BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES'

Storm Water Pollution Control Requirements for Construction Activities Minimum Water Quality Protection Requirements for All Development Construction **Projects/Certification Statement**

The following is intended as minimum notes or as an attachment for building and grading plans and represent the minimum standards of good housekeeping that must be implemented on all construction

sites regardless of size. (Applies to all permits)

• Every effort should be made to eliminate the discharge of non-stormwater from the project site at all times.

- Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheetflow, swales, area drains, natural drainage courses or wind.
- Stockpiles of earth and other construction related materials must be protected from being transported from the site by the forces of wind or water.
- Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be
- Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete wastes on site until they can be disposed of as solid waste.
- Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
- Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other
- Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind

"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/or inaccurate information, failing to update the ESCP to reflect current conditions, or failing to properly and/or adequately implement the ESCP may result in revocation of grading and/or other permits or other sanctions provided by law."

(Owner or authorized agent of the owner)

fixture shall be installed near the appliance. Light

switch shall be located at the entrance to the

. A type B or L gas vent shall terminate not less than

g. Appliance installation shall meet all listed

outside of the building in accordance with Section

502.2.1 and shall be equipped with a back-draft

damper. Screens shall not be installed at the duct

in diameter and is limited to a total combined horizontal

and vertical length of 14 feet, including two 90 degree

elbows from the clothes dryer to point of termination.

Duct length shall be reduced by 2 feet for each 90

degree elbow in excess of two. (MC 504.4.2)

garage shall be installed so that burners and burner-

ignition devices are located not less than 18 inches

above the floor, unless listed as flammable vapor

15. Appliances (water heater, furnace, etc.) located in the

16. Ducts shall be sized per Chapter 6 of the Mechanical

17. Flush volumes of plumbing fixtures and flow rates of

18. ABS and PVC DWV piping installations are limited to

19. All showers and tub-showers shall have a pressure

20. All new, replacement and existing water heaters shall

not more than two stories of areas. (PC 701.2(2))

balance, thermostatic, or combination pressure

balance/thermostatic mixing type valve. (PC 408.3)

be strapped to the wall in two places. One on the upper

1/3 of the tank, and one on the lower 1/3 of the tank.

The lower point shall be a minimum of 4 inches above

13. Clothes dryer exhaust duct shall terminate on the

14. Clothes dryer moisture exhaust duct shall be 4 inches

5 feet above the highest connected appliance flue

passageway.

clearances.

ignition resistant.

Green Code.

the controls.

Code.

collar or draft hood.

(Owner or authorized agent of the owner)

washed into the drainage system.

*The above Best Management Practices are detailed in the latest edition of the California BMP Handbook or Caltrans Stormwater Quality Handbooks.

(MC 304.4.4)

(MC 802.6.2.1)

(MC 303.1)

(MC 504.4)

(MC 305.1)

(PC 507.2)

e. A permanent 120V receptacle outlet and a lighting 21. Plumbing plan check and approval is required for 2 inch and larger water lines, 2 inch and larger gas lines, or any gas line with a pressure of 2psi and higher.

> 22. Ground-fault circuit-interruption (GFCI) for personnel shall be provided in bathrooms, garages, non-habitable accessory structures at or below grade level, outdoor locations, crawl spaces at or below grade level, nonhabitable basements, kitchens where the receptacles serve countertop surfaces, locations within 6ft of the outside edge of sinks/bathtubs/showers, boathouses, and laundry areas. The GFCI shall be installed in a (EC 210.8(A)) readily accessible location.

23. Arc-fault circuit-interruption (AFCI) protection shall be provided in all 120-volt, single phase, 15- and 20ampere branch circuits supplying outlets or devices installed in kitchens, habitable rooms, sunrooms, recreation rooms, closets, hallways, laundry areas, or similar rooms or areas, by any means described in (EC 210.12(A))

24. In any of the areas specified in item 23, where existing branch-circuit wiring is modified, replaced, or extended by more than 6ft and/or adds any outlet or device, the branch circuit shall be protected by one of the following: a. A listed combination-type AFCI located at the origin

of the branch circuit. b. A listed outlet branch-circuit type AFCI located at the first receptacle outlet of the existing branch (EC 210.12(B))

plumbing fittings shall comply with Section 4.303 of the 25. Tamper-resistant receptacles shall be installed in all areas specified in 210.52, all nonlocking-type 12-volt, 15- and 20-ampere receptacles shall be listed tamperresistant receptacles. (EC 406.12)

26. Where NM cable (Romex) is run across the top of joists and/or where the attic is not accessible by permanent stairs or ladders, protection within 6 feet of the nearest edge of the scuttle or attic entrance shall be provided. (EC 334.23, 320.23(A))

Page 3 of 3

GENERAL PROJECT INFORMATION PLAN CHECK NO. JOB ADDRESS

CITY

NOTE: Numbers in the parenthesis () refer to sections of the 2017 edition of the County of Los Angeles Building Code (BC), Residential Code (RC), Plumbing Code (PC), Mechanical Code (MC), Electrical Code (EC), and Green Building

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

BUILDING AND SAFETY DIVISION

INSTRUCTIONS

The following notes must be included on the plans.

SECURITY REQUIREMENTS

Exterior doors, doors between a house and a garage, windows and their hardware shall conform to the Security Provisions of Chapter 67 of the County of Los Angeles Building Code:

a. Single swinging doors, active leaf of a pair of doors, and the bottom leaf of Dutch doors shall be equipped with a latch and a deadbolt. If the latch has a key-locking feature, a dead latch shall be used. The deadbolt lock shall be key operated from the exterior side of the door, and operated from the interior side of the door by a device not requiring a key, tool, or excessive force. Deadbolts shall have a hardened insert with 1" minimum throw and 5/8" minimum embedment into the jamb. (BC 6709.2)

b. Inactive leaf of a pair of doors and the upper leaf of Dutch doors shall have a deadbolt as per paragraph "a", unless it is not key operated from the exterior, or has a hardened deadbolt at top and bottom with (BC 6709.3) 1/2" embedment.

c. Swinging wood door(s) shall be solid core not less (BC 6709.1.1) than 1-3/8" thick. d. Panels of wood doors shall be 9/16" thick and not

more than 300 sq. inches. Stiles and rails to be 1-3/8" thick and 3" minimum width. (BC6709.1.2) e. Door hinge pins accessible from the outside shall

(BC 6709.5) be non-removable. f. Door stops of wood jambs of in-swinging doors shall be one piece construction or joined by a rabbet.

g. Windows and door lights within 40" of the locking device of the door shall be fully tempered/approved burglary resistant/protected by bars, screens or (BC 6714) grills.

h. Overhead and sliding garage doors shall be secured with a cylinder lock, a padlock with a hardened steel shackle, or equivalent when not otherwise locked by electric power operation. Jamb locks shall be on both jambs for doors exceeding 9 feet in width (BC 6711)

i. Sliding glass doors and sliding glass windows shall be capable of withstanding the tests set forth in Section 6706 and 6707 of the Los Angeles County Building Code and shall bear a label indicating compliance with these tests. Locking devices on sliding glass doors complying with Section 1010 and 1030, and emergency egress windows complying with Section 1030, shall be releasable from the inside without the use of a key, tool, or

RESIDENTIAL PLAN

GENERAL NOTES

(BC 6710, 6715)

CONSTRUCTION REQUIREMENTS

excessive force.

2. Notching of studs in exterior or bearing walls shall not exceed 25% of its width. Notching of studs in nonbearing walls shall not exceed 40% of its width. Bored holes in studs shall not exceed 60% of its width, shall not be closer than 5/8" to the edge of the stud, and shall not be located in the same section as a cut or notch. Studs located in exterior or bearing walls shall be doubled if bored over 40% and up to 60% of its width.

3. Wall and Ceiling finishes shall have a flame spread index of not greater than 200, and a smoke-developed index not greater than 450. Insulation materials shall have a flame spread index not to exceed 25, and a smoke-developed index not to exceed 450.

4. Provide fire blocking in concealed spaces of combustible stud walls, partitions, including furred spaces, at the ceiling and floor level, at 10-foot intervals both vertical and horizontal, and between stair stringers

at the top and bottom. (R 302.11) Ducts installed under a floor in a crawl space shall not prevent access to an area of the crawl space. Where it is required to move under ducts for access to areas of the crawl space, a vertical clearance of 18" minimum shall be provided. (MC 603.1)

6. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than .019 inch (No. 26 galvanized sheet).

Page 1 of 3

GREEN BUILDING STANDARDS CODE GENERAL NOTES

GENERAL PROJECT INFORMATION PLAN CHECK NO. DISTRICT NO CITY JOB ADDRESS

NOTE: Numbers in the parenthesis () refer to sections of the 2017 edition of the County of Los Angeles Green Building Standards Code, Table (T).

01-01-2017

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

BUILDING AND SAFETY DIVISION

INSTRUCTIONS

PUBLIC WORKS

The following notes must be included on the plans.

GENERAL REQUIREMENTS

shall comply with the following flow rates:

a. Water Closets - 1.28 GPF

b. Urinals - 0.5 GPF

c. Wall-mounted urinal - 0.125 GPF d. Single showerhead – 2.0 GPM at 80psi

e. Multiple showerheads - 2.0 GPM at 80psi for all combined showerheads

f. Lavatory faucets – 1.2 GPM at 60psi g. Lavatory faucets in public use areas - 0.5 GPM

at 60psi h. Metering faucets - .25 gallons per cycle i. Kitchen faucets – 1.8 GPM at 60psi (4.303.1)

2. Annular spaces around pipes, electrical 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. (4.406.1)

3. Fireplaces shall be direct vent sealed combustion type. Indicate on the plans the manufacturer name and model number.

4. At the time of rough installation, during storage on the construction site, and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal, or other acceptable methods to reduce the amount of water, dust and debris which may enter the system.

5. 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% moisture content. Insulation products which are visibly wet or have high moisture content shall be replaced or allowed to dry prior to enclosure in wall or

floor cavities.

Residential 2017 Green Building Standard Notes

1. Plumbing fixtures and fixture fittings on the plans 6. All mechanical exhaust fans in rooms with a bathtub or shower shall comply with the following:

> a. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. b. Fans must be controlled by a readily accessible humidistat unless functioning as a component of a whole house ventilation system. Humidity control shall be capable of adjustment between a relative humidity

range of 50% and 80%. 7. Adhesives, sealants and caulks shall meet or exceed the standards outlined in Section 4.504.2.1 and comply with the VOC limits in Tables 4.504.1 and 4.504.2 as applicable.

(4.504.2.1) 8. Paints and coatings shall meet or exceed the standards outlined in Section 4.504.2.2 and comply with the VOC limits in Table 4.504.3. (4.504.2.2)

9. Aerosol paints and coatings shall meet or exceed the standards outlined in Section 4.504.2.3. (4.504.2.3) 10. All carpet installed in the building interior shall meet

a. Carpet and Rug Institute's Green Label Plus

all the testing and product requirements of one of the

Program OR b. California Department of Public Health

Standard Method for the testing of VOC Emissions (Specification 01350) OR c. NSF/ANSI 140 at the Gold Level OR d. Scientific Certifications Systems Indoor

Advantage Gold 11. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label Program. Carpet adhesives shall not exceed a VOC limit of 50 g/L.

(4.504.3.1, 4.504.3.2)

Page 1 of 2 Residential 2017 Green Building Standard Notes

f. Glazing adjacent to stairs and ramps where the Roof diaphragm nailing to be inspected before covering. (R 803)

bottom exposed edge is less than 36 inches above Wood structural panel sheathing shall comply with the plane of the adjacent walking surface of Section R803.2. stairways, landings between flights of stairs, and 8. End joints in lumber used as subflooring shall occur ramps, unless the glazing is 36 inches or more over supports, unless end-matched lumber is used, in measured horizontally from the walking surface, or which case each piece shall bear on not less than two a rail is designed per Section R308.4.6. joists. Wood structural panel sheathing used for g. Glazing adjacent to the landing at the bottom of a structural purposes shall comply with Section R503.2. stairway where the glazing is less than 36 inches

above the landing and within a 60-inch horizontal arc less than 180 degrees from the bottom tread nosing, unless the glazing is more than 18 inches from a protective guard per Section R312.

MECHANICAL/PLUMBING/ELECTRICAL CODE REQUIREMENTS

10. Dwelling shall be provided with comfort heating facilities capable of maintaining a room temperature of 68 degrees F at a point 3 feet above the floor and 2 feet (R303.9) from exterior walls.

11. The following are required for central heating furnaces and low-pressure boilers in a compartment:

a. Listed appliances shall be installed with clearances in accordance with the terms of their listings and the manufacturer's installation instructions.

b. Unlisted appliances shall meet both the clearances in Table 904.2, and the clearances allowed by the manufacturer's installation instructions. (MC 904.2(2))

c. When combustion air is taken from inside, the free area of combustion air openings shall be 1 sq. inch per 1,000 BTU (100 sq. inch minimum) per opening. One Opening shall be within 12 inches of the top of the enclosure and the second shall be within 12 inches of the bottom of the enclosure. The dimension shall not be less than 3 inches.

(MC 701.5(1)) d. Not less than 1/4 of an inch screen mesh is required at openings where combustion air is taken from the outside. (MC 701.10(1))

e. Separate ducts shall be used for upper and lower combustion air openings, and maintained to the source of combustion air. (MC 701.11(4))

a. An opening and passageway shall not be less than 22 inches by 30 inches, and not less than the size

of the largest component of the appliance.

12. The following are required for appliances installed in an

(MC 304.4) b. Where the passageway height is less than 6 feet, the distance from access to the appliance shall not exceed 20 feet, as measured along the centerline.

(MC 304.4.1) c. Passageway shall be unobstructed and shall have solid flooring not less than 24 inches wide from entrance to appliance. (MC 304.4.2)

d. A level working platform not less than 30 inches by 30 inches is required in front of the service side of the appliance. (MC 304.4.3)

01-01-2017 Page 2 of 3

12. A minimum of 80% of floor area receiving resilient flooring shall comply with one of the following:

GLAZING REQUIREMENTS

conditions:

9. The following shall be considered specific hazardous

locations requiring safety glazing per Section R308:

sliding, and bifold doors.

closed position.

in-swinging door.

than 9 square feet.

line, of the glazing.

conditions are present:

the floor.

floor.

a. Glazing in fixed and operable panels of swinging,

b. Glazing in fixed or operable panels adjacent to a

door where the bottom exposed edge of the

glazing is less than 60 inches above the walking

surface and it meets either of the following

1. Where the glazing is within 24 inches of either

2. Where the glazing is on a wall perpendicular

c. Window glazing in an individual fixed or operable

panel, that meets all of the following conditions:

1. The exposed area of an individual pane is larger

2. The bottom edge is less than 18 inches above

3. The top edge is more than 36 inches above the

4. One or more walking surfaces are within 36

d. Glazing in guards, railings, structural baluster

of area or height above a walking surface.

panels, and nonstructural in-fill panels, regardless

e. Glazing in walls, enclosures or fences containing

or facing hot tubs, spas, whirlpools, saunas,

steam rooms, bathtubs, showers, and indoor or

outdoor swimming pools, where all of the following

1. The bottom edge of the glazing is less than 60

2. The glazing is within 60 inches, measured

a shower, sauna or steam room.

inches above any standing or walking surface.

horizontally and in a straight line, from the

water's edge of a hot tub, spa, whirlpool,

bathtub, or swimming pool, or from the edge of

inches, measured horizontally and in a straight

side of the door in the plane of the door in a

to the plane of the door in a closed position

and within 24 inches of the hinge side on an

a. Products certified as a Low-Emitting Material in the CHPS High Performance Products Database, OR b. Products certified under UL GREENGUARD Gold (Formerly the Greenguard Children &

Schools program), OR c. RFCI FloorScore program, OR

d. Meet the California Department of Public Health Standard Method for the testing of VOC Emissions (Specification 01350) (4.504.4)

13. Composite wood products (hardwood plywood, particle board, and MDF) installed on the interior or exterior of the building shall meet or exceed the standards outlined in Table 4.504.5. Verification of compliance with these sections must be provided at the time of inspection. (4.504.5)

COATING CATEGORY	VOC	COATING CATEGORY	VOC	
Flat coatings	50	Magnesite cement coatings	450	
Nonflat coatings	100	Mastic texture coatings	100	
Nonflat high-gloss coatings	150	Metallic pigmented coatings	500	
SPECIALTY COATINGS		Multi-color coatings	250	
Aluminum roof coating	400	Pretreatment wash primers	420	
Basement specialty coatings	400	Primers, sealers, and undercoaters	100	
Bituminous roof coatings	50	Reactive penetrating sealers	350	
Bituminous roof primers	350	Recycled coatings	250	
Bond breakers	350	Roof coatings	50	
Concrete curing compounds	350	Rust preventative coatings	250	
Concrete/masonry sealers	100	Shellacs: Clear Opaque	730 550	
Driveway sealers	50	Specialty primers, sealers and undercoaters	100	
Dry fog coatings	150	Stains	250	
Faux finishing coatings	350	Stone consolidants	450	
Fire resistive coatings	350	Swimming pool coatings	340	
Floor coatings	100	Traffic marking coatings	100	
Form-release compounds	250	Tub and tile refinish coatings	420	
Graphic arts coatings (sign paints)	500	Waterproofing membranes	250	
High-temperature coatings	420	Wood coatings	275	
Industrial maintenance coatings	250	Wood preservatives	350	
Low solids coatings ¹	120	Zinc-rich primer	340	
3 Values in this table are derived for	ot unless revised	and including exempt compounds. limits are listed in subsequent columns in the table, and by the California Air Resources Board, Architectural fore information is available from the Air Resources Board.	Coatings and.	

01-01-2017

TABLE 4.504.5/TABLE 5.504.4.5 FORMALDEHYDE LIMITS Maximum Formaldehyde Emissions in Parts per Million CURRENT LIMIT lardwood plywood veneer core lardwood plywood composite core Medium density fiberboard hin medium density fiberboard²

Less Water and Less Exempt C	ompounds 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	
Nonporous	250
Porous	775
Modifited bituminous	500
Marine deck	760
Other	750
Note: For additional information regarding methods table, see South Coast Air Quality Management Distr	

TABLE 4.504.1/TABLE 5	.504.4.1
ADHESIVE VOC LIM	IT ^{1,2}
Grams of VOC per Liter of C	oating,
Less Water and Less Exempt Co	ompounds
ARCHITECTURAL APPLICATIONS	VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet pad adhesives	150
Wood flooring adhesives	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives	50
SPECIALITY 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 and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80
If an adhesive is used to bond dissimilar substrates together VOC content shall be allowed	
 For additional information regarding methods to measure the table, see South Coast Air Quality Management District Rust 	e 1168

PURPOSE OF PERMIT, PROPOSE AS FOLLOW DEMO EXISTING UNIT-892 NEW UNIT-892: 3-BEDROOMS 2-BATH WITH ATTACH GARAGE.

EXISTING HOUSE TO BE DEMO AREA = 550. SQ. FT.

AREA= 1,365. SQ. FT.

ΣΣ

13.

027

ENGINEER
AN (818) 425-8522

P

B

AREA= 420. SQ. FT. = 1,785. SQ.FT. NEW GARAGE LOT SIZE: AREA= 22,924. SQ.FT.

LOT COVERAGE: 6,138. SQ.FT. -2,062 = 4,076. SQ.FT. OCCUPANCY GROUP: R-3/U TYPE CONSTRUCTION: V-B OCCUP. LOAD <10

FIRE SPRINKLERS ARE NOT REQUIRED

SUMMARY

CONSTRUCTION DESIGN

JAIME MURILLO 3241 SANTA ANA ST. (909) 762 - 9278HUNTINGTON PARK, CA. 90225

DESIGNER

PERFECT DESIGN & DEVELOPMENT, INC

EMIL G. CABAL 2416 W. VALLEY BLVD. (626) 289-8808 ALHAMBRA, CA. 91803

TITLE 24-6

TEAR KIMBERLY OWNER 2627 ALTAMIRA DR. (626)537-0061

WEST COVINA, CA. 91792 A-0.1 GENERAL NOTES AND TITLE SHEET A-0.2 GREEN BUILDING CODE A-1.0 SITE PLAN, & 1st FLOOR PLAN A-2.0 2nd FLOOR PLAN, ROOF PLAN & ELEVATIONS S-1.0 FOUNDATION PLAN & ROOF FRAMING PLAN S-2.0 FULL HI. CROSS SECTION ST1 GENERAL NOTES AND FOUNDATION DETAILS

ST2 FRAMING DETAILS

SSW2 | SIMPSON STEEL STRONG WALL CF-1 PERFORMANCE INFORMATION SINGLE HOUSE

CF-2 HVAC SYSTEM SUMMARY SINGLE HOUSE

CF-3 HVAC SYSTEM SUMMARY SINGLE HOUSE

M-1 MECHANICAL GENERAL NOTES M-2 | MECHANICAL DETAILS

INDEX OF DRAWINGS

STRUCTURAL DESIGN AND DETAILS FULLY CONFORM TO ALL APPRPPRIATE REQUIREMENTS OF THE CALIFORNIA RESIDENTIAL CODE. SHOULD A PORTION OR ALL OF THE STRUCTURAL DESIGN CONFORM TO THE REQUIREMENTS OF THE CALIFORMIA BUILDING CODE. THE FULL STRUCTURAL DESIGN IS IN CONFORMANCE WITH THE STRUCTURAL REQUIREMENTS OF THE CALIFORNIA BUILDING CODE. (R301.1.3 CRC)

APPLICABLE CODES COMPLIANCE WITH CITY OF POMONA MUNICIPAL CODE.

THE GOVERNING CODES FOR THIS PROJECT ARE: 2016 CRC THE 2016 CBC, 2016 CFC, 2016 CPC, 2016 CMC, 2016 CEC, 2016 CALIFORNIA ENERGY STANDARDS, AND THE 2016 NEC, 2017 UPC/UMC

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.

UNDERGROUNDING OF ALL EXISTING AND PROPOSED UTILITY LINES IS REQUIRED AS PER CITY OF POMONA MUNICIPAL CODE SECTION 62-31(b)(1) THE PARKWAY LANDSCAPING SHALL BE MAINTAINED BY THE PROPERTY OWNER PER CITY OF POMONA MUNICIPAL CODE SECTION 46-496.

" I CERTIFY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ENSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFORMATION SUBMITTED IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT SUBMITTING FALSE AND/ OR INACCURATE INFORMATION, FAILING TO UPDATE THE ESCP TO REFLECT CURRENT CONDITIONS. OR FAILING TO PROPERLY AND / OR ADEQUATELY IMPLEMENT THE ESCP MAY RESULT IN REVOCATION OF GRADING AND / OR OTHER PERMITS OR OTHER SANCTIONS PROVIDED BY LAW."

Owner

Print

Page 2 of 2

Signature

GENERAL NOTES

Date

ENERAL



2016 CALGreen RESIDENTIAL MANDATORY MEASURES CHECKLIST (Effective Jan. 1, 2017)

SECTION	MEASURES		REQUIREMENTS	Meası provide plan sh
PLANNING A	ND DESIGN (Site Develo	pment)		
4.106.2	Storm Water Drainage and Retention During Construction		ted to manage storm water drainage during construction.	
4.106.3	Grading and Paving	surface water flows to keep water f	ow site grading or drainage system will manage all rom entering buildings.	
4.106.4	Electric Vehicle (EV) Charging for New Construction		le charging in one- and two-family dwellings and in garages; and 3 percent of total parking spaces, as	
ENERGY EFF		, .,		
4.201.1	General	Building meets or exceeds the requestion of the sequence of th	uirements of the 2016 California Building Energy	
WATER EFFI	CIENCY AND CONSERV	ATION (Indoor Water Use)		
			d urinals) and fittings (faucets and showerheads) all comply with requirements of Sections 4.303.1.1 Maximum	
	Water Conserving	Water closets	1.28 gallons/flush	
4.303.1	Water Conserving Plumbing Fixtures and	Showerheads	2.0 gpm @ 80 psi	
4.000.1	Fittings	Kitchen faucets	1.8 gpm @ 60 psi	
	90	Residential lavatory faucets	1.2 gpm @ 60 psi max. 0.8 gpm @ 20 psi min.	
		Lavatory faucets in common & public use areas	0.5 gpm @ 60 psi	
		Metering faucets		
		Urinals	0.125 gallons/flush for wall-mounted type and 0.5 gallons/flush for floor-mounted type or other type	
4.303.2	Standards for Plumbing Fixtures and Fittings		red in Section 4.303.1 shall be installed in accordance Code, and shall meet the applicable referenced	
WATER EFFI		ATION (Outdoor Water Use)		
4.304.1	Outdoor potable water use in landscape areas	After Dec 1, 2015, new residential greater than 500 square feet shall 1. A local water efficient landsca water Resources' Model Water more stringent; or	developments with aggregate landscape area equal to or comply with one of the following options: pe ordinance or the current California Department of er Efficient Landscape Ordinance (MWELO), whichever cape area less than 2,500 square feet may comply with escriptive Compliance Option.	
MATERIAL C		URCE EFFICIENCY (Enhanced Dui		
4.406.1	Rodent proofing	exterior walls shall be protected ag	tric cables, conduits, or other openings in plates at ainst the passage of rodents by closing such openings onry or a similar method acceptable to the enforcing	
MATERIAL C	ONSERVATION & RESO		Waste Reduction, Disposal & Recycling)	<u>'</u>
			minimum of 65% of the nonhazardous construction and	
4.408.1	Construction Waste Management	ordinance; or 2. A construction waste manage 3. A waste management compar	local construction and demolition waste management ment plan, per Section 4.408.2; or	
MATERIAL C		URCE EFFICIENCY (Building Main		
4.410.1	Operation and Maintenance Manual	An operation and maintenance ma	nual shall be provided to the building occupant or owner.	
4.410.2	Recycling by Occupants	accessible areas that serve all build	ng units are constructed on a building site, provide readily dings on the site and is identified for the depositing, rdous materials for recycling, including (at a minimum)	

RESIDENTIAL MANDATORY MEASURES, effective January 1, 2017 (continued)

SECTION	MEASURES	REQUIREMENTS	Measures provided of plan sheet
		paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive. See exception for rural jurisdictions.	pian sheet
ENVIRONME	NTAL QUALITY (Fireplace		
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 all applicable local ordinances.	
ENVIRONME	NTAL QUALITY (Pollutar	nt Control)	
4.504.1	Covering of Duct Openings & Protection of Mech. Equipment During Construction	Duct openings and other related air distribution component openings shall be covered during construction.	
4.504.2.1	Adhesives, Sealants and Caulks	Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.	
4.504.2.2	Paints and Coatings	Paints, stains and other coatings shall be compliant with VOC limits.	
4.504.2.3	Aerosol Paints and Coatings	Aerosol paints and coatings shall be compliant with product weighted MIR limits for ROC and other toxic compounds.	
4.504.2.4	Verification	Documentation shall be provided to verify that compliant VOC limit finish materials have been used.	
4.504.3	Carpet Systems	Carpet and carpet systems shall be compliant with VOC limits.	
4.504.4	Resilient Flooring Systems	80 percent of floor area receiving resilient flooring shall comply with specified VOC criteria.	
4.504.5	Composite Wood Products	Particleboard, medium density fiberboard (MDF) and hardwood plywood used in the interior finish systems shall comply with low formaldehyde emission standards.	
ENVIRONME	NTAL QUALITY (Interior	Moisture Control)	
4.505.2	Concrete Slab Foundations	Vapor retarder and capillary break is installed at slab-on-grade foundations.	
4.505.3	Moisture Content of Building Materials	Moisture content of building materials used in wall and floor framing is checked before enclosure.	
ENVIRONME	NTAL QUALITY (Indoor A		
4.506.1	Bathroom Exhaust Fans NTAL QUALITY (Environ	 Each bathroom shall be mechanically ventilated and shall comply with the following: Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.	
LIVINONIVIE	HIAL GUALITY (ENVIRON	Duct systems are sized, designed, and equipment is selected using the following methods:	I
4.507.2	Heating and Air Conditioning System Design	 Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2011 (Residential Load Calculation), or equivalent. Size duct systems according to ANSI/ACCA 1 Manual D- 2014 (Residential Duct Systems), or equivalent. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 (Residential Equipment Selection) or equivalent. 	
INSTALLER 8	& SPECIAL INSPECTOR	QUALIFICATIONS (Qualifications, Verifications)	
702.1	Installer Training	HVAC system installers are trained and certified in the proper installation of HVAC systems.	
702.2	Special Inspection	Special inspectors must be qualified and able to demonstrate competence to the enforcing agency in the discipline in which they are inspecting.	
703.1	Documentation	Verification of compliance with this code may include construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance.	

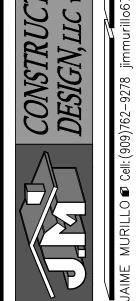
<u>Footnotes</u>:

1 Indicate N/A if not applicable.

Note:
This check list is intended only as an aid to the user and may not contain complete code language. Refer to 2016 CALGreen Chapter 4 for complete code language.

Page **2** of **2**

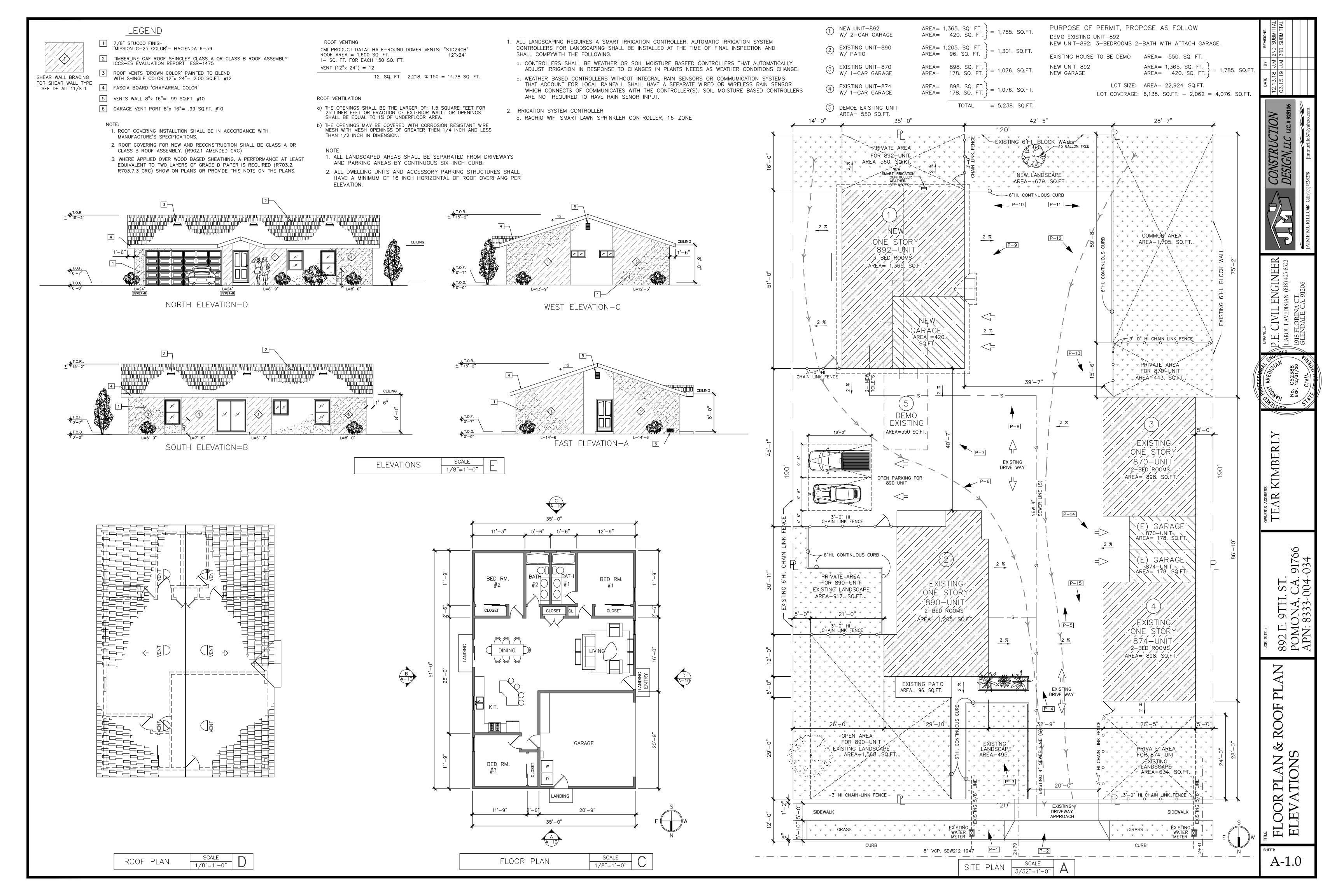
DATE BY RE 12.13.18 J.M 2ND S 03.15.19 J.M 3RD S



RLYTEAR KIMBE

PER 2016 CRC.

FRAMING GREEN BUILDING



			WIND	OW SCH	HED	ULE	(V) (H)		RTICAL SLIDI PRIZONTAL S	
SYM.	WIDTH	HEIGHT	S.G.	FRAME	SCR	GLASS	U-FACTOR	SHGC		REMARKS
A	36"	60"	YES	VINYL	YES	YES	0.32	0.25	BED ROOM	SINGLE SLIDING (V)
B -	36"	36"	YES	VINYL	YES	YES	0.32	0.25	KIT	SINGLE SLIDING (H)
<u>C</u>	36"	60"	YES	VINYL	YES	YES	0.32	0.25	BED ROOM	SINGLE SLIDING (V)
<u>D</u>	36"	16"	YES	VINYL	YES	YES	0.32	0.25	BATH	SINGLE SLIDING (H)
E -	36"	16"	YES	VINYL	YES	YES	0.32	0.25	BATH	SINGLE SLIDING (H)
F	36"	60"	YES	VINYL	YES	YES	0.32	0.25	BED ROOM	SINGLE SLIDING (V)
G	36"	60"	YES	VINYL	YES	YES	0.32	0.25	LIVING	SINGLE SLIDING (V)

THE NFRC TEMPORARY LABEL DISPLAYED ON WINDOWS MUST REMAIN ON THE UNIT UNTIL FINAL INSPECTION INSPECTION HAS BEEN COMPLETED.

- FOR AN FAU LOCATED IN THE ATTIC PROVIDE A MINIMUM ACCESS OF 30"x30", A 24" WIDE WALKWAY, A 30" DEEP WORK PLATFORM, AND ELECTRIC LIGHT OUTLET ADJACENT TO THE FURNACE AND SWITCHED BY THE OPENING. [CMC 304]
- ALL HEATING SYSTEMS SHALL HAVE AN AUTOMATIC THERMOSTAT WITH A CLOCK MECHANISM WHICH THE BUILDING OCCUPANT CAN MANUALLY PROGRAM TO AUTOMATI-CALLY SET BACK THE THERMOSTAT SET POINTS AT LEAST 2 PERIODS WITHIN 24 HOURS.
 - PROVIDE A 3" CLEARANCE ON ALL SIDES, BACK AND TOP AND 6" IN FRONT OF THE FURNACE AND WATER HEATER. [CMC 908]
- SHOW A MINIMUM 70" HIGH NON-ABSORBENT SURFACE AT SHOWER AND TUB AREA. [CBC 807.1.3]
- 5. THE MAXIMUM LENGTH OF A DRYER VENT IS 14 FEET WITH TWO BENDS. TWO FEET SHALL BE DECREASED FOR EACH BEND MORE THAN TWO, UNLESS APPROVED BY THE BUILDING OFFICIAL. [CMC 504.3.4.4]
- 6. AT LEAST ONE OUTLET TO BE INSTALLED AT THE FRONT OF A DWILLING UNIT. [CEC 210.52 (E)]
- SMOKE DETECTORS SHALL SOUND AN ALARM AUDIBLE IN ALL AREAS OF THE BUILDING OR BE INTERCONNECTED.
- 8. ALL BEDROOM RECEPTACLES SHALL BE ARC FOULT TYPE.
- FLUORESCENT LIGHTING IN ALL ROOMS AND KITCHEN.
- 10. ALL EXTERIOR RECEPTACLE SHALL BE WATER PROOF / GFI TYPE.
- RECEPTACLES IN KITCHEN AND ALL LAVATORIES SHALL BE / GFI TYPE.
- 12. ALL LIGHTING SHALL BE HIGH EFFICIENCE TYPE (FLUORESCENT)
- MECHANICAL VENTILATION FOR BATHROOMS (EXHAUST FAN WITH CAPACITY OF 50 CFM INTERMITTENT OR CFM CONTINUOUS) AND KITCHENS (EXHAUST FAN WITH CAPACITY OF 100 CFM INTERMITTENT OR 5 AIR CHANGES PER HOUR [ACH] AONTINOUS. BASED ON KITCHEN VOLUME)
- 14. HEATER SHALL BE CAPABLE OF MAINTAINING A MINIMUM ROOM TEMPERATURE OF 68 DEGREES F AT A POINT 3 FEET ABOVE THE FLOOR AND 2 FEET FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS AT THE DESIGN TEMPERATURE.
- BUILDING SHALL HAVE APPROVED ADDRESS NUMBERS OR APPROVED BUILDING IDENTIFICATION PLACED IN A POSITION THAT IS PLAINLY LEGIBLE AND VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY.
- PROTECTION OF WOOD AND WOOD BASED PRODUCTS FROM DECAY SHALL BE PROVIDED IN THE LOCATIONS SPECIFIED PER SECTION R317.1 BY THE USE OF NATURALLY DURABLE WOOD OR WOOD THAT IS PRESERVATIVE—TREATED IN ACCORDANCE WITH AWPA U1 FOR THE SPECIES, PRODUCT, PRESERVATIVE AND END USE. PRESERVATIVE SHALL BE LISTED IN SECTION 4 OF AWPA U1
- 17. PROVIDE ANTI-GRAFFIT FINISH WITHIN THE FIRST 9 FEET, MEASURED FROM GRADE. AT EXTERIOR WALLS AND DOORS. EXCEPTION: MAINTENANCE OF BUILDING AFFIDAVIT IS RECORDED BY THE OWNER TO CONVENANT AND AGREE WITH THE CITY OF LOS ANGELES TO REMOVE ANY GRAFFITI WITHIN 7-DAYS OF THE GRAFFITI BEING APPLIED.
- NOTE: 1. ALL SLEEPING ROOMS SHALL HAVE EMERGENCY ESCAPE AND SHALL OPEN DIRECTLY INTO A PUBLIC WAY, ALLEY, AND YARD OR EXIT COURT AND SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF TOOLS. ESCAPE OR RESCUE WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPENABLE AREA OF 5'.7" SQUARE FEET, MINIMUM NET CLEAR OPENABLE HEIGHT OF 24" AND MINIMUM NET CLEAR OPENABLE WIDTH 20" AND HAVE A SILL HEIGHT NOT MORE THAN 44" ABOVE THE FLOOR (1026)

SHOWER STALL SHALL HAVE A CLEAR INTERIOR FINISH AREA OF 7.1 SQ. FT. AND BE ABLE TO ACCOMMODATE A MINIMUM 30 INCH CIRCLE AT THE THRESHOLD LEVEL. THESE CLEARANCES SHALL BE MAINTAINED UP TO A HEIGHT OF 70 INCHES ABOVE SHOWER DRAIN.

- 1. WATER CLOSET SHALL BE LOW FLUSH TYPE WITH 1.6 GALLONS PER FLUSH MAX.
- 2. ATTIC ACCESS SHALL BE WEATHER STRIPPED OR SEALED TO PREVINT DRAFTS. 3. A DEVICE TO ABSORB HIGH PRESSURES FROM QUICK CLOSING VALVES SHALL BE PROVIDED.
- 4. ALL BATH ROOM RECEPTACLES SHALL BE ON A 20 AMP CIRCUIT.
- 5. BE CONTROLLED BY A DIMMER SWITCH OR MANUAL-ON OCCUPANI SENSOR. ALL LIGHTING SHALL BE HIGH EFFICACY, OR DEPENDING ON THE LOCATION OF THE LIGHTING,
- 6. ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE ILLUMINATED. (R303.7)
- GLAZING IN THE FOLLOWING LOCATIONS SHALL BE SAFETY GLAZING CONFORMING TO THE HUMAN IMPACT LOADS OF SECTION R308.3 (SEE EXCEPTIONS) (R308.4)
 - a. FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BI-FOLD DOOR ASSEMBLIES.
 - b. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHWERE THE NEAREST VERTICAL EDGE IS WHITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SURFACE.
 - c. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING
 - CONDITIONS: 1) EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SQUARE FEET.

60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE.

- 2) BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR
- 3) TOP EDGE GREATER THAN 36 INCHES ABOVE THE FLOOR.

IS LESS THAN 60 INCHES HORIZONTALLY OF THE BOTTOM TREAD.

- 4) ONE OR MORE WALKING SURFACES WITHIN 36 INCHES HORIZONTALLY OF THE GLAZING. d. GLAZING IN RAILINGS.
- e. 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
- f. 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 INCHES ABOVE A WALKING SURFACE AND WITHIN 60 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGH LINE, OF THE WATER'S EDGE.
- g. GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS.
- h. GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GHLAZING

DOOR SCHEDULE

SYM.	WIDTH	HEIGHT	S.G	DOOR	FRAME	SCR	REMARKS
1	36"	80"	YES	METAL/WD	WOOD	NO	EXTERIOR
(<u>2</u>)	36 "	80"	YES	METAL/WD	WOOD	NO	EXTERIOR
3 −	72"	80"	NO	GLASS	WOOD	YES	TEMPER GLASS
4 _	72"	80"	NO	METAL/PANEL	WOOD	NO	CLOEST
5_	32"	80"	NO	HOLL/WD	WOOD	NO	BED ROOM
<u>6</u>	30"	80"	NO	HOLL/WD	WOOD	NO	BATH
7_	2-24"	80"	NO	HOLL/WD	WOOD	NO	CLOSET
8 _	32"	80"	NO	HOLL/WD	WOOD	NO	BED ROOM
9_	30"	80"	NO	HOLL/WD	WOOD	NO	BATH
10	96"	80"	NO	METAL/PANEL	WOOD	NO	CLOSET
11	32"	80"	NO	HOLL/WD	WOOD	NO	BED ROOM
12	72"	80"	NO	METAL/PANEL	WOOD	NO	CLOSET
13	36"	80"	YES	METAL/WD	WOOD	NO	20 MIN. FIRE RATED SELF CLOSING

NOTES

- a. THE CONSTRUCTION SHALL NOT RESTRICT A FIVE-FOOT CLEAR AND UNOBSTRUCTED ACCESS TO ANY WATER OR POWER DISTRIBUIRION 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.
- b. AN APPROVED SEISMIC GAS SHUTOFF VALVE WILL BE INSTALLED ON THE FUEL GAS LINE ON THE DOWNSTREAM SIDE OF THE UTILITY METER AND BE RIGIDLY CONNECTED TO THE EXTERIOR OF THE BUILDING OR STRUCTURE CONTAINING THE FUEL GAS PIPING. (PER ORDINANCE 170,158) (SEPARATE PLUMBING PERMIT IS REQUIRED).
- c. PLUMBING FIXTURES ARE REQUIRED TO BE CONNECTED TO A SANITARY SEWER OR TO AN APPROVED SEWAGE DISPOSAL SYSTEM (R306.3).
- d. 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 SYPPLY (R306.4).
- e. 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)
- f. PROVIDE ULTRA—LOW FLUSH WATER CLOSETS FOR ALL NEW CONSTRUCTION. EXISTING SHOWER HEADS AND TOILETS MUST BE ADAPTED FOR LOW WATER CONSUMPTION.
- h. WATER HEATER MUST BE STRAPPED TO WALL. (SEC. 507.3, LAPC)
- k. AUTOMATIC GARAGE DOOR OPENERS, IF PROVIDED, SHALL BE LISTED IN ACCORDANCE WITH UL 325.(R309.4)
- 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 (\$1,000) (R314.6.2) AND SHALL BE INTERCONNECTED HARD-WIRED WITH BATTERY BACKUP. AS FOLLOWING
- IN EACH SLEEPING ROOM
- OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
- SHALL BE INTERCONNECTED HARD-WIRED WITH BATTERY BACKUP AND INSTALLED IN ACCORDANCE WITH NFPA 72. – BATTERY SMOKE ALARM PERMITTED IN EXISTING BUILDINGS WHERE ON CONSTRUCTION IN TAKING PLACE.
- m. WHERE A PERMIT IS REQUIRED FOR ALTERRATIONS. REPAIRS OR ADDITIONS EXCEEDING ONE THOUSAND DOLLARS (\$1,000) EXISTING DWELLINGS OR SLEEEPING UNITS THAT HAVE ATTACHED GARAGES OR FUEL-BURNING APPLIANCES SHALL BE PROVIDED WITH A CARBON MONOXIDE ALARM IN ACCORDANCE WITH SECTION R315.2.2 CARBON MONOXIDE ALARMS SHALL ONLY BE REQUIRED IN THE SPECIFIC DWELLING UNIT OR
- SLEEPING UNIT FOR WHICH THE PERMIT WAS OBTAINED. (R315.2.2) - OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
- SHALL BE INTERCONNECTED HARD—WIRED WITH BATTERY BACKUP
- BATTERY CARBON MONOXIDE ALARM IS PERMITTED IN EXISTING DWELLING UNITS WHERE ON CONSTRUCTION IS TAKING PLACE.
- n. EVERY SPACE INTENDED FOR HUMAN ACCUPANCY SHALL BE PROVIDED WITH NATURAL LIGHT BY MEANS OF EXTERIOR GLAZED OPENINGS IN ACCORDANCE WITH SECTION R303.1 OR SHALL BE PROVIDED WITH ARTIFICAL LIGHT THAT IS ADEQUATE TO PROVIDE AN AVERAGE ILLUMINATION OF 6 FOOT-CANDLES OVER THE ARE OF THE ROOM AT A HEIGHT OF 30 INCHES ABOVE THE FLOOR LEVEL. (R303.1)
- o. A COPY OF THE EVALUATION REPORT AND/OR CONDITIONS OF LISTING SHALL BE MADE AVAILABLE AT THE JOB SITE.

WALL LEGEND

2x4 STUDS AT 16" O.C. (TYP) BATH ROOM PLUMBING WALL 2x6 STUDS AT 16" O.C.

SYMBOLS

DOOR NO. SHEET NO.

1 WINDOW NO. WINDOW SYMBOL SHEET NO.

> **ABBREVIATIONS** S.G. SAFETY GLASS

SCR SCREEN (V) VERTICAL

(H) HORIZONTAL

IAQ INDOOR AIR QUALITY MECHANICAL VENTILATION SYSTEM IAQ FANS SHALL BE ENERGY STAR COMPLIANT 50 cfm min AND BE DUCTED TO TERMINATE TO THE OUTSIDE OF THE BUILDING AIRKING AK110PN ENERGY STAR QUIET SERIES 100-CFM. THIS FAN TO REMAIN ON DURING ALL HOURS THE HOUSE IS OCCUPIED.

FANS, NOT FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, MUST BE CONTROLLED BY A HUMIDITY CONTROL

- CARBON MONOXIDE DETECTORS SHALL BE WIRED TO THE BLDG. ELEC. SYSTEM & BE EQUIPPED W/ BATTERY BACKUP. INTERCONNECTED
- SMOKE DETECTOR SHALL BE WIRED TO THE BLDG. ELEC. SYSTEM & BE EQUIPPED W/ BATTERY BACKUP AND INTERCONNECTED.

ALL LIGHT TO BE HIGH EFFICACY.

ELECTRICAL SYMBOLS

→ SWITCH 2 WAY SWITCH VACANCY SENSORS SWITCH MOTION SENSOR DUPLEX CONVENIENCE OUTLET CEILING OUTLET WATERPROOF OUTLET OUTLET WITH SWITCH D.C.O. WITH HEIGHT 220 V OUTLET GROUND FAULT INTERRUPTER ARC-FAULT INTERRUPTER WALL LIGHT CEILING LIGHT

FLUSH LIGHT, CAN LIGHTS SHALL BE AIR TIGHT AND RATED FOR CONTACT WITH INSULATION

A/C DISCONNECT

TANKLESS WATER HEATER

1. THE LOAD RESISTANCE OF GLASS UNDER UNIRORM LOAD SHALL BE DETERMINED IN ACCORDNCE WITH ASTM E1300.

EGRESS WINDOWS

EXTERIOR DOORS

1. PROVIDE A FLOOR OR LANDING ON EACH SIDE OF EVERY EXTERIOR DOOR. LANDING SHALL HAVE A WIDTH NOT LESS THAN THE WIDTH OF THE DOOR. (R311.3 CRC)

a. THE LANDING AT REQUIRED OUT-SWINGING DOOR SHALL NOT BE MORE THAN 1 1/2" LOWER THEN THE TOP OF THE THRESHOLD.

b. THE LANDING AT IN-SWINGING DOORS AND DOORS OTHER THAN THE REQUIRED EGRESS SHALL

NOT BE MORE THAN 7 3/4" BELOW THE TOP OF THE THRESHOLD.

C. MAXIMUM SLPE OF ANY LANDING SHALL NOT EXCEED 1/4 INCH PER FOOT. (R311.3 CRC)

a. A MINIMUM OPENING SIZE OF 5.7 (5.7 AT GRADE LEVEL) SQUARE FEET. 1. A 20-INCH MINIMUM NET CLEAR OPENING WIDTH.

2. A 24-INCH MINIMUM NET CLEAR OPENING HEIGHT 3. A SILL HEIGHT ON HIGER THAN 44 INCHES ABOVE THE FLOOR.

1. SAFETY OR TEMPERED GLAZING AT BATHROOMS: WHERE GLAZING IN ENCLOSURE FOR OR WALLS FACING HOT TUBS. WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS WHERE THE BOTTOM EPOSED EDGE IS LEASS THAN 60" MEASURED VERTICALLY ABOVE A STANDING OR WALKING

1. EMERGENCY EXITS ARE REQUIRED IN ALL SLEEPING AREAS AND MAY BE PROVIDED BY A DOOR A DOOR

SURFACE. PROVIDE SILL HEIGHT ON THE PLAN IF OVER 60" (CRC R308.4) 2. FIBER-CEMENT, FIBER-MAT REINFORCED CEMENT, GLASS MAT GYPSUM OR FIBER-REINFORCED GYPSUM BACKERS SHALL BE USED AS A BASE FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL AND CEILING PANELS IN SHOWER AREAS. (TABLE R702.4.2, R702.4.2 CRC)

1. FAN COIL 3/4" CONDENSATE OVERFLOW SECONDARY DRAIN (COPPER-TYPE "M") SHALL BE DISCHARGE THRU THE CEILING OVER THE LAVATORY, DRAIN SHALL SLOPE AT NOT LESS THAN 1/4" PER FOOT (2%) FAN COIL 3/4" CONDENSATE PRIMARY DRAIN (COPPER-TYPE "M") SHALL BE TRAPPED & PIPED TO NEAREST

TAILPIECE OF LAVATORY. DRAIN SHALL SLOPE AT NOT LESS THAN 1/4" PER FOOT (2%)

THE WORKING CLEARANCES REQUIRED BY CEC 110-26 MUST BE PERMANENTLY MAINTAINED IN FRONT OF ALL ELECTRICAL EQUIPMENT.

DISCONNECT

120 VC

3'-0"

← G.F.I

W/P

1. THE ADDRESS NUMBER REQUIREMENTS.

NUMBERS MUST BE 4 INCH TALL AND AUTOMATICALLY ILLUMINATED AND FACING THE STREET ON BOTHE HOUSES.

2. 2017 CFC CHAPTER 14- "FIRE SAFTY DURING CONSTRUCTION AND DEMOLITION". THE CONTRACTOR MUST ADHERE TO DURING CONSTRUCTION. 3. LABEL THE HOUSE ELECTRICAL PANEL FOR FINAL INSPECTION. / BOTH HOUSES

4. CARBON MONOXIDE ALARMS OR MULTIPLE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH DWELLING SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM AND ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS. 2017 CALIFORNIA RESIDENTIAL CODE. R315.2 ALL HALLWAY

SMOKE ALARMS SHALL BE COMBO CARBON MONOXIDE ALARMS.

5. FIRE SPRINKLERS HAVE NOT BEEN REVIEWED AS A PART OF THIS SUBMITTAL AND SEPARATE SUBMITTALS ARE NOT REQUIRED.

ELECTRICAL

'AFCI' (ARC-FAULT CIRCUIT INTERRUPTER) TO BE PROVIDED AT ALL OUTLETS (RECEPTACLES, LIGHTS, ETC.) IN KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS. (CEC SECTION 210.12)

2. ALL OUTDOOR RECEPTACLES TO HAVE EXTRA DUTY RATED IN USE COVERS. [410-57 NEC]

PASSAGE

WAY

OUTLET

F.A.Ψ.

RETURN AIR

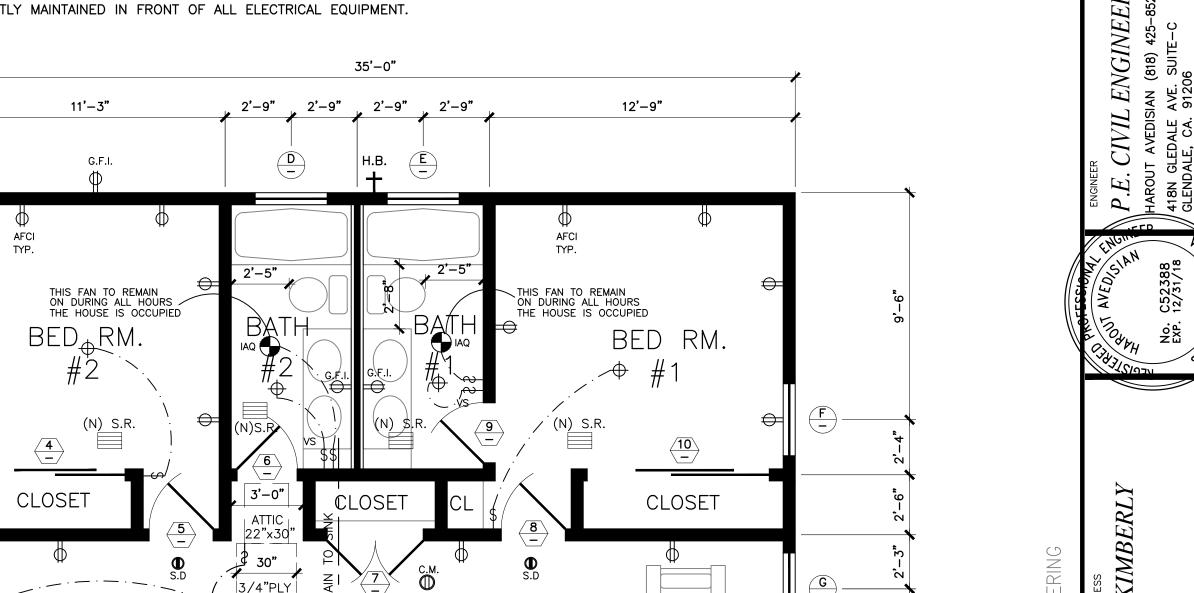
3/4" A/C DRAIN

(N) S.R.

RM.

1. WATER PIPING MATERIALS WITHIN A BUILDING SHALL BE IN ACCORDANCE WITH SEC. 604.1 OF THE CALIFORNIA PLUM CODE PEX, CPVC AND OTHER PLASTIC WATER PIPING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WHIT THE REQUIREMENTS OF SEC. 604 OF THE CPC. INSTALLATION STANDARDS OF APPENDIX 1 OF THE CPC AND MANUFACTUI RECOMMENDED INSTALLATION STANDARDS. CPVC WATER PIPING REQUIRES A CERTIFICATION OF COMPLIANCE AS SPEC IN SEC 604.1.1(d) OF THE CPC PRIOR TO PERMIT ISSUANCE.

ALL PLUMBING MATERIAL TO BE PEX TYPE



 \aleph

₩120 VOL

ш

CFCI

VENT

TYPE 'X' GYP. BD.

SELF LATCHING

FITTING SELF CLOSING

W/H MIN 15,000 BTU/h

5'-0**"**

SOLID CORE TIGHT GARAGE

FIRE RATED DOOR

13 20 MIN. OR 1 3/4

DRYER

(N) GAS | VENT

METERS

(N) TANKLEES

SEE T-24

FULL HT. OCCUPANCY

SEPARATION ON BOTH SIDE

| F.F.=0'-0"|

PIPE BOLLARD OR OTHER

PROTECTIVE MEASURE WHEN

-APPLIANCES ARE SUBJECT TO

DAMAGE 3"MIN. DIA. (PC508.14(12))

NEW REMODEL FLOOR PLAN

9

9 201 R

SCALE

ΣĮΣ

` **~**

SO

ST. 91.

SCF

FLOO, WIND

R

DOOF EDUL

OF THE WIRE SECURED TOGETHER WITH THREE TWISTS OF THE WIRE.

ROOF DIAPHRAGM

SECURE LATH TO ALTERNATE SUPPORTS WITH TIES CONSISTING OF A DOUBLE STRAND OF NO. 18 W & M GAGE GALVANIZED ANNEALED WIRE AT ONE EDGE OF EACH SHEET OF LATH. WIRE TIES SHALL BE INSTALLED NOT LESS THAN 3 INCHES BACK FROM THE EDGE OF EACH SHEET AND SHALL BE LOOPED AROUND STRIPPING OR ATTACHED TO AN 8d COMMON WIRE NAIL DRIVEN INTO EACH SIDE

ROOF FRAMING NOTES:

INDICATE RAFTER JOIST

INDICATE FLOOR JOIST

L____

INDICATE WALL BELOW 1. FOR ROOF ELEVATION, SLOPES, WALL HEIGHTS, ROOF OPENINGS, ETC., SEE ARCH'L PLANS AND

2. TYP. DETAILS NOT SHOWN, SEE SHEET ST1, ST2.

THIS PROJECT INCORPORATES A RADIANT BARRIER

OF THE JOIST OR TO EACH END OF A 16d COMMON WIRE NAIL DRIVEN HORIZONTALLY THROUGH THE JOIST 2 INCHES ABOVE THE BOTTOM OF THE JOIST AND THE ENDS

1. 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 ON THE POST ON THE OPPOSITE SIDE OF THE ANCHORAGE DEVICE. PLATE SIZE SHALL BE A MINIMUM OF 0.299 INCH BY 3 INCHES BY 3 INCHES. 2. ROOF DIAPHRAM 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. PLYWOOD SPANS SHALL CONFORM WITH TABLE 2304.7.

3. ALL DIAPHRAM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX.

4. ALL BOLT HOLES SHALL BE DRILLED 1/23" TO 1/16" OVERSIZED.

5. HOLD-DOWN HARWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.

6. FIELD CUTTING ENDS, NOTCHES, AND DRILLED HOLES IN PRESERVATIVE—TREATED WOOD SHALL BE TREATED IN THE IN ACCORDANCE WITH (R301.1.3 CRC) 7. FOR NON-SHEAR WALL, ANCHOR 1/2"x10" EMBEDDED 7" AND SPACED MAXIMUM 6' WITH 0.229"x3"x3" PLATE SASHERS, MINIMUM 2 ANCHOR BOLTS

PER PIECE, LOCATED NOT MORE THAN 12" OR LESS THAN 7 MOLT DIAMETERS FROM EACH END OF THE PIECE.

8. BOLTS SHALL BE LOCATED IN THE MIDDLE THIRE OF THE WIDTH OF THE PLATE.

9. ANCHOR BOLTS ON SHEAR WALLS IN SEISMIC DESIGN CATEGORY D, DO, D1, D2, AND TOWNHOUSES IN C SHALL HAVE STEEL PLATE WASHERS A MINIMUM OF 3"x3"x0.229" BETWEEN THE SILL PLATE AND THE NUT. (R602.11.1 CEC)

10. SATURATE THE SOIL 18-IN. DEEP BEFORE PLACEING THE CONCRETE SLAB.

FOUNDATION NOTES:

SHEARWALL SYMBOL, FOR SIZE SEE SCHEDULE.

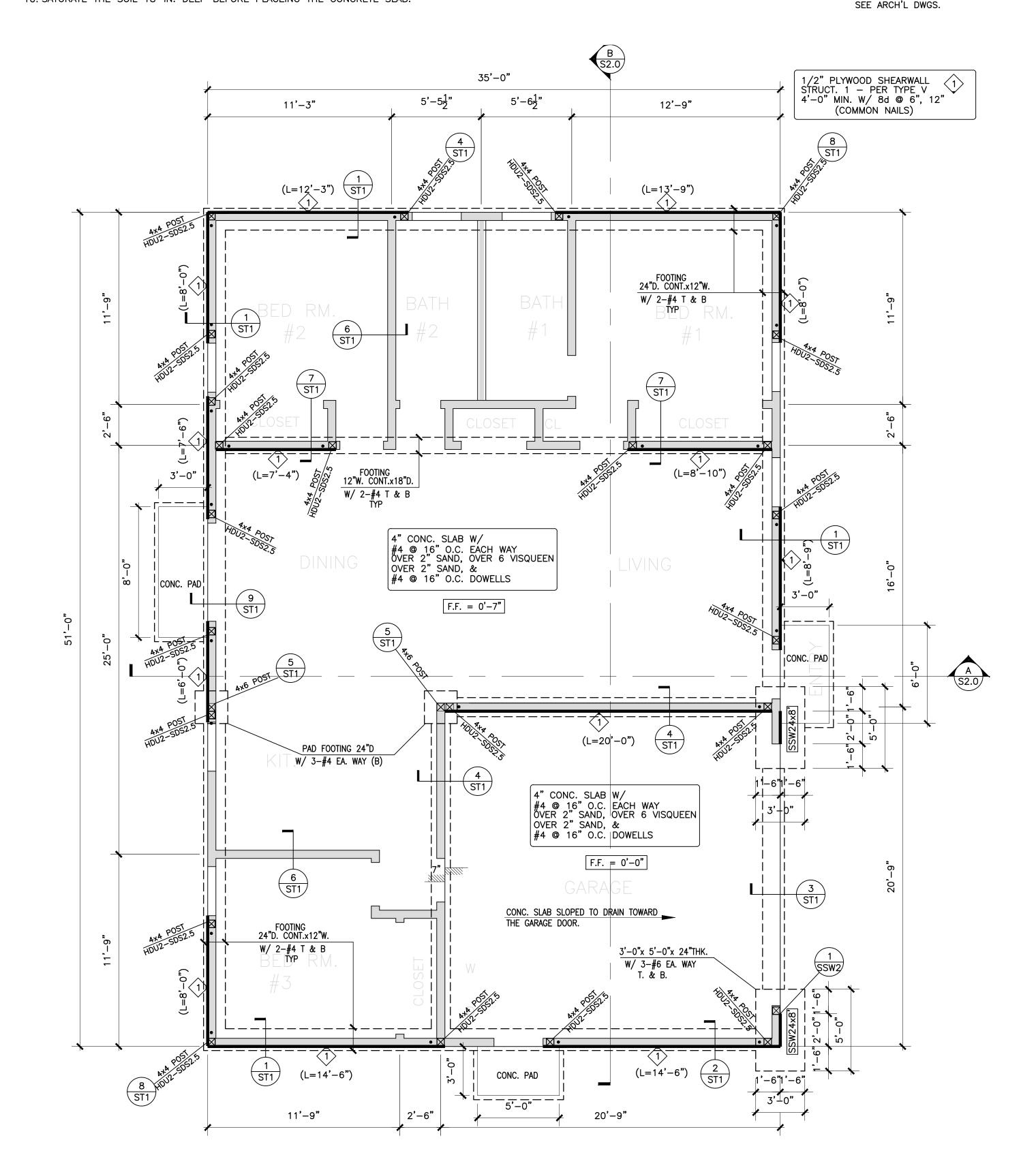
DETAIL No. DETAIL SYMBOL

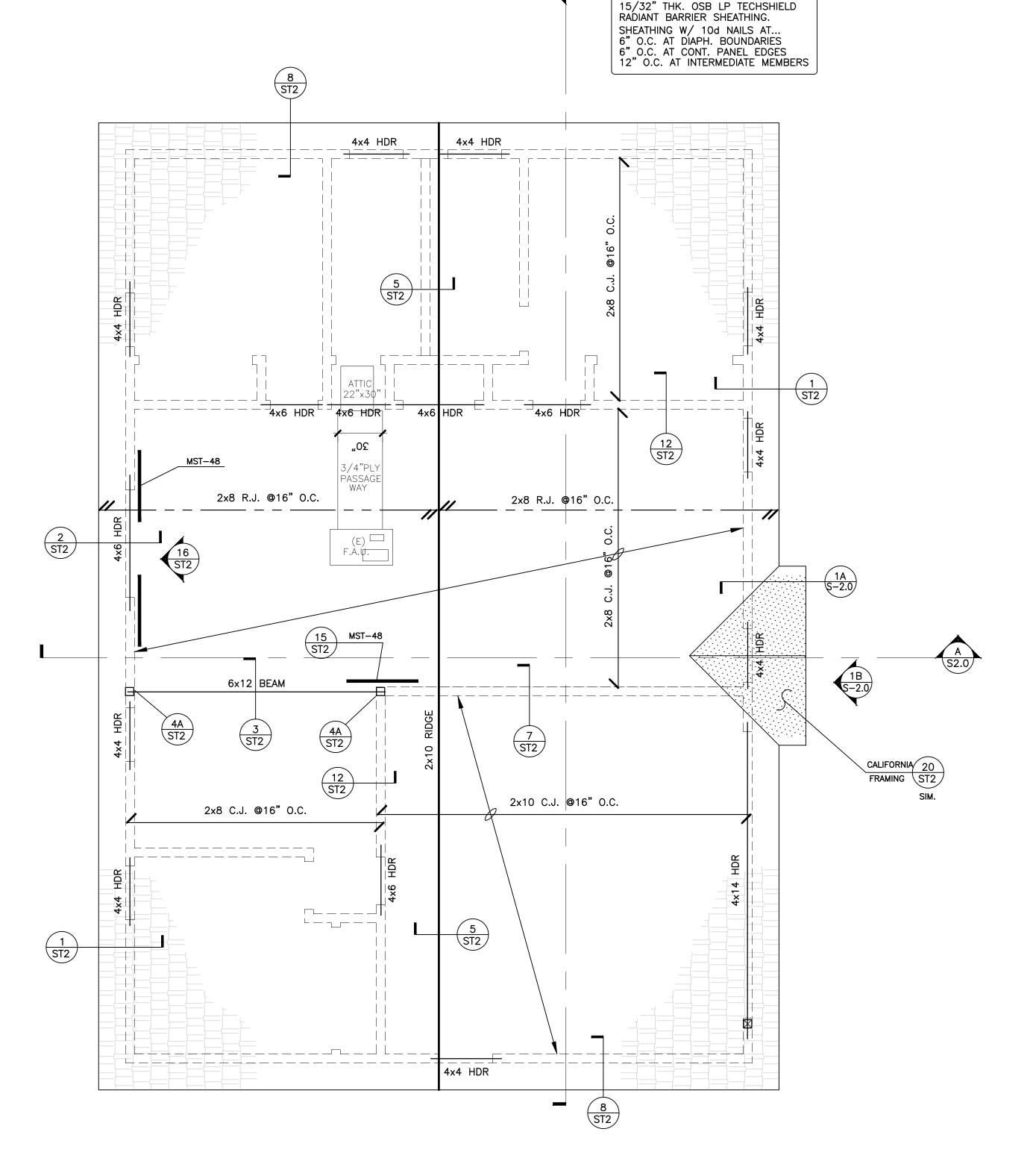
1. FOR DIMENSIONS AND CONDITIONS NOT SHOWN SEE ARCH'L DWGS. AND VERIFY IN FIELD.

2. FOR FINISH FLOOR ELEVATION, SLOPE, DRAINS,

· |≥|≥|

15.



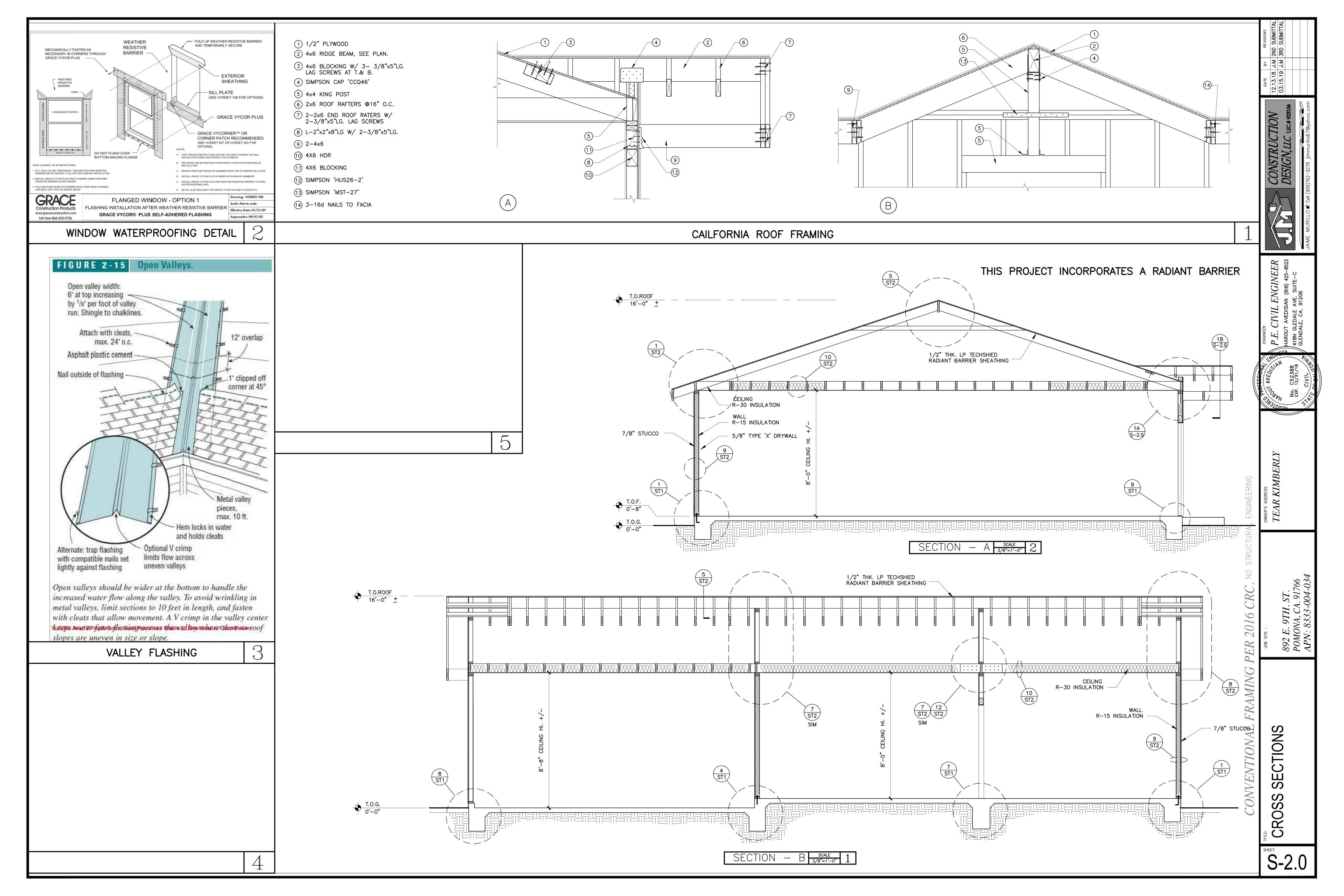


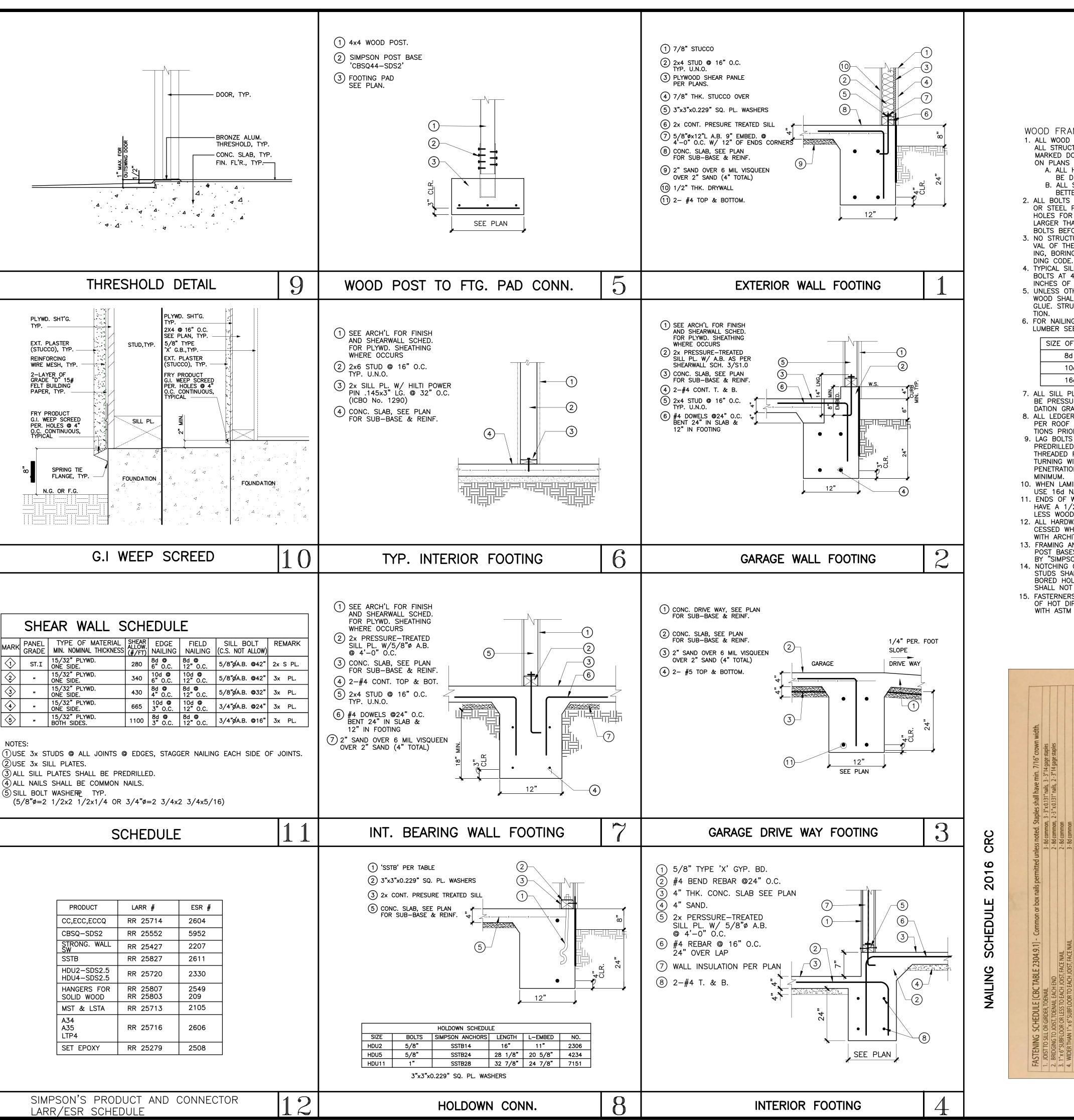
FOUNDATION PLAN SCALE A

FOUNDATION AND F FRAMING PLAN

TEAR

ROOF FRAMING PLAN





- 1. ALL WOOD SHALL CONFORM TO THE CHAPTER 23 OF C.B.C. ALL STRUCTURAL FRAMING MEMBERS SHALL BE GRADE MARKED DOUGLAS FIR AS FOLLOWS UNLESS NOTED OTHERWISE ON PLANS (MOISTURE 19% MAXIMUM): A. ALL HORIZONTAL FRAMING MEMBERS AND POSTS SHALL
 - BE D.F. NO. 1.
- BOLTS BEFORE PLASTERING. 3. NO STRUCTURAL MEMBER SHALL BE CUT WITHOUT THE APPRO-VAL OF THE STRUCTURAL ENGINEER. ANY CUTTING, NOTCH-ING, BORING OF WOOD SHALL CONFORM TO THE LOCAL BUIL-
- WOOD SHALL BE INTERIOR GRADE PLYWOOD WITH EXTERIOR GLUE. STRUCTURAL I CONFORMING TO PS 1, LATEST EDI-
- 6. FOR NAILING (ALL NAILS SHALL BE COMMON U.N.O.) OF LUMBER SEE TABLE 2304.9.1 OF C.B.C. 2007 CODÉ.

SIZE OF NAILS	DIAMETER	STANDARD LENGTH
8d	0.131"	2 1/2"
10d	0.148"	3"
16d	0.162"	3 1/4"

- 7. ALL SILL PLATES RESTING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR UTILITY GRADE OR FOUN-
- 9. LAG BOLTS AND SCREWS SHALL BE PREDRILLED. THE DIA. OF PREDRILLED HOLES SHALL BE 60% OF SHANK DIAMETER. THE THREADED PORTION OF THE SCREW SHALL BE INSERTED BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER PENETRATION OF THREADED PORTION SHALL BE 7 DIAMETER MINIMUM.
- 10. WHEN LAMINATING VERTICALLY 2-2" X MEMBERS TOGETHER, USE 16d NAILS AT 9" O.C. STAGGERED.
- CESSED WHEN REQUIRED BY ARCHITECTURAL FINISH. VERIFY WITH ARCHITECTURAL PLANS, TYPICAL
- POST BASES, TIE DOWNS, ETC, SHALL BE AS MANUFACTURED BY "SIMPSON" OR AN APPROVED EQUAL
- 14. NOTCHING OF EXTERIOR AND BEARING/NON-BEARING WALLS STUDS SHALL NOT EXCEED 25%/40% RESPECTIVELY. BORED HOLES IN BEARING/NON-BEARING WALLS STUDS SHALL NOT EXCEED 40%/60% RESPECTIVELY.

- WOOD FRAMING
- B. ALL STUDS AND BRACES SHALL BE D.F. NO. 1 OR
- BETTER U.N.O. 2. ALL BOLTS SHALL BE STANDARD MACHINE BOLTS WITH M.I. OR STEEL PL WASHERS WHEN HEAD OR NUT BEARS ON WOOD. HOLES FOR BOLTS SHALL BE DRILLED WITH A BIT 1/32" LARGER THAN THE NOMINAL BOLT DIAMETER. TIGHTEN ALL
- 4. TYPICAL SILL BOLTING SHALL BE 5/8" DIA. X 10" ANCHOR BOLTS AT 4'-0" O.C. PROVIDE ONE BOLTS WITHIN NINE INCHES OF EACH END OF EACH SILL PIECE AND AT CORNERS
- 5. UNLESS OTHERWISE NOTED ON PLANS, ALL STRUCTURE PLY-

SIZE OF	NAILS	DIAMETER	STANDARD LENGTH
8d		0.131"	2 1/2"
10	d	0.148"	3"
16	d	0.162"	3 1/4"

- DATION GRADE REDWOOD.
- 8. ALL LEDGER BOLTS SHALL BE SET IN WALLS TO INSURE PRO-PER ROOF SLOPE PER DRAINAGE PLAN. VERIFY ALL CONDI-TIONS PRIOR TO SETTING BOLTS.
- 11. ENDS OF WOOD MEMBERS ENTERING MASONRY WALLS SHALL HAVE A 1/2" AIR SPACE AROUND TOP. END AND SIDES UN-
- LESS WOOD IS TREATED WITH APPROVED PRESERVATIVES. 12. ALL HARDWARE CONNECTING WOOD MEMBERS SHALL BE RE-
- 13. FRAMING ANCHORS, JOIST HANGERS, POST CAPS,
- 15. FASTERNERS FOR PRESERVATIVE- TREATED WOOD SHALL BE OF HOT DIPPED ZINCCOATED GALVANIZED STEEL IN ACCORDANCE WITH ASTM A 153.

DIMENSIONS

- 1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON JOB SITE WITH COMPLETE SET OF LATEST DRAWINGS. NOTES AND DI-MENSIONS SHALL BE CHECKED AND VERIFIED WITH ARCHITEC-TURAL AND STRUCTURAL DRAWINGS. ANY DISCREPANCIES IN NOTES OR DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE COMMENCING WORK SO THAT PRO-PER REMEDIAL WORK CAN BE EXECUTED
- 2. UNLESS SPECIFICALLY DETAILED ON THESE DRAWINGS, CON-TRACTOR SHALL FURNISH AND INSTALL ADEQUATE SHORING, BRACING, ETC. REQUIRED TO SAFELY EXECUTE ALL WORK AND
- SHALL BE FULLY RESPONSIBLE FOR THE SAME. 3. DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIAL.
- SITE PREPARATIONS 1. ALL EXCAVATIONS, PREPARATION FOR SLAB ON GRADE, DEPTH OF FOOTINGS, BACK FILL, ETC., SHALL BE PERFORMED IN ACCOR-DANCE WITH THE SOIL ENGINEER'S RECOMMENDATIONS. ANY DIS-CREPANCIES BETWEEN THE SOIL ENGINEER'S REPORT AND THE FOUNDATION PLANS MUST BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INITIATING ANY EXCAVATION SO THAT PROPER REMEDIAL WORK CAN BE PERFORMED.

CONCRETE

- 1. PORTLAND CEMENT SHALL BE TYPE I OR II CONFORMING TO A.S.T.M. SPECIFICATION C 150. AGGREGATES SHALL BE NORMAL WEIGHT CONFORMING TO A.S.T.M. SPECIFICATION C 33, WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.04%. USE SPECIAL TYPE OF CEMENT WHERE REQUIRED
- BY SOIL CONDITIONS --- SEE SOIL REPORT. 2. ALL CONCRETE SHALL BE DESIGNED BY APPROVED LABORATORY, AND DESIGN MIX SHALL SUBMIT TO ARCHITECT/ENGINEER FOR REVIEW, AND OBTAIN APPROVAL PRIOR TO USE. MAXIMUM SLUMP SHALL BE 4" U.N.O.
- USE MINIMUM OF FIVE SACKS OF CEMENT PER CUBIC YARD CONC. FOOTING (COLUMN PAD)* : 2500 PSI @ 28 DAY
- SLAB ON GRADE* : 2500 PSI @ 28 DAY

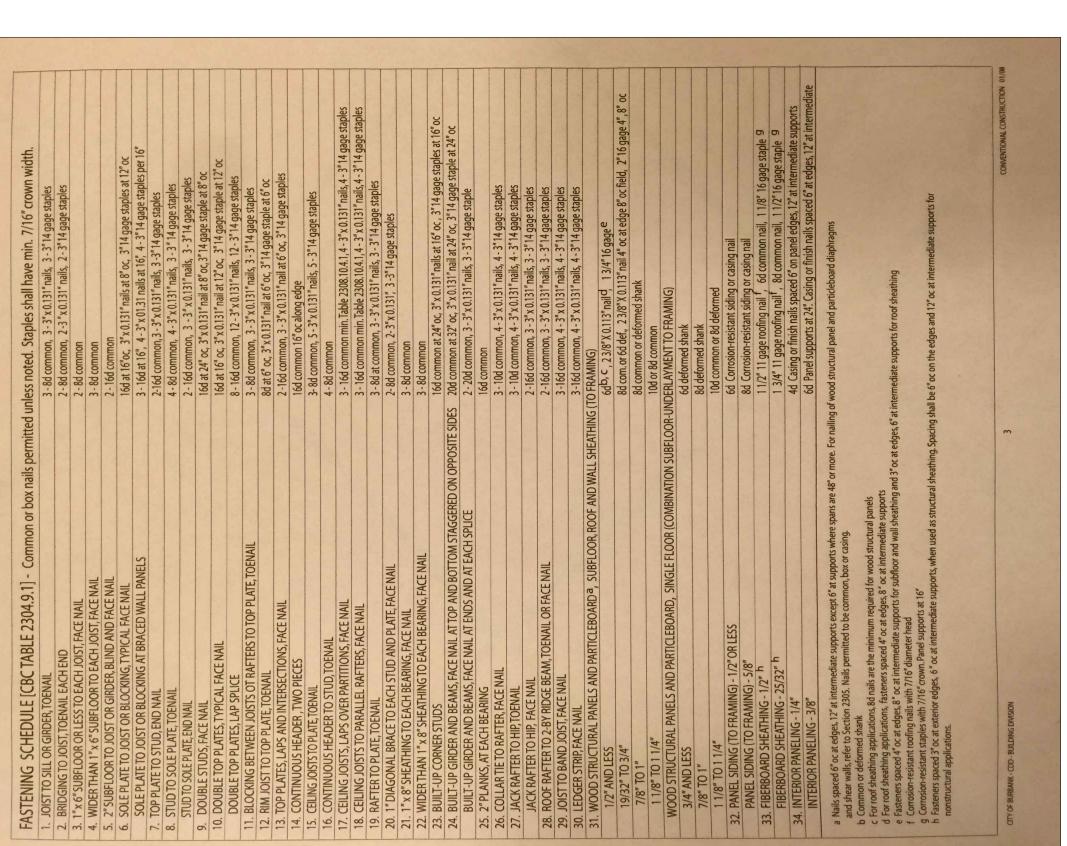
SOIL BEARING CAPACITY = 1500 PSF

- 3. NO PIPES OR DUCTS SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. SEE ARCHITEC-TURAL AND MECHANICAL DRAWINGS FOR LOCATION OF SLEEVES, MOULDS, FLOOR HINGES, ETC., TO BE CAST INTO THE CONCRETE.
- 4. VIBRATION OF CONCRETE SHALL BE PERFORMED IN ACCORDANCE WITH THE PORTLAND CEMENT ASSOCIATION SPECIFICATION.
- 5. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF SEVEN DAYS AFTER ITS PLACEMENT: APPROVED CURING COMPOUNDS MAY BE USED IN LIEU OF MOIST CURING.

GLUED LAMINATED MEMBER 1. ALL LAMINATED LUMBER SHALL BE PROPERLY KILN-DRIED

- FOR GLUE LAMINATING AND MOISTURE CONTENT SHALL NOT EXCEED 12%.
- 2. ALL MEMBERS SHALL CONFORM TO UNIFORM CODE, TABLE 23-1-C-1. COMBINATION 24 F,f=2400 P.S.I. - DRY CONDITION\$ OF USE. MINIMUM REQUIREMENT: SHEAR f(v)=165 P.S.I.; F1(c) = 450 P.S.I. ON COMPRESSION AND TENSION FACES; E=1.8 X 10⁶ P.S.I. MIN. USE 24F-V4 COMBINATION FOR SIMPLE BEAMS AND 24F-V8 FOR CANTILEVERED BEAMS.
- 3. USE ADHESIVE WATER RESISTANT CASEIN TYPE GLUE WITH MOLD INHIBITOR CONFORMING TO FEDERAL SPECIFICATIONS
- MMM-125 (WET-USE EXPOSURE CONDITIONS). 4. FABRICATOR SHALL FURNISH ARCHITECT AN "AITC" INSPECTION CERTIFICATE, CERTIFYING THAT THE GLU-LAM MEMBERS WERE PRODUCED IN ACCORDANCE WITH PROVISIONS OF "AITC" IN-SPECTION MANUAL FOR STRUCTURAL GLUED LAMINATED LUMBER
- 5. ALL LAMINATED BEAMS SHALL CONFORM TO INDUSTRIAL AP-PEARANCE GRADE UNLESS SHOWN OR SPECIFIED OTHERWISE. 6. TENSION LAMINATION REQUIRED AT TOP & BOTTOM OF ALL
- CANTILEVER GLU-LAM BEAMS. 7. IN USE TEMPERATURE OF GLU-LAM BEAMS NOT TO EXCEED
- 150 DEG. F. 8. ALL GLU-LAM MEMBERS EXPOSED TO WEATHER SHALL BE
- PROTECTED WITH AN APPROVED PRESERVATIVE

9. PROVIDE STANDARD 1600 FOOT RADIUS CAMBER U.N.O.



ΣZ

5.

CONSTRUCTION
DESIGN, LLC LIC.# 92510

 $L\ ENGINEER$ sian (818) 425–8522 ave. suite–c 91206

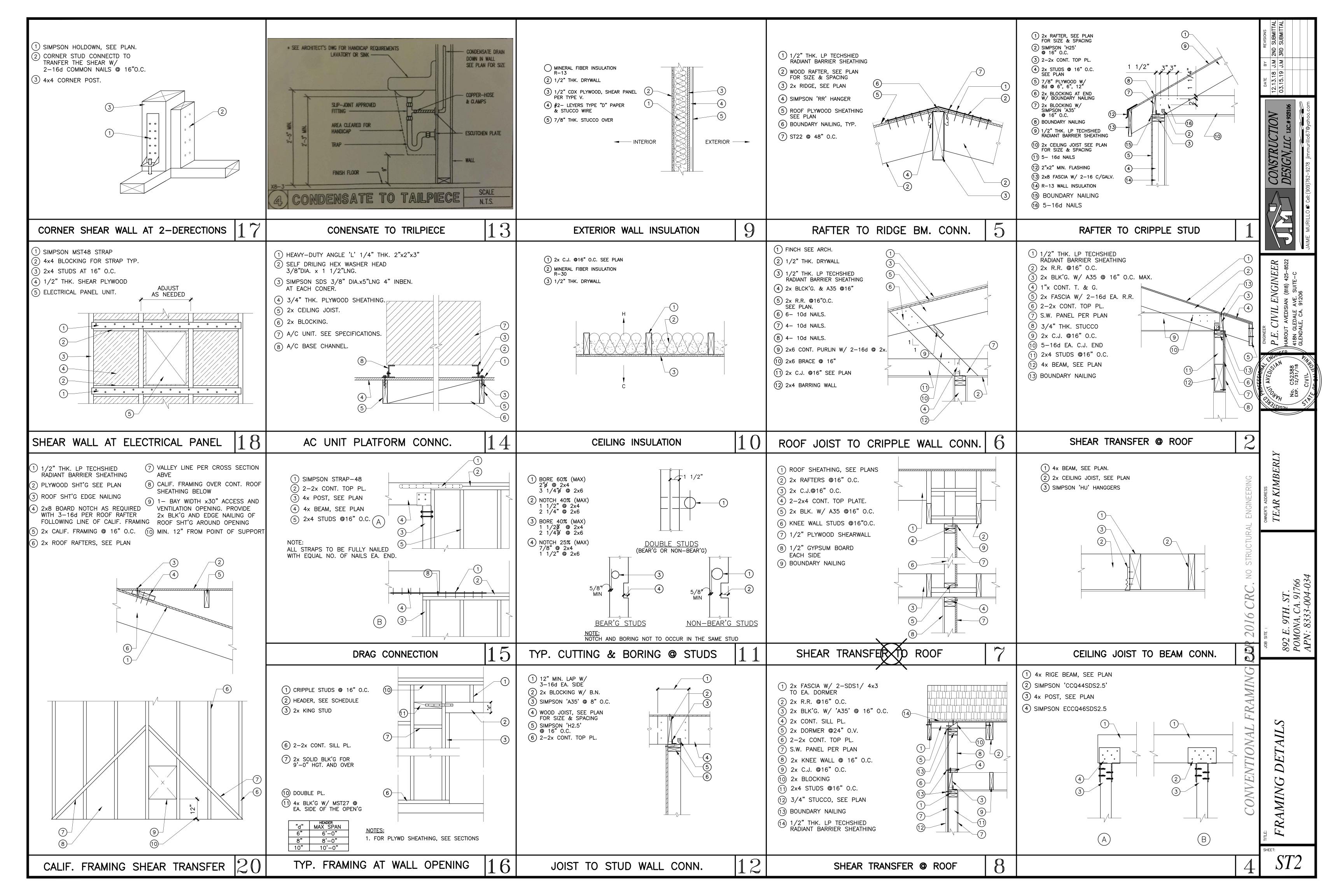
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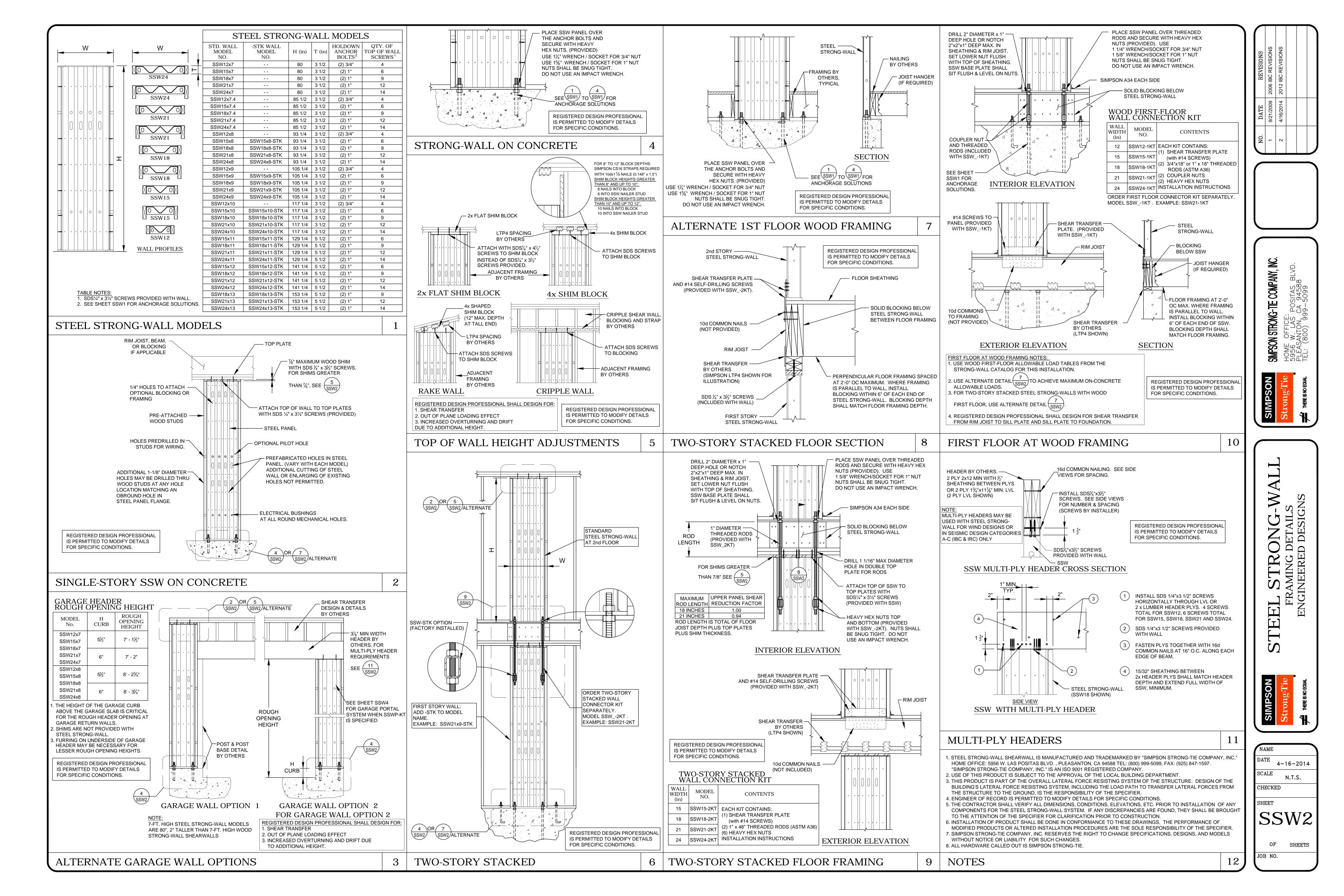
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ERTI	FICATE	OF COMPLIANCE - RESIDENTIA	AL PERFORMANCE COMPLIANC	E METHOD			CF1R-PRF-0					
rojec	t Name:	NEW UNIT 892		Calculation	Date/Time: 11:4	44, Mon, Nov 05, 2018	Page 1 of					
alcul	ation De	escription: Title 24 Analysis		Input File N	ame: A18-8491	R.ribd16x						
LENEE	AL INEO	RMATION										
01	I	Project Name	NEW UNIT 892									
02		Calculation Description										
03		· · · · · · · · · · · · · · · · · · ·	Project Location 892 E 9TH ST									
04			POMONA	05		Standards Version	Compliance 2017					
06		Zip Code		07	Cor		BEMCmpMgr 2016.3.1 (1149)					
08	1	Climate Zone		09		Software Version	EnergyPro 7.2					
10		Building Type	Single Family	11	Front	Orientation (deg/Cardinal)						
12		Project Scope	Newly Constructed	13		Number of Dwelling Units	1					
14	14 Total Cond. Floor Area (ft²)		1365	15		Number of Zones	1					
16	Slab Area (ft		1365	17		Number of Stories	1					
18	Slab Area (ft² Addition Cond. Floor Area(ft²			19		Natural Gas Available	Yes					
20		Addition Slab Area (ft ²)		21	Glazing Percentage (%)							
						Tracing Foreintage (78)	1.5%					
OMPI			1300									
					certified HERS r	ater under the supervision	of a CEC-approved HERS provider.					
	03	This building incorporates one	or more Special Features shown belo	ow								
			$C \vdash F$	rest penus	25							
			ENER	GY USE SUMM	ARY							
		04	05		06	07	08					
	MPLIANCE RESULTS 01 Building Complies with Complex with	nergy Use (kTDV/ft ² -yr)	Standard Design	Propo	sed Design	Compliance Margin	Percent Improvement					
		Space Heating	5.18		3.33	1.85	35.7%					
		Space Cooling	13.99		15.09	-1.10	-7.9%					
OMPLIANCE RESULTS 01 Building Complies with Co 02 This building incorporates 03 This building incorporates 04 Energy Use (kTDV/ft²-yr) Space Heating			1.47		1.47	0.00	0.0%					
		Water Heating	11.94		10.31	1.63	13 70/					

30.20

Registration Date/Time: 11/05/2018 11:47

Photovoltaic Offset

Compliance Energy Total

Registration Number: 418-P010087330A-000-000-0000000-0000

enforcement agency.

CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-10232018-1149

Project Name: NEW UNIT 892 Calculation Date/Time: 11:44, Mon, Nov 05, 2018 Page 2 of 7 Calculation Description: Title 24 Analysis Input File Name: A18-8491R.ribd16x **ENERGY DESIGN RATING** Energy Design Rating (EDR) is an alternate way to express the energy performance of a building using a scoring system where 100 represents the energy performance of the Residential Energy Services (RESNET) reference home characterization of the 2006 International Energy Conservation Code (IECC) with California modeling assumptions. A score of zero represents the energy performance of a building that combines high levels of energy efficiency with renewable generation to zero out its TDV energy. Because EDR includes consideration of components not regulated by Title 24, Part 6 (such as domestic appliances and consumer electronics), it is not used to show compliance with Part 6 but may instead be used by local jurisdictions pursuing local ordinances under Title 24, Part 11 (CALGreen). As a Standard Design building under the 2016 Building Energy Efficiency Standards is significantly more efficient than the baseline EDR building, the EDR of the Standard Design building is provided for Information. Similarly, the EDR score of the Proposed Design is provided separately from the EDR value of installed PV so that the effects of efficiency and renewable energy can both be seen EDR of Proposed Efficiency EDR Value of Proposed PV + Battery Final Proposed EDR Design meets Tier 1 requirement of 15% or greater code compliance margin (CALGreen A4.203.1.2.1) and QII verification prerequisite. Design meets Tier 2 requirement of 30% or greater code compliance margin (CALGreen A4.203.1.2.2) and QII verification prerequisite. Design meets Zero Net Energy (ZNE) Design Designation requirement for Single Family in climate zone CZ9 (Burbank) (CALGreen A4.203.1.2.3) including on-site photovoltaic (PV) renewable energy generation sufficient to achieve a Final Energy Design Rating (EDR) of zero or less. The PV System must be verified. Excess PV Generation EDR Credit: Bypassing PV size limit may violate Net Energy Metering (NEM) rules REQUIRED SPECIAL FEATURES The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis. Insulation below roof deck 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 components tables below. Building-level Verifications: IAQ mechanical ventilation Cooling System Verifications: Minimum Airflow Verified EER Verified Refrigerant Charge Fan Efficacy Watts/CFM **HVAC Distribution System Verifications** Duct Sealing Duct Design-Return Duct Design-Supply Domestic Hot Water System Verifications: -- None --

Registration Date/Time: 11/05/2018 11:47

CF1R-PRF-01

HERS Provider: CHEERS

Report Generated at: 2018-11-05 11:44:22

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Registration Number: 418-P010087330A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-10232018-1149

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: NEW UNIT 892 Calculation Date/Time: 11:44, Mon, Nov 05, 2018 Page 3 of 7 Calculation Description: Title 24 Analysis Input File Name: A18-8491R.ribd16x BUILDING - FEATURES INFORMATION **Number of Water Project Name** Units Cooling Systems NEW UNIT 892 1365 Zone Floor Area Avg. Ceiling Zone Name **HVAC System Name** (ft²) Water Heating System 1 Height FLOOR PLAN Conditioned **UNIT 8921** 1365 DHW Sys 1 OPAQUE SURFACES 04 05 06 Construction Azimuth Orientation Gross Area (ft²) Window & Door Area (ft²) Tilt (deg) WEST WALL FLOOR PLAN R-15 Wall Right EAST WALL FLOOR PLAN Left 408 NORTH WALL FLOOR PLAN R-15 Wall Front 280 SOUTH WALL FLOOR PLAN R-15 Wall Back 90 R-30 Roof FLOOR PLAN R-30 Roof Attic n/a 1365 Name Construction Roof Reflectance Roof Emittance Radiant Barrier Cool Roof Attic FLOOR PLAN Attic RoofFLOOR PLAN Ventilated 0.85 FENESTRATION / GLAZING 02 04 05 06 07 08 09 Surface (Orientation-Azimuth) Multiplier (ft²) U-factor SHGC 1 27.0 0.32 0.25 Insect Screen (default) WINDOWS Window WEST WALL (Right-270) WINDOWS 2 EAST WALL (Left-90) 73.0 0.32 0.25 Insect Screen (default) Window WINDOWS 3 Window SOUTH WALL (Back-180) 8.0 0.32 0.25 Insect Screen (default) Registration Number: 418-P010087330A-000-000-0000000-0000 Registration Date/Time: 11/05/2018 11:47 HERS Provider: CHEERS CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-10232018-1149 Report Generated at: 2018-11-05 11:44:22

ADMINISTRATIVE REQUIREMENTS A) The person in charge of the construction or installation, who is eligible under Division 3 of the Business and Professions Code to accept responsibility for the construction or installation of regulated manufactured devices shall post, or make available with the building permit(s) issued for the building, the Certificate of Installation documentation for manufactured devices regulated by the Appliance Efficiency Regulations or Part 6. Such Certificate of Installation documentation shall be made available to the enforcement agency for all applicable inspections. These certificates shall: i) Identify features, materials, components, manufactured devices, and system diagnostic results required to verify compliance with the Appliance Efficiency Regulations and Part 6. ii) State the number of the building permit under which the construction or installation was

HERS Provider: CHEERS

Report Generated at: 2018-11-05 11:44:22

Project Na	ame: NEV	V UNIT 892				Calculation Date/Time: 11:44, Mon, Nov 05, 2018 Page 4									
Calculation Description: Title 24 Analysis						In	put File Na	ame: /	A18-8491R.ri	bd16x					
OPAQUE S	SURFACE (CONSTRUCTI	ONS												
	01		02		03	04	1	Т	05	06			07		
Const	Construction Name Surface Type Construc		ction Type	Fram	ming		Total Cavity R-value	Winter Des U-facto		Asse		ers			
Attic Ro	ofFLOOR F	PLAN	Attic Roofs	Wood Fra	med Ceiling		op Chord of Roof Truss @ 24 in. O.C. R 30 0.043		• Car	Around Roof Joists: R-17.0 insul. Cavity / Frame: R-13.0 / 2x4 Top Roof Deck: Wood Siding/sheathii Roofing: Light Roof (Asphalt Shir					
R-3	80 Roof Atti		Ceilings (below attic)	• Inside • Cavity		rity / Frame:	Finish: Gypsum Board //Frame: R-9.1 / 2x4 Ceiling Joists: R-20.9 insul.								
F	R-15 Wall		Exterior Walls	Wood Fr	amed Wall	• Sheathing • Cavity / F		eathing / Inst tity / Frame:	Finish: Gypsum Board ing / Insulation: R15 Sheat / Frame: R-15 / 2x4 r Finish: 3 Coat Stucco						
SLAB FLO	ors						3-1								
	01			02		03		- 1	04	(5			T	
	Name			Zone		Area (ft ²) Per		Perin	imeter (ft) Edge Insul. R-val		value & De	lue & Depth Carpete		n	
	Covered S	lab	FLO	LOOR PLAN		1365			172 None		one		0.8	\top	
BUILDING	ENVELOP	E - HERS VER	RIFICATION												
		01		Т		02	E C	76	C	03	T		04		
Q	Quality Insu	ulation Install	ation (QII)	Qua	lity Installa	on of Spray Foam Insulation		-	Building Envelope Air Leakage						
	١	Not Required				Not Required			Not Required			n/a			
WATER HE	ATING SY	STEMS										MANAGEMENT			
	01		T	02	† T	03		Т	04	T	0:	5	Т	06	
	Name		Syst	em Type		Distribution 1	Гуре		Water He	ater	Number o		Sola		
	DHW Sys	: 1		DHW		Standard			DHW Heate	er 1 (1)	1			.09	
WATER HE	WATER HEATERS														
01			03	04	05	06	07	Т	08	09	10	T .	11	Γ	
Nam	ne	Heater Element Type	Tank Type	Number of Units	Tank Volume (gal)	Uniform Energy Factor / Energy Factor / Efficiency	Input Rati Pilot / Therma Efficience	al	Tank Insulation R-value (Int/Ext)	Standby Loss / Recovery Eff	First Hour Rating / Flow Rate	NEEA H Brand	eat Pump / Model /	Tai o	
DHW He	eater 1	Gas	Small Instantaneous	1	0.500000	0.95 EF	<= 200 kBt	tu/hr	R-0/R-0	0	n/a	ı	n/a		

Registration Date/Time: 11/05/2018 11:47

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Registration Number: 418-P010087330A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-10232018-1149

iv) Be signed by the documentation author to certify the documentation is accurate and complete. v) Be signed by the individual eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or installation in the applicable classification for the scope of work specified on the Certificate of Installation document(s). B) The builder shall provide the building owner or the person(s) responsible for operation and maintenance of the feature, material, component or mechanical device installed (in case of multitenant or centrally operated buildings) with the following at the time of occupancy: i) Compliance information. The appropriate completed and signed Certificate(s) of Compliance, Certificate(s) of Installation, and if applicable Certificate(s) of Verification documentation submitted. ii) Operating information. The appropriate Certificate(s) of Compliance and a list of the features, materials, components, and mechanical devices installed in the building and instructions on how to operate them correctly and efficiently. iii) Maintenance information. Required routine maintenance actions shall be clearly stated and incorporated on a readily accessible label. The label may be limited to identifying the operation and maintenance manual. iv) Ventilation Information. A description of the quantity of outdoor air that the ventilation system is designed to provide to the building conditioned space, and instructions for proper operation and C) The Enforcement agency shall not issue a Certificate of Occupancy until all required Certificates of Verification are posted and made available to the building department for all applicable inspections, and that all Certificates of Verification conform to the specifications of Section 10-103(a)5. Sec. 10-103 (d) 2 8-1-2017

performed. Sections of the certificate(s), for which submittal to a HERS provider data registry is required, shall display the unique registration number assigned by the HERS data registry.

iii) Include a declaration statement indicating that the constructed or installed features, materials, components, or manufactured devices conform to all applicable codes and regulations, and to the requirements for such devices given in the plans and specifications approved by the local



HERS Provider: CHEERS

Report Generated at: 2018-11-05 11:44:22

CF1R-PRF-01

CF1R-PRF-01

Date 11/5/2018 Scale

Drawn

Job #A18-8491R Sheet RESIDENTIAL T24 SHEET

Calculation Description: Title 24 Analysis						Input File N	lame: A18	3-8491R	ribd16x					
SPACE CONDITIONING	SYSTEMS													
01		02		03			04		05				06	
SC Sy	SC Sys Name		System Type		Heating Unit Name		Co	Cooling Unit Name		Fan Name		Dis	tribution N	
		Other Heating ar System			Component 1	Cooling Con		mponent 1 HV/		HVAC Fan 1 Air Di		Air Dis	stribution Sy	
HVAC - HEATING UNIT														
	01				02				03				04	
114	Name				System				Number of Ur	nits			ciency	
Heatil	ng Component 1				CntrlFur	nace			1			80	AFUE	
HVAC - COOLING UNIT	TYPES					e de la companya della companya della companya de la companya della companya dell								
01		02	2		03	04	05		06		07			08
Name	Name System Type		п Туре	Number of		Efficie EER	ency SEER	Zona	Zonally Controlled		Compressor Type H		HE	RS Verificat
Cooling Componer	Cooling Component 1 SplitAirCond		rCond	1		12.2	14	Not Zonal			Single Speed Co			ling Compoi
HVAC COOLING - HER	S VERIFICATION	N												
01		02			03		04		05			06		
Name		Ve	erified Airflow	C H Airff		/ Target	7 5	/erified E	ER	Verified SEER		Verified Refrigera Charge		
Cooling Component 1	hers-cool		Required		3	350		Require	d	Not	Required			Required
HVAC - DISTRIBUTION	SYSTEMS													
01	02		03	04	1	05	06		07		08	09		10
			Duct Insula	tion R-valu	ie	Duct Lo	cation		Duct Sur	face Are	a			
Name	Туре		Supply	Retu	ırn	Supply	Retur	rn	Supply	Re	turn	Bypass	Duct	HERS Verificat
Air Distribution System 1	DuctsAtti	ic	6	6		Attic	Attic		0		0	None	0	Air Distrib Syster 1-hers-c
HVAC DISTRIBUTION -	HERS VERIFICA											***		
01			02	03		04		05	06			07		08
Non-			.eakage	Duct Leakage								oly Buried		Low-leaka
Name Air Distribution System	1-here-diet		ication	Target		Location Design				Ducts		Ducts		Air Handl
Air Distribution System 1-hers-dist Required		Ked	unea	5.0		Not Required Required		quired	Not Required No		Not Required n/a			

CERTIFICATE OF COMPLIANCE	- RESIDENTIAL PERFORMAN	CE COMPLIANCE METHOD		CF1R-PRF-			
Project Name: NEW UNIT 892		Calculation Date		Page 6 o			
Calculation Description: Title 24	Analysis	Input File Name					
HVAC - FAN SYSTEMS							
01		02	03		04		
Name		Туре	Fan Power (Watts/C	FM)	HERS Verification		
HVAC Fan 1	Single	Speed PSC Furnace Fan	0.58		HVAC Fan 1-hers-fan		
HVAC FAN SYSTEMS - HERS VERIFI	CATION			***************************************			
01		02		03			
Name		Verified Fan Watt D	Required Fan Efficiency (Watts/CFM)				
HVAC Fan 1-her	s-fan	Required			0.58		
AQ (Indoor Air Quality) FANS							
01	02	03 04		05		06	
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type		Recovery veness(%)	HERS Verification	
SFam IAQVentRpt	44	0.25	Default		0	Required	
				Enecu		 	
	,	CHEER	C				

HERS Provider: CHEERS

Report Generated at: 2018-11-05 11:44:22

Registration Number: 418-P010087330A-000-000-0000000-0000 Registration Date/Time: 11/05/2018 11:47

CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-10232018-1149

CF1R-PRF-01 CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Calculation Date/Time: 11:44, Mon, Nov 05, 2018 Project Name: NEW UNIT 892 Page 7 of 7 Calculation Description: Title 24 Analysis Input File Name: A18-8491R.ribd16x DOCUMENTATION AUTHOR'S DECLARATION STATEMENT 1. I certify that this Certificate of Compliance documentation is accurate and complete. Documentation Author Signature: Raymond Zhong Documentation Author Name: Raymond Zhong Perfect Design 11/05/2018 CEA/HERS Certification Identification (If applicable): 2416 W. Valley Boulevard City/State/Zip: 626-289-8808 Alhambra, CA 91803 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.

The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. Responsible Designer Name: Responsible Designer Signature: Jim Murillo Date Signed: 11/05/2018 Construction Design 3241 Santa Ana City/State/Zip: Huntington Park, CA 90255 (909) 762-9278

Digitally signed by CHEERS™. 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.

Registration Number: 418-P010087330A-000-000-0000000-0000 Registration Date/Time: 11/05/2018 11:47 CA Building Energy Efficiency Standards - 2016 Residential Compliance Report Version - CF1R-10232018-1149

HERS Provider: CHEERS Report Generated at: 2018-11-05 11:44:22

REVISIONS BY

Date 11/5/2018

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KESII	DEMIL	WE INTEN	SURES	OCIALIAIY	WIZ I						RMS-1
Project Na VEW U	ame INIT 892			Build	ding Type				Addition Alone Existing+ Additio	n/Alteration	Date 11/5/2018
Project Ac					fornia Ene			Total	Cond. Floor Area	Addition	# of Units
		POMONA		C	A Clima	ate Zon	ne 09		1,365	n/a	1
	ATION	Туре		Cav	rity	Area (ft²)	Spe	ecia	al Features		Status
Roof		amed Attic		R 30		1,365					New
Wall	Wood Fra	amed		R 15		1,268	Add=R-1	5.0	***************************************		New
Slab	Unheated	l Slab-on-Grade		- no ins	sulation	1,365	Perim =	172'			New
er the colling											
FENES	STRATI	ON	Total Area:	108	Glazing	Percentag	ge: 7.	9%	New/Altered Average	age U-Factor:	0.32
Orient	tation	Area(ft ²)	U-Fac	SHGC	Overh		Sidefin	ıs	Exterior Sh	ades	Status
Right (W)		27.0	0.320	0.25	none		none		Bug Screen		New
Left (E)		73.0	0.320	0.25	none		none		Bug Screen		New
Rear (S)		8.0	0.320	0.25	none		none		Bug Screen		New
			70								
HVAC	SYSTE	MS									
	SYSTE		Min. E	ff Co	oling		Min.	Eff	Ther	mostat	Status
Qty.			Min. E 80% AFU		oling t Air Condi	itioner	Min. 14.0 SE		Ther Setback		Status New
Qty.	Heating Central Fun		-				14.0 SE	ER	Setback		
Qty. 1 HVAC	Heating Central Fun DISTRI	nace BUTION	-	IE Spli				ER	Setback		
Qty.	Heating Central Fun DISTRI ion	nace BUTION	80% AFU	IE Spli	t Air Condi		14.0 SE	ER	Setback D R	uct	New
Qty. 1 HVAC Locati	Heating Central Fun DISTRI ion	BUTION Hea	80% AFU	Co	t Air Condi	Duct	14.0 SE	ER	Setback D R	ouct -Value	New Status
Qty. 1 HVAC Location UNIT 892	Heating Central Furn DISTRI ion	BUTION Hea	80% AFU	Co	t Air Condi	Duc t Attic	14.0 SE	ion	Setback D R	ouct -Value	New Status
Qty. 1 HVAC Location UNIT 892	DISTRI ion R HEAT Type	BUTION Hea	80% AFU	Coo Duct	t Air Condi	Duct Attic	14.0 SE	ion	Setback D R	ouct -Value	Status New
HVAC Locati	DISTRI ion R HEAT Type	BUTION Hea Ducted	80% AFU	Coo Duct	oling ed	Duct Attic	14.0 SE t Locati	ion	Setback D R	ouct -Value	Status New Status

2016 Low-Rise Residential Mandatory Measures Summary

Reference Joint Appendix JA8, except luminaires in closets less than 70 square feet and luminaires in hallways.*

Interior Switches and Controls. Undercabinet lighting must be switched separately from other lighting systems.

either § 150.0(k)3A or with the applicable requirements in §§ 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.

§ 150.0(k)2J:

§ 150.0(k)2K:

110.10(b)3A:

be controlled by a vacancy sensor.

power as determined according to § 130.0(c).

requirements of § 110.10(b) through § 110.10(e).

greater than 10,000 square feet.

building must be high efficacy luminaires and controlled by an occupant sensor.

than 15 percent of the total roof area of the building excluding any skylight area.*

dead load and roof live load must be clearly indicated on the construction documents.

main circuit location; and permanently marked as "For Future Solar Electric".

110.10(e)1: Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.

the nearest point of the solar zone, measured in the vertical plane.*

§ 110.10(c) must be provided to the occupant.

i. Comply with the applicable requirements in §§ 110.9, 130.0, 130.1, 140.6 and 141.0; and

Interior Switches and Controls. In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must

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 meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either item

§ 150.0(k)3Aii (photocell and motion sensor) or item § 150.0(k)3Aiii (photo control and automatic time switch control, astronomical time clock, or

Internally illuminated address signs. Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of

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.

Interior Common Areas of Low-rise Multi-Family Residential Buildings. In a low-rise multifamily residential building where the total interior

common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that

Interior Common Areas of Low-rise Multi-Family Residential Buildings. In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting in that building must:

ii. Lighting installed in corridors and stainwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.

Minimum 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

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. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less

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

Structural Design Loads on Construction Documents. For areas of the roof designated as solar zone, the structural design loads for roof

Interconnection Pathways. The construction documents must indicate: a location for inverters and metering equipment and a pathway for routing of conduit from the solar zone to the point of interconnection with the electrical service (for single family residences the point of interconnection will be the main service panel); and a pathway for routing of plumbing from the solar zone to the water-heating system. **Documentation**. A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through

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: positioned at the opposite (load) end from the input feeder location or

Single Family Residences. Single family residences located in subdivisions with ten or more single family residences and where the

110.10(a)1: application for a tentative subdivision map for the residences has been deemed complete by the enforcement agency must comply with the

110.10(a)2: Low-rise Multi-family Buildings. Low-rise multi-family buildings must comply with the requirements of § 110.10(b) through § 110.10(d).

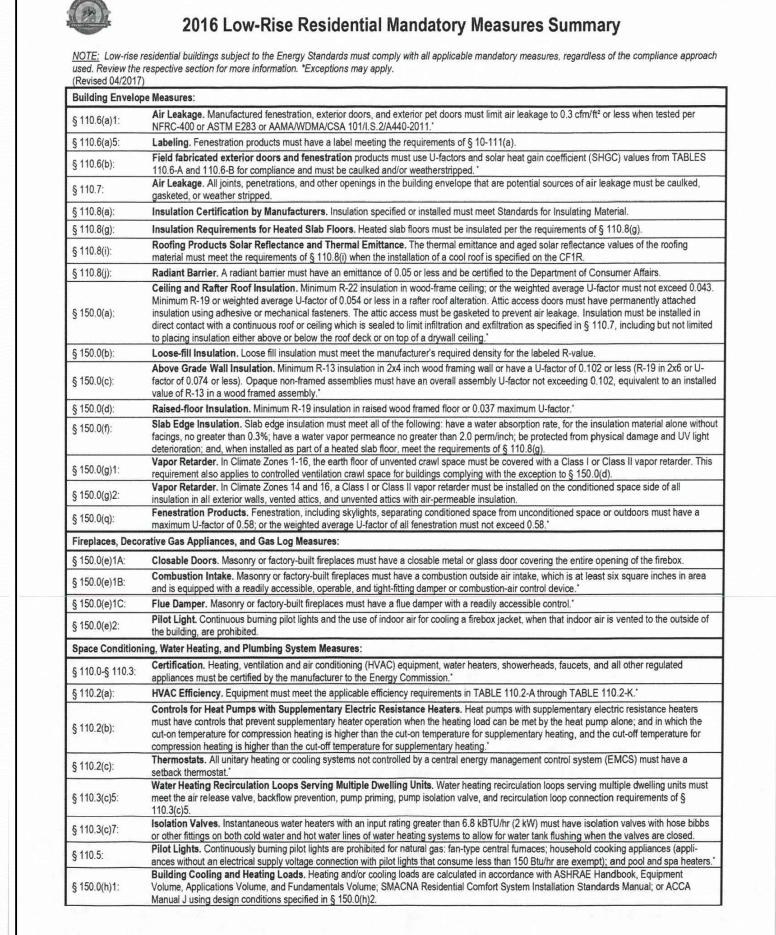
110.10(b)2: Orientation. All sections of the solar zone located on steep-sloped roofs must be oriented between 110 degrees and 270 degrees of true north. Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof

110.10(b)3B: distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of

Interior Switches and Controls. Dimmers or vacancy sensors must control all luminaires required to have light sources compliant with

Residential Outdoor Lighting. For low-rise multifamily residential buildings, outdoor lighting for private patios, entrances, balconies, and porches; and outdoor lighting for residential parking lots and residential carports with less than eight vehicles per site must comply with

Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in §§ 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. Residential Outdoor Lighting. Outdoor lighting for residential parking lots and residential carports with a total of eight or more vehicles per site must comply with the applicable requirements in §§ 110.9, 130.0, 130.2, 130.4, 140.7, and 141.0.



Project Name NEW UNIT 892 System Name							/5/2018 Area
UNIT 892							1,365
ENGINEERING CHECKS		SYSTEM LOAD		-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Number of Systems	1		COIL	COOLING F	PEAK	COIL H	TG. PEAK
Heating System			CFM	Sensible	Latent	CFM	Sensibl
Output per System	68,000	Total Room Loads	467	11,082	795	406	15,4
Total Output (Btuh)	68,000	Return Vented Lighting		0			
Output (Btuh/sqft)	49.8	Return Air Ducts		520			8
Cooling System		Return Fan		0			
Output per System	33,400	Ventilation	0	0	0	0	
Total Output (Btuh)	33,400	Supply Fan		0			
Total Output (Tons)	2.8	Supply Air Ducts		520			{
Total Output (Btuh/sqft)	24.5						
Total Output (sqft/Ton)	490.4	TOTAL SYSTEM LOAD		12,121	795		17,2
Air System							
CFM per System	1,200	HVAC EQUIPMENT SELECTION					
Airflow (cfm)	1,200	CARRIER 24ABB336/58CVA-110-20 (3	TON)	26,197	4,674		68,0
Airflow (cfm/sqft)	0.88						
Airflow (cfm/Ton)	431.1						
Outside Air (%)	0.0%	Total Adjusted System Output		26,197	4,674		68,0
Outside Air (cfm/sqft)	0.00	(Adjusted for Peak Design conditions)	·			L	
Note: values above given at ARI	conditions	TIME OF SYSTEM PEAK			Aug 3 PM		Jan 1
		Airstream Temperatures at Time of	of Heating	Peak)			
Outside Air O cfm Supply Fan 1,200 cfm	67 °F Heating 0	105 °F Coil	→[]		RO	OM	04 °F 8 °F
Outside Air O cfm		(Airstream Temperatures at Time of 1/63 °F 55 / 54 °F Cooling Coil	of Cooling	Peak)	RO		54 °F

	2016 Low-Rise Residential Mandatory Measures Summary		2016 Low-Rise Residential Mandatory Measures Summary
§ 150.0(h)3A:	Clearances. Installed air conditioner and heat pump outdoor condensing units must have a clearance of at least 5 feet from the outlet of any dryer vent.		Duct System Sizing and Air Filter Grille Sizing. Space conditioning systems that use forced air ducts to supply cooling to an occupiable space must have a hole for the placement of a static pressure probe (HSPP), or a permanently installed static pressure probe (PSPP) in the
§ 150.0(h)3B:	Liquid Line Drier. Installed air conditioner and heat pump systems must be equipped with liquid line filter driers if required, as specified by manufacturer's instructions.	§ 150.0(m)13:	supply plenum. The space conditioning system must also demonstrate airflow ≥ 350 CFM per ton of nominal cooling capacity through the return grilles, and an air-handling unit fan efficacy ≤ 0.58 W/CFM as confirmed by field verification and diagnostic testing, in accordance with
§ 150.0(j)1:	Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.		Reference Residential Appendix RA3.3. This applies to both single zone central forced air systems and every zone for zonally controlled central forced air systems.*
§ 150.0(j)2A:	Water piping and cooling system line insulation. For domestic hot water system piping, whether buried or unburied, all of the following must be insulated according to the requirements of TABLE 120.3-A: the first 5 feet of hot and cold water pipes from the storage tank; all piping with a nominal diameter of 3/4 inch or larger; all piping associated with a domestic hot water recirculation system regardless of the pipe diameter;	§150.0(o):	Ventilation for Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2. Neither window operation nor continuous operation of central forced air system air handlers used in central fan integrated ventilation systems are permissible methods of providing whole-building ventilation.
	piping from the heating source to storage tank or between tanks; piping buried below grade; and all hot water pipes from the heating source to kitchen fixtures."	§ 150.0(o)1A:	Field Verification and Diagnostic Testing. Whole-building ventilation airflow must be confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.7.
§ 150.0(j)2B:	Water piping and cooling system line insulation. All domestic hot water pipes that are buried below grade must be installed in a water proof and non-crushable casing or sleeve.*	Pool and Spa	Systems and Equipment Measures:
§ 150.0(j)2C:	Water piping and cooling system line insulation. Pipe for cooling system lines must be insulated as specified in § 150.0(j)2A. Distribution piping for steam and hydronic heating systems or hot water systems must meet the requirements in TABLE 120.3-A."	§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; 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
§ 150.0(j)3:	Insulation Protection. Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.	2000	resistance heating."
§ 150.0(j)3A:	Insulation Protection. Insulation exposed to weather must be installed with a cover suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. The cover must be water retardant and provide shielding from solar radiation that can expose degradation of the material.	§ 110.4(b)1:	Piping . Any pool or spa heating 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.
C 450 0(3)2D	cause degradation of the material. Insulation Protection. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must have a	§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 150.0(j)3B:	Class I or Class II vapor retarder. Gas or Propane Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: a	§ 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.
§ 150.0(n)1:	120V electrical receptacle within 3 feet of the water heater; a Category III or IV vent, or a Type B vent with straight pipe between the outside	§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
	termination and the space where the water heater is installed; a condensate drain that is no more than 2 inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu/hr.	§ 150.0(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flor rate, piping, filters, and valves.*
§ 150.0(n)2:	Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.	Lighting Meas	ures:
§ 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) or by a listing agency that is approved by the Executive Director.	§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9."
Ducts and Fans		§ 110.9(e):	JA8 High Efficacy Light Sources. To qualify as a JA8 high efficacy light source for compliance with § 150.0(k), a residential light source must
§ 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(k)1A:	be certified to the Energy Commission according to Reference Joint Appendix JA8. Luminaire Efficacy. All installed luminaires must be high efficacy in accordance with TABLE 150.0-A.
	CMC Compliance. All air-distribution system ducts and plenums must be installed, sealed, and insulated to meet the requirements of CMC §§ 601.0, 602.0, 603.0, 604.0, 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 a minimum installed level of R-6.0 (or higher if required by CMC § 605.0) or	§ 150.0(k)1B:	Blank Electrical Boxes. The number of electrical boxes that are more than 5 feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(m)1:	a minimum installed level of R-4.2 when entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). 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 requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that	§ 150.0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C. A JA8-2016-E light source rated for elevated temperature must be installed by final inspection in all recessed downlight luminaires in ceilings.
	meets the requirements of UL 723. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed	§ 150.0(k)1D:	Electronic Ballasts. Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less tha 20 kHz.
	sheet metal, duct board or flexible duct must not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area of the ducts.	§ 150.0(k)1E:	Night Lights. Permanently installed night lights and night lights integral to installed luminaires or exhaust fans must be rated to consume no more than 5 watts of power per luminaire or exhaust fan as determined in accordance with § 130.0(c). Night lights do not need to be controlled
§ 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(k)1F:	by vacancy sensors. 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).*
§ 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(k)1G:	Screw based luminaires. Screw based luminaires must not be recessed downlight luminaires in ceilings and must contain lamps that comply with Reference Joint Appendix JA8. Installed lamps must be marked with "JA8-2016" or "JA8-2016-E" as specified in Reference Joint Appendix
§ 150.0(m)7:	Backdraft Dampers. All fan systems that exchange air between the conditioned space and the outside of the building must have backdraft or automatic dampers.	§ 150.0(k)1H:	JA8.* Enclosed Luminaires. Light sources installed in enclosed luminaires must be JA8 compliant and must be marked with "JA8-2016-E."
§ 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(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
	Protection of Insulation. Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and	§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be switched separately from lighting systems."
§ 150.0(m)9:	wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from	§ 150.0(k)2C:	Interior Switches and Controls. Luminaires must be switched with readily accessible controls that permit the luminaires to be manually switched ON and OFF.
C 450 0/>40:	solar radiation.	§ 150.0(k)2D:	Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(m)10:	Porous Inner Core Flex Duct. Porous inner core flex duct must have a non-porous layer between the inner core and outer vapor barrier. Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an	§ 150.0(k)2E:	Interior Switches and Controls. No control must bypass a dimmer or vacancy sensor function if the control is installed to comply with § 150.0(k).
§ 150.0(m)11:	occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11and Reference Residential Appendix RA3.	§ 150.0(k)2F:	Interior Switches and Controls. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(m)12:	Air Filtration. Mechanical systems that supply air to an occupiable space through ductwork exceeding 10 feet in length and through a thermal conditioning component, except evaporative coolers, must be provided with air filter devices that meet the design, installation, efficiency, pressure drop, and labeling requirements of § 150.0(m)12.	§ 150.0(k)2G:	Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with dimmer requirements if it: functions as a dimmer according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.5(f); and meets all other requirements in § 150.0(k)2.
		§ 150.0(k)2H:	Interior Switches and Controls. An EMCS may be used to comply with vacancy sensor requirements in § 150.0(k) if it meets all of the following: it functions as a vacancy sensor according to § 110.9; the Installation Certificate requirements of § 130.4; the EMCS requirements of § 130.5(f); and all other requirements in § 150.0(k)2.
		0.450.00.00	Interior Switches and Controls. A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it

provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.

REVISIONS B

Date 11/5/2018

Drawn

Job #A18-8491R

RESIDENTIAL