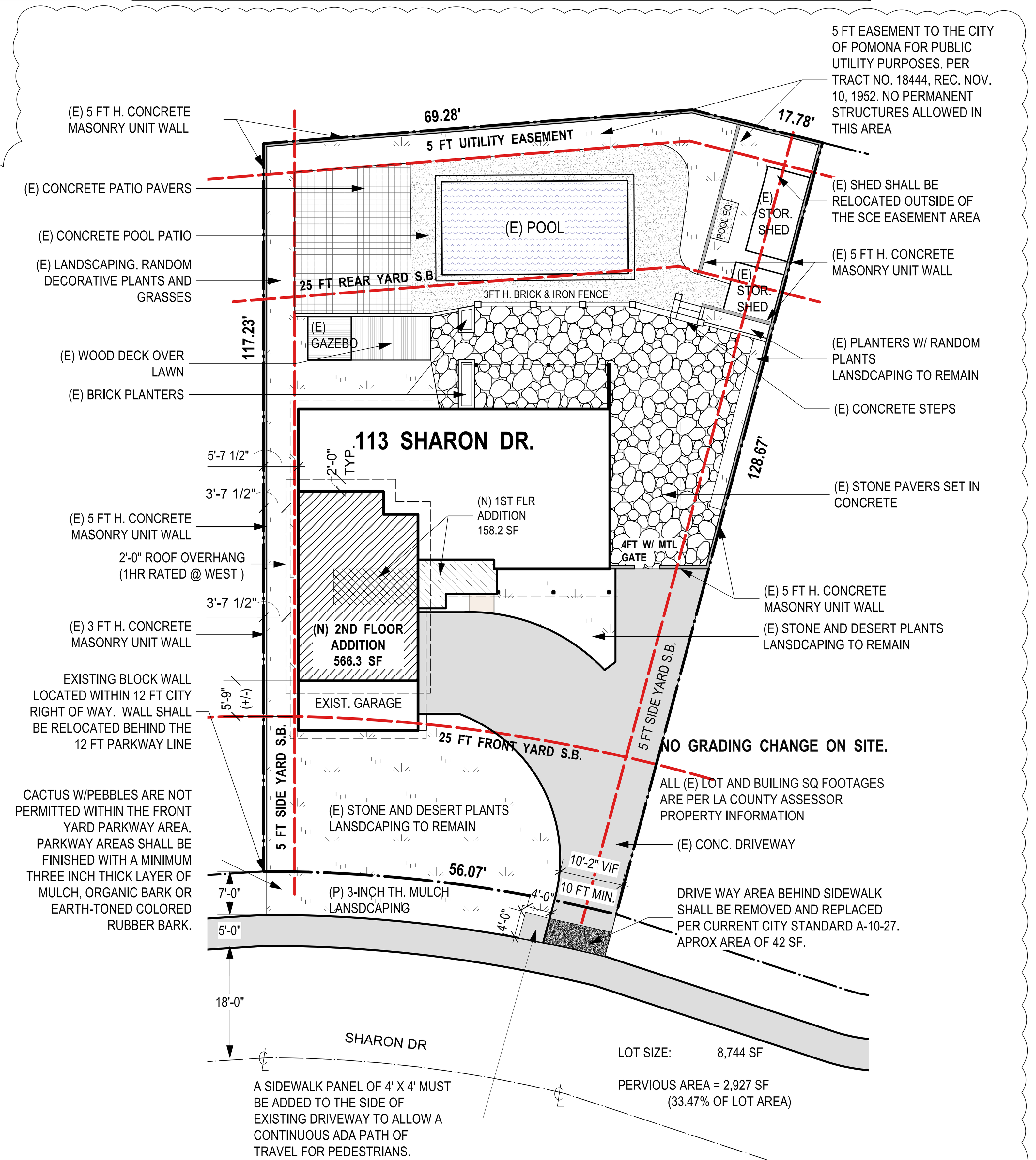
CITY OF POMONA PUBLIC WORKS DEPARTMENT
RESIDENTIAL DRIVEWAY APPROACH

1	UPDATED ENTIRE STANDARD	07/18/11	BAH	DRAWN BY: BAH CHECKED BY: APPROVED BY:	STANDARD 4 OF 4
	REVISONS	DATE	INITIAL		

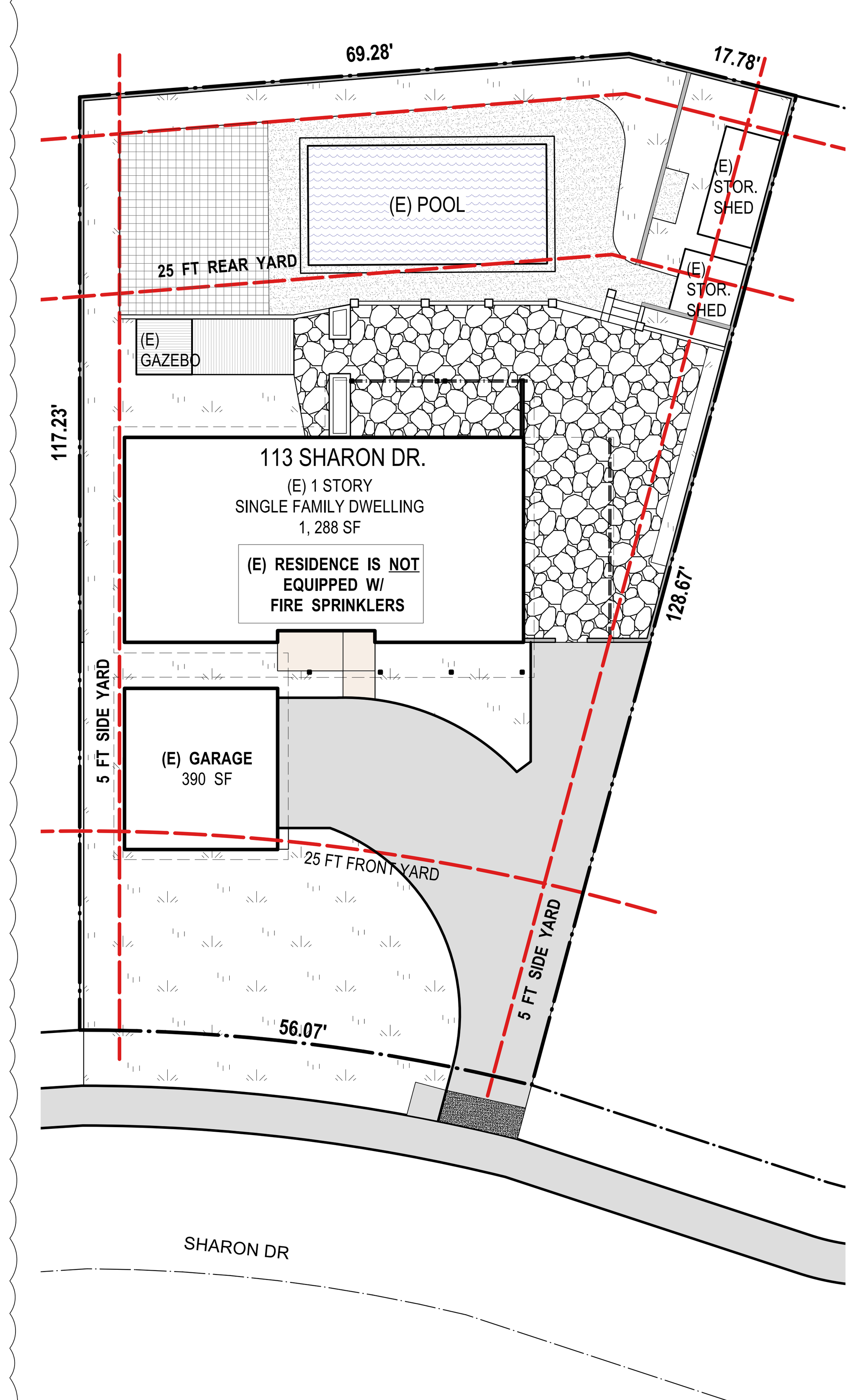
A-27-10

CITY OF POMONA NOTES:

1. THE DRIVEWAY APPROACH SHALL BE IN COMPLIANCE WITH THE CITY OF POMONA STD. A-27-10
2. IT IS THE OWNER'S AND THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ALL DAMAGE TO THE EXISTING PUBLIC IMPROVEMENTS DUE TO THE PROPOSED CONSTRUCTION ACTIVITIES AND TO ADDRESS ALL REPAIRS REQUESTED BY THE PUBLIC WORKS INSPECTOR BASED ON THE INSPECTOR'S REVIEW OF THE CURRENT CONDITION OF THE SAID PUBLIC IMPROVEMENTS.
3. UNDERGROUNDING OF ALL EXISTING AND PROPOSED UTILITY LINES IS REQUIRED AS PERCITY OF POMONA MUNICIPAL CODE SECTION 62-31(B)(1).
4. THE PARKWAY LANDSCAPING SHALL BE MAINTAINED BY THE PROPERTY OWNER PER CITY OF POMONA MUNICIPAL CODE SECTION 46-496.
5. THE PROPERTY ABUTTING SIDEWALK, PARKWAY AND ALLEY, AS APPLICABLE, SHALL BE MAINTAINED FREE OF WEEDS, RUBBISH AND REFUSE BY THE PROPERTY OWNER, AS REQUIRED BY THE CITY'S MUNICIPAL CODE SECTION 18-261.



2 PROPOSED SITE PLAN
Scale: 1/16" = 1'-0"



1 (E) SITE PLAN
Scale: 1/16" = 1'-0"

AGC American General Corporation
34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

OCGG DESIGN

SCOPE DOCUMENT DRAWINGS SET:

ENTRY & SECOND FLOOR ADDITION

113 SHARON DR. POMONA, CA 91767

INDEX

NO.	DATE	ISSUE NOTE
1	12/27/2023	BUILDING PERMIT APPLICATION
2	2/4/2024	REVIEW COMMENTS REPLY
3	3/11/2024	PW & PLANNING COMMENTS REPLY

3/11/24

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND TO BEST OF MY KNOWLEDGE CONFIRM TO THE PERTINENT LOCAL BUILDING CODE AND REGULATIONS GREGORY GESLICKI, NCARB, REGISTERED CALIFORNIA ARCHITECT CALIFORNIA LICENSE NO. C 40389, LICENSE EXPIRATION 11/30/2025

Drawn By	Sheet No.
JC	A-0
Project ID 100-34	

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y	N/A	RESPON. PARTY

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 provision 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.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

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.
Exceptions:
1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.
2. [HCD] For purposes of *CAL*Green, live/work units, complying with Section 419 of the *California Building Code*, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS
4.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

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.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

□ □ **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.

Exception: Additions and alterations not altering the drainage path.

□ □ **4.106.4 Electric vehicle (EV) charging for new construction.** New construction shall comply with Sections 4.106.4.1 or 4.106.4.2 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 accommodate a dedicated 208/240-volt 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 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 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the *California Electrical Code*.

4.106.4.1.1 Identification. The service panel or subpanel circuit 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 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

□ □ **4.106.4.2.1Multifamily 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.

□ □ **4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more 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.

Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required.

Notes:

a.Construction documents shall show locations of future EV spaces.

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 each space served by the ALMS. The electrical system and any 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 installed EVSE 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 EV capable spaces.

4.106.4.2.2.1 Electric vehicle charging stations (EVCS).
Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1.

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements.

4.106.4.2.2.1.1 Location.
EVCS shall comply with at least one of the following options:

1.The charging space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.

2.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 (5486 mm).

2.The minimum width of each EV space shall be 9 feet (2743 mm).

3.One in every 25 charging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).

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 sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

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 Toilets.

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 the 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 only allow 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.

4.303.1.4.5 Pre-rinse spray valves.
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations),Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALUES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)]

□ □ **4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used 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 Regulations,* Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including 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 MAINTENANCE

■ □ **4.406.1 RODENT PROOFING.** Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

□ □ **4.408.1 CONSTRUCTION WASTE MANAGEMENT.** Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

□ □ **4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN**. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

■ □ **4.408.3 WASTE MANAGEMENT COMPANY.** Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

□ □ **4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR].** Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

□ □ **4.408.5 DOCUMENTATION**. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4..

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

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 inspections verifications required by the enforcing agency or this code.
11. Information from the Department of Forestry and Fire Protection 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 are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet 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 note required to comply with the organic waste portion of this section.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL
4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS
5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

AGC American General Corporation
34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

OCGG DESIGN

ENTRY & SECOND FLOOR ADDITION

113 SHARON DR. POMONA, CA 91767

CAL GREEN BUILD'G CODE

NO.	DATE	ISSUE NOTE
1	12/27/2023	BUILDING PERMIT APPLICATION
2	2/4/2024	REVIEW COMMENTS REPLY

LICENSED ARCHITECT GREGORY GOSLICKI NO. C-40389 EXP: 11/30/2025 STATE OF CALIFORNIA

3/11/24

Drawn By: CC
Sheet No. A-1.0
Project ID 100-34

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

AIA California

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y | N/A | RESPON. PARTY

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O^3/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

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 & 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, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or 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, sealant 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 tricloroethylene), 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.

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]

(Less Water and Less Exempt Compounds in Grams per Liter)

ARCHITECTURAL APPLICATIONS	VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS 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 & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
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 4.504.2 - SEALANT VOC LIMIT

(Less Water and Less Exempt Compounds in Grams per Liter)

SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
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 & LESS EXEMPT COMPOUNDS

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
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
INDUSTRIAL 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, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & 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 & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS 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, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

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
PARTICLE BOARD	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 CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

■ ☐ **4.504.3 CARPET SYSTEMS.** All carpet 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.

■ ☐ **4.504.3.1 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% 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.

hhttps://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 buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, 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 standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

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 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 (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier 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 BUILDING MATERIALS.** 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 code.
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 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 to enclose 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 less than or equal to 50% to a maximum of 80%. 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 ENVIRONMENTAL COMFORT

■ ☐ **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 - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (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 - 2014 (Residential Equipment Selection), or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the system functions 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.

American General Corporation
34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

OCGG DESIGN
3100 CHINO HILLS PKWY No. 422 CHINO HILLS CA 91709
Phone 847 480 2112 Email ocgg@ocggarchitects.com
OCGG Architects Website Address: WWW OCGGARCHITECTS.COM

SCOPE DOCUMENT DRAWINGS SET:
THIS DRAWING SET INDICATES GENERAL SCOPE OF THE PROJECT IN TERMS OF DIMENSIONS OF THE BUILDING, MAJOR ARCHITECTURAL ELEMENTS AND THE TYPE OF STRUCTURAL SYSTEMS, MECHANICAL & ELECTRICAL SYSTEMS. AS SCOPE DOCUMENTS THESE DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL THE WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. ON THIS BASIS THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK SHOWN AND/OR REQUIRED BY LOCAL CODE REGULATIONS.

ENTRY & SECOND FLOOR ADDITION
113 SHARON DR. POMONA, CA 91767

CAL GREEN BUILD'G CODE

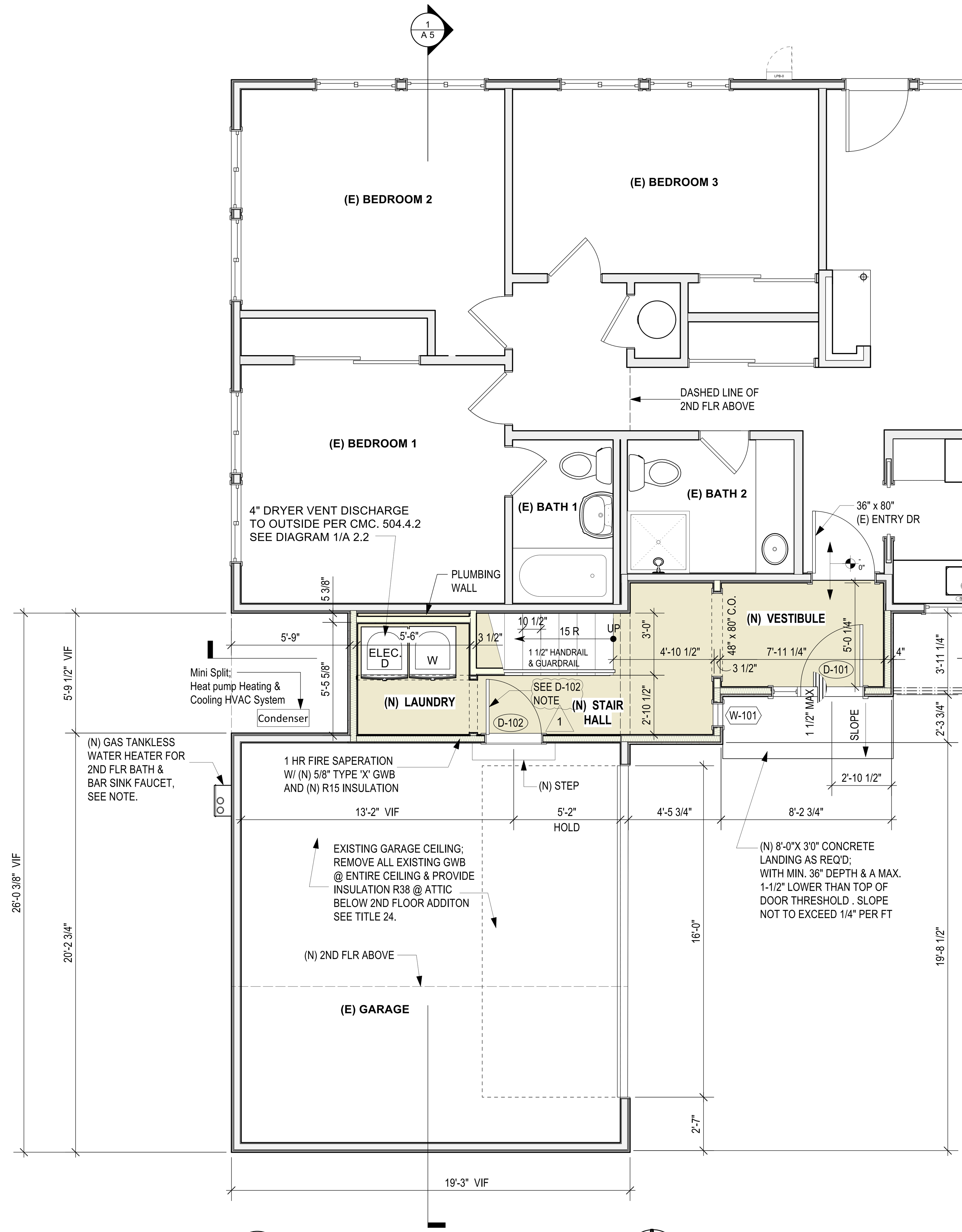
NO.	DATE	ISSUE NOTE
1	12/27/2023	BUILDING PERMIT APPLICATION
2	2/4/2024	REVIEW COMMENTS REPLY

LICENSED ARCHITECT GREGORY GESLICKI NO. C-40389 EXP: 11/30/2025 STATE OF CALIFORNIA

3/11/24

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND TO BEST OF MY KNOWLEDGE CONFIRM TO THE PERTINENT LOCAL BUILDING CODE AND REGULATIONS GREGORY GESLICKI, NCARB, REGISTERED CALIFORNIA ARCHITECT CALIFORNIA LICENSE NO. C 40389, LICENSE EXPIRATION: 11/30/2025

Drawn By: OC
Sheet No.: A-1.1
Project ID: 100-34



2 PROPOSED 1ST FLOOR PLAN
Scale: 1/4" = 1'-0"

(N) GAS TANKLESS WATER HEATER :
TAKAGI OUTDOOR MODEL T-H3M-OS (or APPROVED EQ)
CONTINUOUS MAXIMUM FLOW RATES UP TO 6.6 GPM
GAS INPUT RATING OF 120,000 BTU / HR (<= 200 kBtu/hr)
- PROVIDE PIPE COVER

507.25 Protection of Outdoor Appliances
Appliances; not listed for outdoor installation but installed outdoors shall be provided with protection to the degree that the environment requires.

Appliances; listed for outdoor installation shall be permitted to be installed without protection in accordance with the provisions of its listing and the manufacturer's installation instructions.

WALL LEGEND
- (E) EXTERIOR STUCCO WALL
- (N) EXTERIOR STUCCO WALL
- (E) INTERIOR GWB WALL
- (N) INTERIOR GWB WALL

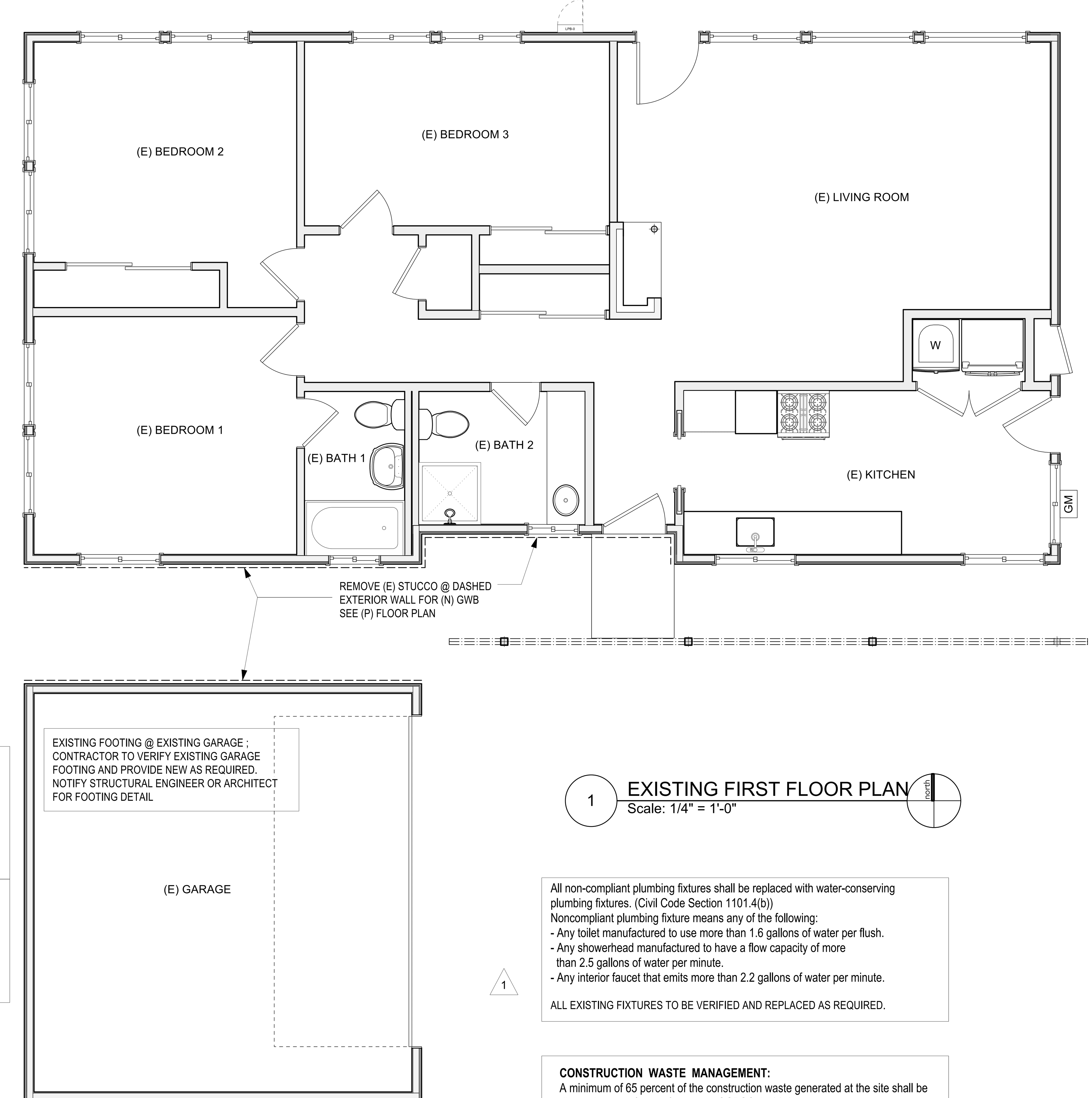
FINISH SCHEDULE
- 1/2" DRYWALL INTERIOR
- 7/8" STUCCO EXTERIOR
- R-13 WALL INSULATION
- R-30 ATTIC INSULATION

NOTE ; DOOR D-102

SOLID WOOD DOORS NOT LESS THAN 1 3/8 INCHES (35 MM) IN THICKNESS, SOLID OR HONEYCOMB-CORE STEEL DOORS NOT LESS THAN 13/8 INCHES (35 MM) THICK, OR 20-MINUTE FIRE-RATED DOORS. DOORS SHALL BE SELF-LATCHING AND EQUIPPED WITH A SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE. (CRC R302.5.1)

1

WATER PIPING MATERIALS WITHIN A BUILDING SHALL BE IN ACCORDANCE WITH SEC. 604.1 OF THE CALIFORNIA PLUMBING CODE. PEX, CPVC AND OTHER PLASTIC WATER PIPING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SEC. 604 OF THE CPC, INSTALLATION STANDARDS OF APPENDIX I OF THE CPC AND MANUFACTURERS RECOMMENDED INSTALLATION STANDARDS. CPVC WATER PIPING REQUIRES A CERTIFICATION OF COMPLIANCE AS SPECIFIED IN SEC 604.1.1(D) OF THE CPC PRIOR TO PERMIT ISSUANCE.



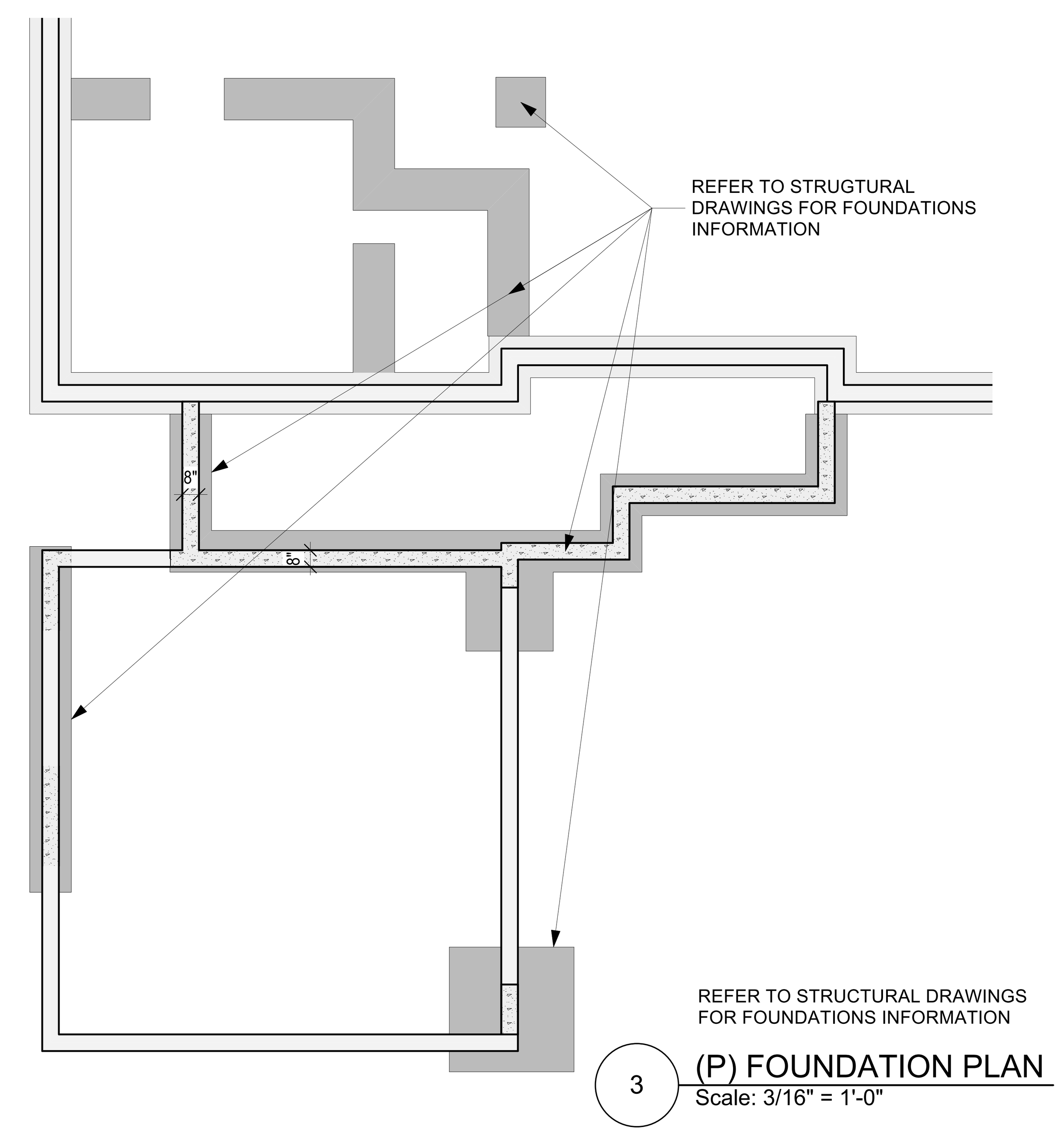
1 EXISTING FIRST FLOOR PLAN
Scale: 1/4" = 1'-0"

All non-compliant plumbing fixtures shall be replaced with water-conserving plumbing fixtures. (Civil Code Section 1101.4(b))
Noncompliant plumbing fixture means any of the following:
- Any toilet manufactured to use more than 1.6 gallons of water per flush.
- Any showerhead manufactured to have a flow capacity of more than 2.5 gallons of water per minute.
- Any interior faucet that emits more than 2.2 gallons of water per minute.

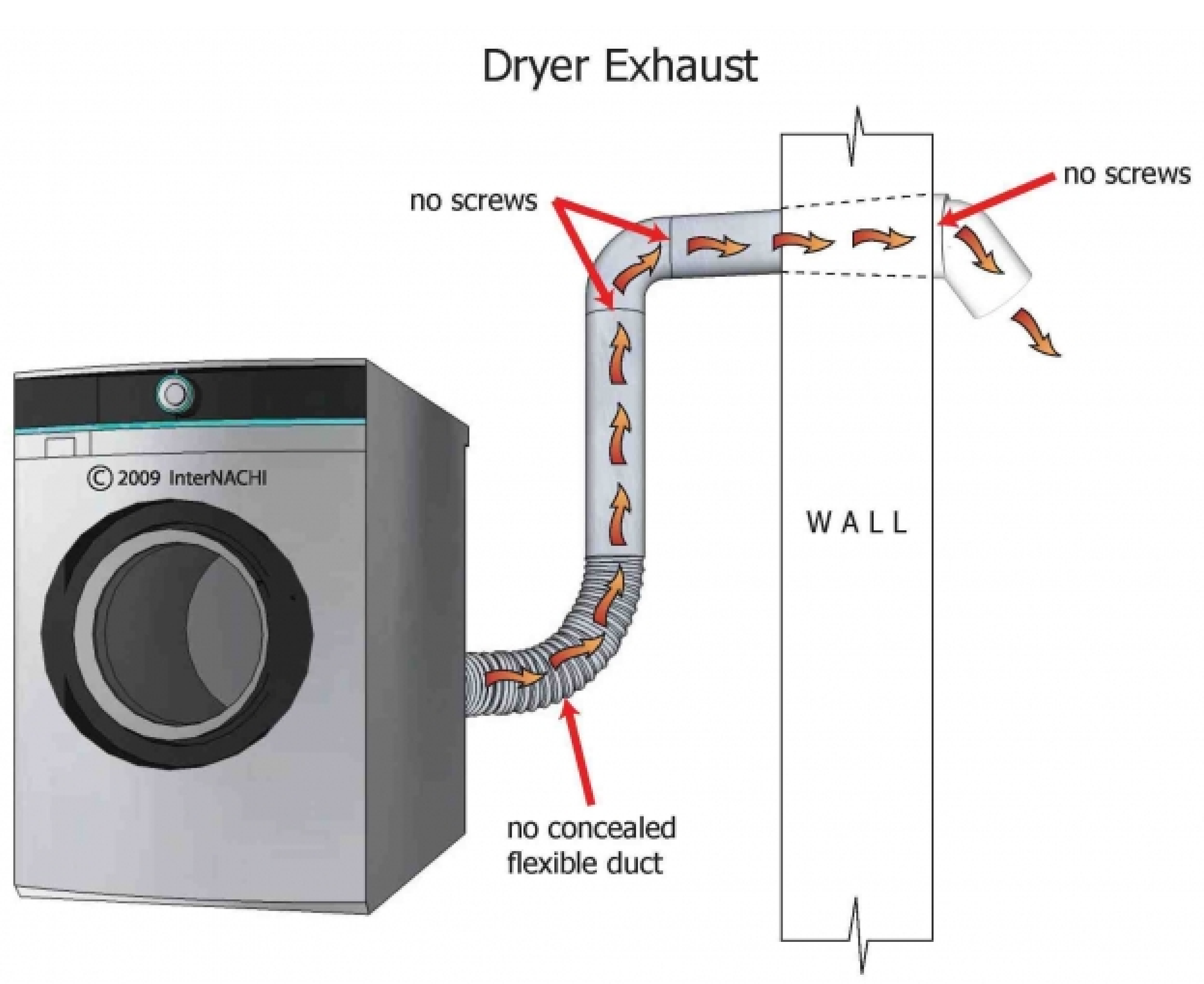
ALL EXISTING FIXTURES TO BE VERIFIED AND REPLACED AS REQUIRED.

1

CONSTRUCTION WASTE MANAGEMENT:
A minimum of 65 percent of the construction waste generated at the site shall be diverted to recycle or salvage, per CGBSC 4.408.1.



3 (P) FOUNDATION PLAN
Scale: 3/16" = 1'-0"



Domestic Clothes Dryer Vents – Length Limitations

Clothes Dryers

The following regulations apply to domestic moisture exhaust ducts in accordance with the 2019 California Mechanical Code, Section 504.

- Duct shall terminate on the outside of building and be equipped with back-draft damper
- No screens shall be installed at duct termination
- Duct shall not be connected by sheet metal screws or other obstructive fasteners
- Duct shall not be connected to gas vent connector, gas vent, or chimney and shall only serve clothes dryers
- Ducts under positive pressure shall not extend into or through ducts or plenums

Domestic Clothes Dryers

Where a compartment or space for a domestic Type 1 clothes dryer is provided, the following restrictions apply:

- Minimum 4-inch diameter moisture exhaust duct approved material shall be installed
- Ducts shall be insulated through attic and crawl space with 1-3/4" pound fiberglass duct wrap
- Domestic clothes dryer vents shall be made of metal and have smooth interior surfaces
- Transition ducts used to connect the dryer to the exhaust duct shall be listed and labeled in accordance with UL 2158A

Exception: Listed clothes dryer transition ducts not more than 6-feet in length may be used in connection with domestic dryer exhausts.

Length Limitation

- Unless otherwise permitted or required by the dryer manufacturer's installation instructions, and approved by the Building Official, domestic dryer moisture exhaust ducts shall not exceed a total combined horizontal and vertical length of 14-feet, including two 90-degree elbows
- Two feet shall be deducted for each 90-degree elbow in excess of two

Exception: Where an exhaust duct power ventilator, in accordance with Section 504.4.2.3, is used, the maximum length of the dryer exhaust duct shall be permitted to be in accordance with the dryer exhaust duct power ventilator manufacturer's installation instructions.

Exhaust Duct Power Ventilators

- Dryer exhaust duct power ventilators for single residential clothes dryers shall be listed and labeled in accordance with UL 705 and installed in accordance with the manufacturer's installation instructions.

Termination of Environmental Air Ducts

- Ducts shall terminate a minimum of 3-feet from property line and 3-feet from openings into the building

Provisions for Makeup Air

- Where a closet is designed for the installation of a clothes dryer, an opening of not less than 100 square inches (0.065m2) for makeup air shall be provided in the door or by other approved means.

? A clothes dryer exhaust duct shall not be connected to a vent connector, gas vent, chimney, and shall not terminate into a crawl space, attic, or other concealed space.

? Exhaust ducts shall not be assembled with screws or other fastening means that extend into the duct and that are capable of atching lint, and that reduce the efficiency of the exhaust system.

? Exhaust ducts shall be constructed of rigid metallic material.

? Transition ducts used to connect the dryer to the exhaust duct shall be listed and labeled in accordance with UL 2158A, or installed in accordance with the clothes dryer manufacturer's installation instructions.

? Devices, such as fire or smoke dampers that will obstruct the flow of the exhaust shall not be used. Where joining of ducts, the male end shall be inserted in the direction of airflow.

FOOTINGS GENERAL NOTE:

1. DEPTH OF FOOTINGS BELOW THE NATURAL AND FINISHED GRADES SHALL NOT BE LESS THAN 24 INCHES FOR EXTERIOR AND 18 INCHES FOR INTERIOR FOOTINGS.

2. EXTERIOR WALLS AND INTERIOR BEARING WALLS SHALL BE SUPPORTED ON CONTINUOUS FOOTINGS.

3. FOOTINGS SHALL BE REINFORCED WITH FOUR ½-INCH DIAMETER DEFORMED REINFORCING BARS. TWO BARS SHALL BE PLACED 4 INCHES FROM THE BOTTOM OF THE FOOTING AND TOW BARS WITHIN 4 INCHES FROM TOP OF THE FOOTING. REINFORCEMENT SHALL HAVE A MINIMUM 3-INCH CONCRETE COVER FOR CONCRETE CAST AGAINST EARTH AND REINFORCEMENT NOT EXCEEDING 5/8-INCH SHALL HAVE MINIMUM 1-1/2-INCH CONCRETE COVER WHEN NOT CAST AGAINST EARTH.

4. CONCRETE FLOOR SLABS ONO GRADE SHALL BE PLACED ON A 4-INCH FILL OF COARSE AGGREGATE OR ONO A 2-INCH SAND BED COVERED WITH A MINIMUM 6 MIL MOISTURE BARRIER MEMBRANE. THE SLABS SHALL BE AT LEAST 3 1/2 INCHES THICK AND SHALL BE REINFORCED WITH ½" DIAMETER DEFORMED REINFORCING BARS. REINFORCING BARS SHALL BE SPACED AT INTERVALS NOT EXCEEDING 16 INCHES EACH WAY.

5. THE SOIL BELOW AN INTERIOR CONCRETE SLAB SHALL BE SATURATED WITH MOISTURE TO A DEPTH OF 18 INCHES PRIOR TO PLACING THE CONCRETE.

6. ALL DRAINAGE ADJACENT TO FOOTINGS SHALL BE CONDUCTED AWAY FROM THE STRUCTURE BY 3-FT WIDE SLOPED APRON DRAINING INTO AN APPROVED NON-EROSIVE DEVICE.

American General Corporation
34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

OCGG DESIGN
3100 CHINO HILLS PKWY No. 422 CHINO HILLS CA 91709
Phone 847 480 2212 Email ocgg@ocggarchitects.com
OCGG Architects Website Address : WWW . OCGGARCHITECTS . COM

SCOPE DOCUMENT DRAWINGS SET:

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ENTRY & SECOND FLOOR ADDITION
113 SHARON DR. POMONA, CA 91767

(E&P) FLOOR PLANS

NO.	DATE	ISSUE NOTE
1	12/27/2023	BUILDING PERMIT APPLICATION
2	2/4/2024	REVIEW COMMENTS REPLY

LICENSED ARCHITECT GREGORY GESICKI NO. C-40389 EXP: 11/30/2025 STATE OF CALIFORNIA
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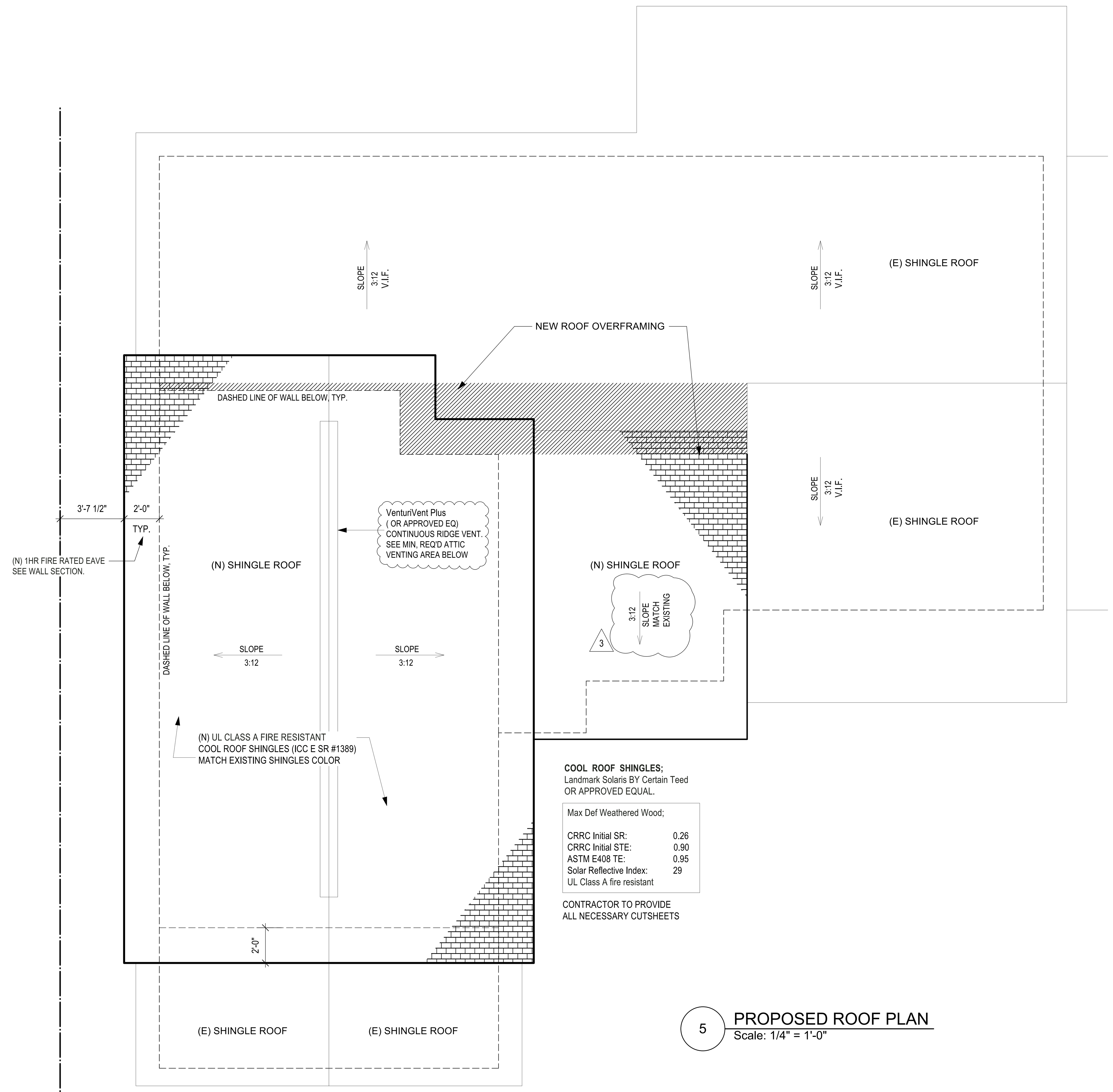
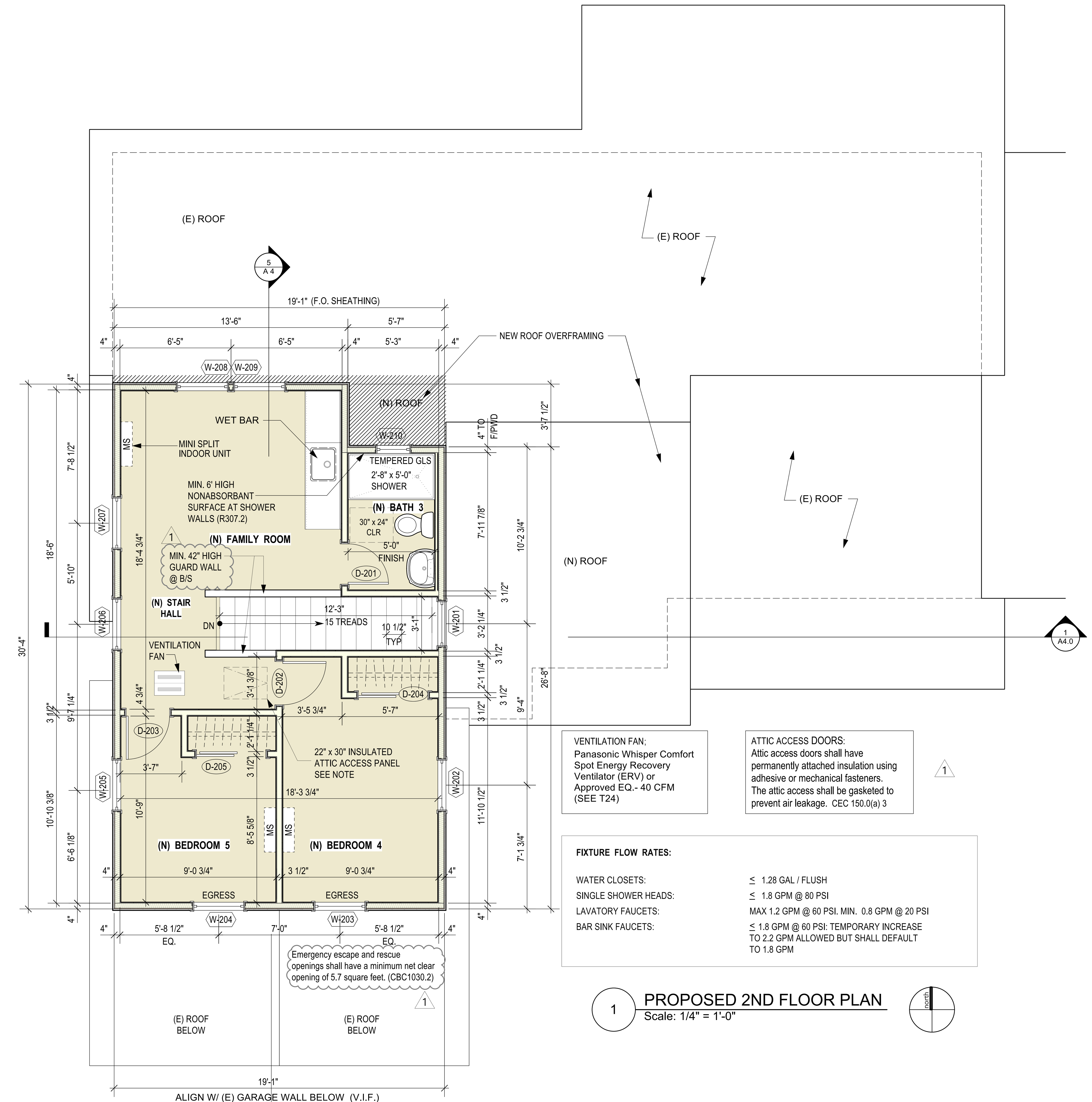
Drawn By: OC
Project ID: 100-34
Sheet No.: A-2.0

NOTE:

1. Pipe, pipe fittings, traps, fixtures, material, and devices used in a plumbing system shall be listed (third-party certified) by a listing agency (accredited conformity assessment body) as complying with the approved applicable recognized standards referenced in this code, and shall be free from defects. (CPC 301.2)
2. The load resistance of glass under uniform load shall be determined in accordance with ASTM E1300.
3. Applications for which no permit is issued within 180 days following the date of application shall automatically expire. (R105.3.2 CRC)
4. Every permit issued shall become invalid unless work authorized is commenced within 180 days after its issuance or if the work authorized is suspended or abandoned for a period of 180 days. A successful inspection must be obtained within 180 days. Note on plans. (R105.5 CRC)
5. Emergency escape and rescue openings shall have a net clear opening of not less than 5.7 square feet (0.530 m2). (R310.2.1 CRC)
The minimum net clear opening height dimension shall be 24 inches. The minimum net clear opening width dimension shall be 20 inches. (R310.2.2 CRC)



5 PROPOSED ROOF PLAN
Scale: 1/4" = 1'-0"



1 PROPOSED 2ND FLOOR PLAN
Scale: 1/4" = 1'-0"

MIN. REQ'D ATTIC VENTING AREA:

One square foot of ventilation is required for every 150 sq ft of enclosed attic space.
517 sq ft Attic Space Requires 490 sq in of Ventilation.

x/517 = 1/150 x = 3.4 sq ft (4960sq in)

VenturiVent Plus (or Approved EQ) provides 18 square inches of net free area per linear foot.
490/18 = 27
REQUIRES 27' CONTINUOUS RIDGE VENT
SOFFIT VENT TO PROVID EQ AMOUNT OF NFA/ LF

LIGHT AND VENT CALCULATION

ROOM NAME	AREA (SF)	WINDOW TYPE & SIZE		PER WINDOW		TOTAL PER ROOM		ORDINANCE'S REQMT	
				LIGHT	VENT	LIGHT	VENT	LIGHT (8 %)	VENT (4 %)
(N) BEDROOM 4	113.4	CASEMENT	3'-0" X 5'-0"	11.5	14	18	22.2	9.1	4.5
		AWNING	3'-0" X 3'-0"	6.5	8.2				
(N) BEDROOM 5	83.2	CASEMENT	3'-0" X 5'-0"	11.5	14	18	22.2	6.7	3.3
		AWNING	3'-0" X 3'-0"	6.5	8.2				
LIVING	209.6	CASEMENT	3'-0" X 3'-6"	7.7	9.7	33.4	41.6	16.8	8.4
		CASEMENT	3'-0" X 3'-6"	7.7	9.7				
		AWNING	3'-0" X 3'-0"	6.5	8.2				
		CASEMENT	3'-0" X 5'-0"	11.5	14				

Window Schedule

			Nominal Size		Window Style		Open'g	Remarks
	Mark		Width	Height	Configuration	Shape	Egress	
W-	101		1'2"	4'0"	Fixed Glass - No Sash	Rectangle	-	
W-	201		2'8"	5'0"	Casement	Rectangle	-	
W-	202		3'0"	3'0"	Awning	Rectangle	-	
W-	203		3'0"	5'0"	Casement	Rectangle	Y	
W-	204		3'0"	5'0"	Casement	Rectangle	Y	
W-	205		3'0"	3'0"	Awning	Rectangle	-	
W-	206		3'0"	5'0"	Casement	Rectangle	-	
W-	207		3'0"	3'0"	Awning	Rectangle	-	
W-	208		3'0"	3'6"	Casement	Rectangle	-	
W-	209		3'0"	3'6"	Casement	Rectangle	-	
W-	210		2'0"	2'0"	Awning	Rectangle	-	Tempered Glass

Air Leakage;
Manufactured fenestration, exterior doors, must limit air leakage to 0.3 CFM per square foot or less. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.

GLAZING MUST MEET THE FOLLOWING:
U-FACTOR = 0.30 or Lower
SHGC = 0.23 or Lower

Door Schedule

			Nominal Size			Door Style	
	Mark		Width	Height	Thickness	Configuration	Slab Style
D-	101		3'0"	6'8"	1 3/4"	Swing	Panel w/ 1'2" Sidelights
D-	102	*	2'8"	6'8"	1 3/4"	Swing	Panel
D-	201		2'4"	6'8"	1 3/8"	Swing	Panel
D-	202		2'6"	6'8"	1 3/8"	Swing	Panel
D-	203		2'6"	6'8"	1 3/8"	Swing	Panel
D-	204		4'0"	6'8"	1 3/8"	Sliding	Panel
D-	205		4'0"	6'8"	1 3/8"	Sliding	Panel

* D-102 ; SEE NOTE ON SHEET 2/A-2.0

American General Corporation
34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

OCGG DESIGN

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ENTRY & SECOND FLOOR ADDITION

113 SHARON DR. POMONA, CA 91767

(P) 2ND FLR & ROOF PLAN

NO.	DATE	ISSUE NOTE
1	12/27/2023	BUILDING PERMIT APPLICATION
2	2/4/2024	REVIEW COMMENTS REPLY
3	3/11/2024	PW & PLANNING COMMENTS REPLY

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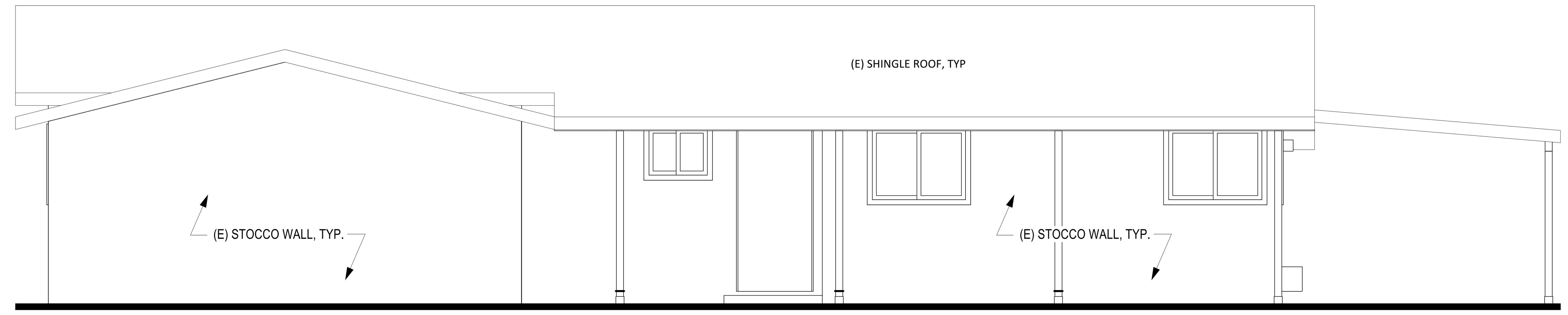
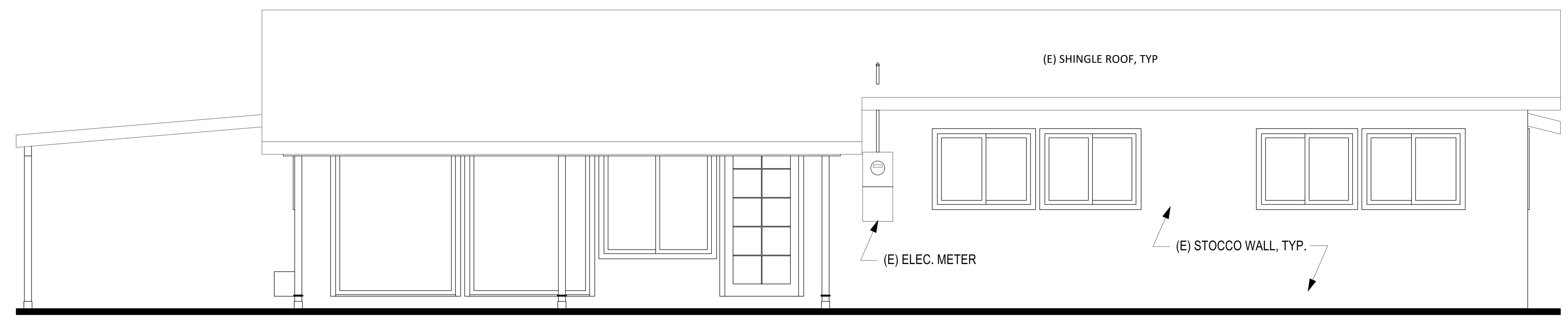
Drawn By: OC
Project ID: 100-34
Sheet No.: A-2.1

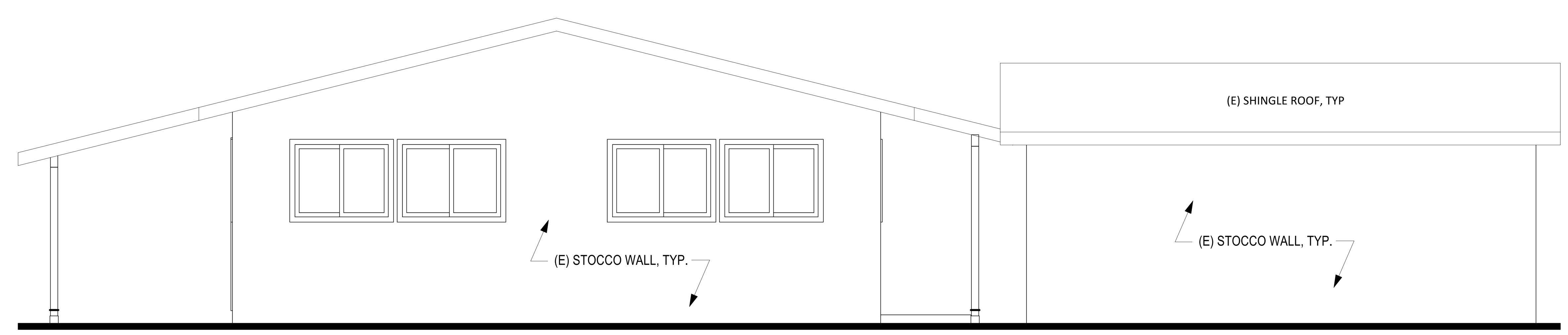


1 (E) FRONT (SOUTH) ELEVATION
Scale: 1/4" = 1'-0"



2 (E) NORTH (REAR) ELEVATION
Scale: 1/4" = 1'-0"

3 (E) SIDE (EAST) ELEVATION
Scale: 1/4" = 1'-0"



4 (E) SIDE (WEST) ELEVATION
Scale: 1/4" = 1'-0"

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34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

OCGG DESIGN
3100 CHINO HILLS PKWY No. 422 CHINO HILLS CA 91709
Phone 847 480 2212 Email ocgg@ocggarchitects.com
OCGG Architects Website Address : WWW . OCGGARCHITECTS . COM

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ENTRY & SECOND FLOOR ADDITION

113 SHARON DR. POMONA, CA 91767

(E) ELEVATIONS

NO.	DATE	ISSUE NOTE
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2	2/4/2024	REVIEW COMMENTS REPLY

LICENSED ARCHITECT GREGORY GESLICKI NO. C-40389 EXP: 11/30/2025 STATE OF CALIFORNIA

3/11/24

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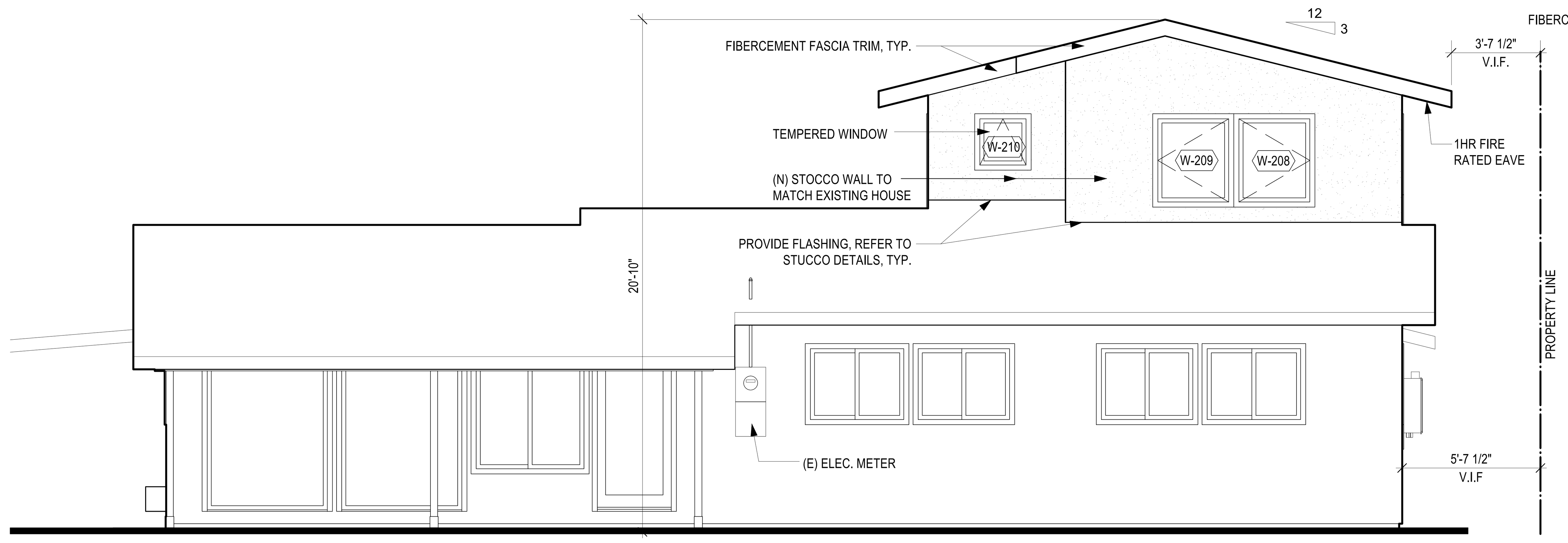
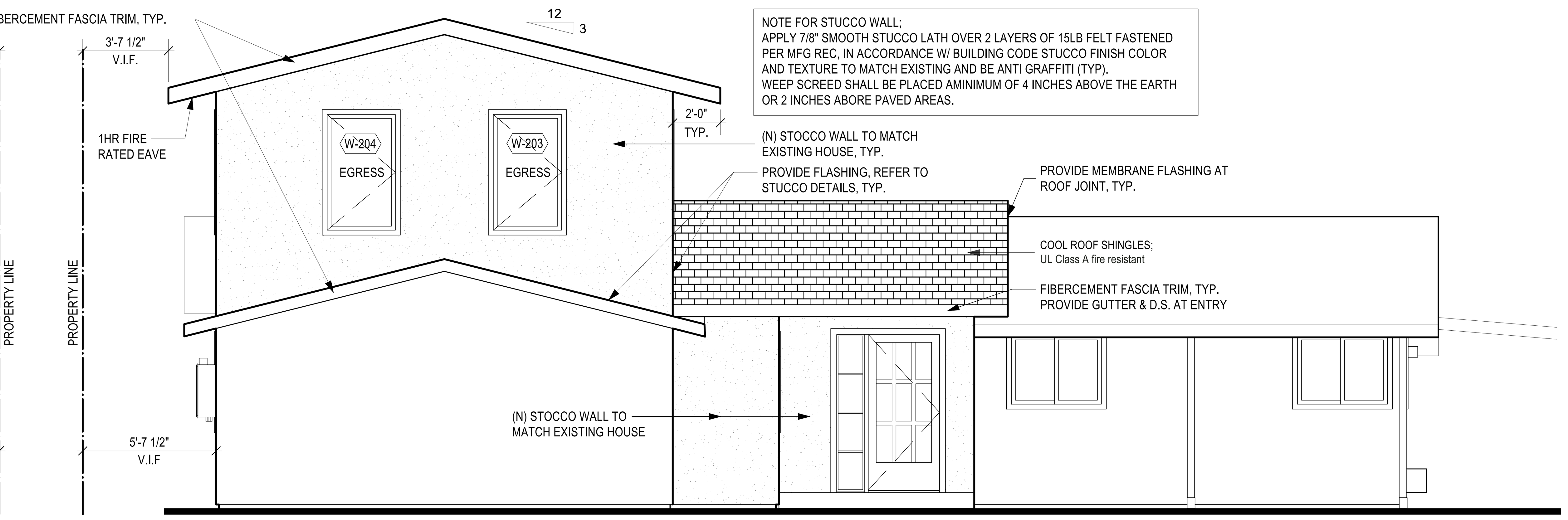
Drawn By: OC

Project ID: 100-34

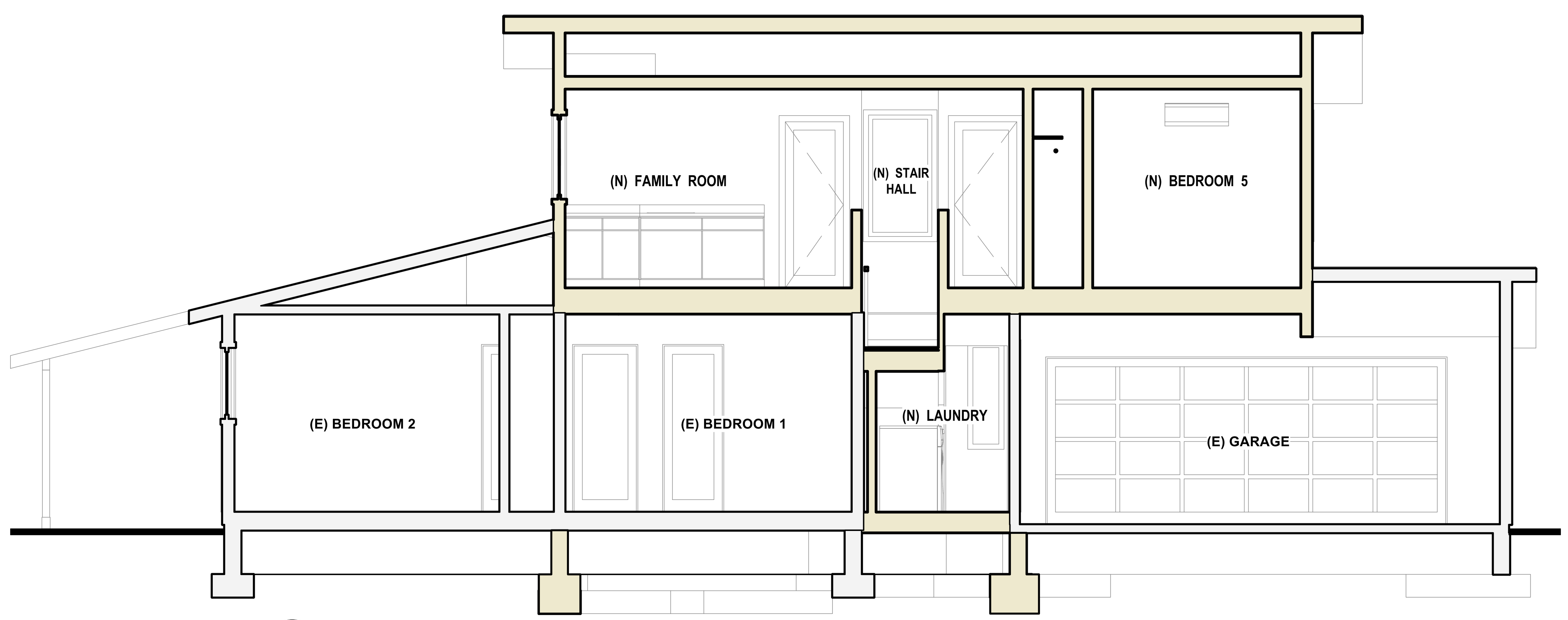
Sheet No.: A-3.0



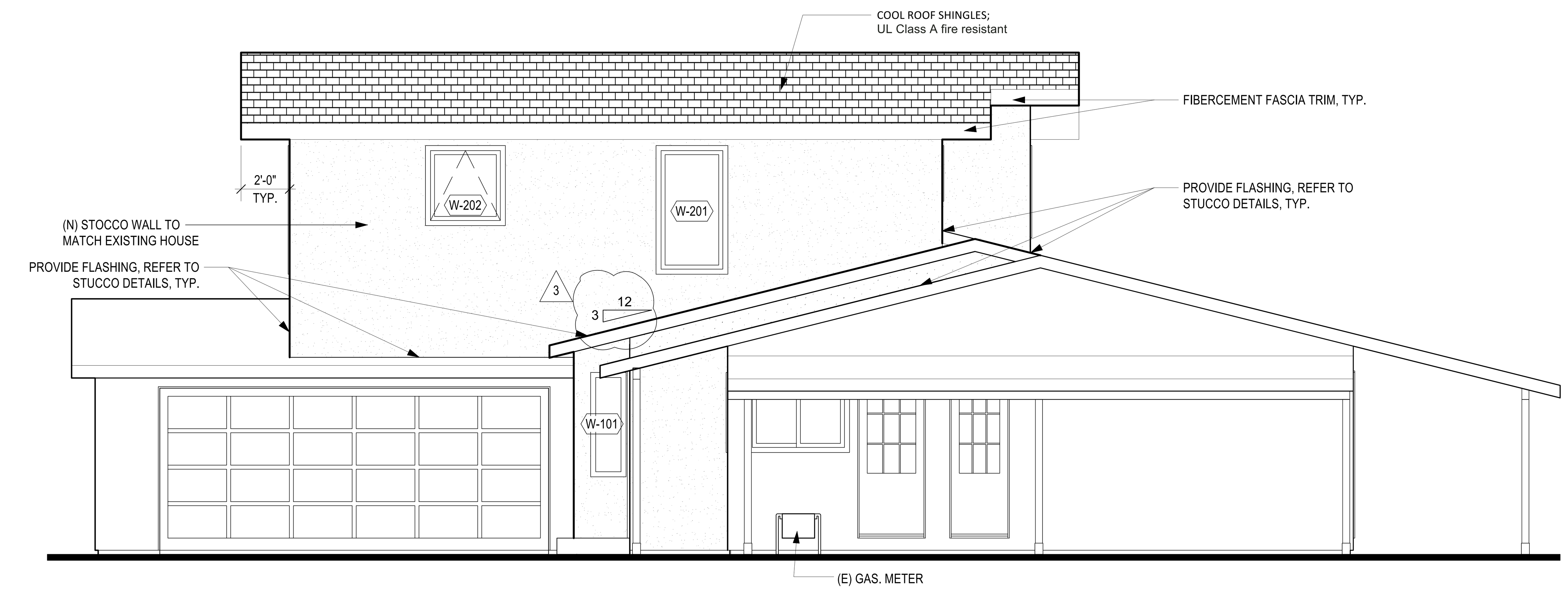
4 (P) REAR (NORTH) ELEVATION
Scale: 1/4" = 1'-0"



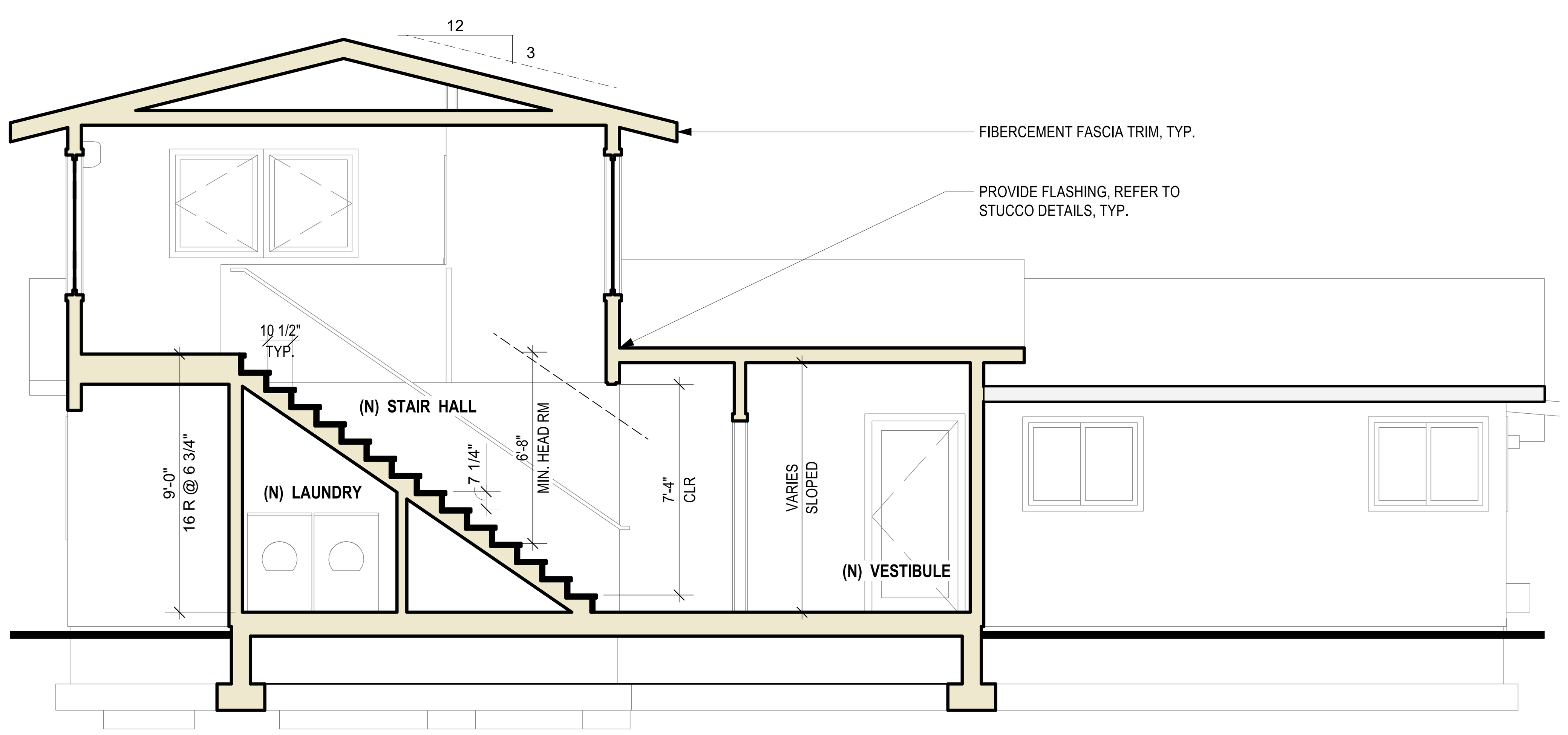
1 (P) FRONT (SOUTH) ELEVATION
Scale: 1/4" = 1'-0"



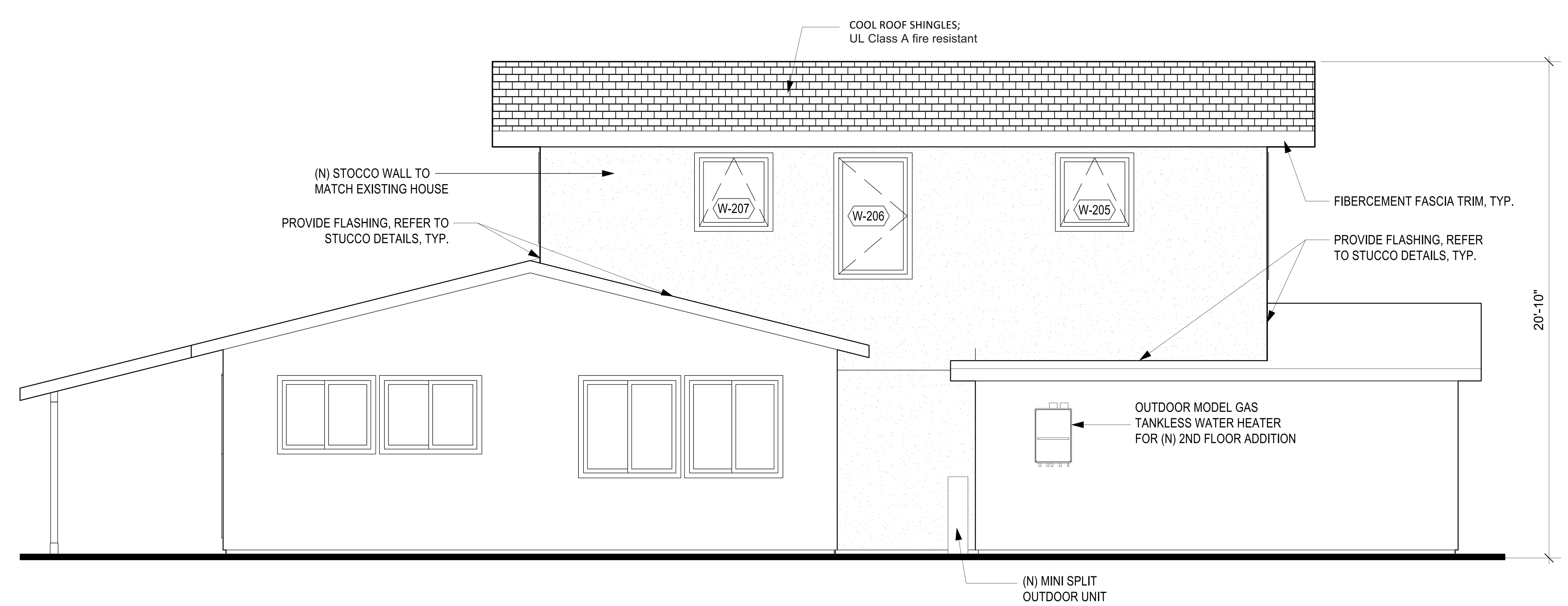
5 SECTION
Scale: 1/4" = 1'-0"



2 (P) SIDE (EAST) ELEVATION
Scale: 1/4" = 1'-0"



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



3 (P) SIDE (WEST) E ELEVATION
Scale: 1/4" = 1'-0"

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34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

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ENTRY & SECOND FLOOR ADDITION

113 SHARON DR. POMONA, CA 91767

(P) ELEVATIONS

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3	3/11/2024	PW & PLANNING COMMENTS REPLY

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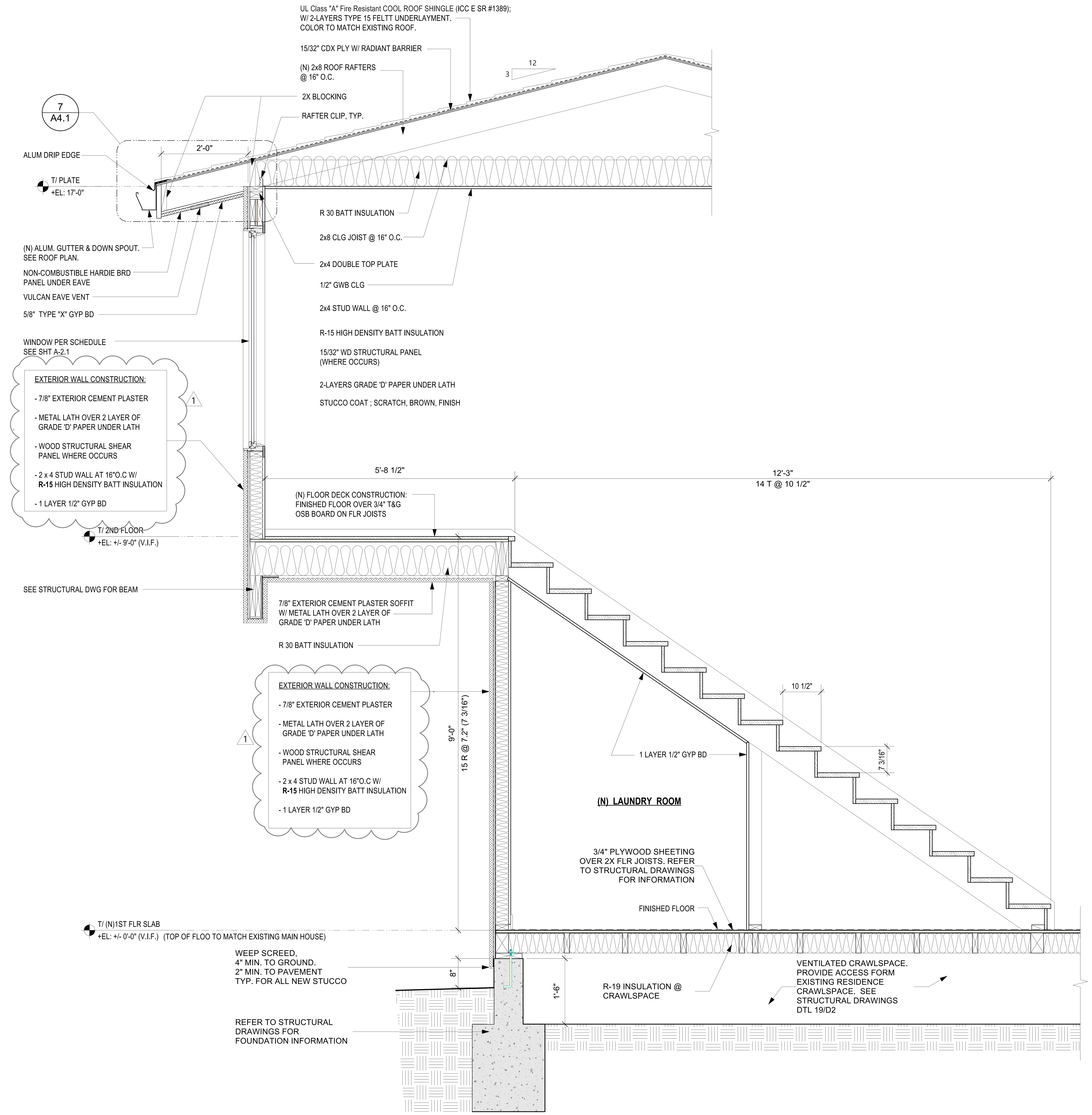

1 WALL SECTION AT STAIR
Scale: 3/4" = 1'-0"
1

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American General Corporation
34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

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3100 CHINO HILLS
Phone 847 480 2212
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ENTRY & SECOND FLOOR ADDITION

113 SHARON DR. POMONA, CA 91767

WALL SECTION

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LICENSED ARCHITECT
GREGORY GESLICKI
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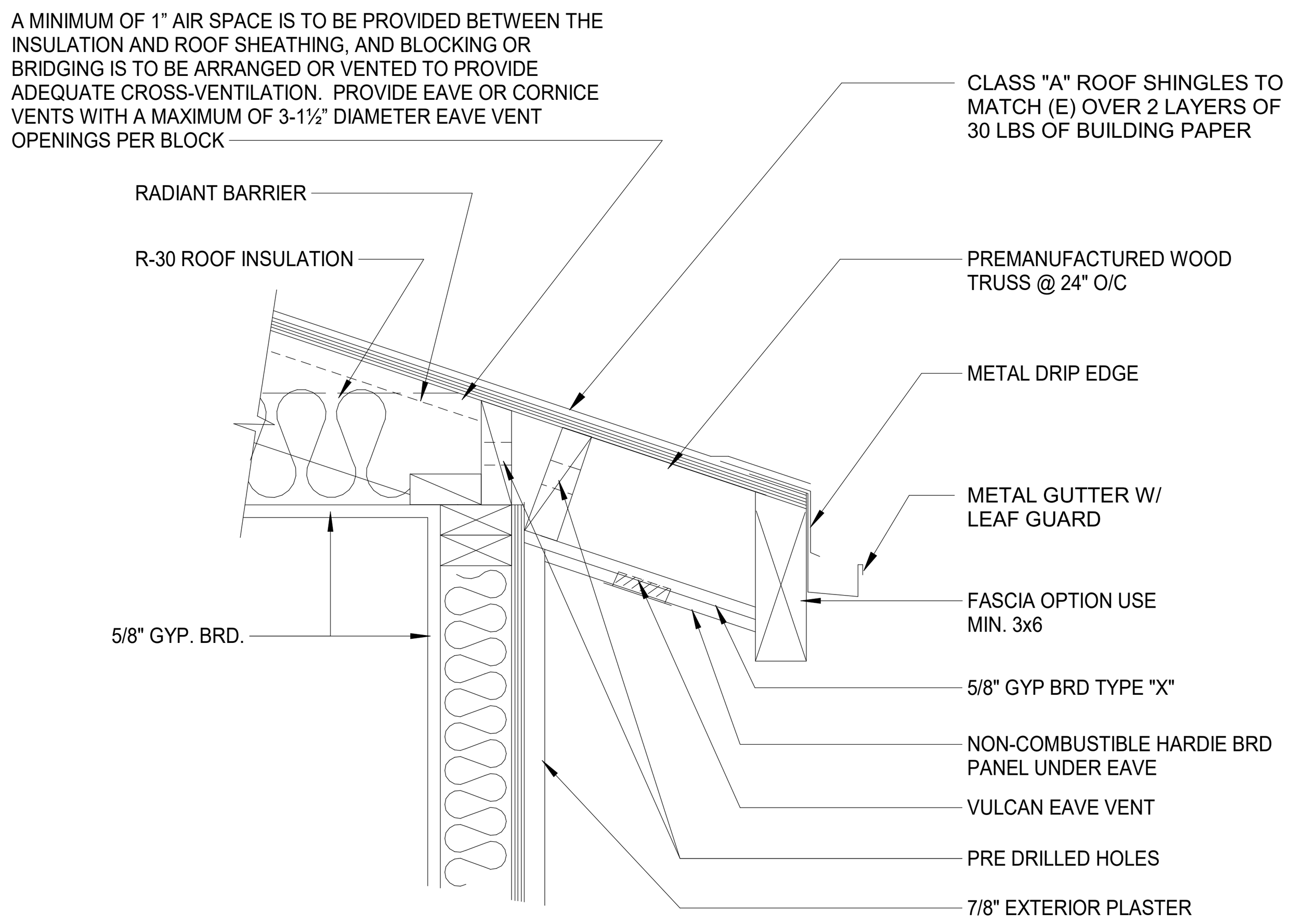
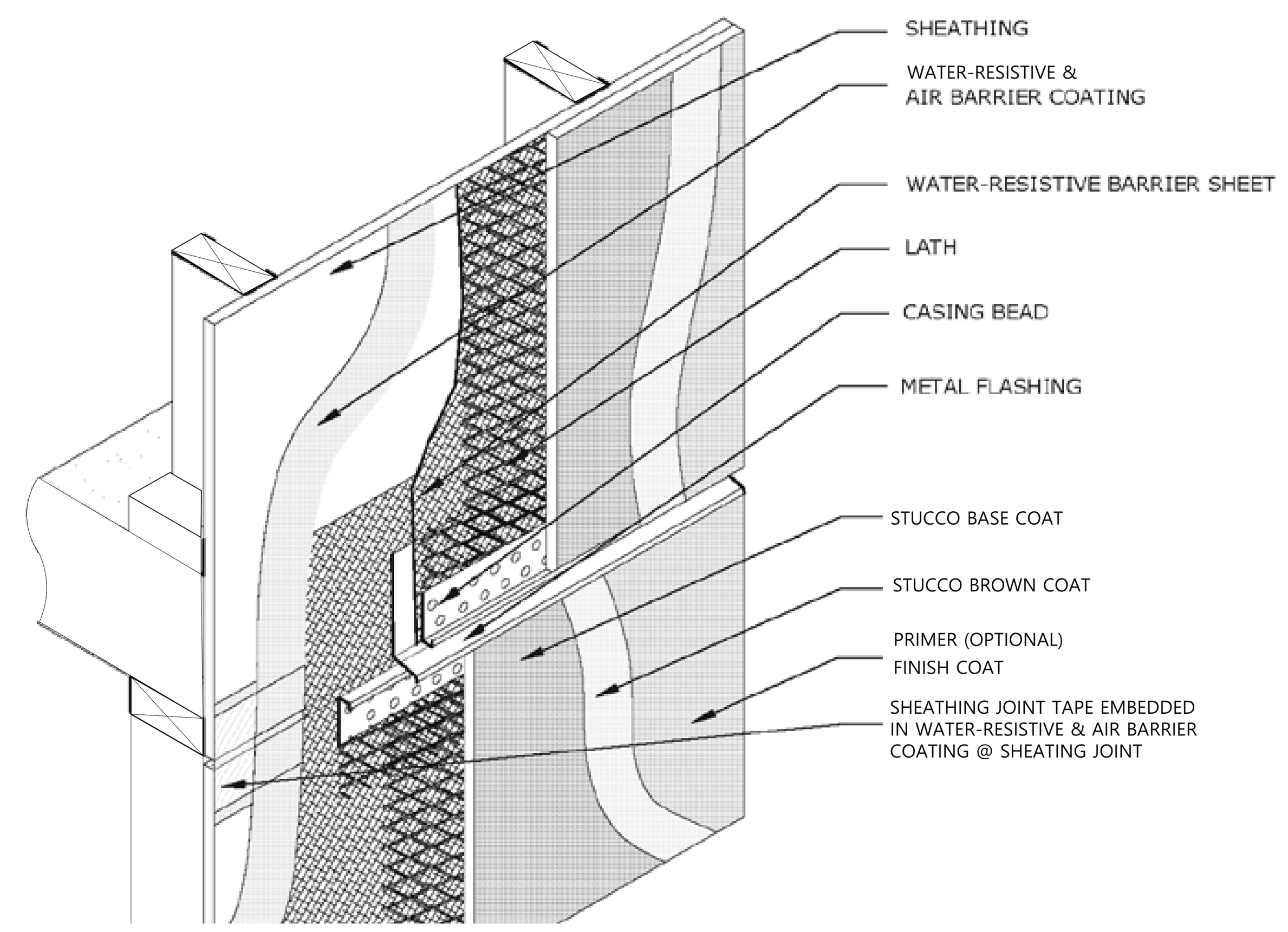
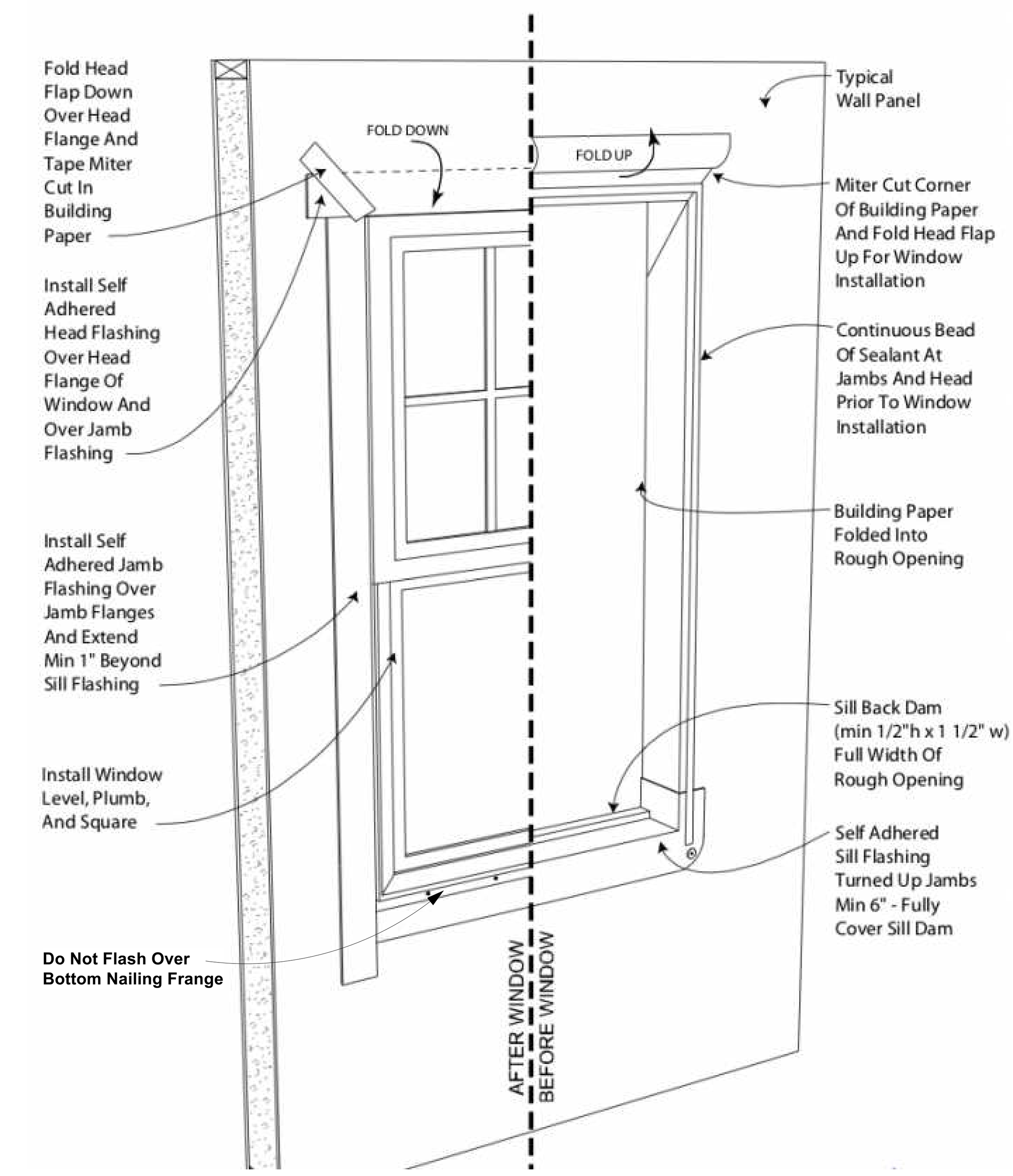
Drawn By	Sheet No.
OC	A-4.0
Project ID 100-34	



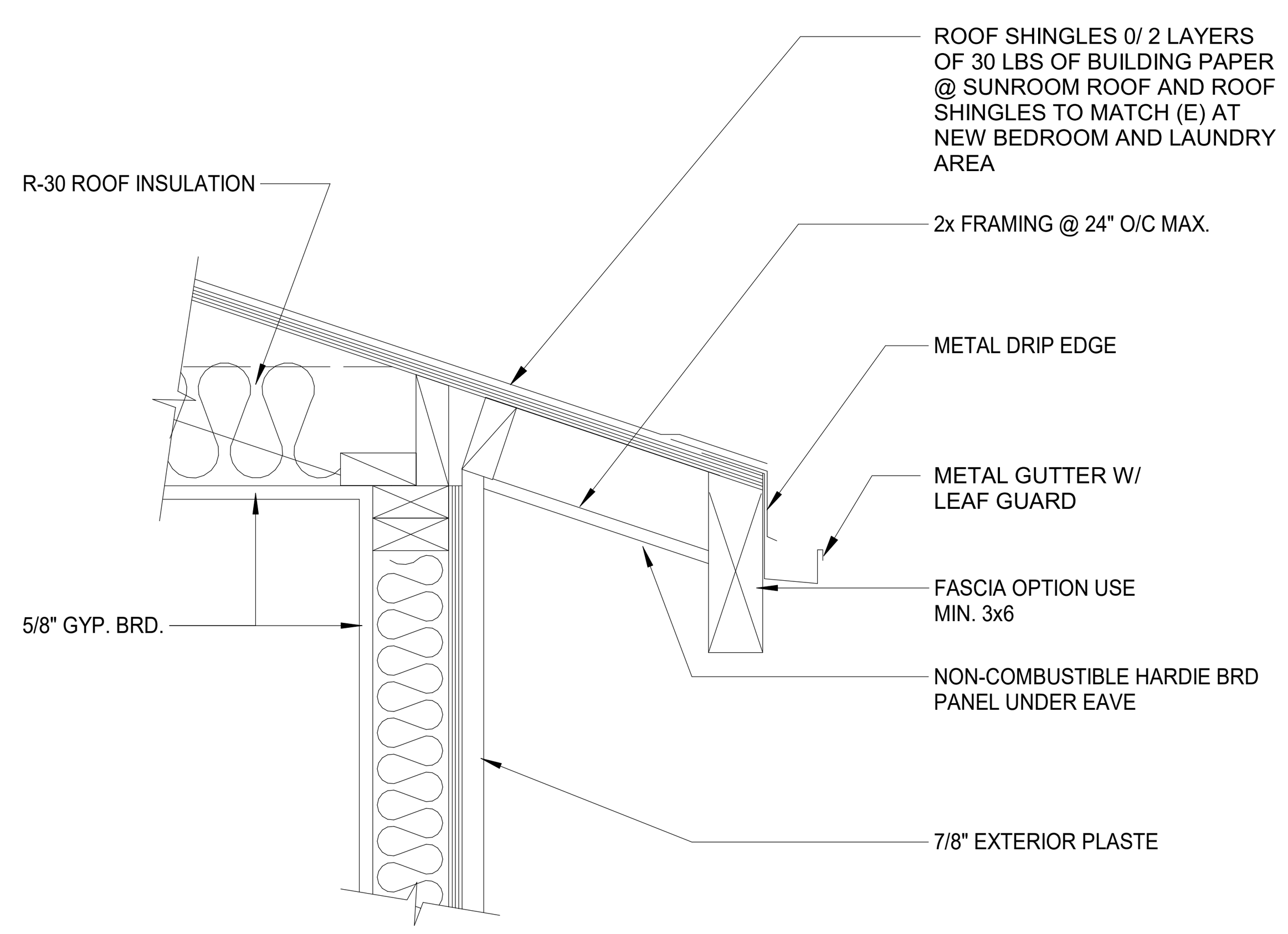
7 — 1 HOUR RATED EAVE DETAIL
1 1/2" = 1'-0"



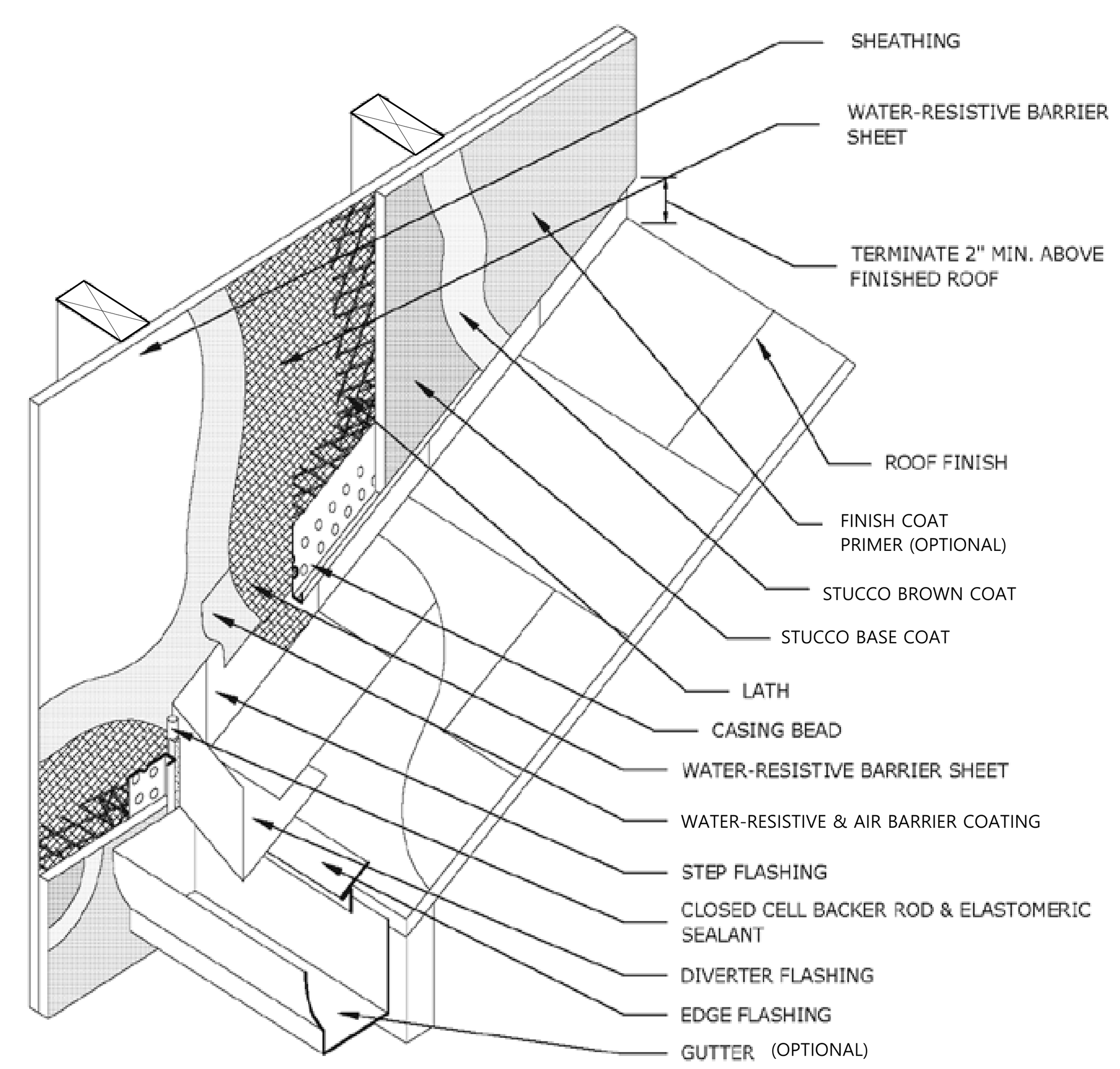
4 — STUCCO JOINT WITH FLASHING
Scale: Actual Size



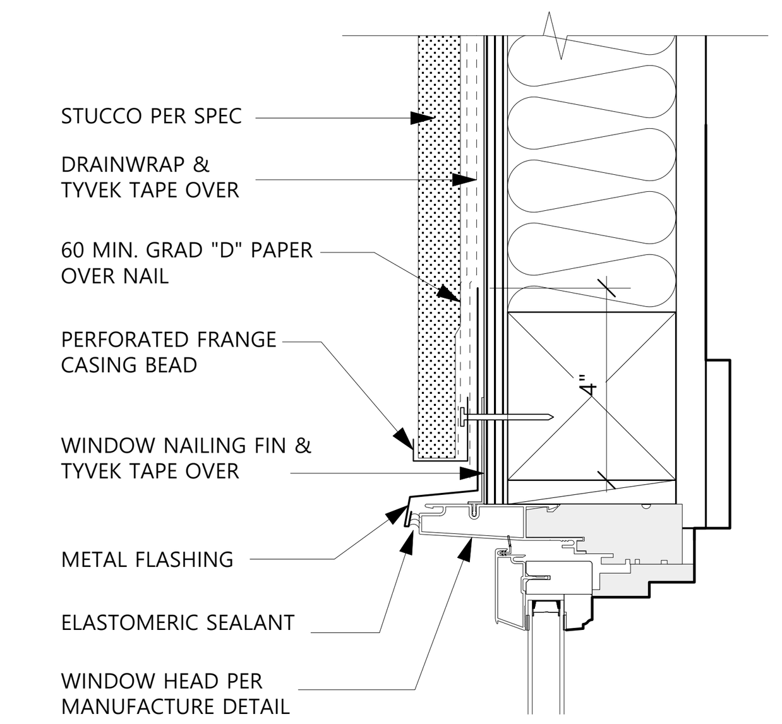
1 — WINDOW FLASHING
Scale: Actual Size



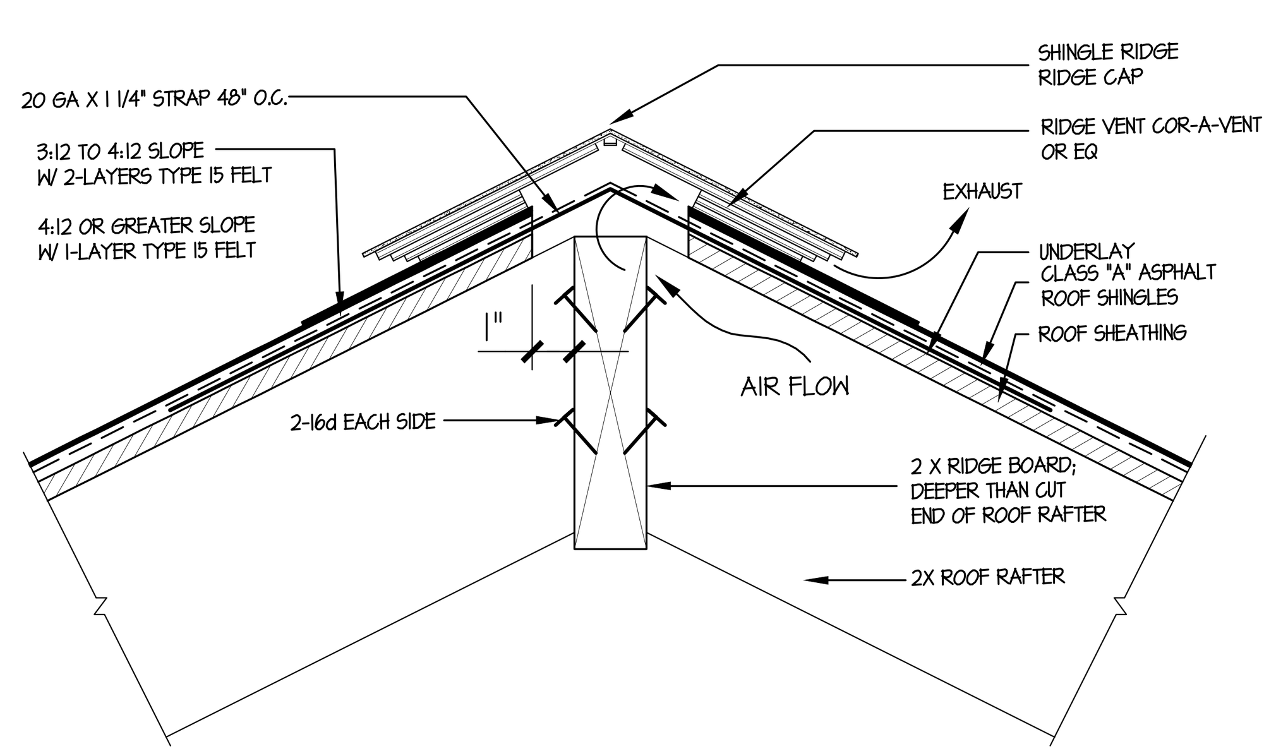
8 — TYP. EAVE DETAIL
1 1/2" = 1'-0"



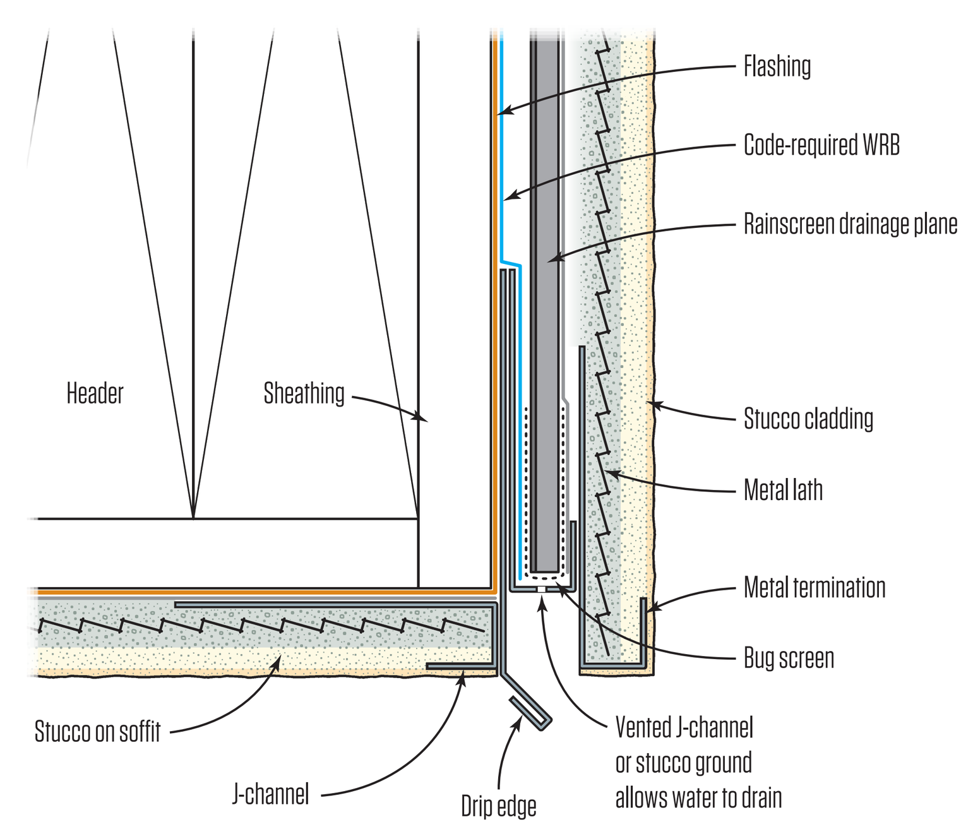
5 — STUCCO TERMINATION AT WALL DIVERTER
Scale: Actual Size



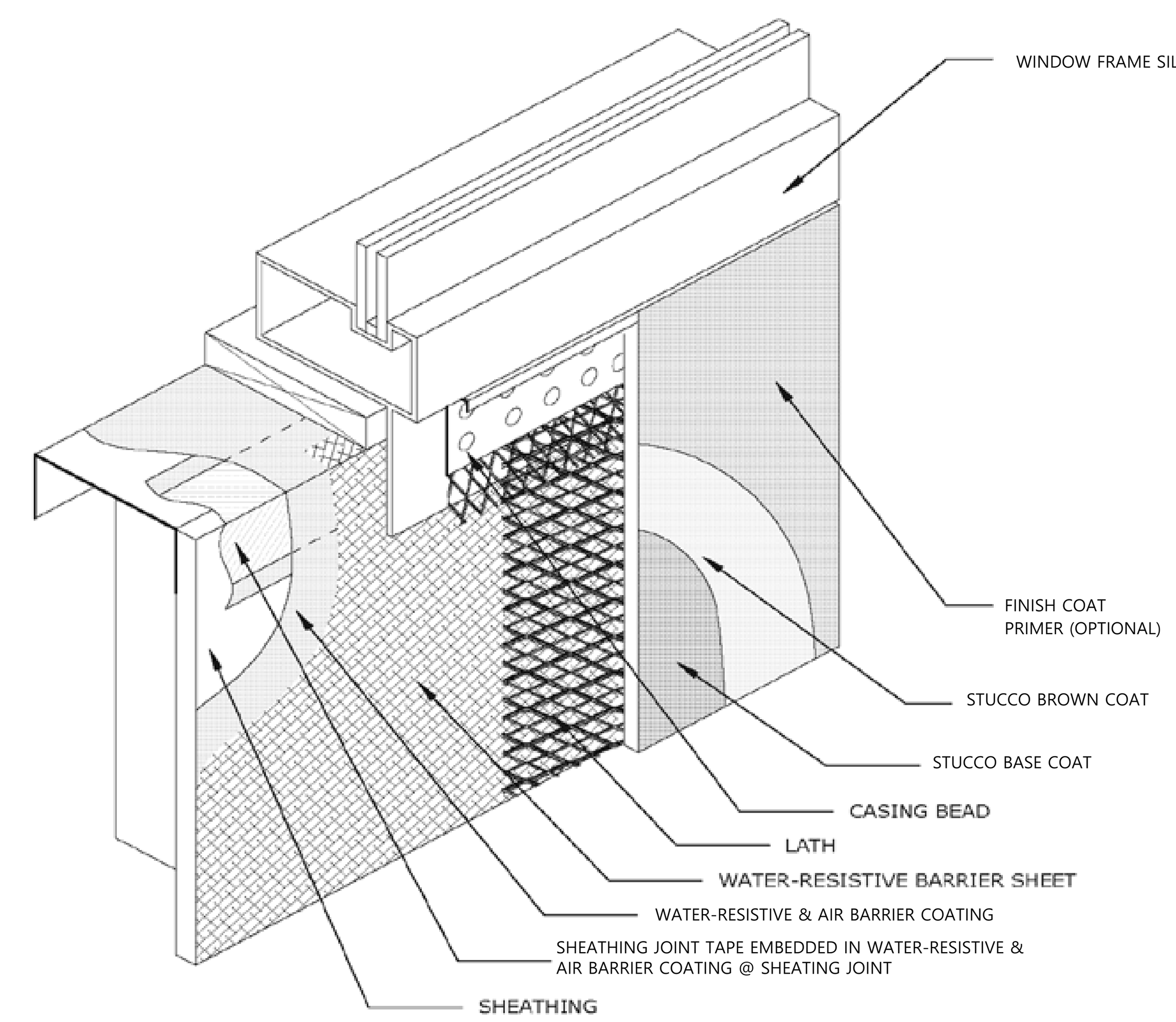
2 — WINDOW HEAD DETAIL WITH NAILING FIN
Scale: 3" = 1'-0"



9 — RIDGE CONNECTION & RIDGE VENT
1 1/2" = 1'-0"



6 — STUCCO DETAIL @ EAST & WEST WALL
3/4" = 1'-0"



3 — STUCCO TERMINATION AT WINDOW SILL
Scale: Actual Size

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34941 Calle Del Sol
Capistrano Beach, CA 92624
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email admin@amgencorp.com

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ENTRY & SECOND FLOOR ADDITION

113 SHARON DR. POMONA, CA 91767

MISC DETAILS

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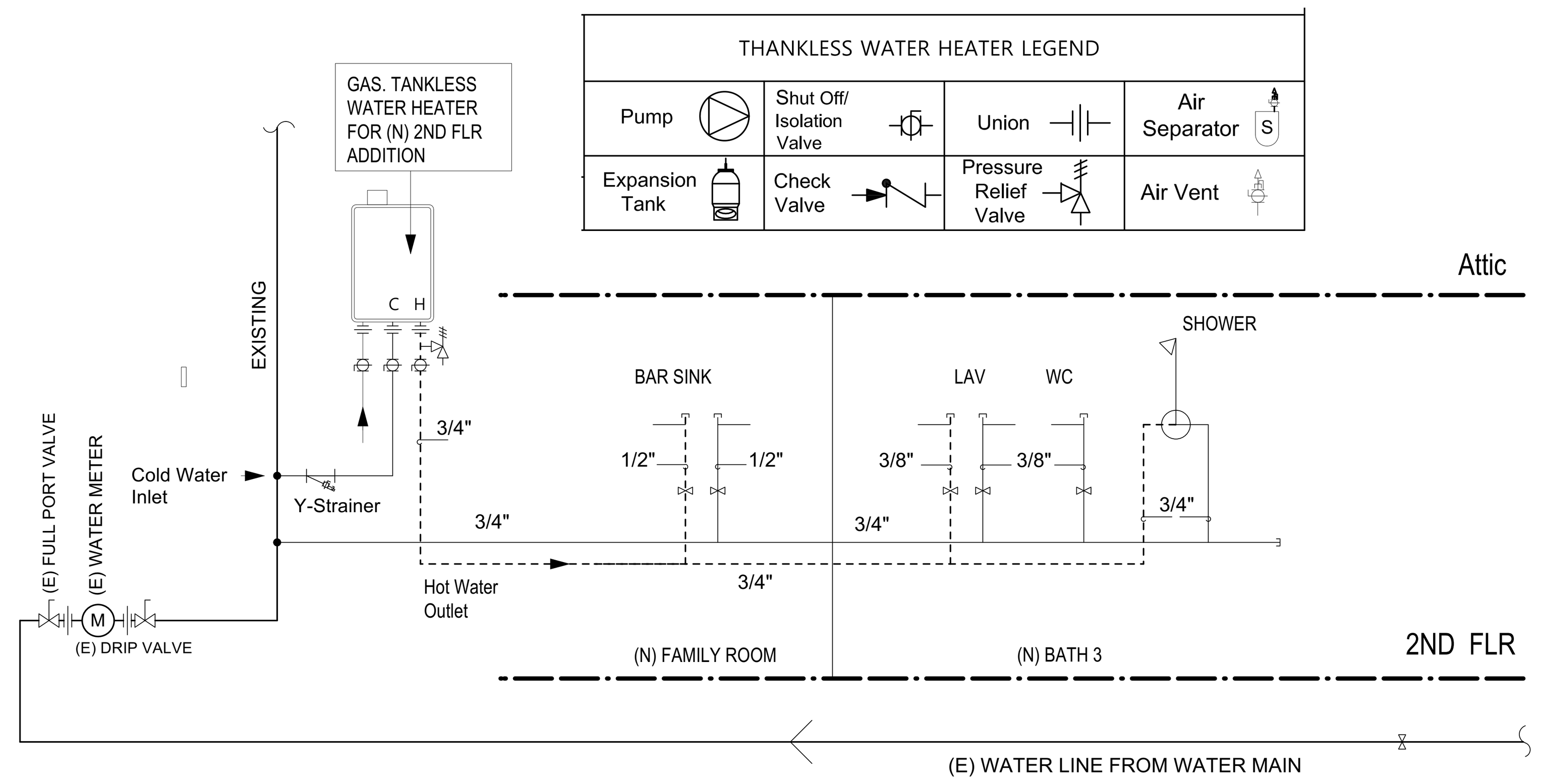


SEE FLOOR/ELCETRICAL PLAN FOR WATER HEATER LOCATION AND CONTRACTOR TO VERIFY THE ADEQUACY OF THE LOCATION.

3 WATER RISER DIAGRAM @ ADDITION
Scale: N.T.S.

WATER PIPING NOTES:

ALL FRESH WATER PIPING TO INCORPORATE THE FOLLOWING REQUIREMENTS:

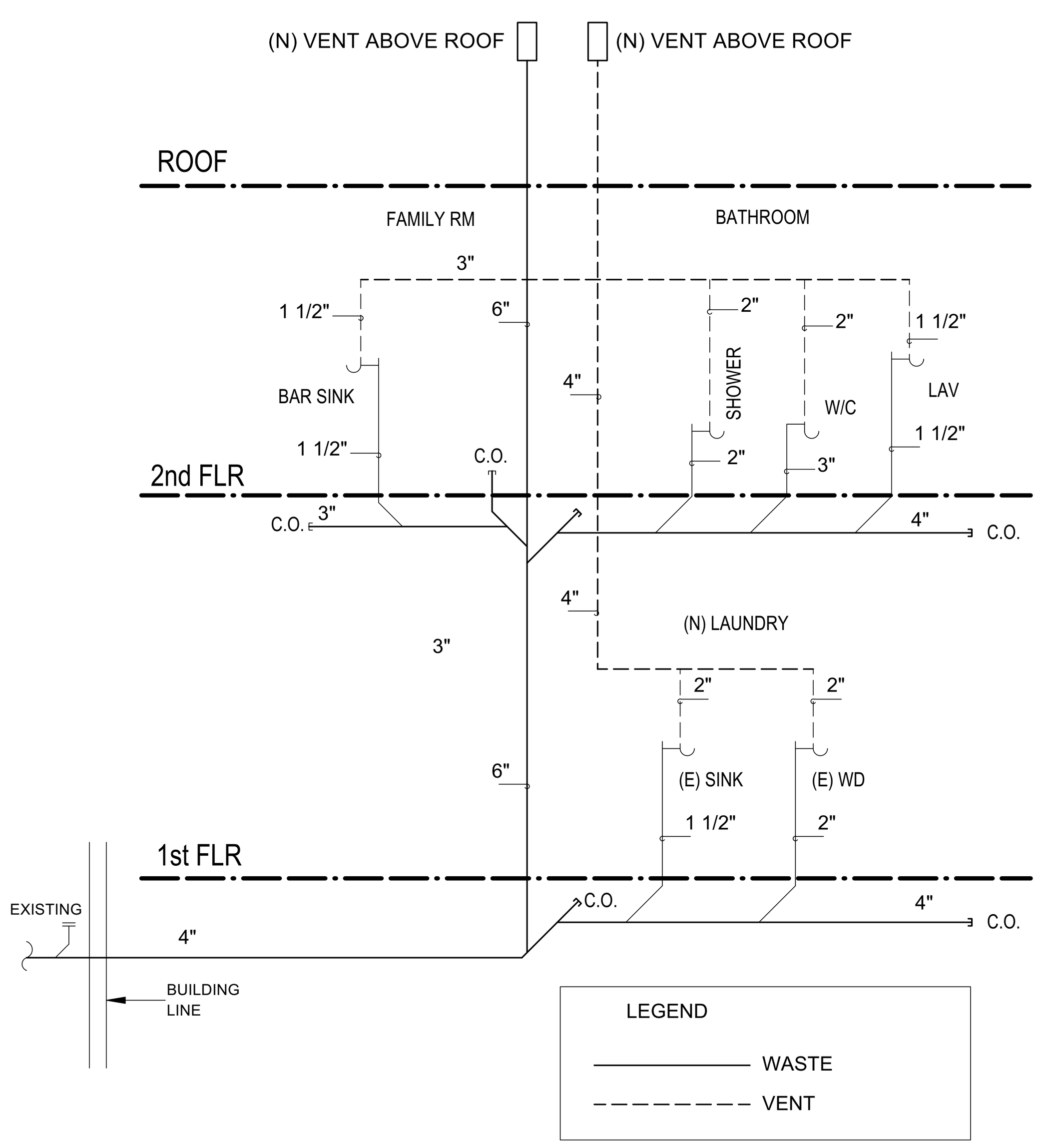
12" AIR CHAMBERS FOR ALL FIXTURES

24" AIR CHAMBERS AT ALL WATER PIPE RISERS

PROVIDE SHUT OFF VALVES @ ALL FIXTURES

ALL PIPING IN UNHEATED SPACES SHALL BE INSULATED

ALL PLUMBING WORK MUST COMPLY WITH CALIFORNIA PLUMBING CODE 2022



4 SANITARY RISER DIAGRAM
Scale: N.T.S.

1

WATER PIPING MATERIALS WITHIN A BUILDING SHALL BE IN ACCORDANCE WITH SEC. 604.1 OF THE CALIFORNIA PLUMBING CODE.

PEX, CPVC AND OTHER PLASTIC WATER PIPING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SEC. 604 OF THE CPC, INSTALLATION STANDARDS OF APPENDIX I OF THE CPC AND MANUFACTURERS RECOMMENDED INSTALLATION STANDARDS.

CPVC WATER PIPING REQUIRES A CERTIFICATION OF COMPLIANCE AS SPECIFIED IN **SEC 604.1.1(d)** OF THE CPC PRIOR TO PERMIT ISSUANCE.

604.1.1 (d) Certification of Compliance. :
Prior to issuing a building permit pursuant to Section 604.1.1, the building official shall require as part of the permitting process that the contractor, or the appropriate plumbing subcontractors, provide written certification: (1) that is required in subdivision (e), and (2) that he or she will comply with the flushing procedures and worker safety measures of this code and the manufacturer's installation instructions.

All non-compliant plumbing fixtures shall be replaced with water-conserving plumbing fixtures. (Civil Code Section 1101.4(b))
Noncompliant plumbing fixture means any of the following:
- Any toilet manufactured to use more than 1.6 gallons of water per flush.
- Any showerhead manufactured to have a flow capacity of more than 2.5 gallons of water per minute.
- Any interior faucet that emits more than 2.2 gallons of water per minute.

ALL EXISTING FIXTURES TO BE VERIFIED AND REPLACED AS REQUIRED.

* PROVIDE STUD GUARDS IN ALL PIPING LOCATIONS

WATER PIPING NOTES:

Materials for building water piping and building supply piping shall comply with the applicable standards referenced in Table 604.1. / 2019 California Plumbing Code.

TABLE 604.1
MATERIALS FOR BUILDING SUPPLY AND WATER DISTRIBUTION PIPING AND Fittings

MATERIAL	BUILDING SUPPLY PIPE AND FITTINGS	WATER DISTRIBUTION PIPE AND FITTINGS	REFERENCED STANDARD(S) PIPE	REFERENCED STANDARD(S) FITTINGS
CPVC	X	X	ASTM D2846, ASTM F441, ASTM F442, CSA B137.6	ASTM D2846, ASTM F437, ASTM F438, ASTM F439, ASTM F1970, CSA B137.6
PVC	X[1]	-	ASTM D1785, ASTM D2241, AWWA C900	ASTM D2464, ASTM D2466, ASTM D2467, ASTM F1970

Notes:
1 For Building Supply or cold-water applications.

DRAINAGE PIPING NOTES:

Materials for drainage piping shall be in accordance with one of the referenced standards in Table 701.2 / 2019 California Plumbing Code.

TABLE 701.2
MATERIALS FOR DRAIN, WASTE, VENT PIPE AND FITTINGS

MATERIAL	UNDERGROUND DRAIN, WASTE, VENT PIPE AND FITTINGS	ABOVEGROUND DRAIN, WASTE, VENT PIPE AND FITTINGS	BUILDING SEWER PIPE AND FITTINGS	REFERENCED STANDARD(S) PIPE	REFERENCED STANDARD(S) FITTINGS
ABS (Schedule 40)	X	X	X	ASTM D2661, ASTM D2680*	ASTM D2661, ASTM D2680*

MAIN HOUSE

Description of Load	Typical Usage	Watts Used
GENERAL LIGHTING AND RECEPTACLE OUTLET CIRCUITS		
Multiply the square footage of house x 3	3 watts/sq. ft.	4,338
KITCHEN CIRCUITS		
Kitchen circuits	3,000 watts	3,000
Electric oven	2,000 watts	NA
Electric stove top	5,000 watts	NA
Microwave	1,500 watts	1,200
Garbage disposal under kitchen sink	1,000 watts	1,000
Automatic dish washer	3,500 watts	3,500
Garbage compactor	1,000 watts	NA
Instantaneous hot water at sink	1,500 watts	NA
LAUNDRY CIRCUITS		
Laundry circuit	1,500 watts	1,500
Electric clothes dryer	4,500 watts	4,500
HEATING AND AIR CONDITIONING CIRCUITS		
Central heating and air conditioning	6,000 watts	6,000
Window mounted air conditioning	1,000 watts	NA
Whole-house or attic fan	500 watts	500
Central electric furnace	8,000 watts	NA
Evaporative cooler	500 watts	NA
OTHER ELECTRICAL LOADS		
Electric water heater (storage type)	4,000 watts	NA
Electric tankless water heater	15,000 watts	NA
Swimming pool or spa	3,500 watts	NA
Other (describe)		
Other (describe)		
Other (describe)		
TOTAL WATTS USED @ Existing Main House		25,538

(N) 2ND FLR ADDITION

Description of Load	Typical Usage	Watts Used
GENERAL LIGHTING AND RECEPTACLE OUTLET CIRCUITS		
Multiply the square footage of house x 3	3 watts/sq. ft.	1,698
KITCHEN CIRCUITS		
Kitchen circuits	3,000 watts	NA
Microwave	1,500 watts	NA
Garbage disposal under kitchen sink	1,000 watts	NA
Automatic dish washer	3,500 watts	NA
20 Amp. Bathroom Branch Circuits	2,400 watts	2,400
HEATING AND AIR CONDITIONING CIRCUITS		
Mini Split	2,500 watts	2,500
Panasonic WhisperComfort Ventilator	23 watts	23
TOTAL WATTS USED @ (N) 2nd Floor ADDITION		6,621
TOTAL WATTS USED @ (P) RESIDENCE		32,159

EXISTING ELECTRICAL PANEL @ Existing Main House ; **100 AMS**
TOTAL WATTS USED @ (P) RESIDENCE; 32,159 (VA)

The suggested amperage needed to power the proposed home adequately ;
((32,159 VA-10,000 VA) X (0.40) + 10,000 VA) / 240 (V) = **79 Amperes**

ELECTRICAL NOTES

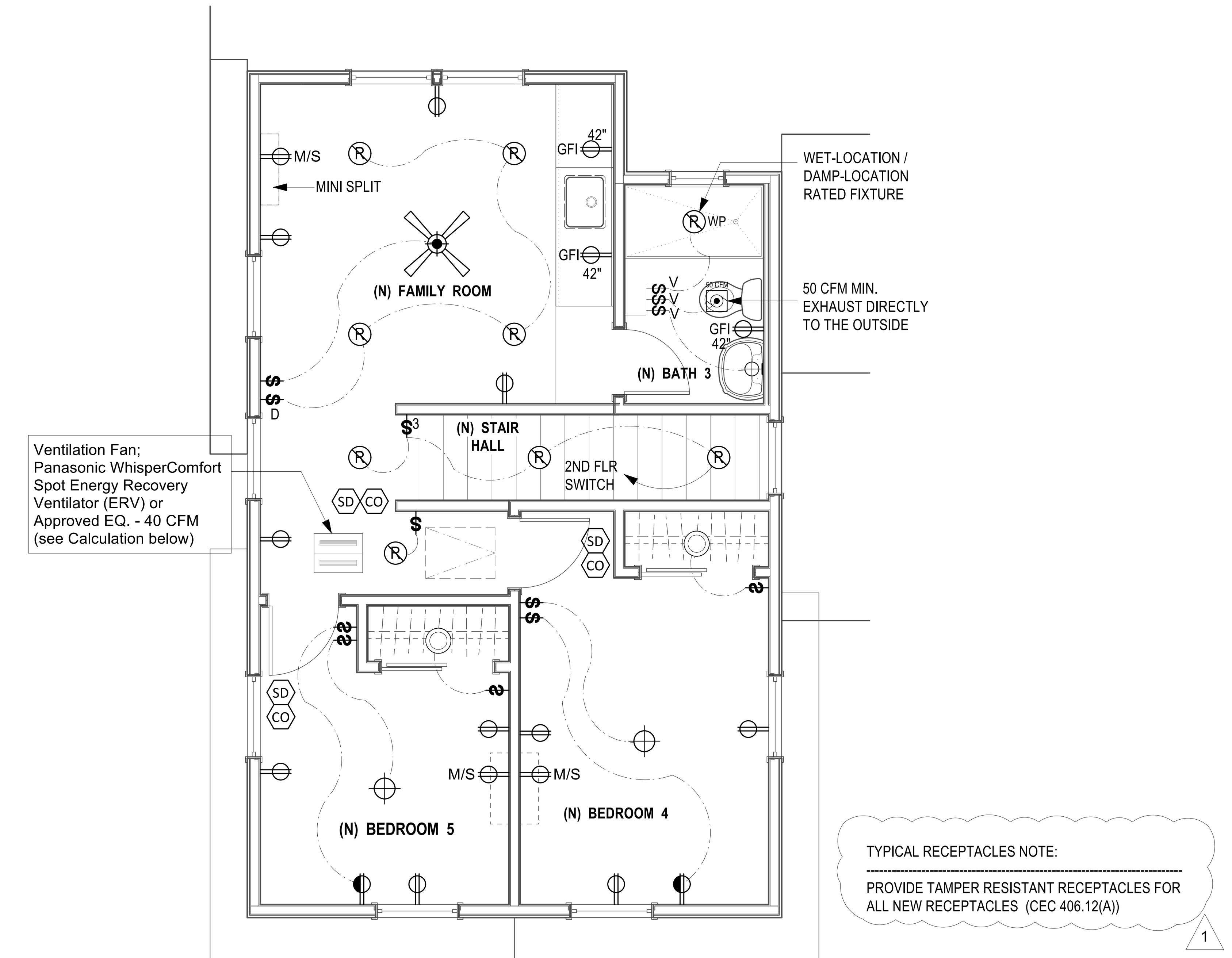
- 20-amp branch shall be provided to supply bathroom receptable outlets. The circuit shall have no other outlets.
- Ground fault circuit interruption (GFCI)for personnel shall be provided and installed in readily accessible location.
- Arc fault circuit interruption shall be installed to provide protection of the branch circuit.
- Tamper-resistant receptacles shall be installed in all areas specified in 210.52. All nonlocking type 12 volt 12 and 2-ampere receptacles shall be listed tamper-resistant receptacles.
- Smoke alarms shall be interconnected, hard-wired with battery backup, and shall be installed in accordance with NFPA 72.
- Carbon monoxide alarm shall be interconnected, hard-wired with battery backup.

Receptacle outlet locations will comply with CEC Article 210.52

a) Tamper resistant receptacles for all locations described in 210.52 (i.e., all eceptacles in a dwelling).
b) Weather resistant type for receptacles installed in damp or wet locations.
C) GFCI protected outlets for locations described in NEC 210.8(A):
Laundry areas, kitchen dishwashers, kitchens, garages, bathrooms, outdoors, within 6' of a sink, etc

RESIDENTIAL ENERGY LIGHTING REQ
All installed luminaires shall be high-efficacy in accordance with ES TABLE 150.0-A. Light sources that are not marked "JA8-2016-E" shall not be installed in enclosed luminaires. ES 150.0(k)
In bathrooms, garages, laundry rooms, and utility rooms at least one luminaire shall be controlled by a vacancy sensor.

Outdoor lighting permanently mounted to the building must be controlled by Photocell and Motion Sensor and a manual ON/OFF switch that does not override the chosen combination: (CEC §150.0(k)3)



WET-LOCATION / DAMP-LOCATION RATED FIXTURE

50 CFM MIN. EXHAUST DIRECTLY TO THE OUTSIDE

Ventilation Fan; Panasonic WhisperComfort Spot Energy Recovery Ventilator (ERV) or Approved EQ. - 40 CFM (see Calculation below)

TYPICAL RECEPTACLES NOTE:
PROVIDE TAMPER RESISTANT RECEPTACLES FOR ALL NEW RECEPTACLES (CEC 406.12(A))
1

2 (P) 2ND FLR ELECTRICAL PLAN
Scale: 1/4" = 1'-0"

HOUSE FAN (MIN. REQ'D CFM) @ 2nd Floor
CFM = FLOOR AREA X 0.01 + {(# OF BEDROOM +1) * 7.5}
= 566 x 0.01 + (3*7.5) = 28.16 (CFM)

ELEC. CLOTHES DRYER:

CLOTHES DRYER SHALL HAVE A 4-WIRE GROUNDED ELECTRICAL OUTLET. (CEC 250.140)

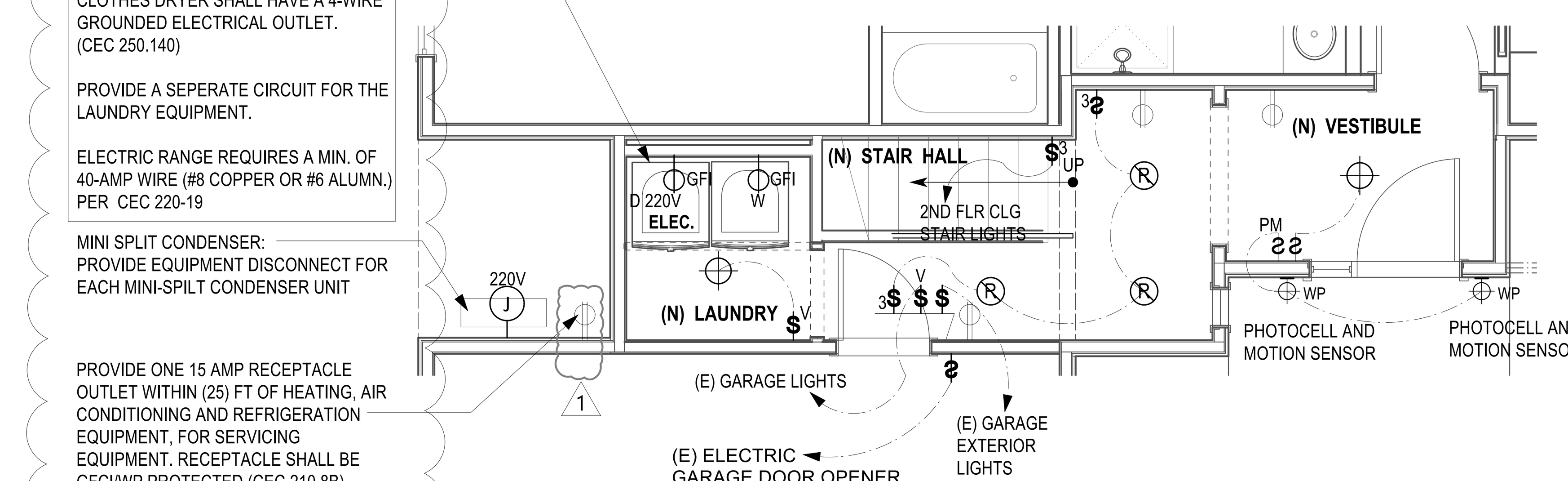
PROVIDE A SEPERATE CIRCUIT FOR THE LAUNDRY EQUIPMENT.

ELECTRIC RANGE REQUIRES A MIN. OF 40-AMP WIRE (#8 COPPER OR #6 ALUMN.) PER CEC 220-19

MINI SPLIT CONDENSER:
PROVIDE EQUIPMENT DISCONNECT FOR EACH MINI-SPILT CONDENSER UNIT

PROVIDE ONE 15 AMP RECEPTACLE OUTLET WITHIN (25) FT OF HEATING, AIR CONDITIONING AND REFRIGERATION EQUIPMENT, FOR SERVICING EQUIPMENT. RECEPTACLE SHALL BE GFCI/WP PROTECTED (CEC 210.8B)

1



1 (P) 1ST FLR ELECTRICAL PLAN
Scale: 1/4" = 1'-0"

1ST FLOOR TYPICAL RECEPTACLES NOTE:
PROVIDE TAMPER RESISTANT RECEPTACLES FOR ALL NEW RECEPTACLES (CEC 406.12(A)).

THE BRANCH CIRCUIT SERVING THE GARAGE RECEPTACLES SHALL NOT SERVE OUTLETS OUTSIDE OF THE GARAGE
1

VERIFY POWER OUTLET VOLTAGE AMOUNTS W/ MANUFACTURE BEFORE INSTALLATION OF OUTLETS FOR TANKLESS WATER HEATER, MINI-SPLIT, AND ALL OTHER ELECTRICAL EQUIPMENT AND APPLIANCES.

ELECTRICAL SYMBOLS LEGEND

- SINGLE PLUG RECEPTACLE
- DUPLEX RECEPTACLE-WALL - ARC
- GFI GROUND FAULT INTERRUPT DUPLEX RECEPTACLE - WALL
- WP WATER PROOFED GFI DUPLEX RECEPTACLE - WALL
- J JUNCTION BOX
- S SINGLE POLE SWITCH W/ DIMMER SENSOR
- S_3 THREE-WAY SWITCH W/ DIMMER SENSOR
- S_4 FOUR-WAY SWITCH W/ DIMMER SENSOR
- S_V SINGLE POLE SWITCH W/ VACANCY SENSOR
- S_{PM} SINGLE POLE SWITCH W/ PHOTOCELL AND MOTION SENSOR
- SD SMOKE DETECTOR - HARD WIRED, INTER CONNECTED W/ BATTERY BACK-UP
- CO CARBON MONOXIDE DETECTOR - HARD WIRED, INTER CONNECTED W/ BATTERY BACK-UP
- WP WATER PROOF / WEATHER RESISTANT
- EXHAUST FAN - ENERGY STAR HUMIDISTAT CONTROLLED FANS, DUCTED OUT MIN. 3 FT AWAY FROM WINDOWS AND DOORS.
- R RECESSED 6" FIXTURE
- LED UNDERCABINET PUCK LIGHT
- WALL SCONCE
- SURFACE MOUNTED FIXTURE
- STRIP LIGHT FIXTURE
- LED FLUSH MOUNT CEILING LIGHT
- CEILING FAN W/ LIGHT
- ELEC. METER & DISCONECT
- EP ELEC. PANEL

AGC
American General Corporation
34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

OCGG DESIGN

ENTRY & SECOND FLOOR ADDITION

113 SHARON DR. POMONA, CA 91767

ELECTRICAL & PLUMBING PLANS

NO.	DATE	ISSUE NOTE
1	12/27/2023	BUILDING PERMIT APPLICATION
2	2/4/2024	REVIEW COMMENTS REPLY

3/11/24

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND TO BEST OF MY KNOWLEDGE CONFIRM TO THE PERTINENT LOCAL BUILDING CODE AND REGULATIONS. GREGORY GESICKI, NCARB, REGISTERED CALIFORNIA ARCHITECT CALIFORNIA LICENSE NO. C 40389, LICENSE EXPIRATION 11/30/2025

Drawn By	Sheet No.
CC	EP-1
Project ID 100-34	

GENERAL NOTES

1. All work shall conform to the requirements of the Department of Building and Safety and all other applicable codes, ordinances and regulations. See note on plans or use most current editions of 2022 CBC

2. Notify the Architect before commencing any work on items where discrepancy or omissions from the drawings are encountered or where there is any doubt as to the meaning. Contractor shall attend job walk prior to submitting bid. All demo work and site conditions to be noted and incorporated into bid.

3. Any work or material shown on either drawings or specified in writing shall be executed as though covered by both.

4. Any conflict or errors in the drawings and specifications shall be reported to the Architect before proceeding. Dimensions shall not be scaled from drawings. Dimensions given on the drawings shall be verified by the contractors and all subcontractors on the job site.

5. All work and workmanship shall comply strictly with the requirements of the governing codes and other governing ordinances. Where work exceeding these requirements is not specifically called for in the contract documents, they shall be considered minimum standards of performance for the work of this contract.

6. Disclaimer: The project Architect or Engineer will not be responsible for any action taken by anyone on the project if that person has knowledge of any discrepancies, omission, or ambiguity in the calculation, drawings, or specifications, until the project Architect or Engineer has been notified, corrected the discrepancy, made teh inclusion, or more clearly explained the intent of the calculations, drawings or specifications.

7. Dimensions have preference over scale. All dimensions are to the face of the studs unless otherwise noted.

8. General Contractor and sub-contractors shall be required to obtain his own permit, city license, state license, and insurance.

9. General Contractor and sub-contractors shall clean up and remove from the premises, from time to time, all waste material and debris of every description which may accumlate in or about the premises as a result of his work.

10. General Contractor and sub-contractors are to review all the contract documents, other sections, drawings, etc. since they may include work which they are responsible for and should be included in their bid and as a part of the construction coordination with other trades.

11. Architect shall not be held responsible for changes or additions to this project, by owner, or contractor, or anyone else.

12. Utility Services: Contractor and subcontractors shall confirm locations of utilities and notifiy all persons working on site of existing utilities. Contractor shall locate and identify active utility services and temporarily deactivate them when they constitute a hazard. Location of gas, electric, adn water meters to conform with utility company requirements. Prior to digging, the contractor and/or subcontractor shall notify the Underground Service Alert at (800) 422-4133 at least two (2) days prior to excavation.

13. Any energy calculations, and Structural calculations shall be considered a part of this contract document and shall remain on site during the course of construction along with the drawings, shop drawings, and specifications for review by any subcontractor. This information shall be available during the bidding period, all subcontractors are responsible for reviewing and understanding their content. Any errors, omission, lack of clarity, shall be brought to teh attention of the Architect for clarification.

14. The Contractor, Subcontractors, and Owner shall comply with all Federal, State, and local Environmental Laws, Rules, and Regulations as well as all Fed OSHA rules. This includes, but is not limited to all Rules adopted by the controlling Air Quality Management District which may cover paints and solvents and asbestos removal, also all regulations regarding usuage of hazardous materials, storage, disposal, and transportation of hazardous wastes. The Architect shall be held harmless and indemnified by the Owner and Contractor for any litgation relative to environmental compliance. It is understood the Architect is not responsible for this area and the Owner and Contractor must be diligent in this area.

15. All Details, Sections, and Notes shown on drawings are intended to be typicla and shall apply to similar situations elsewhere unless otherwise noted.

16. The details on the drawings shall be used wherever applicable unless noted otherwise on the drawings. Notes and details on the drawings shall take precedence over general notes and typical details.

17. Contractor agrees he shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all normal working hours, and the contractor shall defend, indemnify, and hold the owner and the architect harmless form any and all liability, real or alleged, in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner or the architect.

18. Observation visits to the job site by the architect's and engineer's field representatives shall neither be construed as inspection nor approval of construction.

19. During and after construction, the builder and owner shall keep loads on the structure withing the limits of design loads as set forth in the governing building code.

20. Protect existing construction finishes, adjacent property, planting and trees. Protect the work from rain and other natural elements. Repair, refinish, or replace any items damaged during construction.

21. Temporary electric and water services shall be furnished and paid for by the owner unless otherwise negotiated.

22. Contractor shall provide a temporary toilet in accordance with local ordinances if no existing toilet is available on site.

23. Liability Insurance and Worker's Compensation Insurance: Contractor and subcontractors shall purchase and maintain, complete coverage to protect the claims under worker's compensation acts, adn have current liabiity insurance, and show proof thereof.

24. The drawings are the property of the architect or engineer and are protected by U.S. copyright laws.

25. If it is discovered the contractor and/or his subcontractors have knowledge of any errors, omissions, or discrepancies which were not brought to the attention of the architect prior to their contract and subsequently results in an extra, said contractor may be held liable for withholding such information.

MICROLLAMS / PARALLAMS / TIMBERSTRAND

1) MICROLLAMS/PARALLAMS/TIMBERSTRANDS SHALL BE FABRICATED BY THE TRUS–JOIST OR AN APPROVED EQUAL IN STRUCTURAL DESIGN AND LOAD VALUES, AND CONFORM TO ICC ESR–1387 AND SHALL HAVE THE

DESIGN STRESSES (100 % LOAD DURATION)

	CATEGORY	E psi	F(b) psi	Fc ⊥ psi (2)	Fc ‖ psi	Fv psi
1	TIMBER STRAND LSL	$1.5X10^{6}$	$2250^{(4)}$	650	1950	285
2	MICROLLAM LVL	$1.9X10^{6}$	$2600^{(3)}$	750	2310	285
3	PARALLAM PSL	$2.0X10^{6}$	$2900^{(1)}$	650	2900	290

(1) FOR 12 INCH DEPTH, FOR OTHERS, MULTIPLY BY (12/d) 0.111

(2) Fc ⊥ SHALL NOT BE INCREASED FOR DURATION OF LOAD.

(3) DEPTHS GREATER THAN 12", MULTIPLY F(b) BY (12/d) 0.136

(4) DEPTHS GREATER THAN 12", MULTIPLY F(b) BY (12/d) 0.092

2) FOR NOTCHING, DRILLING, AND MULTIPLE MEMBER CONNECTION, COMPLY WITH MFG'S SPECIFICATION OR CALL MESA ENGINEERING.

SITE WORK

1. Provide temporary sanitation facilities during duration of construction.

2. No trenches or excavations 5' or more in depth into which a person is required to descend or obtain necessary permit form the Stae of California Division of Industrial Safety prior to issuance of a building or grading permit.

3. Site Clearing- All existing vegetation shall be stripped and halved off from the site.

4. Maintenance of Site- The Architect, Engineer, Contractor, or any Subcontractors shall not be held responsible for any damages to the dwelling or the surrounding site as a result of the owner's maintenance practices; however, the following should be passed on to the owner as recommendations for maintenance of graded site.
    1) Maintain existing slope planting, providd new approved planting where lacking and maintain irrigation systems in working order
    2) Maintain paved diverter terrace, intercepter terraces, downdrains, opportenances such as inlets and velocity reducer structures in clean conditions and in good repair.
    3) Earth berms prevent water from flowing over slopes. It is important these berms be maintained.
    4) Standing storm water on the pad area directly above descending slopes, whether natural, cut, or fill is a major contributor toward slope failure. It is important the pad drainage be maintained at a minimum of 2% to the street or other approved location to prevent this situation.
    5) Side Swales which direct water around the house should be maintained so that they will not become ineffective.
    6) Catch basins, grates, and subsurface drainage piping should be kept free of silt and debris.
    7) Root gutters and downspouts should be inspected periodically to assure they are not broken or clogged. All nonerosive drainage devices should be kept clean and in good repair.
    8) Extensive landscaping or revisions to the property may seriously alter the surface drainage pattern. When landscaping, homeowners should avoid disrupting flow patterns created when the property drainage in hillside areas is from the rear yard to the street. Some properties drain to natural watercourse, or other specific watercourse intended for this use.
    9) Any problems such as erosion should be repaired immediately in order that more serious problems may be averted.
    10) Rodent activity should be controlled to prevent water penetration and loosening of the soil.

WOOD FRAMING

1) ALL LUMBER SHALL BE GRADE MARKED AND CONFORM WITH THE STANDARD GRADING AND DRESSING RULES (NO. 16) OF THE WEST COAST LUMBER INSPECTION BUREAU. MAXIMUM MOISTURE CONTENT NOT TO EXCEED 19%. FRAMING LUMBER TO WEST COAST DOUGLAS FIR LARCH AS FOLLOWS:
-ALL 4 X 12 AND SMALLER FRAMING MEMBERS..........#2, U.N.O.
-ALL 4 X 14, 4 X 16, 6 X AND 8 X FRAMING MEMBERS..........#1, U.N.O.
-ALL 2 X JOISTS AND RAFTERS..........#2, U.N.O.
-ALL 2 X 4 STUDS..........CONSTRUCTION GRADE OR BETTER, U.N.O.
-ALL 2 X 6 AND LARGER STUDS..........#2 OR BETTER, U.N.O.
-ALL POST AND TIMBERS..........#1, U.N.O.

2) ALL RESAWN AND ROUGHSAWN BEAMS ARE TO BE DELIVERED FREE OF HEART CENTER.

3) ALL SILL PLATES RESTING ON CONCRETE OR MASONRY TO BE PRESSURE TREATED DOUGLAS FIR.

4) PLYWOOD FOR ROOF SHEATHING SHALL BE CDX. USE EXTERIOR TYPE, MIN. GRADE WHERE PLYWOOD IS EXPOSED TO WEATHER. THE SPACING IN INCHES OF ROOF AND FLOOR SUPPORTS OVER WHICH PANELS ARE APPLIED SHALL NOT EXCEED THE SPAN RATING STAMPED ON THE PANELS. PLYWOOD. SHALL BE DOUGLAS FIR SHEATHING CONFORMING TO PS I-95 AND OR PS2-92 UNITED STATE DEPARTMENT OF COMMERCE AND SHALL BE GRADE STAMPED "D.F.P.A." EXTERIOR GLUE.

5) PLACE PLYWOOD SHEATHING PERPENDICULAR TO JOIST AND "C" FACE DOWN.

6) NAILS FOR FRAMING WORK TO BE "COMMON" OR "BOX" TYPE U.N.O. ON PLANS.

7) ALL METAL ANCHORS, FASTENERS AND CONNECTORS ETC. SPECIFIED ON PLANS SHALL BE FROM THE SIMPSON STRONG-TIE COMPANY OR AN APPROVED EQUAL IN STRUCTURAL DESIGN AND LOAD VALUES. FULLY NAIL OR BOLT ALL HARDWARES, I.E. STRAPS, PAHD'S, HANGERS, PB/CB, PC/CC, ETC.

8) ALL JOIST HANGERS TO BE SIMPSON "U" HANGERS U.N.O., OR APPROVED EQUAL IN STRUCTURAL DESIGN AND LOAD VALUES.

9) ALL INTERIOR WALLS TO BE SECURED WITH SHOT PINS PER MANUFACTURERS RECOMMENDATIONS, U.N.O. RECOMMEND RAMSET@ 48"O.C. AT NON-SHEAR/NON-BEARING WALLS, NOTE: CALCULATIONS GOVERN IN ALL CASES. REFER TO I.C.C:ESR-1663.

10) ALL CONVENTIONAL FRAMED PORTIONS TO BE CONSTRUCTED PER SECTION 2320 OF THE C.B.C. ALL NAILING IS TO BE PER TABLE NO. 23-II-B-I OF THE C.B.C.

11) PROVIDE 2 X 6 RAFTERS @ 24" O.C., W/ MAXIMUM SPAN 9'-0" AT CALIFORNIA FRAMING.

12) PROVIDE DOUBLE FLOOR JOISTS BELOW ALL PARALLEL PARTITIONS, AND SOLID BLOCK JOIST BETWEEN WALLS AND BEARING PORTIONS.

13) PROVIDE SOLID BLOCKING BETWEEN JOIST UNDER WALLS PERPENDICULAR TO FLOOR JOIST.

14) PROVIDE MINIMUM 2 X 6 STUDS AT PLUMBING WALLS.

15) USE MINIMUM 3 X NOMINAL MEMBERS WHEN NAIL SPACING IS @ 2" OR CLOSER CENTER TO CENTER AT SHEAR WALLS.

16) TOP PLATES OF ALL STUD WALLS SHALL BE TWO PIECES THE SAME SIZE AS STUDS, U.N.O. SPLICES TO LAP 4'-0" MINIMUM WITH A MINIMUM OF (6)-16d NAILS PER SPLICE.

17) ALL BOLTS HEADS AND NUTS BEARING ON WOOD SHALL HAVE STANDARD CUT WASHERS AND ALL BOLT HOLES SHALL BE DRILLED 1/32" LARGER THAN THE BOLT DIAMETER.

18) PRE DRILL FOR NAILING WHEN NAIL SPACING RESULTS IN THE WOOD SPLITTING.

19) PROVIDE 1 X 6 DIAGONAL LET IN BRACING (2 APPROX. 45-DEGREES) EVERY 25'-0" MAXIMUM IN STUD WALLS NOT SHEATHED. NAIL WITH (2)-8d'S PER STUD AND (3)-8d'S AT EACH END TO PLATE (MINIMUM (4)-STUDS).

20) ALL BEAMS TO BE SUPPORTED WITH SAME WIDTH FULL BEARING STUDS OR POST, U.N.O.

21) ALL DOUBLE JOISTS ARE TO BE SECURED W/16d NAILS @ 12" O.C., STAGGERED. USE 1/2" DIA. MACHINE BOLTS FOR 3-JOIST OR MORE @ 18" O.C. STAGG. U.N.O.

22) ALL MULTIPLE STUDS TO BE ATTACHED WITH 16d NAILS AT 24" O.C.

23) STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, CONDUIT, ETC. UNLESS SPECIFICALLY DETAILED BY THE STRUCTURAL ENGINEER.

24) APPLY SHEAR MATERIALS PRIOR TO FURRING, FROM BOTTOM PLATES TO TOP PLATES WITH NO INTERRUPTIONS.

25) PROVIDE FURRING AS NEEDED TO ALIGN NON-SHEAR WALLS WITH SHEAR WALLS.

26) ALL ISOLATED POSTS AND BEAMS TO HAVE SIMPSON PB'S AND PC'S MIN. U.N.O.

27) HOLD DOWN ANCHORS, E.G. SIMPSON HDA'S, PAHD'S, CB'S, TO BE TIED IN PLACE PRIOR TO CALLING FOR INSPECTION.

28) VERIFY LOCATION OF HOLD DOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE PROPER AND ACCURATE INSTALLATION.

29) HDA'S AND PHD'S TO BE INSTALLED IN ACCORDANCE WITH:I.C.C ES ER 5708.

30) ALL SIMPSON HDA, PHDA AND CB HOLDOWNS TO BE FASTENED TO MIN. 4 X 4 POST.

31) FLOOR JOIST ARE NOT DESIGNED TO SUPPORT WATERBEDS. STRUCTURAL ENGINEER SHALL BE NOTIFIED IF WATERBEDS ARE TO BE USED.

32) FRAMING FOR PRE-FABRICATED FIREPLACE FLUES SHALL BE BALLOON FRAMED FULL-HEIGHT USING 2 X 4 STUDS @ 16" O.C. BRACED AT MID HEIGHT, AND AT THE PLATE HEIGHTS, TYP. U.N.O.

33) USE 3X (MIN.) OR 2X6 STUDS @ FIRST FLOOR OF 3-STORY BUILDING.

34) 34. ALL THE LUMBER IN CONTACT WITH CONCRETE OR MASONRY (i.e. SILL PLATE & LEDGER,ETC.) TO BE PRESSURE TREATED DOUGLAS FIR.

35) THE SIZE OF ALL EXPOSED BEAMS SHOWN ON THE FRAMING PLANS ARE THE NIN. SIZE. FOR EXACT SIZE (THICKNESS & DEPTH) SEE ARCHT. DRAW'G. AND COORDINATE WITH STRUCTURAL ENGINEER.

36) LAG BOTS: PROVIDE LEAD HOLE 70% OF THREADED SHANK dia., AND FULL dia. FOR SMOOTH SHANK PORTION. SOAP, PARAFFIN OR OTHER APPROVED LUBRICANT SHALL BE USED ON THREADS. INSTALLATION SHALL BE BY SCREWING NOT HAMMERING. CARE SHALL BE TAKEN TO AVOID OVER TORQUING BOLT.

37) ALL FLOOR SHEATHING SHALL BE NAILED AND GLUED TO FLOOR FRAMING.

FOUNDATION

1) ALL CONTINUOUS FOOTINGS TO HAVE 5/8" DIA. ANCHOR BOLTS WITH 3"X3"X1/4" WASHER @ 48" O.C., U.N.O. ON PLANS. USE MINIMUM (2)-A.B.'S PER SILL PLATE PER SHEAR PANEL WITH (1)-ANCHOR BOLT @ MAXIMUM 12" FROM ENDS AND SPLICES, (U.N.O.) (MIN. 7" EMBEDMEDT INTO CONC.)

2) ALL CONTINUOUS FOOTINGS TO HAVE MINIMUM (2)- #4 REINFORCING BAR AT TOP AND BOTTOM, U.N.O.

3) VERIFY MINIMUM FOUNDATION DEPTH, WIDTH, REINFORCING STEEL, & ADDITIONAL EXPANSIVE SOIL REQUIREMENTS WITH VALID SOILS REPORT. IF ANY CONDITIONS ARE MORE RESTRICTIVE THAN THE STATED STRUCTURAL MINIMUM REQUIREMENTS, THEY SHALL SUPERCEDE SAID STRUCTURAL MINIMUM REQUIREMENTS.

4) PROVIDE #3 X 24" LONG DOWELS @ 24" O.C. AND 12" FROM CORNERS AT ALL CONCRETE STOOPS AND PORCHES.

5) HDU'S TO BE INSTALLED IN ACCORDANCE WITH I.C.C- ESR :2330

6) VERIFY LOCATION OF HOLD DOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE PROPER AND ACCURATE INSTALLATION.

7) ALL METAL ANCHOR, FASTENERS, AND CONNECTORS, ETC. SPECIFIED ON PLANS SHALL BE FROM THE SIMPSON STRONG-TIE COMPANY OR AN APPROVED EQUAL IN STRUCTURAL DESIGN AND LOAD VALUES.

8) VERIFY THE LOCATIONS OF FOUNDATION HARDWARE WITH THE FRAMING CONTRACTOR PRIOR TO PLACEMENT OF CONCRETE. DO NOT REDUCE SHEAR PANEL WIDTH WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.

9) REFER TO ELEVATION PLAN ADDENDA'S FOR ANY VARIATIONS.

10) HOLD DOWN ANCHORS, E.G. SIMPSON HDU'S, CB'S, PB'S, TO BE TIED IN PLACE PRIOR TO CALLING FOR INSPECTION.

11) FOUNDATION EXCAVATIONS SHALL BE INSPECTED PRIOR TO FORMING OR PLACEMENT OF REINFORCING STEEL BY THE SOILS ENGINEER.

12) SOIL BEARING PRESSURE: 1500 PSF PER NO SOIL REPORT PREPARED .

13) EXTERIOR FOOITNG TO BE :
15" WIDE X24" DEEP FOOTING INTO NATURAL GRADE W/ 2-#4 @ TOP AND 2-#4 AT BOTTOM. (U.O.N.). COUNTINUOUS FOOTING TO REST ON COMPACTED GRADE.
INTERIOR FOOITNG TO BE :
15" WIDE X24" DEEP FOOTING INTO NATURAL GRADE W/ 2-#4 @ TOP AND 2-#4 AT BOTTOM. (U.O.N.). COUNTINUOUS FOOTING TO REST ON COMPACTED GRADE.

14) THICKEN STEM WALL TO RECEIVE MASONRY VENEER WHERE OCCURS.

REINFORCED CONCRETE

1) ALL WORK, TESTING AND INSPECTION SHALL CONFORM TO STRENGTH DESIGN USED FOR ALL CONCRETE GRADES, (SEE SCHED. FOR CONCRETE GRADES). MAXIMUM SIZE AGGREGATE SHOULD BE 1". 1-1/2" AGGREGATE MAY BE USED IN CONTINUOUS FOOTINGS OR ISOLATED PAD. PROVIDE MIX DESIGN FOR APPROVAL BEFORE POURING CONCRETE.

2) ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150.

3) USE TYPE FIVE CEMENT FOR SOIL CONTAINING A SULFATE CONCENTRATION OF 0.2% OR MORE.

4) FINE AND COURSE AGGREGATE SHALL CONFORM TO A.S.T.M.C-33 FOR NORMAL WEIGHT CONCRETE AND A.S.T.M. C-330 FOR LIGHTWEIGHT CONCRETE.

5) READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH A.S.T.M. C-94.

6) REINFORCING BARS SHALL CONFORM TO A.S.T.M. A-615-60 AND APPLICABLE C.B.C. STANDARDS.

7) WATER SHALL BE CLEAN AND SUITABLE FOR DOMESTIC USE.

8) SILL FASTENING:
-INTERIOR AND EXTERIOR BEARING WALLS: 5/8" DIAMETER ANCHOR BOLTS, 7" INTO CONCRETE PER LA. B.C. 1806.6 WITH A MINIMUM EDGE DISTANCE OF 4" PAST COLD JOINT AND 48" O.C. MAXIMUM, 12" FROM ENDS AND SPLICES U.N.O. ON PLANS OR ENGINEERING CALCULATIONS.
-INTERIOR NON-BEARING WALLS: APPROVED SHOT PINS WITH CADMIUM WASHERS, 3'-0" O.C. MAXIMUM, 6" FROM CORNERS AND SPLICES U.N.O. ON PLANS OR ENGINEERING CALCULATIONS.

9) TOP OF CONCRETE SLABS TO BE MINIMUM OF 6" (8" FHA/VA) ABOVE FINISH GRADE.

10) PROVIDE 3/4" CHAMFERS AT ALL EXPOSED CORNERS.

11) FOUNDATION (WIDTHS AND DEPTHS) AND REINFORCING AS SHOWN ON PLANS ARE SUPERCEDED BY LOCAL CODES OR ORDINANCES WHICH REQUIRE INCREASES OF THE SAME.

12) ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND OTHER INSERTS SHALL BE SECURED INTO POSITION AND INSPECTED BY THE LOCAL BUILDING OFFICIAL PRIOR TO THE PLACING OF ANY CONCRETE.

13) PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES, BUT SHALL NOT BE EMBEDDED THEREIN. PIPES OR DUCTS EXCEEDING 1/3 THE SLAB OR WALL THICKNESS SHALL NOT BE PLACED IN THE STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED.

14) LOCATION OF CONSTRUCTION OR POUR JOINTS MUST BE APPROVED BY THE STRUCTURAL ENGINEER.

15) FOOTINGS SHALL BE EXAMINED AND CERTIFIED IN WRITING BY THE PROJECT SOIL/GEOLOGY ENGINEER PRIOR TO INSPECTIONS AND PLACEMENT OF THE CONCRETE.

16) DO NOT PLACE CONCRETE UNTIL ALL REINFORCEMENT, CONDUIT OUTLET BOXES, ANCHORS, HANGERS, SLEEVES, BOLTS OR OTHER EMBEDDED MATERIALS AND ITEMS ARE SECURELY AND PROPERLY FASTENED IN THEIR PROPER PLACES AND POSITION. SUB-CONTRACTOR SHALL VERIFY INSTALLATION OF HOLDOWN AND ANCHOR BOLTS, PAHD STRAPS AND OTHER ANCHORAGE MATERIAL AND ITEMS PRIOR TO PLACEMENT OF CONCRETE.

17) THE FOLLOWING MINIMUM CLEAR DISTANCE BETWEEN REINFORCING STEEL AND FACE OF CONCRETE SHALL BE MAINTAINED UNLESS NOTED OTHERWISE ON PLANS:
-SLAB ON GRADE..........MID. HT. OF SLAB.
-CONCRETE BELOW GRADE, FORMED..........2"
-CONCRETE BELOW GRADE, UNFORMED (POURED AGAINST EARTH)..........3"
-CONCRETE EXPOSED TO WEATHER..........1-1/2"
-WALLS..........1"

18) ELECTRICAL GROUND: EXTEND (1)-REINFORCING BAR 18" ABOVE CONCRETE AT ELECTRICAL PANEL LOCATION.

19) CONCRETE CONTRACTOR SHALL PERFORM ALL DRY-PACKING OPERATIONS NEEDED BY THE FRAMING CONTRACTOR IN BRINGING HIS TOP PLATE LINES TO A LEVEL CONDITION.

20) CONCRETE CONTRACTOR SHALL PROMPTLY REMOVE ANY ANCHOR BOLTS OR OTHER STEEL INADVERTANTLY MISPLACED IN OR AT OPENINGS AND SHALL PATCH ANY SURFACE DAMAGE CAUSED BY THE REMOVAL THEREOF.

21) REFER TO CIVIL ENGINEER'S PRECISE GRADING PLANS FOR LOCATION OF DEEPENED FOOTINGS.

22) SLABS SHALL BE TROWELED SMOOTH AND LEVEL AROUND ALL PLUMBING PIPES, ELECTRICAL CONDUIT, AND MISCELLANEOUS IRON STRAPS PROTRUDING THEREFROM. SLABS SHALL BE SPRAYED WITH HUNT'S PROCESS CURING COMPOUND IMMEDIATELY AFTER FINISH TROWELING.

23) AFTER COMPLETION OF POURING EACH SLAB, CONCRETE CONTRACTOR SHALL REMOVE ALL FORM LUMBER, MISCELLANEOUS LUMBER AND CEMENT DEBRIS, LEAVING JOB SITE CLEAN AND GRADED SMOOTH FOR OTHER WORKMEN.

24) CONCRETE CONTRACTOR TO FURNISH ALL CONCRETE, ROCK, SAND, MESH, MEMBRANE, ANCHOR BOLTS W/ NUTS AND WASHERS, ANCHOR STRAPS, FORM MATERIALS, HUNT'S PROCESS COMPOUND AND REINFORCING STEEL. ALL SPECIAL STEEL SHALL BE FABRICATED BY STEEL SUB-CONTRACTOR AND SUPPLIED BY THE CONTRACTOR. ALL FORM LUMBER SHALL BE STRAIGHT; ALL SCREEDS SHALL BE STRAIGHT. ALL POINTS ON THE BUILDING SLABS SHALL BE WITHIN +/- 1/8" OF ESTABLISHED GRADE ELEVATION WITHIN ANY 12' RADIUS.

25) HEIGHT AND WIDTH OF ALL FOOTING TRENCHES SHALL BE AS PER PLAN; TRENCHES FOR FOOTINGS SHALL BE CLEANED BEFORE CONCRETE IS POURED. AN IMAGINARY LINE FROM THE BOTTOM CORNER OF ANY FOOTING, EXTENDING DOWNWARD AT 45 DEGREES FROM THE HORIZONTAL SHALL NOT INTERSECT ANY EXCAVATION FOR GAS, SEWER OR DRAINAGE PURPOSES.

26) POST TENSION SLABS, IF APPLICABLE: POST TENSION LOADS FROM STRUCTURE ABOVE SHALL BE SUPPLIED TO THE POST-TENSION ENGINEER PRIOR TO POST-TENSION DESIGN. ANCHOR BOLTS AND OTHER HARDWARE TO BE SHOWN ON POST-TENSION PLANS TO AVOID MIS-LOCATION OF HARDWARE, AND POSSIBLE FIELD FIXES MAY CUT DOWN TENDONS.

27) CONCRETE SLAB ON GRADE:
a. SUBGRADE: THE SUBGRADE SHALL BE PREPARED AND COMPACTED IN ACCORDANCE TO SOILS REPORT SPECIFICATION.
b. SUBBASE: THE SUBBASE SHALL CONSIST OF 2 INCH SAND ON THE SUBGRADE, 6 MIL VISQUEEN VAPOR BARRIER, AND ADDITIONAL 2 INCH SAND OVER THE VAPOR BARRIER. THE SUBBASE SHALL BE ROLLED TO ACHIEVE COMPACTION AND LEVELING.
c. CONCRETE: THE CONCRETE MEETING THE "CONCRETE STRENGTH SCHEDULE" SPECIFICATION OF THE ULTIMATE STRENGTH AND SLUMP SHALL BE PLACED, SCREEDED (STRIKE OFF), BULLFLOATED, EDGED, FLOATED, AND TROWELED. THE FINISH SURFACE PATTERN AND TEXTURE SHALL MEET THE ARCHITECTURAL AND/OR OWNER'S SPECIFICATION.
d. CONTRACTION JOINTS: SAW CUTTING FOR CONTRACTION JOINT SHALL BE PERFORMED AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT AGGREGATES FROM BEING DISLODGED BY THE SAW. THE DEPTH AND LOCATIONS OF SAW CUTTING SHALL BE IN ACCORDANCE TO THE DETAILS AND PLANS.
e. CURING: WASHED BURLAP OR COTTON MATS SATURATED WITH WATER SHALL BE PLACED AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT SURFACE DAMAGE OVER THE ENTIRE SURFACE INCLUDING THE EDGES OF SLABS. THE CURING SHALL BE A MINIMUM OF 7 DAYS UNLESS OTHERWISE SPECIFIED AND THE COVERING SHALL BE KEPT SATURATED DURING THE CURING PERIOD.

CONCRETE SCHEDULE

LOCATION	COMPRESSIVE STRENGTH @ 28 DAYS	CEMENT TYP.	MAX. SLUMP	W/C RATIO	CONTINUOUS INSPECTION
FT'G,	f'c = 2,500 psi	V	4"	.45	NO

LAP SPLICE SCHEDULE

REBAR	f'c = 2,500	f'c = 3,000	f'c = 4,000	f'c = 5,000
#4	25"	23"	20"	18"
#5	31"	28"	25"	22"
#6	37"	34"	30"	26"
#7		49"	43"	38"
#8		56"	49"	43"
#9		63"	55"	49"
#10		71"	62"	55"
#11		79"	69"	61"

REINFORCING STEEL

1) ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615-60, EXCEPT A-615-40 @ TIES.

2) WELDED WIRE FABRIC TO CONFORM TO A.S.T.M. A-185. LAP TO BE 1-1/2 SPACES, 9" MINIMUM.

3) REINFORCING DETAILING, BENDING, AND PLACING SHALL CONFORM TO A.C.I. 315.

4) WELDING OF REINFORCING STEEL SHALL CONFORM TO CURRENT A.W.S. STANDARDS, USING PROPER LOW HYDROGEN WELDING RODS.

5) THE FOLLOWING MINIMUM CLEAR DISTANCES BETWEEN REINFORCING STEEL AND FACE OF CONCRETE SHALL BE MAINTAINED UNLESS NOTED OTHERWISE ON PLANS:
-SLAB ON GRADE..........CENTER OF SLAB
-CONCRETE BELOW GRADE, FORMED..........2"
-CONCRETE BELOW GRADE, UNFORMED (POURED AGAINST EARTH)..........3"
-CONCRETE EXPOSED TO WEATHER..........1-1/2"
-WALLS..........1"
-COLUMNS AND BEAMS TO MAIN BARS..........2"

6) ALL BARS IN CONCRETE SHALL BE LAPPED PER SCHEDULE (2'-0" MINIMUM) AT ALL SPLICES, U.N.O.

7) ALL BARS IN MASONRY SHALL BE LAPPED A MINIMUM OF 48 BAR DIAMETER (2'-0" MINIMUM) AT ALL SPLICES, U.N.O.

8) SPLICES OF HORIZONTAL REBAR IN WALLS AND FOOTINGS SHALL BE STAGGERED 4'-0" MINIMUM.

9) PROVIDE DOWELS IN FOOTINGS AND/OR GRADE BEAMS THE SAME SIZE AND NUMBER AS VERTICAL WALL OR COLUMN REINFORCING, DOWELS SHALL HAVE A MINIMUM PROTECTION EQUAL TO STANDARD LAP SPLICES, U.N.O.

10) #5 OR LARGER BARS SHALL NOT BE RE-BENT WITHOUT APPROVAL OF ENGINEER.

11) ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO INSPECTION AND PLACING OF CONCRETE OR GROUTING MASONRY.

12) VERTICAL BARS IN WALLS SHALL BE ACCURATELY POSITIONED AT THE CENTER OF THE WALL, U.N.O., AND TIED INTO POSITION AT THE TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 BAR DIAMETER.

a) Floor live load= 40 psf. Floor dead load=14 psf
b) Roof live load= 20 psf. Roof dead load=16.6 psf

b) WIND DESIGN DATA:

Basic wind speed: 110 mph. Importance factor I=1 For all category
Wind exposure: C
Internal pressure coefficient= 0.18 or -0.18
Component and cladding pressure = 16 psf

d) EARTHQUAKE DESIGN DATA:

· Ss =1.737

· S1 =.644

· Site class: D -DEFAULT SEE SECTION 11.4.3

· Seismic design category: D

· SMs =2.084
· SM1 =1.095
· SDs =1.390
· SD1 =0.730

· REDUNDANCY FACTOR=1.3

Basic Seismic Force Resisting System
Per ASCE 7-16 ,Table:12.2-1

1)Section: A: Bearing Wall System
· R =6.5 · Cs =0.2138

· **SEISMIC IMPORTANCE FACTOR: I=1**
· **RISK CATEGORY : II**

Soil bearing pressure= 1500 psf

TABLE 2304.10.2 NAILING SCHEDULE

	CONNECTION	
1)	JOIST TO SILL OR GIRDER, TOENAIL	3–8d
2)	BRIDGING TO JOIST, TOENAIL EACH END	2–8d
3)	1" X 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
4)	WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
5)	2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
6)	SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	16d @ 16" O.C. 3–16d PER 16"
7)	TOP PLATE TO STUD, END NAIL	2–16d
8)	STUD TO SOLE PLATE	4–8d TOENAIL, OR 2–16d END NAIL.
9)	DOUBLE STUDS, FACE NAIL	16d @ 24" O.C.
10)	DOUBLE TOP PLATES, TYPICAL FACE NAIL DOUBLE TOP PLATES, LAP SPLICE	16d @ 16" O.C. 8–16d
11)	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
12)	RIM JOIST TO TOP PLATE, TOENAIL	8d @ 6" O.C.
13)	TOP PLATES, LAP & INTERSECTION, FACE NAIL	2–16d
14)	CONTINUOUS HEADER, TWO PIECES	16d @ 16" O.C. ALONG EACH EDGE
15)	CEILING JOISTS TO PLATE, TOENAIL	3–8d
16)	CONTINUOUS HEADER TO STUD, TOENAIL	4–8d
17)	CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
18)	CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
19)	RAFTER TO PLATE, TOENAIL	3–8d
20)	1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
21)	1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2–8d
22)	WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
23)	BUILT–UP CORNER STUDS	16d @ 24" O.C.
24)	BUILT–UP GIRDER AND BEAMS 2–20d @ ENDS AND @ EACH SPLICE	20d @ 32" @ TOP & BOTTOM & STAGG.
25)	2" PLANKS	2–16d @ EACH BEARING
26)	WOOD STRUCTURAL PANEL AND PARTICLEBOARD: 2 SUBFLOOR AND WALL SHEATHING (TO FRAMING) (1")	
	1/2" AND LESS	6d
	19/32" – 3/4"	8d OR 6d
	7/8" – 1"	8d
	1–1/8" –1–1/4"	10d OR 8d
	COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING):	
	3/4" OR LESS	6d
	7/8" OR 1"	8d
	1–1/8" –1–1/4"	10d OR 8d
27)	PANEL SIDING (TO FRAMING):^{2}	
	1/2" OR LESS	6d
	5/8"	8d
28)	FIBERBOARD SHEATHING:^{7}	
	1/2"	NO. 11ga.
	25/32"	NO. 11ga.
29)	INTERIOR PANELING	
	1/4"	4d
	3/8"	6d

FOOTNOTES:

1) COMMON OR BOX NAILS MAY BE USED EXCEPT WHERE OTHERWISE STATED.
2) NAILS SPACED AT 6" O.C. AT EDGES, 12" AT INTERMEDIATE SUPPORTS EXCEPT 6" AT ALL SUPPORTS WHERE SPANS ARE 48" OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTIONS 2315.3.3 AND 2315.4. NAILS FOR WALL SHEATHING MAY BE COMMON, BOX OR CASING.
3) COMMON OR DEFORMED SHANK.
4) COMMON.
5) DEFORMED SHANK.
6) CORROSION–RESISTANT SIDING OR CASING NAILS CONFORMING TO THE REQUIREMENTS OF SECTION 2304.3.
7) FASTENERS SPACED 3" O.C. @ EXTERIOR EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS.
8) CORROSION–RESISTANT ROOFING NAILS WITH 7/16" DIAMETER HEAD AND 1–1/2" LENGTH FOR 1/2" SHEATHING AND 1–3/4" LENGTH FOR 25/32" SHEATHING CONFORMING TO THE REQUIREMENTS OF SECTION 2304.3.
9) CORROSION– RESISTANT STAPLES WITH NOMINAL 7/16" CROWN AND 1–1/8" LENGTH FOR 1/2" SHEATHING AND 1–1/2" LENGTH FOR 25/32" SHEATHING CONFORMING TO THE REQUIREMENTS OF SECTION 2304.3.
10) PANEL SUPPORTS AT 16" (20" IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED). CASING OR FINISH NAILS SPACED 6" ON PANEL EDGES, 12" AT INTERMEDIATE SUPPORTS.
11) PANEL SUPPORTS AT 24". CASING OR FINISH NAILS SPACED 6" ON PANEL EDGES, 12" AT INTERMEDIATE SUPPORTS.

Zouheir T Saleh
C 042881
Exp. 03/31/2024
01-29-2024

CONSULTANT:
MESA Entreprise ,Inc
Structural/Consulting.
1304 Corte Maltera
Costa Mesa Ca 92626.
TEL:562-235-4572-
FAX:562-490-8362.

REVISIONS:

PROJECT:
113 SHARON DR.
POMONA, CA 91767

DRAWN BY:
SCALE: NOTED
CAD FILE:
PROJECT NO.:
DATE: 01-29-2024

SN1

NOTES

ROOF DIAPHRAGM:
USE 1/2" CDX PLYWOOD, PANEL INDEX (24/0) , WITH 10d NAIL AT 6" O.C. SUPPORTED EDGES, BOUNDARIES & @ 12" O.C. FIELD (BLOCKED DIAPH. U.O.N.).

FLOOR AND DECK DIAPHRAGM:
USE 3/4" CC-CD PLYWOOD, PANEL INDEX (32/16) , WITH 10d NAIL AT 4" O.C. SUPPORTED EDGES, BOUNDARIES &@ 10" O.C. FIELD (BLOCKED DIAPH. U.O.N.), MADE WITH EXTERIOR GLUE.

REGISTERED INSPECTION IS REQUIRED FOR, WELDING AND EPOXY APPLICATION.

THE REINFORCING WIRE MESH, DEFORMED REINFORCING STEEL BARS AND STRUCTURAL STEEL SHAPES DELIVERED TO THE JOBSITE FOR USE ON THE CONSTRUCTION OF THE STRUCTURE MUST BE ACCOMPANIED WITH MILL CERTIFICATES, PREPARED BY AN APPROVED TESTING AGENCY WHICH DOCUMENT THE MATERIAL STRENGTHS AND CHEMICAL COMPOSITION SPECIFIED FOR THE PROJECT.

DOUGLAS FIR LARCH: (PER 2022 C.B.C)
NO.1 Fb = 1000 PSI. Fv = 95 PSI.

MAX 19% OF MOISTURE CONTENT AT TIME OF INSALLATION.

FIELD WELDING TO BE DONE BY WELDERS MUST BE CERTIFIED BY THE CITY BUILDING DEPARTMENT FOR (STRUCTURAL STEEL) (LIGHT GAGE STEEL). CONTINUOUS INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED.

PROVIDE FIRE BLOCKING IN CONCEALED SPACES IN STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AT THE CELLING AND FLOOR LEVEL AND AT 10 FT. INTERVALS BOTH VERTICAL AND HORIZONTAL (B.C. 708.2.1)

FINISHED RIDGE HEIGHT SHALLL NOT EXCEED THE ELEVATION SHOWN ON THE PLOT PLAN. ALLOW FOR THICKNESS OF ROOFING PER DETAIL PROVIDED.

ADDITIONAL NOTES:

1) GENERAL CONTRACTOR IS FULLY RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS & CONDITION BEFORE START OF ANY WORK. ANY DISCREPANCY SHALL BE BROUGHT TO ATTENTION OF THE ENGINEER AT DALTA IMMEDIATELY.
2) SEE SHEAR WALL SCHEDULE FOR ALL ANCHOR BOLT SIZE AND SPACING.

3) ALL HOLDOWN HARDWARE IS TO BE SECURED IN PLACE PRIOR TO

4) THICKEN FOOTING TO RECEIVE VENEER AS NEEDED.
FOUNDATION INSPECTION.

HEADER SCHEDULE			
WIDTH OF OPENING	STUD WIDTH SIZE		
	2X4	2X6	2X8
3'-0" MAX.	2-2X4 OR 4X4	3-2X4 OR 6X4	4-2X4 OR 8X4
5'-0" MAX.	2-2X6 OR 4X6	3-2X6 OR 6X6	4-2X6 OR 8X6
8'-0" MAX.	2-2X8 OR 4X8	3-2X8 OR 6X8	4-2X8 OR 8X8
OVER 8'-0"	SEE PLAN		

TYPICAL CEILING JOIST SCHEDULE (U.N.O.)	
CEILING JOIST	MAX. SPAN
2X6 @ 16" O.C.	12'-0"
2X8 @ 16" O.C.	16'-0"
2X10 @ 16" O.C.	20'-0"

NOTE:
AT EXTERIOR AND INTERIOR WALLS, A 4X12 MIN. HEADER MAY BE USED IN LIEU OF THE HEADER NOTED IN THE TABLE. HEADER NOTED IN TABLE SHALL BE PROVIDED OVER ALL WINDOWS, DOORS, AND OTHER OPENING, UNLESS NOTED OTHERWISE.

A.B. WASHER PLATE SCHED.	
BOLT SIZE	WASHER
5/8" Ø	3"X3"X1/4"
3/4" Ø	3"X3"X5/16"
7/8" Ø	3"X3"X5/16"
1" Ø	3.5"X3.5"X3/8"
1 1/4" Ø	4"X4"X3/4"

FRAMING NOTES

1. TOP PLATE SPLICE -LAP PLATE 48" MIN. WITH (12) 16d NAILS (U.O.N.).
2. ALL STRUCTURAL HARDWARE TO BE "SIMPSON STRONG TIE" SILVER METAL W/ LATEST ACCEPTED I.C.C. AND R.R. LA. APPROVALS (U.O.N.).
3. PROVIDE STEEL PLATE TIES(16 GA. MIN. 1-1/2" X 24) OR SIMPSON ST22 ACROSS TOP &/ OR BOTTOM PLATE WHERE INTERRUPTED OR CUT BY FRAMING MEMBER.
4. PROVIDE SAME SIZE POST UNDER ALL POSTS FROM ABOVE (P.A.).
5. ALL NAILING SHALL BE PER 2022 C.B.C SEE NAILING SCHEDULE SHEET SN1 (GENERAL NOTES)
6. ALL CONSTRUCTION SHALL CONFORM TO 2022 C.B.C.
7. REFER TO SHEAR WALL SCHEDULE FOR SILL PLATE NAILING AT SHEAR PANELS. (DETAILED)
8. 4 X BEAMS BEARING ON TOP PLATE TO HAVE DOUBLE STUDS OR POST UNDER TOP PLATE -PER PLAN. CONNECT BEAM TO PLATE W/A35 EA. SIDE (U.O.N.).
9. ALL DBL. FLOOR JOISTS SHALL BE FACE NAILED W/16d @12" O.C. STAGGERED 2" FROM EACH EDGE (U.O.N.).
10. ALL HEADERS NOT SPECIFICALLY NOTED SHALL BE 4 X MIN. WITH THE DEPTH IN INCHES EQUAL TO THE SPAN IN FEET.(4 X 4 MIN.).
11. ALL FRAMING MEMBERS TO BE D.F. #2 (U.O.N.) ALL POST TO BE D.F. #1.
12. PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARITIONS.
13. ALL 4 X 8 AND LARGER HEADERS SHALL HAVE DOUBLE TRIMMERS EA. SIDE OF HEADERS (U.O.N.)
14. ALL DOUBLE / TRIPLE FLOOR JOISTS BEARING ON TOP PLATE TO HAVE DOUBLE / TRIPLE STUDS DIRECTLY UNDER.
15. WOOD BEAMS 4" & WIDER SHALL BE D.F. #1 OR BETTER.
16. BEAM BEARING ON POST TO HAVE "BC", "PC" , "CC" POST CONNECTORS, BEAM TO POST (U.O.N.) OR DETAILED OTHERWISE ON PLAN.
17. PROVIDE 1 X 6 TIE JUST ABOVE CEILING JOIST WHERE CEILING JOISTS ARE NOT PARALLEL, LAP WITH RAFTERS AND SPIKE WITH 3-16d.
18. ALL BEAMS SHOWN ON PLANS SHOULD BE PLACED AT CENTER OF ALL POINT LOADS FROM ABOVE AT BEARING WALL OR / SHEAR WALL.
19. REFER TO ARCHITECTURAL PLANS FOR ANY DIMENSIONS, DO NOT SCALE STRUCTURAL PLANS .
20. FABRICATION OF STRUCTURAL STEEL SHALL BE BY AN APPROVED FABICATOR OR FABRICATION SHALL BE CONTINUOSLY INSPECTED BY REGISTER INSPECTOR.
21. NAILING TO BE PER TABLE 2304.10.2.
22. FASTENERS IN PRESSURE-TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE OF HOT -DIPPED ZINC-COATED GALVANIZED STEEL, STAILESS STEEL,SILICON BRONZE OR COPPER in accordance with ASTM A 153, Per CRC R317.3.
23. ALL EXISTING STRUCTURAL ELEMENTS SHALL BE FIELD VERIFIED.
24. PROVIDE 2X FULL DEPTH BLOKING BRIDGES @ ROOF RAFTER CEILING JOIST FLOOR JOIST AND BEAMS EVERY 8'-0" O/C.
25. THE QUALITY MARK SHALL BE ONE OF THE STAMP OR LABEL AFFIXED TO PRESERVATIVE-TRETED WOOD,AND SHALL INCLUDE THE FOLLOWING INFORMATIONIDENTIFICATION OF TREATING MANUFACTURER ,TYPE OF PRESERVATIVE USED, MINIMUM PRESERVATIVE RETENTION(pcf) END USE FOR WHICH THE PRODUCT IS TREATED,AWPA STANDARD TO WHICH THE PRODUCT WAS TREATED AND IDENTITY OF THE ACCREDITED INSPECTION AGENCY.(CBC.2308.1.8.1).
26. MOISTURE CONTENT OF PRESERVATIVE-TREATED WOOD SHALL BE 19 PER CENT OR LESS BEFORE BEING COVERED WITH INSULATION,INTERIOR WALL FINISH, AND FLOOR COVERING OF OTHER MATERIALS WHEN USED IN ENCLOSED LOCATIONS.
27. NAILS SHALL BE DRIVEN FLUSH TO SHEATHING AND NOT OVERDRIVEN.
28. COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A 153.FASTENINGS FOR WOOD FOUNDATIONS SHOULD BE AS REQUIERED IN AF&PA TECHNICAL REPORT NO.7.
29. ALL NEW WOOD OR TIMBER BELOW THE BFE SHALL BE PRESSURE TREATDE,REDWOOD OR NATURALLY DECAY RESISTANT WOOD.
30. A FINAL FLOOD ELEVATION CERTIFICATE EXECUTED BY A LICENCED SURVEY OR CIVIL ENGINEER MUST BE FURNISHED TO THE CITY INSPECTOR PRIOR TO THE APPROVAL OF THE LOWEST FLOOR FRAMING.
31. ROOF FRAMING NAILING TO BE INSPECTED BEFORE COVERING.FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR SHALL HAVE TONGUE AND GROOVE OR BLOCKED PANEL EDGES.TABLE SPAN SHALL CONFORM WITH TABLE TABLE 2305.5 OF THE ORANGE COUNTY BUILDING CODE.
32. ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX.
33. ALL EXTERIOR WALL TO BE SECURED WITH 5/8" DIAM. x 16" A.B.'s

FOUNDATION NOTES

1. EXTERIOR FOOTING TO BE :
15" WIDE X24" DEEP FOOTING INTO NATURAL GRADE W/ 2-#4 @ TOP AND 2-#4 AT BOTTOM. (U.O.N.). COUNTINUOUS FOOTING TO REST ON COMPACTED GRADE.
INTERIOR FOOTING TO BE :
15" WIDE X24" DEEP FOOTING INTO NATURAL GRADE W/ 2-#4 @ TOP AND 2-#4 AT BOTTOM. (U.O.N.). COUNTINUOUS FOOTING TO REST ON COMPACTED GRADE.
2. SOIL BEARING PRESSURE: 1500 PSF NO SOIL REPORT PREPARED.
3. TYP. ANCHOR BOLTS: 5/8" DIAM. X 14" LONG A.B. W/3" X 3" X 1/4" PLATE WASHER @48" O.C.(U.O.N) @ SHEAR WALL EMBED 7" INTO FIRST POUR. REFER TO FOUNDATION PLAN AND SHEAR WALL SCHED. FOR SPACING AT SHEAR WALL.
MIN END DISTANCE:5" MAX END DISTANCE:12"
4. CONCRETE SHALL ATTAIN A DESIGN BEARING CAPACITY OF 2500 PSI AND FOR GRADE BM. OR CONCRETE COL. SHALL BE 3000 PSI.
5. HOLDOWNS SHALL BE RETIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING. HOLDOWNS SHALL BE TIED IN PLACE PRIOR TO CALLING FOUNDATION INSPECTION.
6. THE FLOOR SLAB AND FOUNDATION MAY BE POURED HOMOGENEOUSLY AT THE SAME TIME OR IN TWO POURS WITH A COLD JOINT BETWEEN. DESIGN IS BASED ON A HOMOGENEOUS POUR. ALL ANCHOR BOLTS SHALL BE LONGER ENOUGH TO ACHIEVE 7" MIN EMBED. IN FIRST POUR.
7. WHEN FOUNDATION WALLS EXCEED 4'-0" IN HEIGHT/DEPTH , FOR ANY REASON, PROVIDE STEM WALL REINFORCING MINIMUM #4 @ 24" O.C. BOTH WAYS, OR AS PER ENGINEER OF RECORD.
8. PRE-SATURATION MEMO FROM SOILS ENGINEER REQUIRED PRIOR TO PRE-SLAB INSPECTION, IF REQUIRED OR APPLICABLE.
9. HOLD-DOWN CONNECTOR BOLTS SHALL NOT BE MORE THAN 1/16" OVERSIZED AT THE CONNECTOR OF THE HOLD-DOWN POST.
10. SPECIAL INSPECTION BY A REGISTRED DEPUTY INSPECTOR IS REQUIRED FOR:
*-FIELD WELDING.
*CONCRETE STRENGTH > 2500 PSI.
*HIGH STRENGTH BOLTING.
*SHEAR WALLS AND HARDY FRAME
11. HOLD-DOWN CONNECTOR BOLTS SHALL NOT BE MORE THAN 1/16" OVERSIZED AT THE CONNECTOR OF THE HOLD-DOWN POST.
12. HOLD- DOWN CONNECTORS BOLT INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS AND HOLD- DOWN SHALL BE FINGER TIGHT AND 1/2" WRENCHTURN JUST PRIOR TO COVERING WALL FRAMING. CONNECTOR BOLTS IN WOOD FRAMING .CONNECTOR BOLTSINTO WOODFRAMING REQUIRE STEEL PLATE WASHERS IN ACCORDANCE WITH TABLE:2305.5 OF THE COUNTY OF ORANGE BUILDING CODE.
13. CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A WIND OR SEISMIC FORCE.RESISTING SYSTEM/COMPONENT LISTED IN THE "STATMENT OF SPECIAL INSPECTION" SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSABILITY TO THE BUILDING INSPECTORS AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON SUCH SYSTEM OR COMPONENT PER SECTION:1706.1
14. ALL REBAR, ANCHOR BOLTS AND HOLDOWNS ARE TO BE IN PLACE PRIOR TO FOUNDATION INSPECTION.
15. PROVIDE MINIMUM TWO ANCHOR BOLTS PER SHEARWALL SEGMENT.
16. ANCHOR BOLTS AT SILL PLATES TO BE AT 48" O.C. MIN. AND 4 3/8" MIN. AND 12" MAX. FROM ENDS.
17. SEE FRAMING PLAN FOR SHEARWALL FRAME LOCATIONS.
18. ALL BOTTOM PLATES @ FOOTINGS TO HAVE 5/8"Ø ANCHOR BOLTS WITH 3"x3"x¼" WASHERS AT 48" O/C U.N.O.
19. ALL FOUNDATION EXCAVATIONS TO BEAR ON LIKE MATERIAL.
20. FOUNDATION CONCRETE SHALL BE 2500-PSI IN 28 DAY MIX.
21. ALL WALLS ARE TO BE FRAMED WITH A MINIMUM OF 6" STUDS.
22. DOUBLE WALL USED AS PLUMBING WALLS ARE TO BE MINIMUM OF 8" WIDE AND NO FLAT STUDS PERMITTED STAGGRED STUDS ARE ACCEPTABLE.

ADDITIONAL NOTES

a. CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A WIND OR SEISMIC FORCE. RESISTING SYSTEM/COMPONENT LISTED IN THE "STATMENT OF SPECIAL INSPECTION" SHAL SUBMIT A WRITTEN STATEMENT OF RESPONSABILITY TO THE BUILDING INSPECTORS AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON SUCH SYSTEM OR COMPONENT PER SECTION:1704.4

b. REGISTERED INSPECTION IS REQUIRED FOR:
- CONCRETE MORE THAN 2500 PSI.
- REINFORCING STEEL.
- WELDING.
-H.S.BOLTS.
-EPOXY ANCHORS /DOWELS..
-STRUCTURAL STEEL.

c. FOUNDATION SILLS SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD

d. ALL WELDING SHALL BE PERFORMED BY WELDER CERTIFIED BY THE CITY, USING THE ELECTRICAL SHIELDED ARC PROCESS AT LICENSED SHOPS, OR OTHERWISE APPROVED BY THE LOCAL BUILDING DEPARTMENT.

e. SHOP WELDS MUST BE PERFERMED IN A FABRICATOR'S SHOP LICENSED BY AN APPROVED AGENCY.

f. PROVIDE LEAD HOLE 40%-70% OF THREATED SHANK DIAMETER AND FULL DIAMETER AND FULL DIAMETER FOR SMOOTH SHANK PORTION

g. TRUSSES ,STRUCTURAL STEEL, GLULAM BEAMS,ENGINEERED JOIST SHALL BE MADE BY A FABRICATOR LICENSED BY AN APPROVED AGENCY.

h. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR WOOD SHEAR WALLS,SHEAR PANELS,AND DIAPHRAGMS,INCLUDING NAILING,BOLTING ,ANCHORING, AND OTHER FASTENING TO COMPONENETS OF THE SEISMIC FORCE RESISTING SYSTEM. SPECIAL INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED WHERE THE FASTENER SPACING OF THE AHEATHING IS 4 INCHES OR LESS.

i. ALL DIAPHRAGM AMD SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS WITH FULL HEADS(CBC 2303 NDS-05)

j. MECHANICALLY DRIVEN NAILS USED IN WOOD STRUCTURAL PANEL SHEAR WALL SHALL MEET THE SAME DIMENSIONS AS THAT REQUIRED FOR HAND DRIVEN NAILS ,INCLUDING DIAMETER MIN LENGHT AND MIN HEAD DIAMETER ,CLIPPED HEAD OR BOX NAILS ARE NOT ACCEPTABLE (LARUCP23-03)

k. ENGINEERED WOOD PRODUCTS SUCH AS PREFABRICATED WOOD I JOIST ,STRUCTURAL GLUED-LAMINATED TIMBER, STRUCTURAL COMPOSITE LUMBER AND DESGN TRUSSES SHALL NOT BE NOTCHED OR DRILLED EXCEPT WHERE PERMITTED BY THE MANUFACTURS RECOMMENDATIONS OR WHERE THE EFFECTS OF SUCH ALTERATIONS ARE SPECIFICALLY CONSIDERED IN THE DESIGN OF THE MEMBER BY A REGISTERED DESIGN PROFESSIONAL IN REPONSIBLE CHARGES(CBC 23084.3)

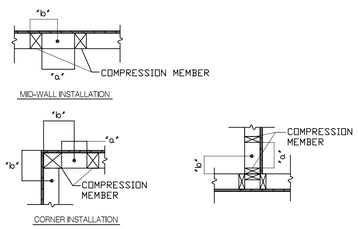
l. SHEATHING NAILS OR OTHER APPROVED SHEATHING CONNECTORS SHALL BE DRIVE SO THAT THEIR HEAD OR CROWN IS FLUSH WHITH THE SURFACE OF THE SHEATHING (CBC 2304.9.2)

m. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH OF UP 3/16" LARGER THAN THE BOLT DIAMETER AND SLOT LENGHT NOT TO EXCED 1-3/4 " , PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT(CBC2305.3.11)

- HOLD-DOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS ; AND HOLD-DOWNS SHALL BE FINGER TIGHT AND 1/2 WRENCH TURN JUST PRIOR TO COVERING THE WALL FRAMING CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS IN ACCORDANCE WITH TABLE 2305.5 OF THE LA BUILDING CODE.
- ROOF FRAMING NAILING TO BE INSPECTED BEFORE COVERING.FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR SHALL HAVE TONGUE AND GROOVE OR BLOCKED PANEL EDGES.TABLE SPAN SHALL CONFORM WITH TABLE TABLE 2304.8(1) OF THE LA BUILDING CODE.
- ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX.
- ALL BOLT HOLES SHALL BE DRILLED 1/32" TO 1/16" OVERSIZED
- HOLD-DOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.

LICENSED PROFESSIONAL ENGINEER
Zouheir T. Saleh
C 042881
Exp: 03/31/2024
Civil Engineer
STATE OF CALIFORNIA
01-29-2024 .

ANCHOR BOLT LAYOUT



POST SIZE	'a' DISTANCE BETWEEN POSTS: 4'	'a' DISTANCE BETWEEN POSTS: 6'
	'b' DISTANCE FROM BOLT TO OUTSIDE OF POST	
2x4 or 2x6	3 1/2"	4 1/2"
3x4 or 3x6	4 1/2"	5 1/2"
2-2x4 or 2-2x6	5"	6"
2-3x4 or 2-3x6	7"	8"
4x6 or 6x6	7 1/2"	8 1/2"
4x8 or 6x8	9 1/4"	10 1/4"
4x10 or 6x10	11 1/4"	12 1/4"

NOTES:
1. COMPRESSION MEMBERS DO NOT INCLUDE TRIMMERS.
2. SEE TDS ELEVATIONS FOR 'a' DIMENSION

SPECIAL INSPECTION PROGRAM
And Designation Of
SPECIAL INSPECTORS

SPECIAL INSPECTIONS
(Only checked items are required)

ITEMS	SPECIAL INSPECTIONS
☒ Bolts installed in concrete	Periodic
☒ Epoxy application	Continuous
☒ shear walls nailing	Periodic
☒ Floor& Roof Diaphragm	Periodic
☒ Drag Struts	Periodic
☒ Grade Beam	Periodic
☒ Hardy Frame	Periodic
☐	
☐	
☐	
☐	
☐	
☐	
☐	

DECLARATION BY OWNER OR ARCHITECT/ENGINEER OF RECORD
I, the ☐ Owner ☐ Engineer or ☐ Architect of record, declare that the above listed Special Inspector(s) is/are hired by me.

Signature Date

CONSULTANT:
MESA Entreprise ,Inc
Structural/Consulting.
1304 Corte Malhera.
Costa Mesa Ca 92626.
TEL:562-235-4572-
FAX:562-490-8362.

REVISIONS:
1
2
3
4
5
6

PROJECT:
113 SHARON DR.
POMONA, CA 91767

DRAWN BY:
SCALE: NOTED
CAD FILE:
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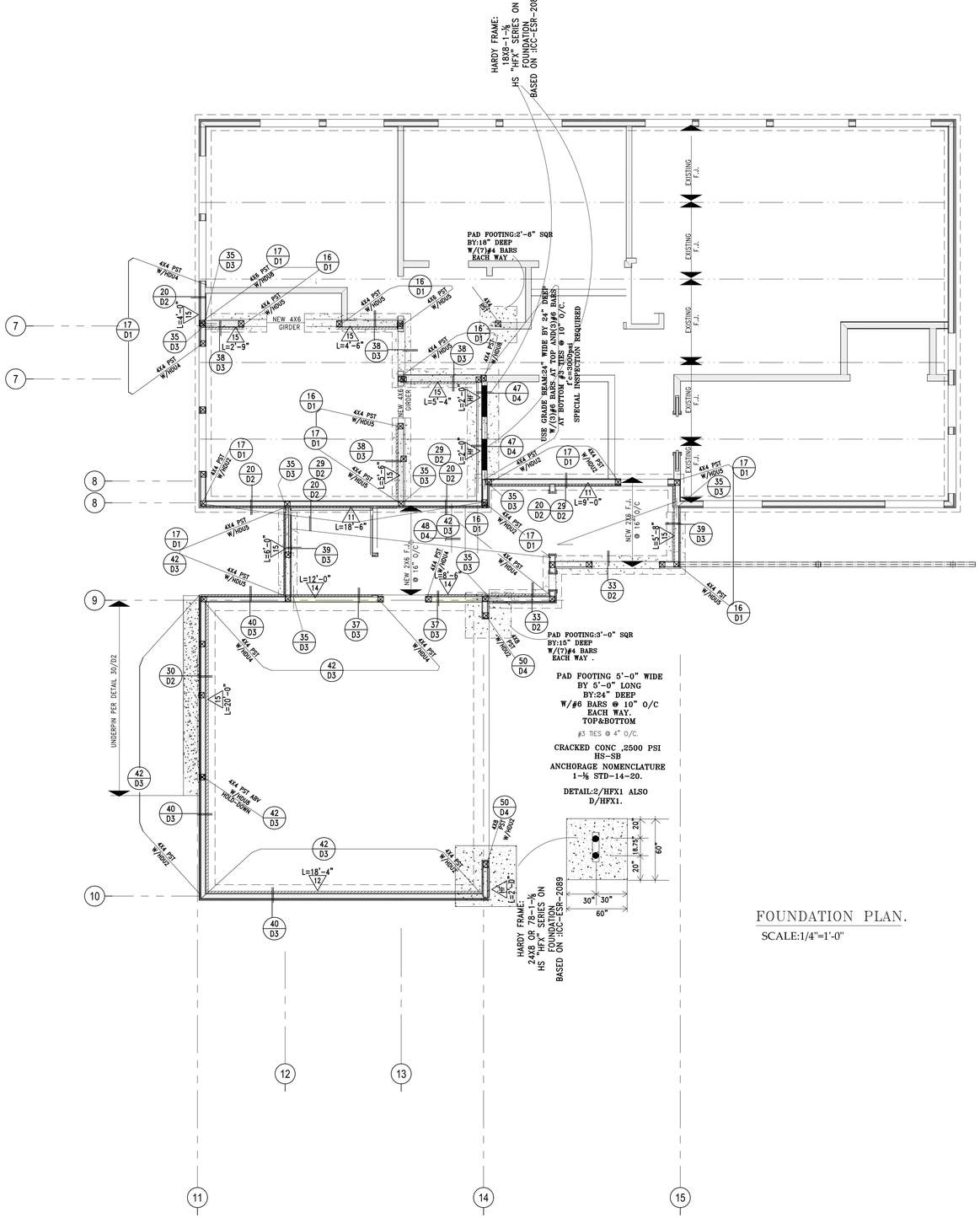
SN2



FOUNDATION PLAN.

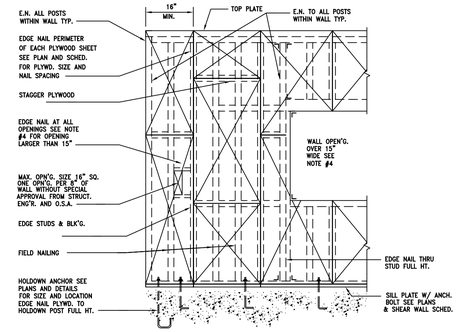
SCALE:1/4"=1'-0"

SHEAR WALL SCHEDULE									TOP ANCHORAGE
MARK	SHEATHING SEE NOTE #7	E.N.	F.N.	EDGE STUD & BLK'G.	SILL PLATE SEE NOTE #2,8,9 CONNECTOR	SPACING	NAIL SIZE	SILL NAIL SPACING	CAPACITY	SIMPSON A35/LTP4
1	15/32" C-D,C-C PLYWD. BLKD W/8d @ 6" O.C. E.N. & 12" O.C. F.N.	6"			5/8" AB @ 48" O.C.	4'-0"	8d	16d @ 6" O.C.	200 lb./ft.	16" O.C.
2	15/32" C-D,C-C PLYWD. BLKD w/8d @ 4"O.C. E.N. & 12"O.C. F.N.	4"	12"	2X	5/8" AB @ 32" O.C.	2'-8"	8d	16d @ 5" O.C.	285 lb./ft.	16" O.C.
3	15/32" STR I PLYWD. BLKD W/8d @ 4" O.C. E.N. & 12" O.C. F.N.	4"	12"	3X	5/8" AB @ 24" O.C.	2'-0"	8d	5/8" lag @ 8" O.C.	355 lb./ft.	12" O.C.
4	15/32" STR I PLYWD. BLKD W/10d @ 4" O.C. E.N. & 12" O.C. F.N.	4"	12"	3X	5/8" AB @ 16" O.C.	1'-4"	10d	5/8" lag @ 8" O.C.	380 lb./ft.	12" O.C.
5	15/32" STR I PLYWD. BLKD W/10d @ 3" O.C. E.N. & 12" O.C. F.N.	3"	12"	3X	5/8" AB @ 16" O.C.	1'-4"	10d	5/8" lag @ 8" O.C.	500 lb./ft.	8" O.C.
6	15/32" STR I PLYWD. BLKD W/10d @ 2" O.C. E.N. & 12" O.C. F.N.	2"	12"	3X	5/8" AB @ 8" O.C.	8"	10d	5/8" lag @ 8" O.C.	650 lb./ft.	8" O.C.

** AT 2" AND 3" SILL NAIL SPACING, THE CONTRACTOR MUST PREDRILL HOLES
** USE COMMON NAILS ONLY.
** FOR LAG BOLTS PROVIDE LEAD HOLES40%~70% OF THREADED SHANK DIAMETER AND FULL DIAMETER FOR SMOOTH SHANK PORTION.

NOTES:

1. NAILS SHALL HAVE 3/8" MIN. EDGE DISTANCE FROM EDGE OF PLYWOOD AND EDGE OF STUD. USE COMMON NAILS ONLY
2. USE 3X EDGE STUDS & BLK'G. WHERE NAIL SPACING IS LESS THAN 6" O.C. FOR 8d NAILS +6" O.C. FOR 10d NAILS AND WHERE CALLED OUT IN PLANS AND DETAILS. USE 3X SILL PLATE AT ALL SHEAR WALLS 12,13,14 AND 15 OR USE 3XBLOCKING ON TOP OF EXISTING SILL PLATE.
3. PROVIDE 3/8" NAIL EDGE DISTANCE AT 3X STUDS AND BLK'G.
4. AT OPENING IN SHEAR PANEL OVER 15" WIDE, PROVIDE SOLID BLK'G AT HEAD AND SILL LEVEL, EACH SIDE OF OPENING STRAP WITH 1" X 16 GA. X 3 TIMES OPENING WIDTH GALV. METAL STRAP NAIL WITH 8d @ 2" O.C.
5. NAILING WITH MACHINE NAILS SHALL CONFORM TO THE WOOD GENERAL NOTES ON SH1
6. ALL DEFECTIVE NAILS SHALL BE REMOVED AND REPLACED WITH SOUND NAILING.
7. PLYWOOD SHEATHING SHALL BE 1/2" STRUCT.1 PLYWOOD (EXT. GLUE) GRADE W/ 8d NAILS U.N.O.. PROVIDE FRAMING MEMBER OR BLOCKING AT ALL EDGES PER SCHEDULE. PROVIDE EDGE NAILING TO END STUD OR POST WHERE HOLDOWN OCCURS AND TO ALL OTHER POSTS IN SHEARWALLS. PLYWOOD SHEATHING SHALL CONFORM TO PLYWOOD SHEARWALL DETAILS.
8. SILL PLATES SHALL BE PRESSURE TREATED D.F. AND CONFORM TO SILL PLATES DETAILS. PROVIDE MINIMUM OF 3 ANCHOR BOLTS IN ALL SHEAR WALLS.
9. ANCHOR SPACING SHALL BE REDUCED TO HALF THE SPACING SHOWN WHERE SHEAR WALL SHEATHING IS ON BOTH SIDES OF THE WALL STAGGER NAILING AND JOINTS.
10. ALL SHEARWALLS NAILING, ANCHOR BOLT INSTALLATION, HOLDOWN INSTALLATION AND OTHER ELEMENTS OF SHEARWALL ASSEMBLY SHALL BE INSPECTED BY THE ENGINEER OF RECORD, A CERTIFICATE OF INSPECTION MUST BE SUBMITTED TO THE ENGINEER OF RECORD AND TO THE BUILDING DEPARTMENT. THE BUILDING OWNER SHALL BE RESPONSIBLE FOR THE INSPECTOR FOR PERFORMING THE STRUCTURAL OBSERVATION.
11. PLYWOOD SHEARWALLS SHALL BE COVERED WITH 2 LAYERS OF 15 # FELT UNDER LAYMENT PRIOR TO PLACING FINISH MATERIAL.
12. ALL LAG BOLTS (LB) TO BE 8" LONG INSTALLED WITH PILOT HOLE AND WRENCH.
13. 5/8" DIAM. A.B. MAY BE REPLACED BY 5/8" DIAM. THREADED RODS BY 5" EMBED. WITH SIMPSON ET EPOXY, ICC ESR-2805, (OR EQUIVALENT) AT THE SAME SPACING, WITH SPECIAL INSPECTION. EACH BOLT SHALL HAVE MIN.3"x3"x1/4" THICK SQUARE WASHER.
14. FRAMING MEMBERS OR BLOCKING SHALL BE PROVIDED AT ALL EDGES OF ALL PLYWOOD SHEETS IN SHEAR WALL.
15. ALL PLYWOOD PANEL SHALL BE MANUFACTURED USING EXTERIOR GLUE.
15. ALL EXTERIOR WALL TO BE SECURED WITH 5/8" DIAM. x 16" A.B.'s AT 72" O.C. WITH 7" OF EMBEDMENT, UNLESS OTHERWISE NOTED, AND WITH MINIMUM 3"x3"x1/4" THICK PLATE WASHER UNDER NUT AT EACH BOLT.
16. ALL INTERIOR WALLS WITH SHOT PINS: RAMSET # 3348, OR EQUIVALENT, AT 36" O.C. AT BEARING WALLS AND 48" O.C. AT NON-BEARING WALLS, UNLESS OTHERWISE NOTED.
17. CODE MINIMUM (2) ANCHOR BOLTS PER PANEL.
18. CODE MINIMUM 16d SOLE PLATE NAILS AT 16" O.C. TYPICAL AT ALL



TYPICAL SHEARWALL SCHEDULE

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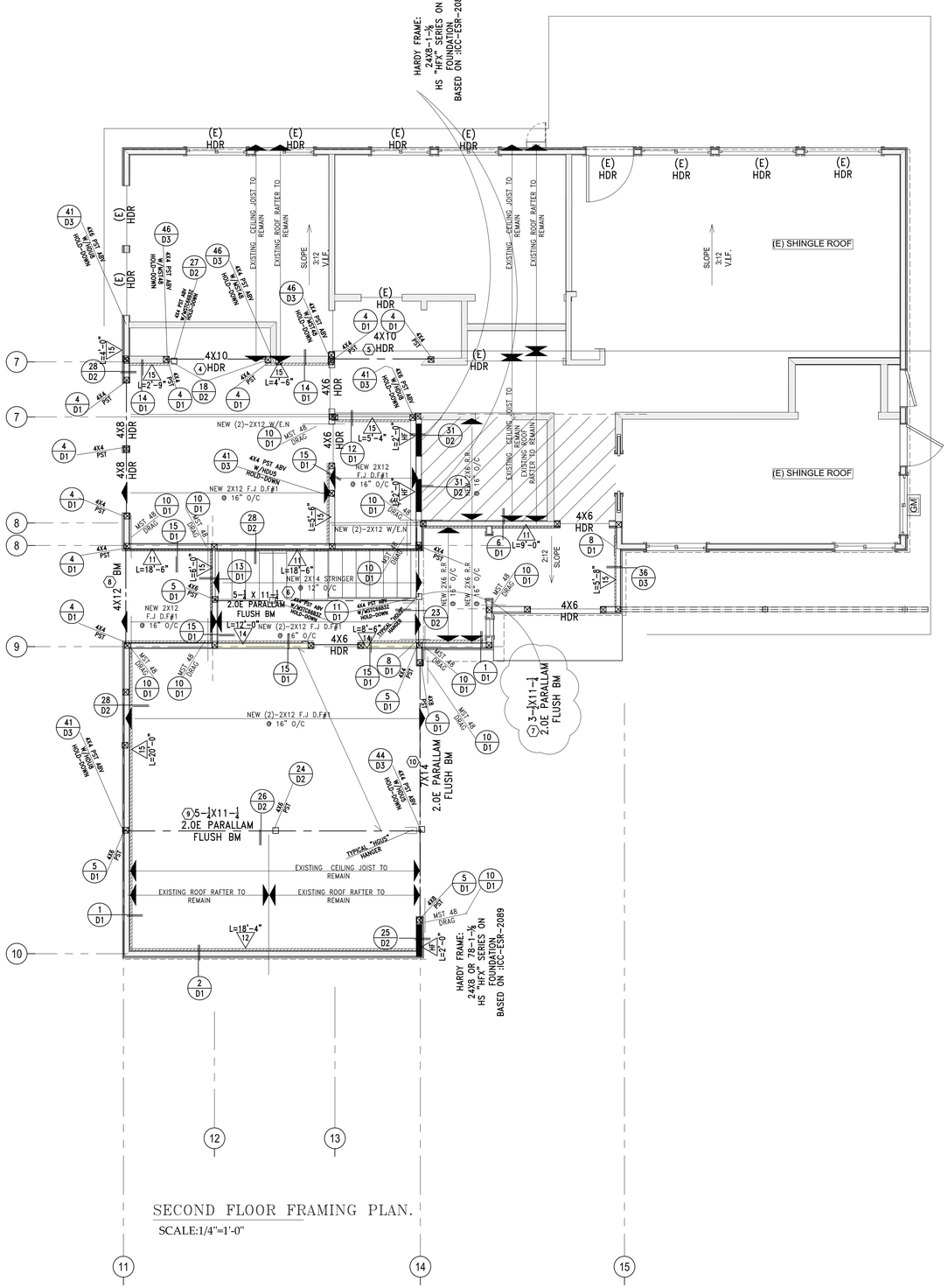

SECOND FLOOR FRAMING PLAN.

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

SHEAR WALL SCHEDULE									TOP ANCHORAGE
MARK	SHEATHING SEE NOTE #7	E.N.	F.N.	EDGE STUD & BLK'G.	SILL PLATE SEE NOTE #2,8,9 CONNECTOR	SPACING	NAIL SIZE	SILL NAIL SPACING	CAPACITY	SIMPSON A35/LTP4
1	15/32" C-D,C-C PLYWD. BLKD W/8d @ 6" O.C. E.N. & 12" O.C. F.N.	6"			5/8" AB @ 48" O.C.	4'-0"	8d	16d @ 6" o.c.	200 lb./ft.	16" O.C.
2	15/32" C-D,C-C PLYWD. BLKD w/8d @ 4"O.C. E.N. & 12"O.C. F.N.	4"	12"	2X	5/8" AB @ 32" O.C.	2'-8"	8d	16d @ 5" O.C.	285 lb./ft.	16" O.C.
3	15/32" STR I PLYWD. BLKD W/8d @ 4" O.C. E.N. & 12" O.C. F.N.	4"	12"	3X	5/8" AB @ 24" O.C.	2'-0"	8d	5/8" Lag @ 8" o.c.	355 lb./ft.	12" O.C.
4	15/32" STR I PLYWD. BLKD W/10d @ 4" O.C. E.N. & 12" O.C. F.N.	4"	12"	3X	5/8" AB @ 16" O.C.	1'-4"	10d	5/8" Lag @ 8" o.c.	380 lb./ft.	12" O.C.
5	15/32" STR I PLYWD. BLKD W/10d @ 3" O.C. E.N. & 12" O.C. F.N.	3"	12"	3X	5/8" AB @ 16" O.C.	1'-4"	10d	5/8" Lag @ 6" o.c.	500 lb./ft.	8" O.C.
6	15/32" STR I PLYWD. BLKD W/10d @ 2" O.C. E.N. & 12" O.C. F.N.	2"	12"	3X	5/8" AB @ 8" O.C.	8"	10d	5/8" Lag @ 5" o.c.	650 lb./ft.	8" O.C.

** AT 2" AND 3" SILL NAIL SPACING, THE CONTRACTOR MUST PREDRILL HOLES

** USE COMMON NAILS ONLY.

** FOR LAG BOLTS PROVIDE LEAD HOLES40%-70% OF THREADED SHANK DIAMETER AND FULL DIAMETER FOR SMOOTH SHANK PORTION.

NOTES:

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3. PROVIDE 3/8" NAIL EDGE DISTANCE AT 3X STUDS AND BLK'G.

4. AT OPENING IN SHEAR PANEL OVER 15" WIDE, PROVIDE SOLID BLK'G AT HEAD AND SILL LEVEL, EACH SIDE OF OPENING STRAP WITH 1" X 16 GA. X 3 TIMES OPENING WIDTH GALV. METAL STRAP NAIL WITH 8d @ 2" O.C.

5. NAILING WITH MACHINE NAILS SHALL CONFORM TO THE WOOD GENERAL NOTES ON SN1

6. ALL DEFECTIVE NAILS SHALL BE REMOVED AND REPLACED WITH SOUND NAILING.

7. PLYWOOD SHEATHING SHALL BE 1/2" STRUCT.1 PLYWOOD (EXT. GLUE) GRADE W/ 8d NAILS U.N.O.. PROVIDE FRAMING MEMBER OR BLOCKING AT ALL EDGES PER SCHEDULE. PROVIDE EDGE NAILING TO END STUD OR POST WHERE HOLDOWN OCCURS AND TO ALL OTHER POSTS IN SHEARWALLS. PLYWOOD SHEATHING SHALL CONFORM TO PLYWOOD SHEARWALL DETAILS.

8. SILL PLATES SHALL BE PRESSURE TREATED D.F. AND CONFORM TO SILL PLATES DETAILS. PROVIDE MINIMUM OF 3 ANCHOR BOLTS IN ALL SHEAR WALLS.

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14. FRAMING MEMBERS OR BLOCKING SHALL BE PROVIDED AT ALL EDGES OF ALL PLYWOOD SHEETS IN SHEAR WALL.

15. ALL PLYWOOD PANEL SHALL BE MANUFACTURED USING EXTERIOR GLUE.

15. ALL EXTERIOR WALL TO BE SECURED WITH 5/8" DIAM. x 16" A.B.'s AT 72" O.C. WITH 7" OF EMBEDMENT, UNLESS OTHERWISE NOTED, AND WITH MINIMUM 3"x3"x1/4" THICK PLATE WASHER UNDER NUT AT EACH BOLT.

16. ALL INTERIOR WALLS WITH SHOT PINS; RAMSET # 3348, OR EQUIVALENT, AT 36" O.C. AT BEARING WALLS AND 48" O.C. AT NON-BEARING WALLS, UNLESS OTHERWISE NOTED.

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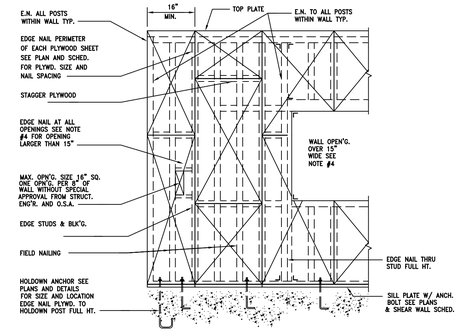

TYPICAL SHEARWALL SCHEDULE

01-29-2024

MESA ENGINEERING

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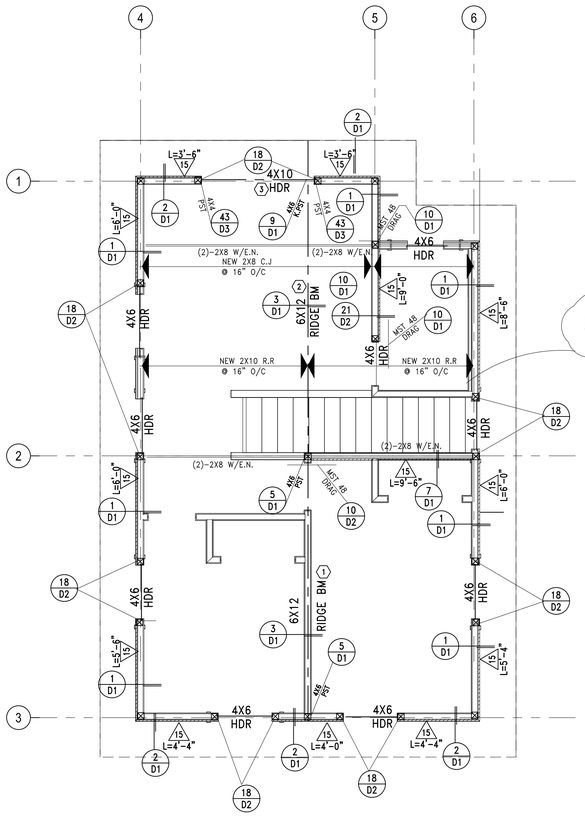

ROOF FRAMING PLAN.

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

SHEAR WALL SCHEDULE									TOP ANCHORAGE
MARK	SHEATHING SEE NOTE #7	E.N.	F.N.	EDGE STUD & BLK'G.	SILL PLATE SEE NOTE #2,8,9 CONNECTOR	SPACING	NAIL SIZE	SILL NAIL SPACING	CAPACITY	SIMPSON A35/LTP4
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2	15/32" C-D,C-C PLYWD. BLKD w/8d @ 4"O.C. E.N. & 12"O.C. F.N.	4"	12"	2X	5/8" AB @ 32" O.C.	2'-8"	8d	16d @ 5" O.C.	285 lb./ft.	16" O.C.
3	15/32" STR I PLYWD. BLKD W/8d @ 4" O.C. E.N. & 12" O.C. F.N.	4"	12"	3X	5/8" AB @ 24" O.C.	2'-0"	8d	5/8" Lag @ 8" o.c.	355 lb./ft.	12" O.C.
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5	15/32" STR I PLYWD. BLKD W/10d @ 3" O.C. E.N. & 12" O.C. F.N.	3"	12"	3X	5/8" AB @ 16" O.C.	1'-4"	10d	5/8" Lag @ 8" o.c.	500 lb./ft.	8" O.C.
6	15/32" STR I PLYWD. BLKD W/10d @ 2" O.C. E.N. & 12" O.C. F.N.	2"	12"	3X	5/8" AB @ 8" O.C.	8"	10d	5/8" Lag @ 3" o.c.	650 lb./ft.	8" O.C.

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3. PROVIDE 3/8" NAIL EDGE DISTANCE AT 3X STUDS AND BLK'G.

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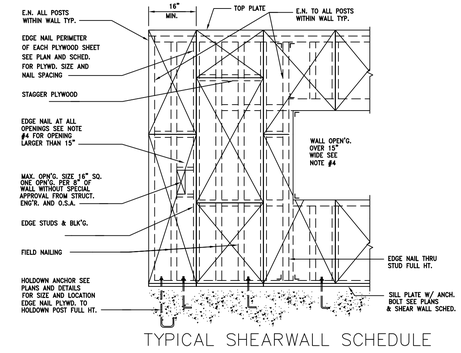

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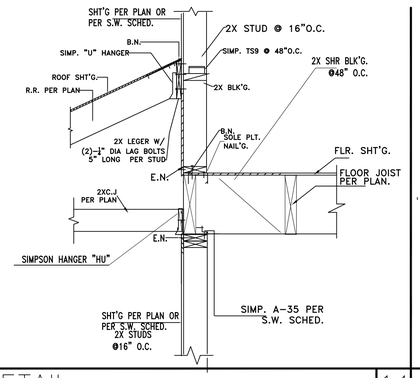
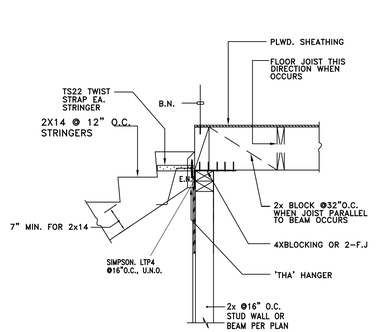
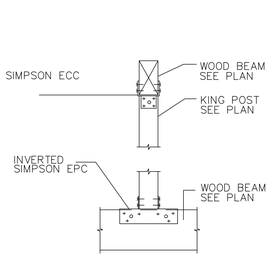
S3



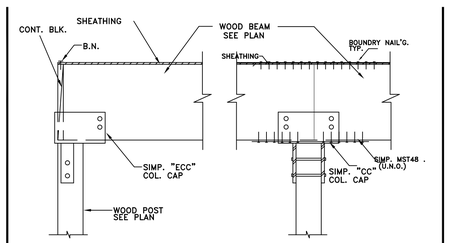
DETAIL 14



DETAIL 13

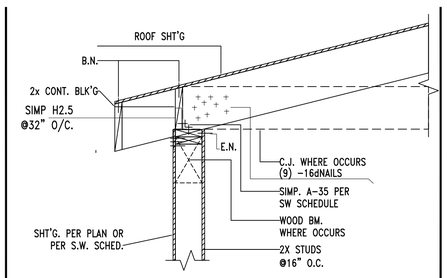


DETAIL 9

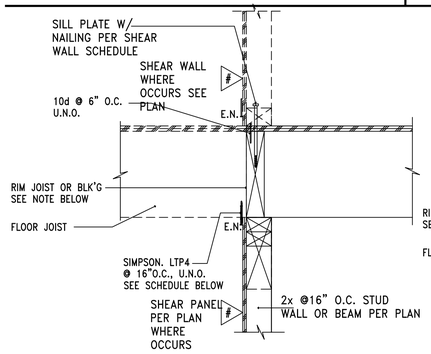


TYPICAL BEAM TO POST CONNECTION DETAIL

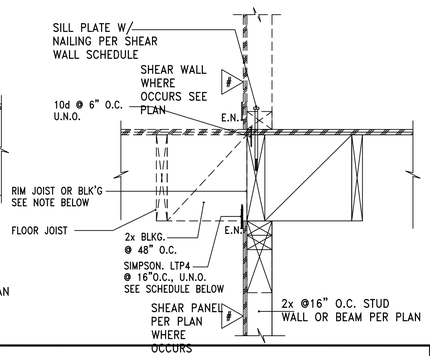
DETAIL 5

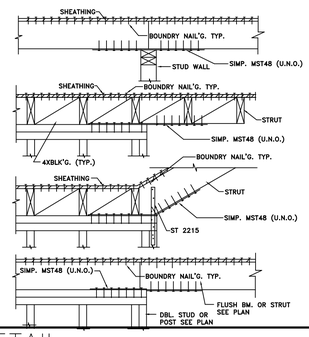


DETAIL 1



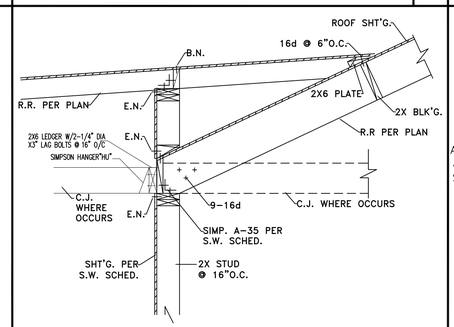
DETAIL 15



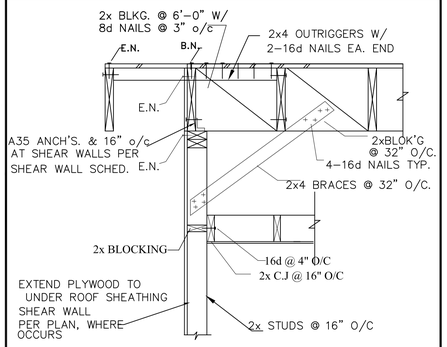


TYPICAL STRUT DETAIL

DETAIL 10

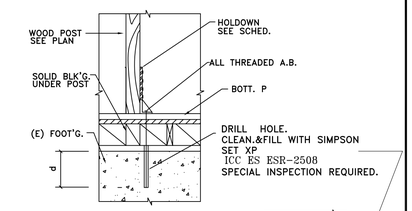


DETAIL 6



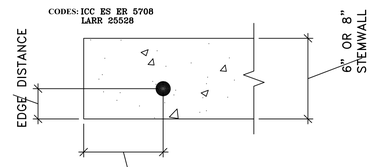
DETAIL 2

MIN EDGES DISTANCE TO BE:
-1-7/8" FOR THE 5/8" DIA BOLTS.
-2-5/8" FOR THE 7/8" DIA BOLTS.
-2-1/4" FOR THE 3/4" DIA BOLTS.



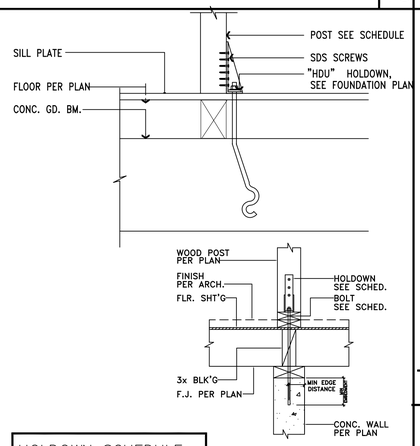
HOLDOWN	A.B.	"d"	CAPACITY
* HDU2	5/8"	12"	2300#
			3423#
* HDU5	5/8"	12 "	4230#

CODES: ICC ES ER 5708
LARR 25528



TOP VIEW
SPECIAL INSPECTION REQUIRED.

DETAIL 17

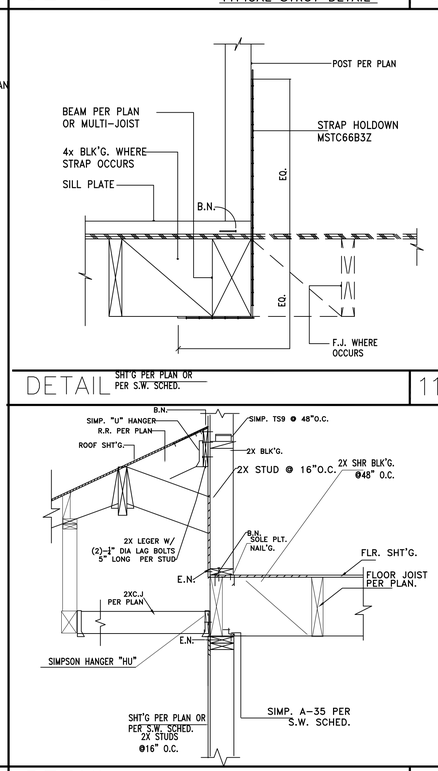


HOLDOWN SCHEDULE	
TYPE	MIN. Embed.
SSTB16 AT HDU2	12-5/8"
SSTB20 AT HDU4	16-5/8"
SSTB24 AT HDU5	25-5/8"
SSTB28 AT HDU8	29-7/8"

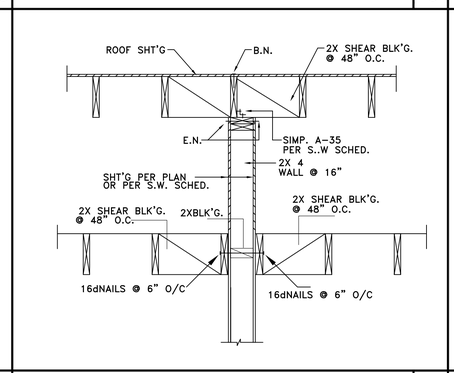
CODES I.C.C ESR-2330 ,ESR-2523 ,ESR-2611

MIN EDGES DISTANCE TO BE:
-1-7/8" FOR THE 5/8" DIA BOLTS.
-2-5/8" FOR THE 7/8" DIA BOLTS.
-2-1/4" FOR THE 3/4" DIA BOLTS.

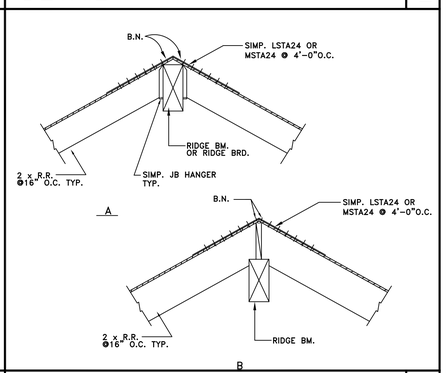
DETAIL 16



DETAIL 12

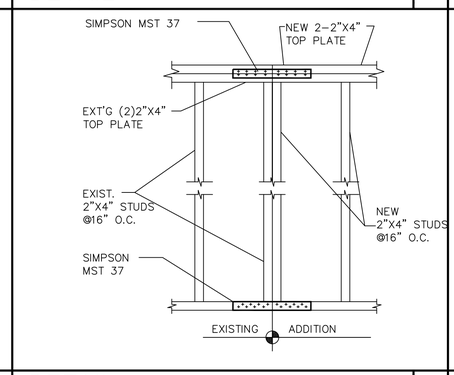


DETAIL 8

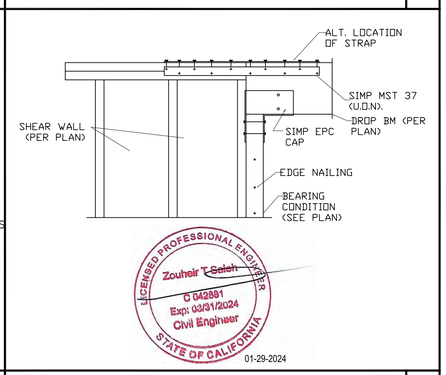


DETAIL 3

DETAIL 11



DETAIL 7



LICENSED PROFESSIONAL ENGINEER
Zouheir T. Sebsh
C 042881
Exp: 03/31/2024
Civil Engineer
STATE OF CALIFORNIA
01-29-2024

DETAIL 4

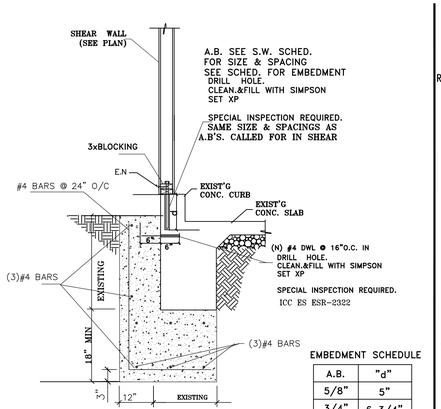
CONSULTANT:
MESA Entreprise,Inc
Structural/Consulting.
1304 Corte Maltera.
Costa Mesa Ca 92626.
TEL:562-235-4572.
FAX:562-490-8362.

REVISIONS:

PROJECT:
113 SHARON DR.
POMONA, CA 91767

DRAWN BY:
SCALE: NOTED
CAD FILE:
PROJECT NO.:
DATE: 01-29-2024

D1



EMBEDMENT SCHEDULE

A.B.	"d"
5/8"	5"
3/4"	6 3/4"
7/8"	7 3/4"
1"	9"

MIN EDGES DISTANCE TO BE:
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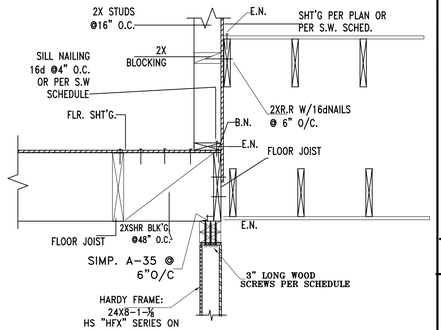
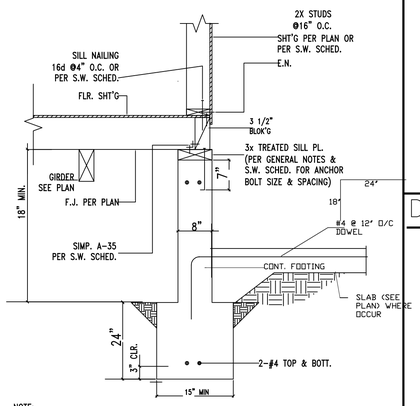
-2-5/8" FOR THE 7/8" DIA BOLTS.
-2-1/4" FOR THE 3/4" DIA BOLTS.

DETAIL 30



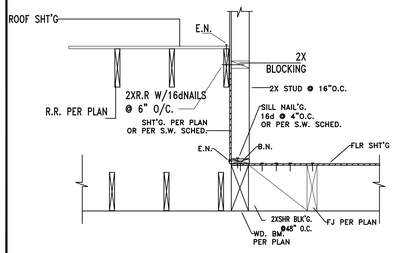
DETAIL 31



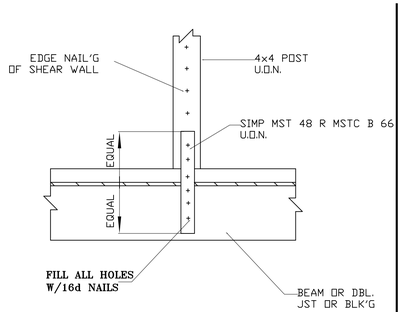
NOTE:
USE 2x SILL PLATE (MIN.) EXCEPT 3x SILL PLATE (P.T.) AT ALL SHEAR WALLS W/SHEAR CAPACITY GREATER THAN 300 PLF (PER S.W. SCHED.)(TYP.)

MIN EDGES DISTANCE TO BE:
-1-7/8" FOR THE 5/8" DIA BOLTS.
-2-5/8" FOR THE 7/8" DIA BOLTS.
-2-1/4" FOR THE 3/4" DIA BOLTS.

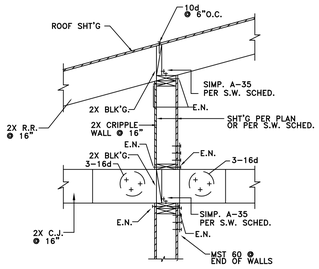
DETAIL 33

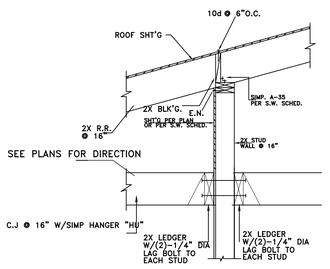


DETAIL 26

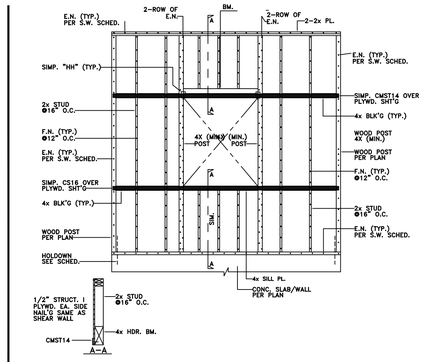


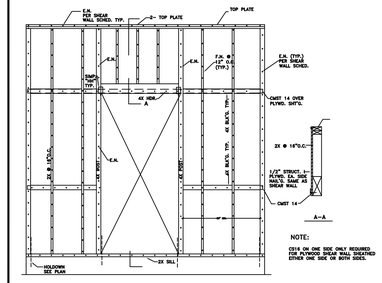
DETAIL 24





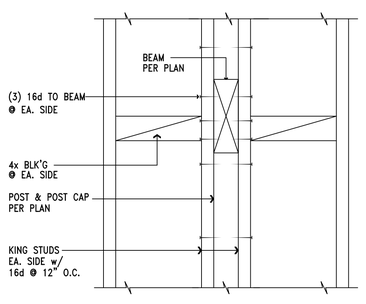
DETAIL 21



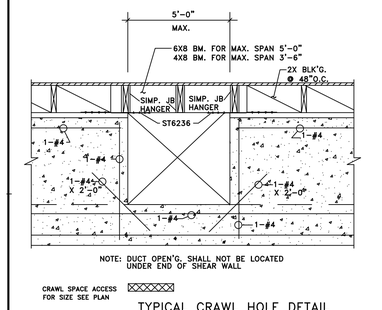


TYPICAL SHEAR WALL STRAP DETAIL

DETAIL 18

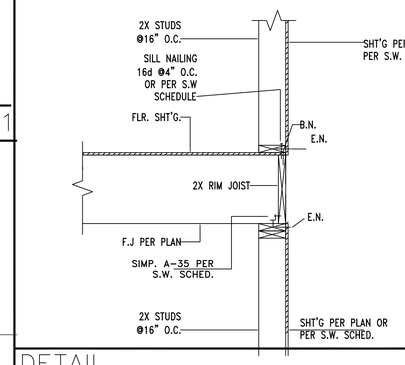


DETAIL 22

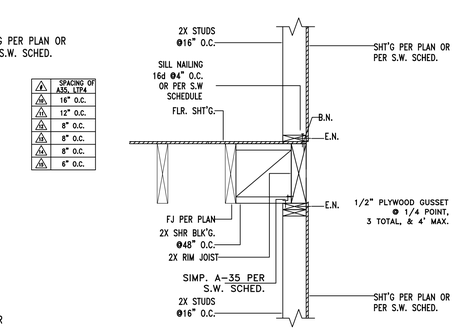


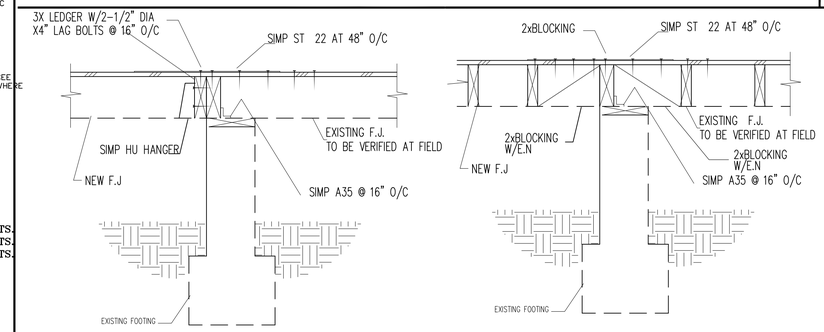
TYPICAL CRAWL HOLE DETAIL

DETAIL 19

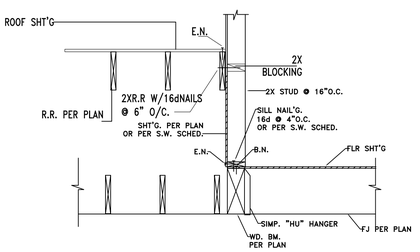


DETAIL 28

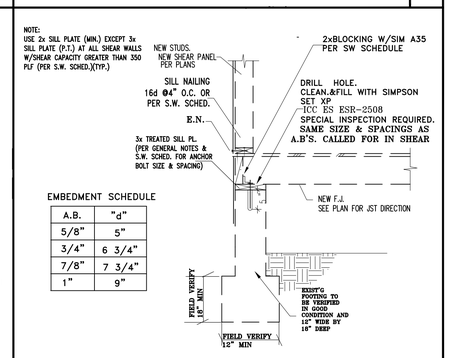




DETAIL 29



DETAIL 23



DETAIL 20

CONSULTANT:
MESA Entreprise ,Inc
Structural/Consulting.
1304 Corte Maltera.
Costa Mesa Ca 92626.
TEL:562-235-4572-
FAX:562-490-8362.

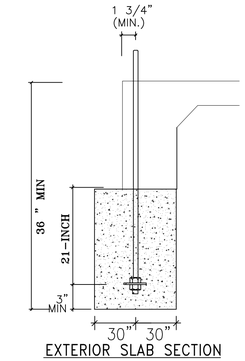
REVISIONS:

PROJECT:
113 SHARON DR.
POMONA, CA 91767

DRAWN BY:
SCALE:
CAD FILE:
PROJECT NO.:
DATE: 01-29-2024

D2

SHEET___ OF ___



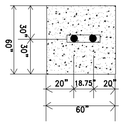
PAD FOOTING 5'-0" WIDE BY 5'-0" LONG BY:24" DEEP W/#6 BARS @ 10" O/C EACH WAY. TOP&BOTTOM

#3 TIES @ 4" O/C.

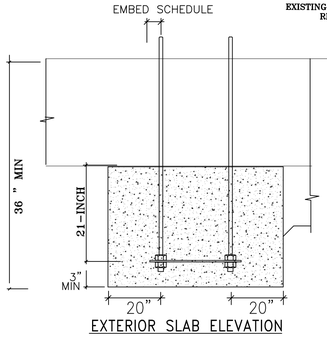
CRACKED CONC ,2500 PSI HS-SB

ANCHORAGE NOMENCLATURE 1-⅛ STD-14-20.

DETAIL:2/HFX1 ALSO D/HFX1.



EXTERIOR SLAB SECTION



HARDY FRAME: 24X8-1-⅛ HS "HFX" SERIES ON FOUNDATION

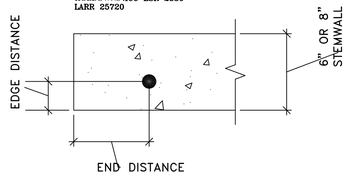
BASED ON :ICC-ESR-2089

EXTERIOR SLAB ELEVATION

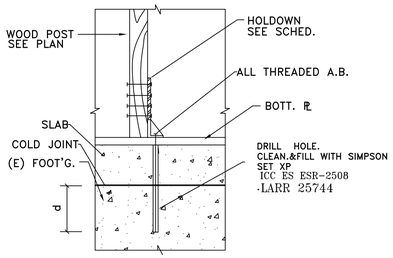
DETAIL 45

HOLDOWN	A.B.	"d"			
* HDU2	5/8"	12"			
* HDU4	5/8"	12"			
* HDU5	5/8"	15"			
**HD8A	7/8"	15"			

HOLDOWNS:ICC ESR 2330 LARR 25720



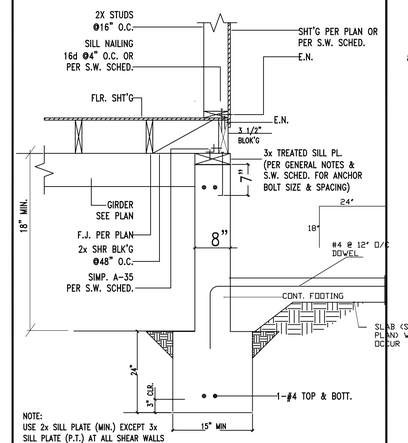
TOP VIEW



MIN EDGES DISTANCE TO BE:
-1-7/8" FOR THE 5/8" DIA BOLTS.
-2-5/8" FOR THE 7/8" DIA BOLTS.
-2-1/4" FOR THE 3/4" DIA BOLTS.

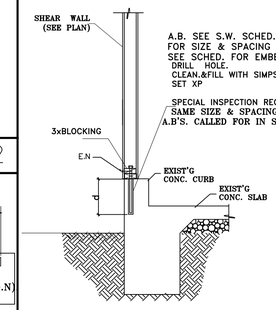
SPECIAL INSPECTION REQUIRED.

DETAIL 42



NOTE:
USE 2x SILL PLATE (MIN.) EXCEPT 3x SILL PLATE (P.T.) AT ALL SHEAR WALLS W/SHEAR CAPACITY GREATER THAN 300 PLF (PER S.W. SCHED.)(TYP.)

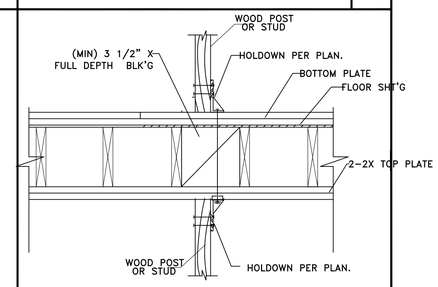
DETAIL 39



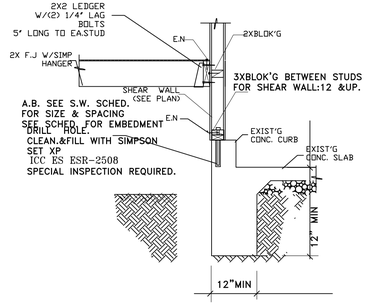
EMBEDMENT SCHEDULE

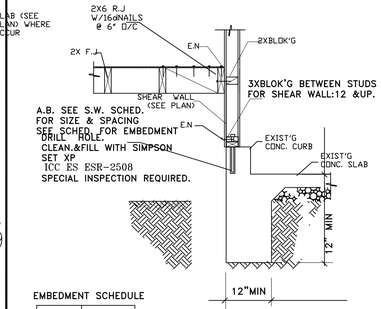
A.B.	"d"
5/8"	5"
3/4"	6 3/4"
7/8"	7 3/4"
1"	9"

DETAIL 40



DETAIL 41

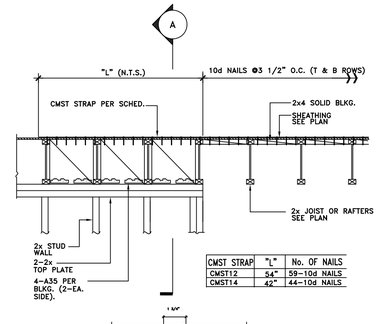




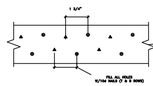
EMBEDMENT SCHEDULE

A.B.	"d"
5/8"	5"
3/4"	6 3/4"
7/8"	7 3/4"
1"	9"

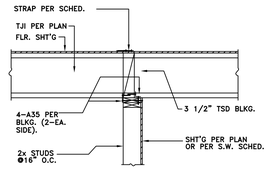
DETAIL 37



CMST STRAP	"L"	No. OF NAILS
CMST12	54"	59-10d NAILS
CMST14	42"	44-10d NAILS



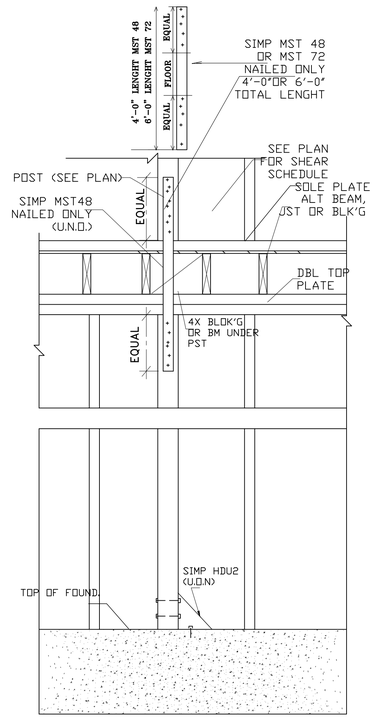
STRAP PLAN VIEW



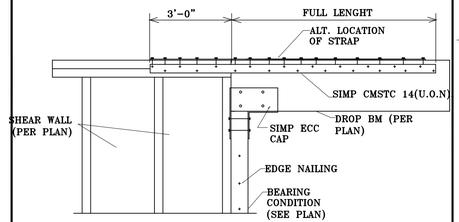
SECTION -A-

01-29-2024

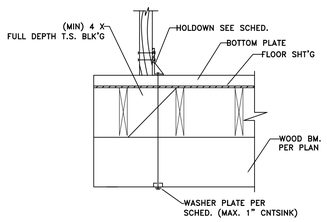
DETAIL 34



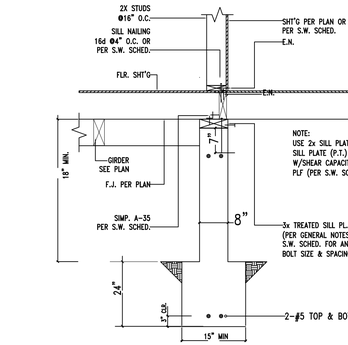
DETAIL 46

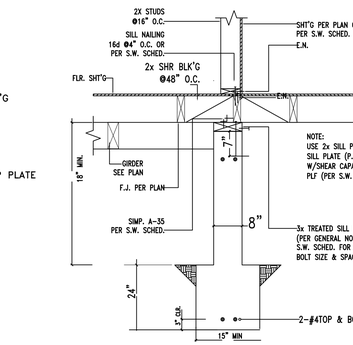


DETAIL 43

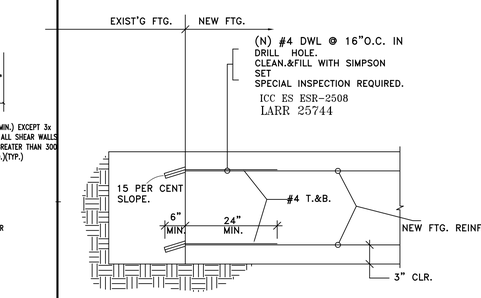


DETAIL 44



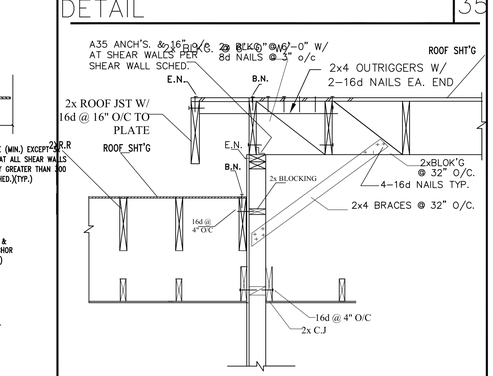


DETAIL 38



TYPICAL EXIT'G. TO NEW FOOT'G. DETAIL

DETAIL 35



DETAIL 36

CONSULTANT:
MESA Entreprise ,Inc
Structural/Consulting.
1304 Corte Maltera.
Costa Mesa Ca 92626.
TEL:562-235-4572.
FAX:562-490-8362.

REVISIONS:

PROJECT:
113 SHARON DR.
POMONA, CA 91767

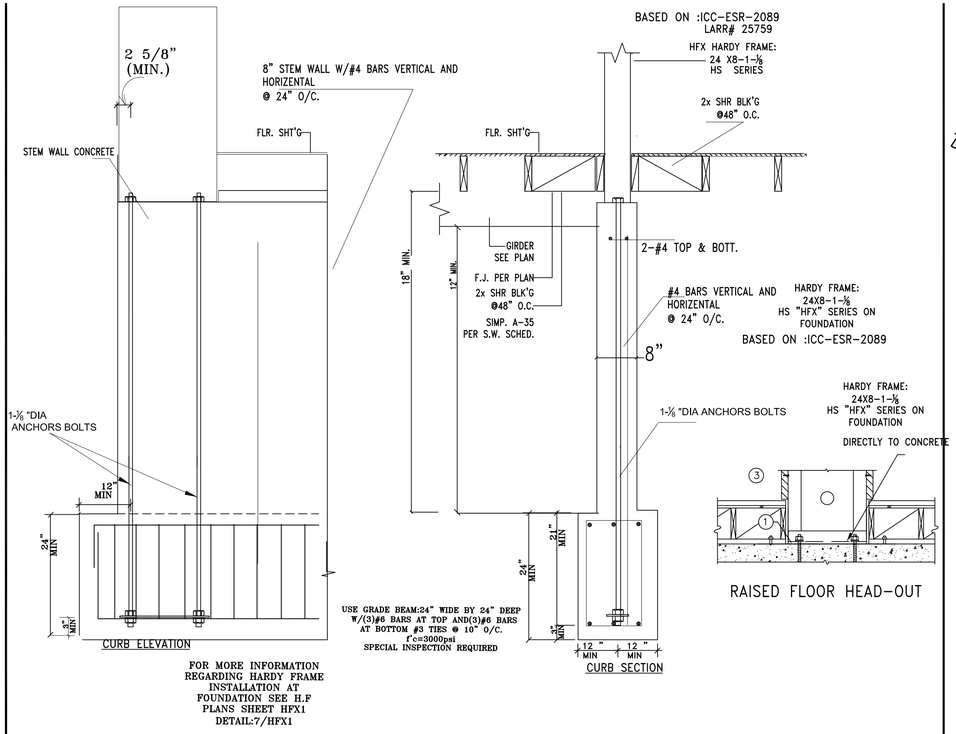
DRAWN BY:
SCALE:
CAD FILE:
PROJECT NO.:
DATE:01-29-2024

D3

SHEET___ OF ___

DETAIL

DETAIL

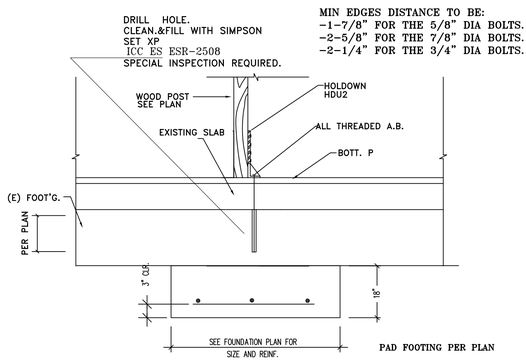


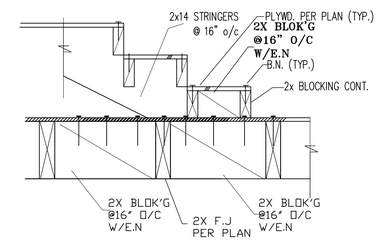
DETAIL

47

DETAIL

DETAIL





48

DETAIL

DETAIL

50

DETAIL

49

LICENSED PROFESSIONAL ENGINEER
Zouheir T Sellah
C 042881
Exp: 03/31/2024
Civil Engineer
STATE OF CALIFORNIA
01-29-2024

CONSULTANT:
MESA Entreprise ,Inc
Structural/Consulting.
1304 Corte Maltera.
Costa Mesa Ca 92626.
TEL:562-235-4572-
FAX:562-490-8362.

REVISIONS:

PROJECT:
113 SHARON DR.
POMONA, CA 91767

DRAWN BY:
SCALE:
CAD FILE:
PROJECT NO.:
DATE: 01-29-2024

D4

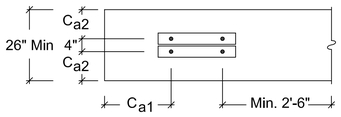
SHEET___ OF ___

BACK TO BACK REINFORCED ANCHORAGE (BB-RA)

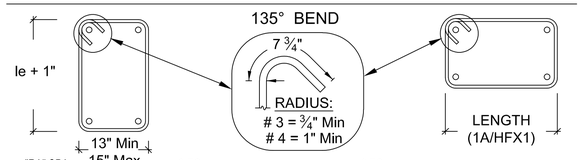
Model	Panel Width (in)	Anchorage[1]	Rod Dia (in)	Rod Grade[2,3]	BB-RA le[4] (in)	BB-RA C_{a1}[5] (in)	BB-RA C_{a2}[6] (in)	Stirrups[9] (in)	Shear Ties[7]
HFX-9x	9	1-1/8-STD-BB-RA	1-1/8	STD	15	19-3/4	11	8 - # 4	# 3 (min) @ 3-3/4" OC
HFX-12x	12	1-1/8-STD-BB-RA		STD	23	19-3/4	11	13 - # 4	# 3 (min) @ 4" OC
		1-1/8-HS-BB-RA		HS					
HFX-15x	15	1-1/8-STD-BB-RA		STD		20-5/8	11	14 - # 4	# 4 (min) @ 4" OC
		1-1/8-HS-BB-RA		HS					
HFX-18x	18	1-1/8-STD-BB-RA		STD		20-5/8	11	15 - # 4	
		1-1/8-HS-BB-RA		HS					
HFX-21x	21	1-1/8-STD-BB-RA		STD		20-5/8	11	16 - # 4	
		1-1/8-HS-BB-RA		HS					
HFX-24x	24	1-1/8-STD-BB-RA		STD		20-5/8	11	18 - # 4	
		1-1/8-HS-BB-RA		HS					

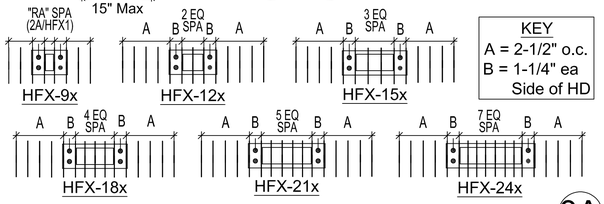
BACK TO BACK REINFORCED ANCHORAGE NOMENCLATURE

1-1/8 - STD - BB - RA
- REINFORCED ANCHORAGE
- "BACK TO BACK" INSTALLATION
- ROD GRADE
- ROD DIAMETER



3

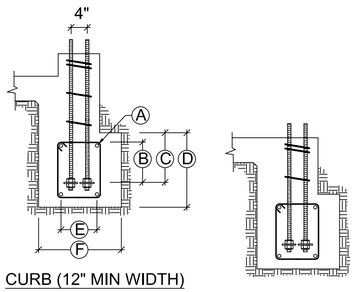




KEY
A = 2-1/2" o.c.
B = 1-1/4" ea Side of HD

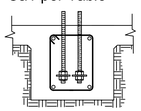
BB-RA SHEAR TIES & STIRRUPS

3A



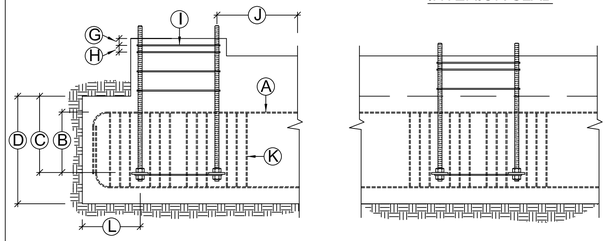
CURB (12" MIN WIDTH)

EXTERIOR SLAB



INTERIOR SLAB

A. #4 (Min) Longitudinal Rebar Top and Bottom by EOR
B. le - 3"
C. le per Table
D. le + 7"
E. CL = 10" Min, 12" Max
F. 2'-2" (Min)
G. ±1" From Top of Concrete to CL of Shear Tie
H. 1" CL @ Upper Two Ties
I. Shear Ties per Table
J. 2'-6" (Min) UNO by EOR
K. Stirrups per Table
L. Ca1 per Table



CURB @ OUTSIDE CORNER

CONTINUOUS FOOTING

BB-RA SECTIONS & ELEVATIONS

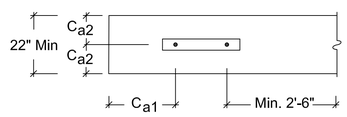
3B

REINFORCED ANCHORAGE (RA)

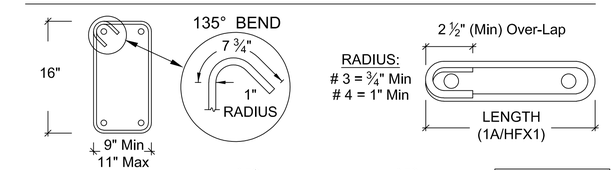
Model	Panel Width (in)	Anchorage[1]	Rod Dia (in)	Rod Grade[2,3]	RA le[4] (in)	RA C_{a1}[5] (in)	RA C_{a2}[6] (in)	Stirrups[9] (in)	Shear Ties[7]
HFX-9x	9	1-1/8-STD-RA	1-1/8	STD	15	19-3/4	11	8 - # 4	# 3 (min) @ 3-3/4" OC
HFX-12x	12	1-1/8-STD-RA		STD				9 - # 4	# 3 (min) @ 4" OC
		1-1/8-HS-RA		HS					
HFX-15x	15	1-1/8-STD-RA		STD		20-5/8		10 - # 4	
		1-1/8-HS-RA		HS					
HFX-18x	18	1-1/8-STD-RA		STD					
		1-1/8-HS-RA		HS					
HFX-21x	21	1-1/8-STD-RA		STD				11 - # 4	# 4 (min) @ 4" OC
		1-1/8-HS-RA		HS					
HFX-24x	24	1-1/8-STD-RA		STD				12 - # 4	
		1-1/8-HS-RA		HS					

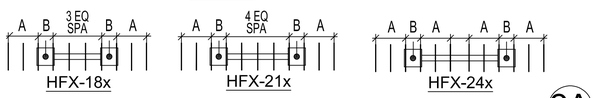
REINFORCED ANCHORAGE NOMENCLATURE

1-1/8 - STD - RA
- REINFORCED ANCHORAGE
- ROD GRADE
- ROD DIAMETER



2

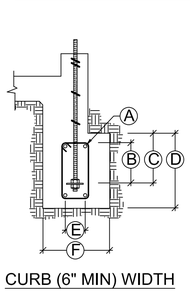




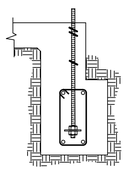
KEY
A = 3" o.c.
B = 1-1/2" ea Side of HD

RA SHEAR TIES & STIRRUPS

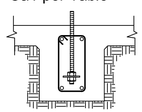
2A



CURB (6" MIN) WIDTH

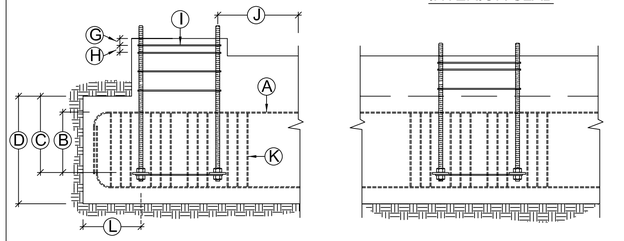


EXTERIOR SLAB



INTERIOR SLAB

A. #4 (Min) Longitudinal Rebar Top and Bottom by EOR
B. 12" Min
C. 15" Min
D. 22" Min
E. CL = 6" Min, 8" Max
F. 1'-10" (Min)
G. ±1" From Top of Concrete to CL of Shear Tie
H. 1" CL @ Upper Two Ties
I. Shear Ties per Table
J. 2'-6" Min UNO by EOR
K. Stirrups per Table
L. Ca1 per Table



CURB @ OUTSIDE CORNER

CONTINUOUS FOOTING

RA SECTIONS & ELEVATIONS

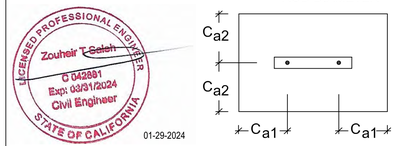
2B

UNREINFORCED ANCHORAGE (UA)

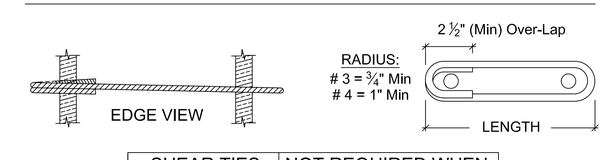
Model	Panel Height	Anchorage[1]	Rod Dia (in)	Rod Grade[2,3]	UA le[4] (in)	UA C_{a1}[5] & C_{a2}[6] (in)	Shear Ties[7,8]
HFX-9x	79.5" - 8'	1-1/8-STD-13-19	1-1/8	STD	13	19	1 - # 3
HFX-12x	78" - 10'	1-1/8-STD-13-19		STD	13	19	
		1-1/8-HS-20-30		HS	20	30	
HFX-15x, 18x	78" - 13'	1-1/8-STD-14-20		STD	14	20	
HFX-15x, 18x Balloon	14' - 20'	1-1/8-HS-20-30		HS	20	30	
HFX-21x, 24x	78" - 13'	1-1/8-STD-14-20		STD	14	20	
		1-1/8-HS-23-34			23	34	2 - # 3
HFX-21x, 24x Balloon	14' - 20'	1-1/8-HS-20-30		HS	20	30	

UNREINFORCED ANCHORAGE NOMENCLATURE

1-1/8 - STD - 14 - 20
- END & EDGE DISTANCE (C_{a1} & C_{a2})
- EMBEDMENT DEPTH (l_e)
- ROD GRADE
- ROD DIAMETER



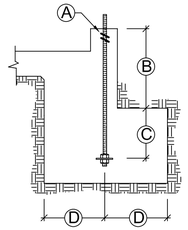
1



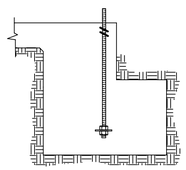
SHEAR TIES	NOT REQUIRED WHEN	
Model	Length	End Distance ≥	Edge Distance ≥
HFX-9x	7-1/2"	2-3/8"	2-3/8"
HFX-12x	10-1/2"	6-1/4"	3-1/2"
HFX-15x	12"	7-3/8"	4-1/4"
HFX-18x	15"	8-3/8"	5"
HFX-21x	18"	9-3/8"	5-1/2"
HFX-24x	21"	10-3/8"	6"

UA SHEAR TIES

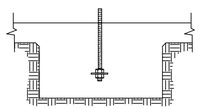
1A



CURB (6" MIN) WIDTH

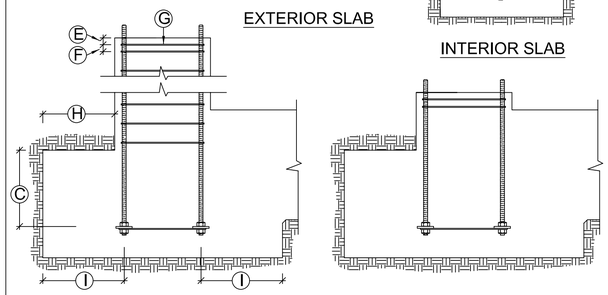


EXTERIOR SLAB



INTERIOR SLAB

A. Shear Ties per UA Table
B. 10" Max or per Plans
C. le per Table
D. Ca2 per Table
E. ±1" from Top of Concrete to CL of Shear Tie
F. 1" CL @ Upper Two Ties
G. Shear Ties per RA Table when Top of Concrete is ≥ 8" above Top of Slab
H. 12" Min
I. Ca1 per Table



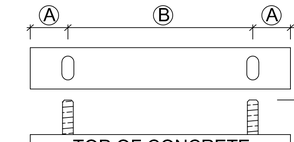
STEM WALL @ OUTSIDE CORNER

CURB @ OUTSIDE CORNER

UA SECTIONS & ELEVATIONS

1B

1. DESIGNS ARE TO RESIST LOADING PER ACI 318-19, SEC 17.10.5.3.
2. STD INDICATES ANCHORS COMPLYING WITH ASTM F1554 GRADE 36 WITH A HARDY FRAME BOLT BRACE (HFXBB) INSTALLED WITH STD OR GRADE 8 DOUBLE NUTS ON THE EMBED END.
3. HS INDICATES ANCHORS COMPLYING WITH ASTM A193 GRADE B7 WITH A 1/2"x3"x3"(MIN) HFPW PLATE WASHER INSTALLED WITH DOUBLE NUTS ON THE EMBED END (HFXBB NOT REQUIRED).
4. LE = LENGTH OF EMBEDMENT FROM THE TOP OF FOOTING OR GRADE BEAM TO THE TOP OF THE HFXBB BOLT BRACE (TOP OF THE EMBEDDED HFPW PLATE WASHER @ HS ANCHORS)
5. CA1 = DISTANCE FROM HD CENTERLINE TO THE END OF THE FOOTING OR GRADE BEAM.
6. CA2 = DISTANCE FROM HD CENTERLINE TO BOTH THE FRONT AND THE BACK FACE OF THE FOOTING OR GRADE BEAM.
7. SHEAR TIES ARE GRADE 60 (MIN) REBAR AND REQUIRED FOR NEAR EDGE DISTANCE CONDITIONS PER ACI 318-19, F'C = 2,500 PSI. CURBS AND STEM WALLS MUST BE 6 INCH (MIN) WIDTH FOR UA AND RA, 12 INCH (MIN) WIDTH FOR BB-RA.
8. FOR UA APPLICATIONS, ADDITIONAL TIES MAY BE REQUIRED AT STEM WALLS. SHEAR TIES ARE NOT REQUIRED FOR INSTALLATION AWAY FROM EDGE (SEE DETAIL 1A), INSTALLATION ON WOOD FRAMING, OR FOR IRC BRACED WALL PANEL APPLICATIONS.
9. STIRRUPS ARE GRADE 60 (MIN) REBAR. SEE TABLE FOR SIZE AND SPACING. SEE "STIRRUP LAYOUT" DIAGRAMS AND "KEY" FOR LAYOUT PATTERNS.
10. CONCRETE EDGE DISTANCES MUST COMPLY WITH ACI 318-19, SECTION 17.9.2. COATED REINFORCEMENT MAY BE SPECIFIED BY THE EOR TO LIMIT EXPOSURE AND THEREFORE REDUCE MINIMUM CONCRETE COVER. COATED REINFORCEMENT MUST COMPLY WITH ACI 318-19, SECTION 20.5.2.



Model	Width	Ⓐ	Ⓑ
HFX-9x	9"	1-3/4"	5-1/2"
HFX-12x	12"		8-1/2"
HFX-15x	15"	2-5/8"	9-3/4"
HFX-18x	18"		12-3/4"
HFX-21x	21"		15-3/4"
HFX-24x	24"		18-3/4"

HFX ANCHOR CENTERLINES

A

IMPORTANT!

1. ANCHORAGE IS DESIGNED FOR TENSION AND SHEAR TRANSFER ONLY, FOUNDATION DESIGN PER EOR.
2. REINFORCEMENT SHOWN IS THE MINIMUM REQUIREMENT AND IS NOT INTENDED TO REPLACE REINFORCEMENT DESIGNED BY THE EOR.
3. FOR RA AND BB-RA INSTALLATIONS, THE HFXBB BOLT BRACE MAY BE PLACED ON TOP OF THE STIRRUPS WITH DOUBLE-NUTS INSTALLED AT EMBED END OF STANDARD GRADE ANCHOR RODS. (NOTE: ½" x 3" x 3" MIN. HFPW PLATE WASHERS ARE REQUIRED TO BE DOUBLE-NUTTED AT EMBED END OF HIGH STRENGTH ANCHOR RODS.)
4. HIGH STRENGTH ALL-THREAD RODS PROVIDED BY HARDY FRAMES ARE STAMPED ON BOTH ENDS. (HF B7)

IMPORTANT NOTES

B

REVISIONS	DATE

ANCHORAGE DETAILS - HFX PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH *HARDY FRAME* PRODUCTS

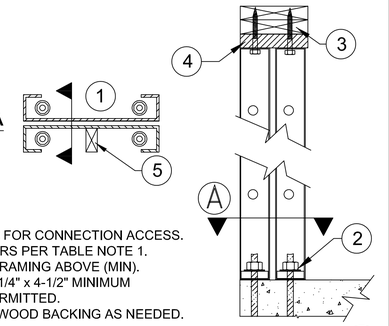
HARDY FRAME SHEAR WALL SYSTEMS
16023 SWINGLEY RIDGE RD
CHESTERFIELD, MO 63017
(800) 325-8075
WWW.HARDYFRAME.COM

MiTek®

DATE:
1-1-2023

HFX1

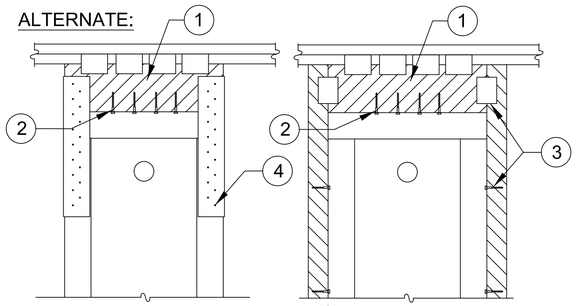
SECTION A



1. CAVITY ORIENTED FOR CONNECTION ACCESS.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. NOMINAL 8 INCH FRAMING ABOVE (MIN).
4. A 2x FILLER WITH 1/4" x 4-1/2" MINIMUM WS SCREWS IS PERMITTED.
5. FIELD INSTALLED WOOD BACKING AS NEEDED.

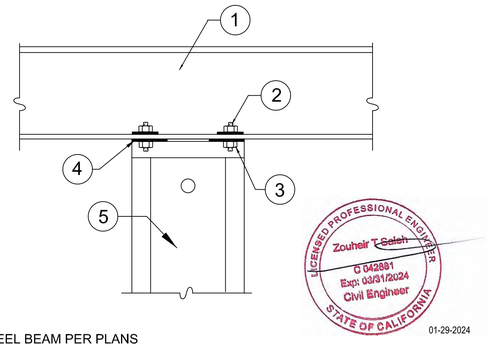
BACK TO BACK INSTALLATION 3

ALTERNATE:



1. WOOD FILLER (13 3/8" MAX DEPTH) WITH USP MP4F CONNECTORS BOTH SIDES, QUANTITY BY BUILDING DESIGN PROFESSIONAL.
2. 1/4" x 3" (MINIMUM) WS SCREWS, QUANTITY PER TABLES
3. ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS INSTALLED THROUGH PRE-PUNCHED HOLES IN PANEL EDGES REQ'D WHEN INSTALLING A FILLER GREATER THAN 1-1/2" ABOVE TO BRACE OUT-OF-PLANE HINGE OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.
4. MiTek HFFB FILLER BRACE WITH 1/4" x 1-1/2" WS SCREWS TO FILLER (FILL ALL HOLES) AND 1/4" SELF-TAPPING SCREWS TO PANEL (5 MIN. EACH FACE) REQ'D WHEN INSTALLING A FILLER GREATER THAN 3-1/4" ABOVE TO BRACE OUT-OF-PLANE HINGE OR WHEN SPECIFIED BY THE BUILDING DESIGN PROFESSIONAL.

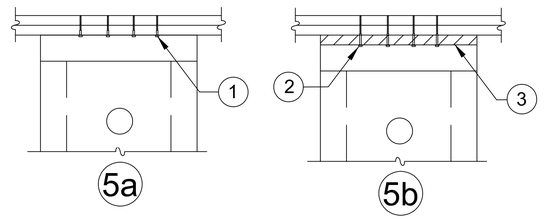
FILLER GREATER THAN 1-1/2 IN. 6



LICENSED PROFESSIONAL ENGINEER
Zouheir T Saleh
C 042891
Exp: 03/31/2024
Civil Engineer
STATE OF CALIFORNIA
01-29-2024

1. STEEL BEAM PER PLANS
2. ALL THREAD RODS THRU-BOLTED TO STEEL BEAM BY BUILDING DESIGN PROFESSIONAL.
3. NUTS AND WASHERS PER TABLE NOTE 1.
4. *HARDY FRAME*® STACKING WASHERS (HFSW) REQUIRED TO BE WELDED INSIDE TOP CHANNEL OF LOWER PANEL.
5. *HARDY FRAME*® "STK" PANEL WITH STACKING WASHERS WELDED INSIDE THE TOP CHANNEL BY MANUFACTURER.

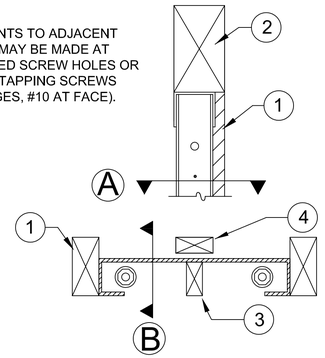
STEEL BEAM ABOVE THRU-BOLT 2



1. 1/4" x 3" (MINIMUM) WS SCREWS, QUANTITY PER TABLES
2. 1/4" x 4-1/2" (MINIMUM) WS SCREWS, QUANTITY PER TABLES
3. 2x WOOD FILLER.

TOP PLATE CONNECTIONS 5

NOTE:
ATTACHMENTS TO ADJACENT TRIMMERS MAY BE MADE AT PREPUNCHED SCREW HOLES OR WITH SELF TAPPING SCREWS (#12 AT EDGES, #10 AT FACE).



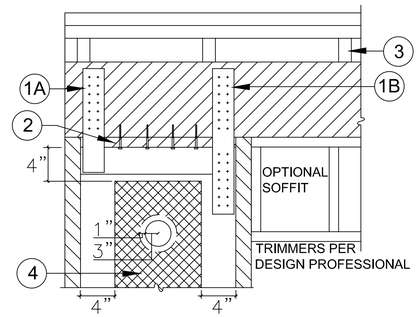
SECTION B

SECTION A

1. TRIMMERS PROVIDE FULL BEARING FOR HEADER ABOVE, DESIGN AND CONNECTIONS BY BUILDING DESIGN PROFESSIONAL.
2. 6x HEADER.
3. WOOD MEMBERS FOR BACKING MAY BE INSERTED VERTICALLY OR HORIZONTALLY IN THE PANEL CAVITY AS NEEDED.
4. WOOD MEMBER FLUSH TO FACE OF WALL FOR BACKING AS NEEDED.

6x HEADER ABOVE-SECTIONS 1

NOTE:
TO PREVENT DRILLING ADDITIONAL HOLES ORIENT THE PANEL CAVITY TOWARD THE FIXTURE BEING INSTALLED.



1. (A) PRE-WELDED STRAPS ARE PROVIDED ON 78" AND 79-1/2" PANEL HEIGHTS. THEY ARE AVAILABLE FOR OTHER HEIGHTS UPON REQUEST.
   (B) FIELD INSTALLED STRAPS WITH SELF TAPPING SCREWS ARE PERMITTED. THE DESIGN AND CONNECTION IS BY THE DESIGN PROFESSIONAL.
2. A 2x WOOD FILLER WITH 1/4"x4-1/2" (MIN.) WS SCREWS IS PERMITTED.
3. WHEN CRIPPLE STUDS OCCUR, SHEAR TRANSFER DESIGN TO BE PER THE BUILDING DESIGN PROFESSIONAL.
4. A 1" DIA. HOLE MAY BE ADDED IN THE PANEL FACE WHEN IT IS LOCATED IN THE UPPER HALF OF THE PANEL HEIGHT AND IS 4" MINIMUM FROM ANY EDGE. FOR PANELS MORE THAN 12" WIDE, ADDITIONAL HOLES MUST BE OFFSET 1" MINIMUM FROM THE 3" DIA. PREPUNCHED HOLE. FOR HOLES LARGER THAN 1" DIAMETER OR TO ADD MORE THAN ONE HOLE CONTACT MITEK HARDY FRAME TECHNICAL SUPPORT AT (800) 754-3030.

TOP CONNECTION TO HEADER 4

HFX PANELS 78 IN. THROUGH NOMINAL 13 FEET

Model Number	Net Height (in)	Depth (in)	Hold Down Diameter[1] (in)	Top Screw Qty[2] (ea)	Screw Qty Available at Edges (ea)[3]
HFX-12,15,18,21 & 24x78	78	3-1/2	1-1/8	9" Width = 5 12" Width = 6 15" Width = 8	4
HFX-9x79.5	79-1/2				
HFX-12,15,18,21 & 24x8	92-1/4				
HFX-9x8	93-3/4				
HFX-12,15,18,21 & 24x9	104-1/4				
HFX-12,15,18,21 & 24x10	116-1/4			18" Width = 10	5
HFX-15,18,21 & 24x11	128-1/4			21" Width = 12	
HFX-15,18,21 & 24x12	140-1/4			24" Width = 14	6
HFX-15,18,21 & 24x13	152-1/4				

BALLOON PANELS 14 FEET THROUGH 20 FEET

Model Number	Net Height (in)	Depth (in)	Hold Down Diameter[1] (in)	Top Screw Qty[2] (ea)	Screw Qty Available at Edges (ea)[3]
HFX-15,18,21 & 24x14	164-1/4	3-1/2	1-1/8	15" Width = 8 18" Width = 10 21" Width = 12 24" Width = 14	6 7 8
HFX-15,18,21 & 24x15	176-1/4				
HFX-15,18,21 & 24x16	188-1/4				
HFX-15,18,21 & 24x17	200-1/4				
HFX-15,18,21 & 24x18	212-1/4				
HFX-15,18,21 & 24x19	224-1/4				
HFX-15,18,21 & 24x20	236-1/4				

TABLE NOTES

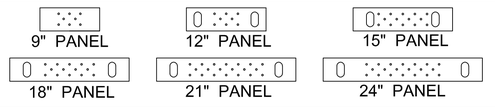
1. FOR STD OR HS GRADE HOLD DOWN ANCHOR BOLTS CONNECT TO THE PANEL BASE WITH HARDENED ROUND WASHERS BELOW GRADE 8 NUTS. ALTERNATE WASHERS ARE (2 EA) ROUND-FLAT OR (2 EA) SAE WASHERS ON EACH BOLT. ALTERNATE NUTS ARE 2H HEAVY HEX.
2. 1/4" DIAMETER MITEK® PRO SERIES™ WS SCREWS. LENGTH IS 3" (MINIMUM) WHEN ATTACHED DIRECTLY TO THE COLLECTOR AND 4-1/2" (MINIMUM) WHEN INSTALLING A 2x FILLER ABOVE THE PANEL.
3. ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS IS REQUIRED AT THE PANEL EDGES WHEN INSTALLING A FILLER ABOVE THE TOP CHANNEL THAT IS GREATER THAN 1-1/2" OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.

A

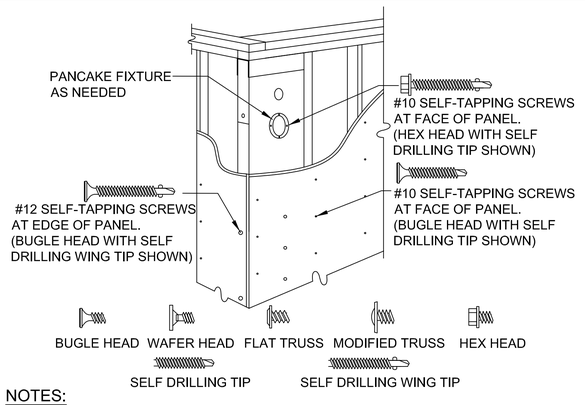
INSTALLATION INSTRUCTIONS

1. WHEN INSTALLING ON CONCRETE CONNECT WITH (1 EA) HARDENED ROUND WASHER BELOW (1 EA) GRADE 8 NUT, SECURE WITH A DEEP SOCKET (RECOMMENDED) UNTIL SNUG TIGHT. ALTERNATE WASHERS AND NUTS ARE PROVIDED IN TABLE NOTE 1.
2. INSTALLATION ON CONCRETE PROVIDES THE HIGHEST ALLOWABLE VALUES. CONFIRM WITH THE DESIGN PROFESSIONAL BEFORE INSTALLING ON OTHER SUPPORTING SURFACES.
3. USE 1/4"X4-1/2" MITEK® PRO SERIES™ WS SCREWS AT TOP CONNECTIONS WITH A 2x FILLER. IF THE TOP OF PANEL IS IN DIRECT CONTACT WITH THE COLLECTOR ABOVE (TOP PLATES, HEADER, BEAM, ETC.) USE1/4 x 3" (MIN)
4. FOR INSTALLATIONS WITH A FILLER GREATER THAN 1-1/2" ABOVE, OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL, ADJACENT KING POSTS TO BRACE THE OUT-OF-PLANE HINGE CAN BE CONNECTED WITH 1/4" DIA. SCREWS THROUGH PRE-PUNCHED HOLES AT THE PANEL EDGES.

B



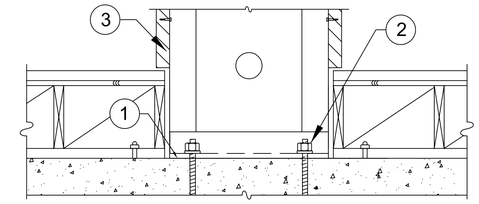
C



NOTES:

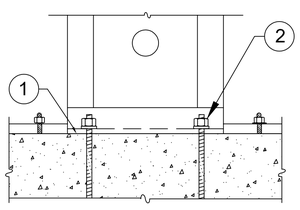
A. SURFACE FINISHES, CONNECTORS AND FIXTURES ARE ATTACHED TO THE PANEL FACE WITH # 10 SELF-TAPPING SCREWS SPACED NO LESS THAN 2-1/4" OC.
B. ATTACHMENTS TO THE PANEL EDGES ARE MADE WITH # 12 SELF-TAPPING SCREWS.
C. STRUCTURAL CONNECTIONS ARE TO BE DESIGNED BY THE DESIGN PROFESSIONAL.
D. STRUCTURAL HARDWARE USED TO TRANSFER LOADS SHOULD NOT EXCEED 12 GAUGE.

D



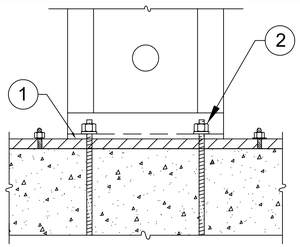
1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. NUTS AND WASHERS PER TABLE NOTE 1.

RAISED FLOOR HEAD-OUT 8



1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.

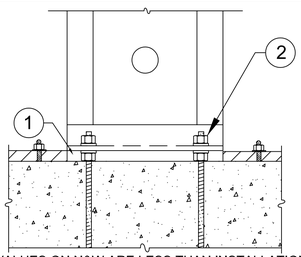
INSTALLATION ON CONCRETE 7



ALLOWABLE VALUES ON 2x PLATE ARE LESS THAN INSTALLATION ON CONCRETE

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND TREATED PLATE.
2. NUTS AND WASHERS PER TABLE NOTE 1.

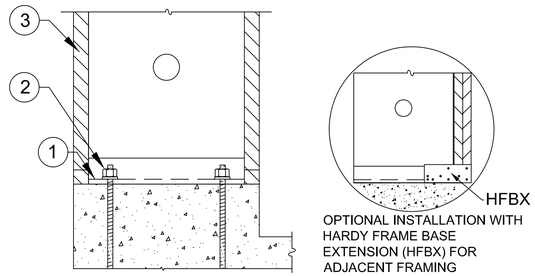
INSTALLATION ON 2x PLATE 11



ALLOWABLE VALUES ON N&W ARE LESS THAN INSTALLATION ON CONCRETE

1. PLUS OR MINUS 1-1/2" GAP TO BE FILLED WITH 5,000 PSI NON-SHRINK GROUT (MINIMUM).
2. NUT AND WASHER GRADES PER TABLE NOTE 1.

INSTALLATION ON NUTS & WASHERS 10



OPTIONAL INSTALLATION WITH HARDY FRAME BASE EXTENSION (HFBX) FOR ADJACENT FRAMING

1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. ADJACENT FRAMING OPTIONAL U.N.O. BY BUILDING DESIGN PROFESSIONAL.

INSTALLATION ON CURB 9

REVISIONS	DATE

FRAMING DETAILS - HFX PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH MITEK® *HARDY FRAME*® PRODUCTS

HARDY FRAME SHEAR WALL SYSTEMS
16023 SWINGLEY RIDGE RD
CHESTERFIELD, MO 63017
(800) 325-8075
WWW.HARDYFRAME.COM

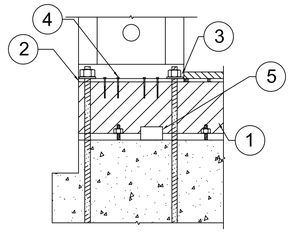
MiTek®

DATE:
1-1-2023

HFX2

NOTES:

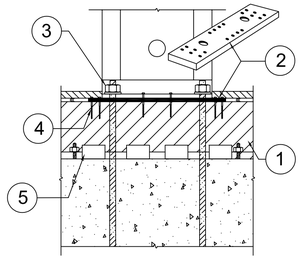
A. INSTALLATION WITHOUT *HARDY FRAME*® BEARING PLATE (HFXBP) MAY INCREASE DEFLECTION AND RESULT IN A DECREASE OF ALLOWABLE SHEAR VALUE, BUILDING DESIGN PROFESSIONAL MUST ANALYZE EFFECTS
B. COUPLERS MAY BE USED WHEN THREADED ROD IS SUBJECT TO TENSION LOADS ONLY.



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® PANEL DIRECTLY ON RIM.
3. NUTS AND WASHERS PER TABLE NOTE 1.
4. 1/4" x 4-1/2" (MINIMUM) WS SCREWS THROUGH BOTTOM OF PANEL MINIMUM QUANTITY PER TABLE.
5. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

RAISED-OS CORNER 4

NOTE:
COUPLERS MAY BE USED WHEN THREADED ROD IS SUBJECT TO TENSION LOADS ONLY.

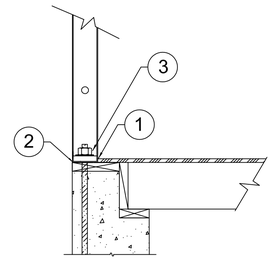


1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. NUTS AND WASHERS PER TABLE NOTE 1.
4. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
5. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

RAISED BEARING PLATE 3

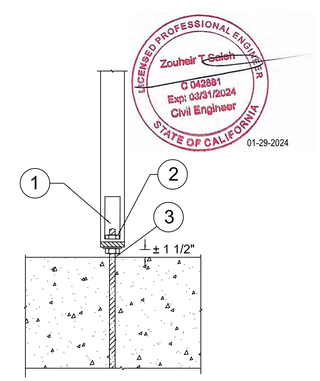
NOTES:

A. CHECK WALL HEIGHT, *HARDY FRAME*® BEARING PLATES BELOW THE PANEL BASE OR CUSTOM HEIGHT PANELS ARE AVAILABLE TO AVOID FILLERS GREATER THAN 1-1/2".
B. FOR MAXIMUM ALLOWABLE VALUES INSTALL PANEL ON CONCRETE



1. FLOOR SHEATHING NOTCHED, INSTALL PANEL ON WOOD PLATE.
2. 15# FELT OR EQUIVALENT RECOMMENDED BETWEEN PANEL BASE AND TREATED MUDSILL.
3. NUTS AND WASHERS PER TABLE NOTE 1.

RAISED STEM WALL 2



1. ACCESS HOLE LOCATED AT EDGE OF POST.
2. NUTS AND WASHERS PER TABLE NOTE 1.
3. PLUS OR MINUS 1-1/2" GAP TO BE FILLED WITH 5,000 PSI STRENGTH NON-SHRINK GROUT (MIN).

POST ON N&W 1

Model Number	Net Height (in)	Depth (in)	Hold Down Diameter[1] (in)	Screw Quantity			Screw Qty[4] Available at Edges (ea)
				Panel	Top[2] (ea)	Bott[3] (ea)	
HFX-12,15,18,21 & 24x8	92-1/4	3-1/2	1-1/8	12" Width	6	6	4
HFX-12,15,18,21 & 24x9	104-1/4			15" Width	8	8	
HFX-12,15,18,21 & 24x10	116-1/4			18" Width	10	10	5
HFX-15,18,21 & 24x11	128-1/4			21" Width	12	12	
HFX-15,18,21 & 24x12	140-1/4			24" Width	14	14	6
HFX-15,18,21 & 24x13	152-1/4						

NOTE: *HARDY FRAME*® STACKING WASHERS (HFSW) ARE REQUIRED IN THE TOP OF PANELS WHEN CONNECTING TO TENSION ANCHORS FROM ABOVE. *HARDY FRAME*® "STK PANELS" INCLUDE HFSW WASHERS PRE-WELDED IN THE TOP CHANNEL.

1. HOLD DOWN TENSION ANCHORS SPECIFIED AS STANDARD GRADE (STD) MUST COMPLY WITH ASTM F1554 GRADE 36 (OR EQUAL). HOLD DOWN TENSION ANCHORS SPECIFIED AS HIGH STRENGTH (HS) MUST COMPLY WITH ASTM A 193 GRADE B7 (OR EQUAL). TENSION ANCHORS (BOTH GRADES) CONNECT TO THE UPPER AND LOWER PANELS WITH HARDENED ROUND WASHERS AND GRADE 8 NUTS. A *HARDY FRAME*®'HFSW" STACKING WASHER IS REQUIRED IN THE TOP CHANNEL OF THE LOWER PANEL (AVAILABLE PRE-WELDED IN A *HARDY FRAME*®"STK" PANEL). ALTERNATE WASHERS ARE (2 EA) ROUND-FLAT OR (2 EA) SAE WASHERS AT EACH ANCHOR CONNECTION. ALTERNATE NUTS ARE 2H HEAVY HEX.
2. 1/4" DIAMETER MITEK® PRO SERIES™ WS SCREWS. LENGTH IS 3" (MINIMUM) WHEN ATTACHING DIRECTLY TO THE COLLECTOR AND 4-1/2" (MINIMUM) WHEN INSTALLING A 2x FILLER ABOVE THE PANEL.
3. 1/4" DIAMETER MITEK® PRO SERIES™ WS SCREWS. LENGTH IS 4-1/2" (MINIMUM) AT CONNECTIONS TO FLOOR SYSTEMS AND BEAMS BELOW.
4. 1/4" DIAMETER SCREWS ARE REQUIRED AT THE EDGES WHEN INSTALLING A FILLER GREATER THAN 1-1/2 INCH ABOVE OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL.

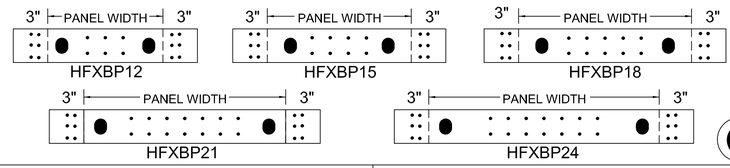
A

INSTALLATION ON FLOOR SYSTEMS WITH *HARDY FRAME*® BEARING PLATE (HFXBP)

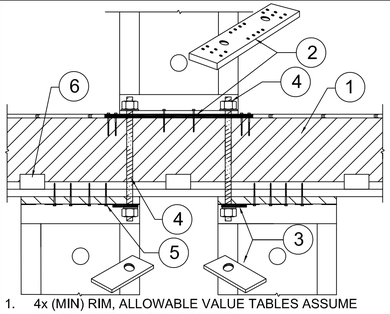
1. WITH HOLES PRE-DRILLED FOR 1-1/8" DIA.TENSION ANCHORS, INSTALL A SOLID 4x (MINIMUM) RIM IN FLOOR SYSTEM AT PANEL LOCATION. ALLOWABLE VALUE TABLES ASSUME THE RIM IS ENGINEERED WOOD PRODUCT (EWP).
2. NOTCH FLOOR SHEATHING THEN INSTALL HFXBP ON RIM WITH 6 EACH 1/4"X4-1/2" (MIN) "WS" SCREWS AT EACH END.
3. PLACE PANEL ON HFXBP.
4. WHEN STACKING PANELS, INSTALL "HFSW" STACKING WASHERS IN THE TOP CHANNEL OF THE LOWER PANEL. CONNECT LOWER TO UPPER PANELS WITH TENSION ANCHORS (GRADE PER PLANS) AND SECURE AT BOTH ENDS WITH HARDENED ROUND WASHERS AND GRADE 8 NUTS TO BE SNUG TIGHT. *HARDY FRAME* "STK" PANELS THAT INCLUDE "HFSW" STACKING WASHERS PRE-WELDED IN THE TOP CHANNEL ARE AVAILABLE,
5. WHEN MORE THAN 12 SCREWS ARE REQUIRED FOR THE BOTTOM CONNECTION OR JOINTS IN FRAMING MEMBERS OCCUR AT SCREW LOCATIONS, INSTALL ADDITIONAL 1/4"x4-1/2" WS SCREWS THROUGH THE BASE OF PANEL WHERE THEY ALIGN WITH HOLES IN THE HFXBP.
6. FOR STANDARD WALL HEIGHTS, INSTALL A 2x FILLER ABOVE PANEL (DTL 5/HFX2). FOR FILLERS GREATER THAN 1-1/2 IN. SEE DETAIL 6/HFX2.

NOTE: INSTALLATIONS MAY VARY WITH JOB SPECIFIC CONDITIONS AND/OR SPECIFICATIONS BY THE BUILDING DESIGN PROFESSIONAL.

B



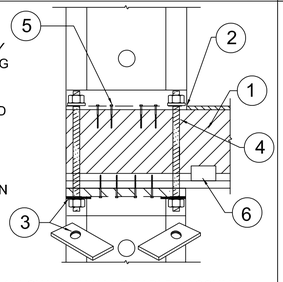
C



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8 IN. DIA HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

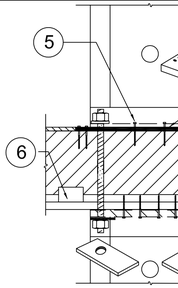
PYRAMID STACK 8

NOTE:
INSTALLATION WITHOUT *HARDY FRAME*® BEARING PLATE (HFXBP) MAY INCREASE DEFLECTION AND RESULT IN A DECREASE OF ALLOWABLE SHEAR VALUE, BUILDING DESIGN PROFESSIONAL MUST ANALYZE EFFECTS.



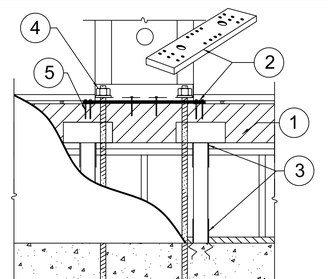
1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® PANEL DIRECTLY ON RIM.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STACK @ OS CORNER 7



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

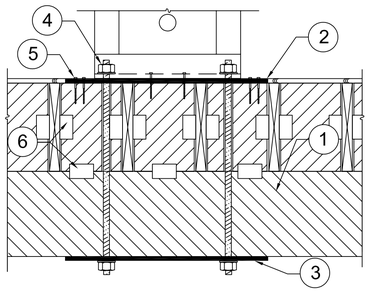
STRAIGHT STACK 6



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. USP POST CAP AND POST BASE BY THE BUILDING DESIGN PROFESSIONAL.
4. NUTS AND WASHERS PER TABLE NOTE 1.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.

CRIPPLE WALL 5

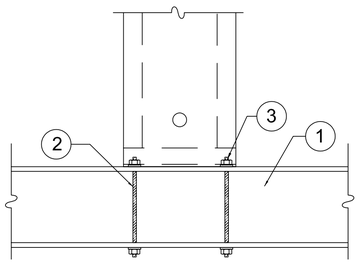
LOAD PATH FROM BEAM TO FOUNDATION AND CHECK THAT PANEL DRIFT IS WITHIN CODE LIMIT BY BUILDING DESIGN PROFESSIONAL.



1. DROP BEAM WITH FLOOR JOIST ABOVE PER PLAN.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® BEARING PLATE (HFXBP) OR BEARING PLATE WASHER AT UNDERSIDE OF BEAM SIZED PER BUILDING DESIGN PROFESSIONAL TO LIMIT CRUSHING FROM TENSION ANCHOR FORCES.
4. NUTS AND WASHERS PER TABLE NOTE 1.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP CONNECTORS BY DESIGN PROFESSIONAL

DROP BM - FL SYSTEM 14

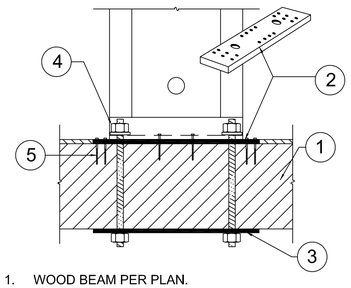
LOAD PATH FROM BEAM TO FOUNDATION AND CHECK THAT PANEL DRIFT IS WITHIN CODE LIMIT BY BUILDING DESIGN PROFESSIONAL.



1. STEEL BEAM PER PLANS
2. HOLD DOWN ALL THREAD RODS THRU-BOLTED TO BOTTOM FLANGE OF STEEL BEAM BY BUILDING DESIGN PROFESSIONAL.
3. NUTS AND WASHERS AT PANEL BASE PER TABLE NOTE 1

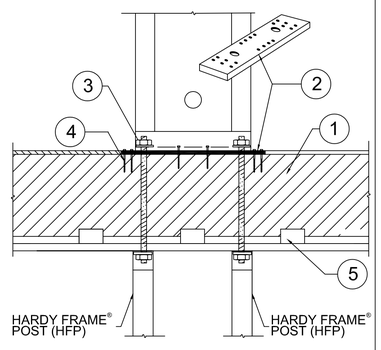
STEEL BM THRU-BOLT 13

LOAD PATH FROM BEAM TO FOUNDATION AND CHECK THAT PANEL DRIFT IS WITHIN CODE LIMIT BY BUILDING DESIGN PROFESSIONAL.



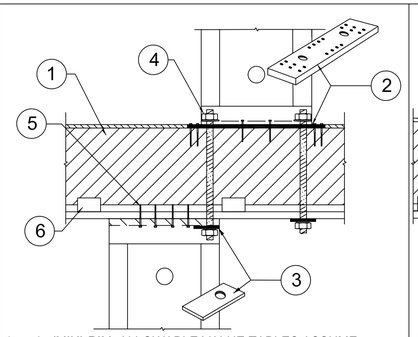
1. WOOD BEAM PER PLAN.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® BEARING PLATE (HFXBP) OR BEARING PLATE WASHER AT UNDERSIDE OF BEAM SIZED PER BUILDING DESIGN PROFESSIONAL TO LIMIT CRUSHING FROM TENSION ANCHOR FORCES.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.

WOOD BM THRU-BOLT 12



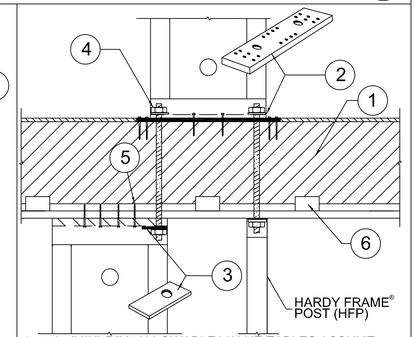
1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
4. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
5. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

HFP POSTS BELOW 11



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STAGGERED THRU-BOLT 10



1. 4x (MIN) RIM, ALLOWABLE VALUE TABLES ASSUME ENGINEERED WOOD PRODUCT.
2. NOTCH FLOOR SHEATHING THEN INSTALL *HARDY FRAME*® BEARING PLATE (HFXBP) AND PANEL PER INSTALLATION NOTES 3-6, DETAIL B/HFX3.
3. *HARDY FRAME*® STACKING WASHER (HFSW) AT TOP OF PANEL REQUIRED WHEN CONNECTING TO TENSION ANCHOR FROM ABOVE.
4. 1-1/8" DIA. HOLD DOWN, HFSW AND N&W PER TABLE NOTE 1 ARE PROVIDED IN *HARDY FRAME*® HFTC KIT.
5. 1/4" x 4-1/2" (MIN) WS SCREWS, QUANTITY PER TABLE.
6. USP MP4F CONNECTORS, QUANTITY BY BUILDING DESIGN PROFESSIONAL.

STAGGERED-HFP POST 9

REVISIONS	DATE

FLOOR SYSTEM DETAILS - HFX PANELS

THIS DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH MITEK® *HARDY FRAME*® PRODUCTS

HARDY FRAME SHEAR WALL SYSTEMS
16023 SWINGLEY RIDGE RD
CHESTERFIELD, MO 63017
(800) 325-8075
WWW.HARDYFRAME.COM

MiTek®

DATE:
1-1-2023

HFX3

GENERAL INFORMATION

01	Project Name	Sharon Drive Addition			
02	Run Title	Title 24 Analysis			
03	Project Location	113 Sharon Drive			
04	City	Pomona	05	Standards Version	2022
06	Zip code	91767	07	Software Version	EnergyPro 9.2
08	Climate Zone	9	09	Front Orientation (deg/ Cardinal)	180
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Addition and/or Alteration	13	Number of Bedrooms	7
14	Addition Cond. Floor Area (ft^2)	724	15	Number of Stories	2
16	Existing Cond. Floor Area (ft^2)	1288	17	Fenestration Average U-factor	0.3
18	Total Cond. Floor Area (ft^2)	2012	19	Glazing Percentage (%)	16.92%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Fuel Type	Natural gas	23	No Dwelling Unit:	No

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 USE SUMMARY

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0	22.04	0	23.49	0	-1.45
Space Cooling	0	60.71	0	60.63	0	0.08
IAQ Ventilation	0	0	0	0	0	0
Water Heating	0	23.26	0	20.6	0	2.66
Self Utilization/Flexibility Credit						
Efficiency Compliance Total	**0**	**106.01**	**0**	**104.72**	**0**	**1.29**
Photovoltaics		0		0		
Battery				0		
Flexibility						
Indoor Lighting	0	7.11	0	7.11		
Appl. & Cooking	0	28.84	0	28.84		
Plug Loads	0	46.52	0	46.52		
Outdoor Lighting	0	1.64	0	1.64		
TOTAL COMPLIANCE	**0**	**190.12**	**0**	**188.83**		

ENERGY USE INTENSITY

	Standard Design (kBtu/ft^2 - yr)	Proposed Design (kBtu/ft^2 - yr)	Compliance Margin (kBtu/ft^2 - yr)	Margin Percentage
Gross EUI[1]	27.56	26.93	0.63	2.29
Net EUI[2]	27.56	26.93	0.63	2.29

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

REQUIRED SPECIAL FEATURES

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

- Cool roof
- New ductwork added is less than 25 ft. in length
- Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3)

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

- Verified Refrigerant Charge
- Airflow in habitable rooms (SC3.1.4.1.7)
- Refrigerant Charge verification required if a refrigerant containing component is altered
- 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)
- Duct Sealing required if a duct system component, plenum, or air handling unit is altered

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft^2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Sharon Drive Addition	2012	1	7	3	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Status
Existing Living Area	Conditioned	HVAC System1	1288	8	DHW Sys 1	Existing Unchanged
New 1st Floor Living Area	Conditioned	HVAC System1	158	8	DHW Sys 1	New
New 2nd Floor Living Area	Conditioned	2nd Floor HVAC System2	566	8	DHW Sys 1	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Front Wall	Existing Living Area	R-0 Wall	180	Front	144	22	90	none	Existing	No
Left Wall	Existing Living Area	R-0 Wall	270	Left	208	54	90	none	Existing	No
Rear Wall	Existing Living Area	R-0 Wall	0	Back	400	139	90	none	Existing	No
Right Wall	Existing Living Area	R-0 Wall	90	Right	208	30	90	none	Existing	No
Front Wall 2	New 1st Floor Living Area	R-15 Wall	180	Front	112	38	90	Extension	New	n/a
Left Wall 2	New 1st Floor Living Area	R-15 Wall	270	Left	48	0	90	Extension	New	n/a
Right Wall 2	New 1st Floor Living Area	R-15 Wall	90	Right	56	5	90	Extension	New	n/a
Front Wall 3	New 2nd Floor Living Area	R-15 Wall	180	Front	152	30	90	none	New	n/a
Left Wall 3	New 2nd Floor Living Area	R-15 Wall	270	Left	240	33	90	none	New	n/a

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Rear Wall 2	New 2nd Floor Living Area	R-15 Wall	0	Back	152	25	90	none	New	n/a
Right Wall 3	New 2nd Floor Living Area	R-15 Wall	90	Right	240	22.5	90	none	New	n/a
Interior Surface	New 1st Floor Living Area>>Existing Living Area	R-0 Wall1	n/a	n/a	200	0	n/a		New	n/a
Roof 2	Existing Living Area	R-11 Roof Attic	n/a	n/a	722	n/a	n/a		Existing	No
Roof 3	New 1st Floor Living Area	R-30 Roof Attic	n/a	n/a	158	n/a	n/a		New	n/a
Roof 4	New 2nd Floor Living Area	R-30 Roof Attic	n/a	n/a	566	n/a	n/a		New	n/a
Raised Floor	Existing Living Area	R-0 Floor Crawlspace	n/a	n/a	1288	n/a	n/a		Existing	No
Raised Floor 2	New 1st Floor Living Area	R-19 Floor Crawlspace	n/a	n/a	158	n/a	n/a		New	n/a
Interior Surface 2	New 2nd Floor Living Area	R-0 Floor No Crawlspace	n/a	n/a	566	n/a	n/a		New	n/a
Front Wall 4	__Garage__	R-0 Wall	180	Front	144	0	90	none	Existing	No
Left Wall 4	__Garage__	R-0 Wall	270	Left	208	0	90	none	Existing	No
Rear Wall 3	__Garage__	R-0 Wall	0	Back	400	0	90	none	Existing	No
Right Wall 4	__Garage__	R-0 Wall	90	Right	208	0	90	none	Existing	No

OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Zone	Construction	Azimuth	Orientation	Area (ft^2)	Skylight Area (ft^2)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof	Status	Verified Existing Condition	Existing Construction
Roof	__Garage__	R-0 Roof No Attic	0	Back	390	0	4	0.1	0.85	No	Existing	No	

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof	Status	Verified Existing Condition
Attic Existing Living Area	Attic RoofExisting Living Area	Ventilated	4	0.1	0.85	No	No	Existing	No
Attic New 1st Floor Living Area	Attic RoofNew 1st Floor Living Area	Ventilated	4	0.63	0.75	Yes	Yes	New	n/a
Attic New 2nd Floor Living Area	Attic RoofNew 2nd Floor Living Area	Ventilated	4	0.63	0.75	Yes	Yes	New	n/a

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Window	Window	Front Wall	Front	180			1	11	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 2	Window	Front Wall	Front	180			1	11	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 3	Window	Left Wall	Left	270			1	32	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 4	Window	Left Wall	Left	270			1	22	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Window 5	Window	Rear Wall	Back	0			1	21	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 6	Window	Rear Wall	Back	0			1	21	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
French Door	Window	Rear Wall	Back	0			1	20	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 7	Window	Rear Wall	Back	0			1	17	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 8	Window	Rear Wall	Back	0			1	30	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 9	Window	Rear Wall	Back	0			1	30	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 10	Window	Right Wall	Right	90			1	10	1.19	Table 110.6-A	0.83	Table 110.6-B	Bug Screen	Existing	No
Window 101	Window	Right Wall 2	Right	90			1	5	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window 203	Window	Front Wall 3	Front	180			1	15	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window 204	Window	Front Wall 3	Front	180			1	15	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window 205	Window	Left Wall 3	Left	270			1	9	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window 206	Window	Left Wall 3	Left	270			1	15	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window 207	Window	Left Wall 3	Left	270			1	9	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window 208	Window	Rear Wall 2	Back	0			1	10.5	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Window 209	Window	Rear Wall 2	Back	0			1	10.5	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window 210	Window	Rear Wall 2	Back	0			1	4	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window 201	Window	Right Wall 3	Right	90			1	13.5	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window 202	Window	Right Wall 3	Right	90			1	9	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA

OPAQUE DOORS

01	02	03	04	05	06
Name	Side of Building	Area (ft^2)	U-factor	Status	Verified Existing Condition
Door	Right Wall	20	0.5	Existing	No
Door 101	Front Wall 2	20	0.5	New	n/a
Door 102	Front Wall 2	18	0.5	New	n/a

SLAB FLOORS

01	02	03	04	05	06	07	08	09	10
Name	Zone	Area (ft^2)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated	Status	Verified Existing Condition
Slab-on-Grade	__Garage__	390	78	none	0	0%	No	Existing	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-0 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.361	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: 3 Coat Stucco
R-15 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: 3 Coat Stucco
R-0 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-0	None / None	0.484	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4 Inside Finish: Gypsum Board
R-0 Wall1	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
Attic RoofExisting 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
Attic RoofNew 1st Floor 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
Attic RoofNew 2nd Floor 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

American General Corporation
34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

OCGG DESIGN
3100 Chino Hills Pkwy No. 422 Chino Hills CA 91709
Phone 847 480 2212 Email ocgg@ocggarchitects.com
OCGG Architects Website Address: WWW. OCGGARCHITECTS . COM

ENTRY & SECOND FLOOR ADDITION
113 SHARON DR. POMONA, CA 91767

CAL GREEN BLDG STANDARDS CODE

NO.	DATE	ISSUE NOTE

LICENSED ARCHITECT GREGORY GESLICKI NO. C-40389 EXP: 11/30/2025 STATE OF CALIFORNIA
3/12/24

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND TO BEST OF MY KNOWLEDGE CONFIRM TO THE PERTINENT LOCAL BUILDING CODE AND REGULATIONS GREGORY GESLICKI, NCARB, REGISTERED CALIFORNIA ARCHITECT CALIFORNIA LICENSE NO. C 40389, LICENSE EXPIRATION: 11/30/2025

Drawn By: OC
Sheet No.: T-1
Project ID: 100-34

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-0 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.216	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12
R-19 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x10 @ 16 in. O. C.	R-19	None / None	0.046	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x10
R-11 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-11	None / None	0.081	Over Ceiling Joists: R-1.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
R-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-30	None / None	0.032	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
R-0 Floor No Crawlspace	Interior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.196	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

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

WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)	Status	Verified Existing Condition	Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)	New	NA	

WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency Type	Efficiency	Rated Input Type	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	Tank Location	Status	Verified Existing Condition
DHW Heater 1	Gas	Consumer Instantaneous	1	0	UEF	0.95	Btu/Hr	200000	0	n/a	n/a		New	n/a

WATER HEATING - HERS VERIFICATION

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

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Existing HVAC System
2nd Floor HVAC System2	Heat pump heating cooling	Heat Pump System 2	1	Heat Pump System 2	1	n/a	n/a	Setback	New	No	

HVAC - HEATING UNIT TYPES

01	02	03	04	05
Name	System Type	Number of Units	Heating Efficiency	Heating Unit Brand
Heating Component 1	Central gas furnace	1	AFUE - 80	n/a

HVAC - COOLING UNIT TYPES

01	02	03	04	05	06	07	08	09
Name	System Type	Number of Units	Efficiency Metric	Efficiency EER/EER2/CEER	Efficiency SEER/SEER2	Zonally Controlled	Mulit-speed Compressor	HERS Verification
Cooling Component 1	Central split AC	1	EER/SEER	11.7	14	Not Zonal	Single Speed	Cooling Component 1-hers-cool

HVAC - HEAT PUMPS

01	02	03	04	05	06	07	08	09	10	11	12	13
			Heating				Cooling					
Name	System Type	Number of Units	Heating Efficiency Type	HSPF/HSPF2/COP	Cap 47	Cap 17	Cooling Efficiency Type	SEER/SEER2	EER/EER2/CEER	Zonally Controlled	Compressor Type	HERS Verification
Heat Pump System 2	VCHP-ductless	1	HSPF	8.8	24000	19000	EERSEER	15	12.2	Not Zonal	Single Speed	Heat Pump System 2-hers-htpump

HVAC HEAT PUMPS - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verified Refrigerant Charge	Verified HSPF/HSPF2	Verified Heating Cap 47	Verified Heating Cap 17
Heat Pump System 2-hers-htpump	Not Required	0	Not Required	Not Required	Yes	No	Yes	Yes

VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09	10
Name	Certified Low-Static VCHP System	Airflow to Habitable Rooms	Ductless Units in Conditioned Space	Wall Mount Thermostat	Air Filter Sizing & Pressure Drop Rating	Low Leakage Ducts in Conditioned Space	Minimum Airflow per RA3.3 and SC3.3.3.4.1	Certified non-continuous Fan	Indoor Fan not Running Continuously
Heat Pump System 2	Not required	Required	Required	Required	Not required	Not required	Not required	Not required	Not required

HVAC - DISTRIBUTION SYSTEMS

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

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.58	HVAC Fan 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION

01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Not Required	0

HERS RATER VERIFICATION OF EXISTING CONDITIONS

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Timothy Carstairs	Documentation Author Signature: Timothy Carstairs
Company: Carstairs Energy Inc.	Signature Date: 2023-12-07 13:50:10
Address: 2238 Bayview Heights Drive, Suite E	CEA/ HERS Certification Identification (If applicable): r160610042
City/State/Zip: Los Osos, CA 93402	Phone: 805-904-9048

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

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

Responsible Designer Name: Okhee Choi	Responsible Designer Signature: Okhee Choi
Company: Okhee Choi	Date Signed: 2023-12-07 15:03:20
Address: 3100 Chino Hills Pkwy Unit 422	License: NA
City/State/Zip: Chino Hills, CA 91709	Phone: 847-791-5809

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

Easy to Verify at CalCERTS.com

American General Corporation
34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

OCGG DESIGN
3100 CHINO HILLS PKWY No. 422 CHINO HILLS CA 91709
Phone 847 480 2212 Email ocgg@ocggarchitects.com
OCGG Architects Website Address : WWW . OCGGARCHITECTS . COM

SCOPE DOCUMENT DRAWINGS SET:

THIS DRAWING SET INDICATES GENERAL SCOPE OF THE PROJECT IN TERMS OF DIMENSIONS OF THE BUILDING, MAJOR ARCHITECTURAL ELEMENTS AND THE TYPE OF STRUCTURAL SYSTEMS, MECHANICAL & ELECTRICAL SYSTEMS. AS SCOPE DOCUMENTS THESE DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL THE WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. ON THIS BASIS THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK SHOWN AND/OR REQUIRED BY LOCAL CODE REGULATIONS.

ENTRY & SECOND FLOOR ADDITION

113 SHARON DR. POMONA, CA 91767

CAL GREEN BLDG STANDARDS CODE

NO.	DATE	ISSUE NOTE

LICENSED ARCHITECT GREGORY GESLICKI NO. C-40389 EXP: 11/30/2025 STATE OF CALIFORNIA

3/12/24

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND TO BEST OF MY KNOWLEDGE CONFIRM TO THE PERTINENT LOCAL BUILDING CODE AND REGULATIONS GREGORY GESLICKI, NCARB, REGISTERED CALIFORNIA ARCHITECT CALIFORNIA LICENSE NO. C 40389, LICENSE EXPIRATION: 11/30/2025

Drawn By: OC
Project ID: 100-34
Sheet No.: T-2

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name Sharon Drive Addition	Building Type ☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration	Date 12/7/2023
Project Address 113 Sharon Drive Pomona	California Energy Climate Zone CA Climate Zone 09	Total Cond. Floor Area 2,012 · Addition 724 · # of Units 1

INSULATION

Construction	Type	Cavity	Area (ft^2)	Special Features	Status
Floor	Wood Framed w/Crawl Space	- no insulation	1,288		Existing
Wall	Wood Framed	- no insulation	122		Existing
Wall	Wood Framed	- no insulation	154		Existing
Wall	Wood Framed	- no insulation	261		Existing
Wall	Wood Framed	- no insulation	178		Existing
Door	Opaque Door	- no insulation	20		Existing
Roof	Wood Framed Attic	R 11	722		Existing
Floor	Wood Framed w/Crawl Space	R 19	158		New

FENESTRATION Total Area: 341 Glazing Percentage: 16.9 % New/Altered Average U-Factor: 0.30

Orientation	Area(ft^2)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status
Front (S)	22.0	1.190	0.83	none	none	N/A	Existing
Left (W)	54.0	1.190	0.83	none	none	N/A	Existing
Rear (N)	139.0	1.190	0.83	none	none	N/A	Existing
Right (E)	10.0	1.190	0.83	none	none	N/A	Existing
Right (E)	27.5	0.300	0.23	none	none	N/A	New
Front (S)	30.0	0.300	0.23	none	none	N/A	New
Left (W)	33.0	0.300	0.23	none	none	N/A	New
Rear (N)	25.0	0.300	0.23	none	none	N/A	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Gas Central Furnace	80% AFUE	Split Air Conditioner	14.0 SEER	Setback	Existing
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	Ducted	Ducted	Attic	6.0	Altered
2nd Floor HVAC System	Ductless / with Fan	Ductless	n/a	n/a	New

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Small Instantaneous Gas	1	0.95	Standard	New

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name Sharon Drive Addition	Building Type ☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration	Date 12/7/2023
Project Address 113 Sharon Drive Pomona	California Energy Climate Zone CA Climate Zone 09	Total Cond. Floor Area 2,012 · Addition 724 · # of Units 1

INSULATION

Construction	Type	Cavity	Area (ft^2)	Special Features	Status
Wall	Wood Framed	R 15	74		New
Door	Opaque Door	- no insulation	38		New
Wall	Wood Framed	R 15	48		New
Wall	Wood Framed	R 15	51		New
Roof	Wood Framed Attic	R 30	724	Cool Roof	New
Demising	Wood Framed	- no insulation	200		New
Wall	Wood Framed	R 15	674		New
Demising	Wood Framed w/o Crawl Space	- no insulation	566		New

FENESTRATION Total Area: 341 Glazing Percentage: 16.9 % New/Altered Average U-Factor: 0.30

Orientation	Area(ft^2)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status

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.
(04/2022)

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.

2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: 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(j)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 tosunlight, 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. *

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality**. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses .** Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *

Lighting:

§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	**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)1E:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k). *

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: Sharon Drive Addition
Date: 12/7/2023
System Name: HVAC System
Floor Area: 1,446

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
Existing Living Area	Existing 1st Floor	1	1,417	27,140	506	1,417	27,140	506	985	36,241
New 1st Floor Living Area	1st Floor Addition	1	84	1,609	62	84	1,609	62	65	2,403
	PAGE TOTAL					1,501	28,748	568	1,051	38,644
	TOTAL *					1,501	28,748	568	1,051	38,644

* Total includes ventilation load for zonal systems.

ROOM LOAD SUMMARY

Project Name: Sharon Drive Addition
Date: 12/7/2023
System Name: 2nd Floor HVAC System
Floor Area: 566

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
New 2nd Floor Living Area	2nd Floor Addition	1	300	6,299	222	300	6,299	222	155	6,041
	PAGE TOTAL					300	6,299	222	155	6,041
	TOTAL *					300	6,299	222	155	6,041

* Total includes ventilation load for zonal systems.

American General Corporation
34941 Calle Del Sol
Capistrano Beach, CA 92624
Phone (949) 542-8777 / 101
email admin@amgencorp.com

OCGG DESIGN
3100 CHINO HILLS PKWY No. 422 CHINO HILLS CA 91709
Phone 847 480 2212 Email ocgg@ocggarchitects.com
OCGG Architects Website Address : WWW . OCGGARCHITECTS . COM

SCOPE DOCUMENT DRAWINGS SET:

THIS DRAWING SET INDICATES GENERAL SCOPE OF THE PROJECT IN TERMS OF DIMENSIONS OF THE BUILDING, MAJOR ARCHITECTURAL ELEMENTS AND THE TYPE OF STRUCTURAL SYSTEMS, MECHANICAL & ELECTRICAL SYSTEMS. AS SCOPE DOCUMENTS THESE DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL THE WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. ON THIS BASIS THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK SHOWN AND/OR REQUIRED BY LOCAL CODE REGULATIONS.

ENTRY & SECOND FLOOR ADDITION
113 SHARON DR. POMONA, CA 91767

CAL GREEN BLDG STANDARDS CODE

NO.	DATE	ISSUE NOTE

NO. C-40389
EXP: 11/30/2025
3/12/24

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND TO BEST OF MY KNOWLEDGE CONFORM TO THE PERTINENT LOCAL BUILDING CODE AND REGULATIONS GREGORY GEILICKI, NCARB, REGISTERED CALIFORNIA ARCHITECT CALIFORNIA LICENSE NO C 40389, LICENSE EXPIRATION 11/30/2025

Drawn By: OC
Sheet No.: T-3
Project ID: 100-34