

A RESIDENTIAL REMODEL & ADDITION FOR:

### SHINE & JONES

43 SAN GABRIEL DR FAIRFAX, CA 94930

APN: 001-261-08

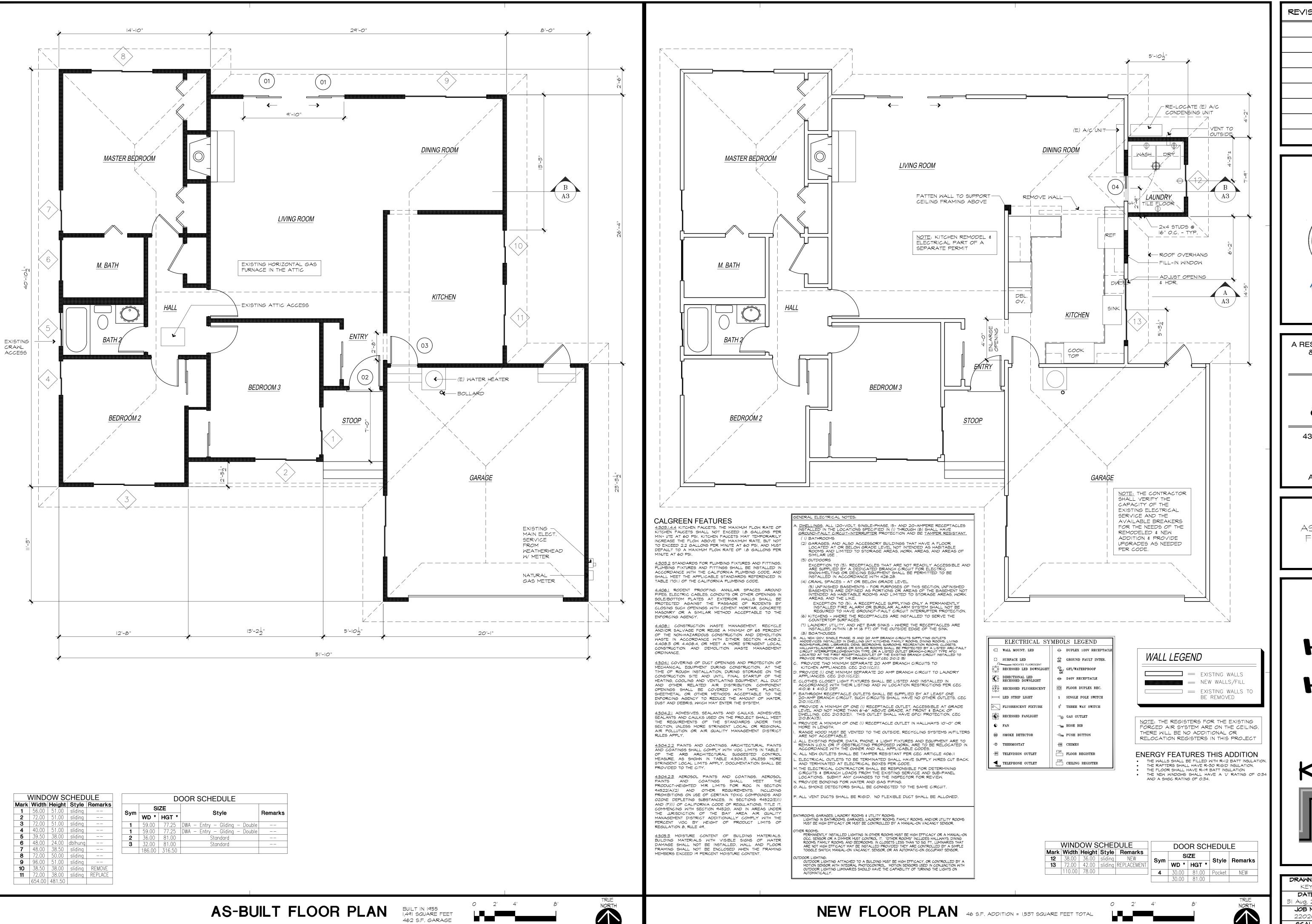
SITE PLAN AND DATA

A ARCHITECTURE

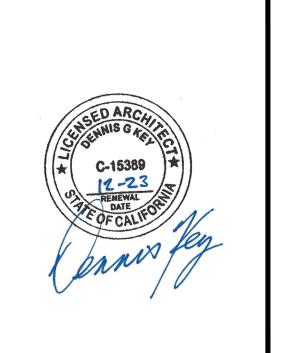
DATE:
3| Aug, 2022

JOB NO.
220203

SCALE:
|/8"=|'-0"



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



A RESIDENTIAL REMODEL & ADDITION FOR:

### **SHINE & JONES**

43 SAN GABRIEL DR FAIRFAX, CA 94930

APN: 001-261-08

AS-BUILT & NEW FLOOR PLANS

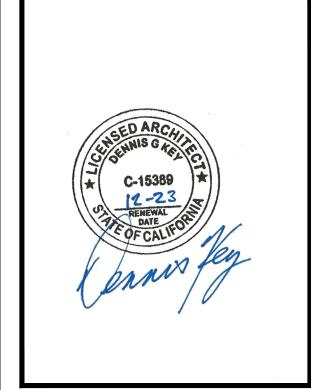


DRAWN BY KEY JOB NO. 220203

OF 8 TOTAL SHTS.

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





A RESIDENTIAL REMODEL & ADDITION FOR:

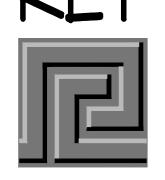
# SHINE & JONES

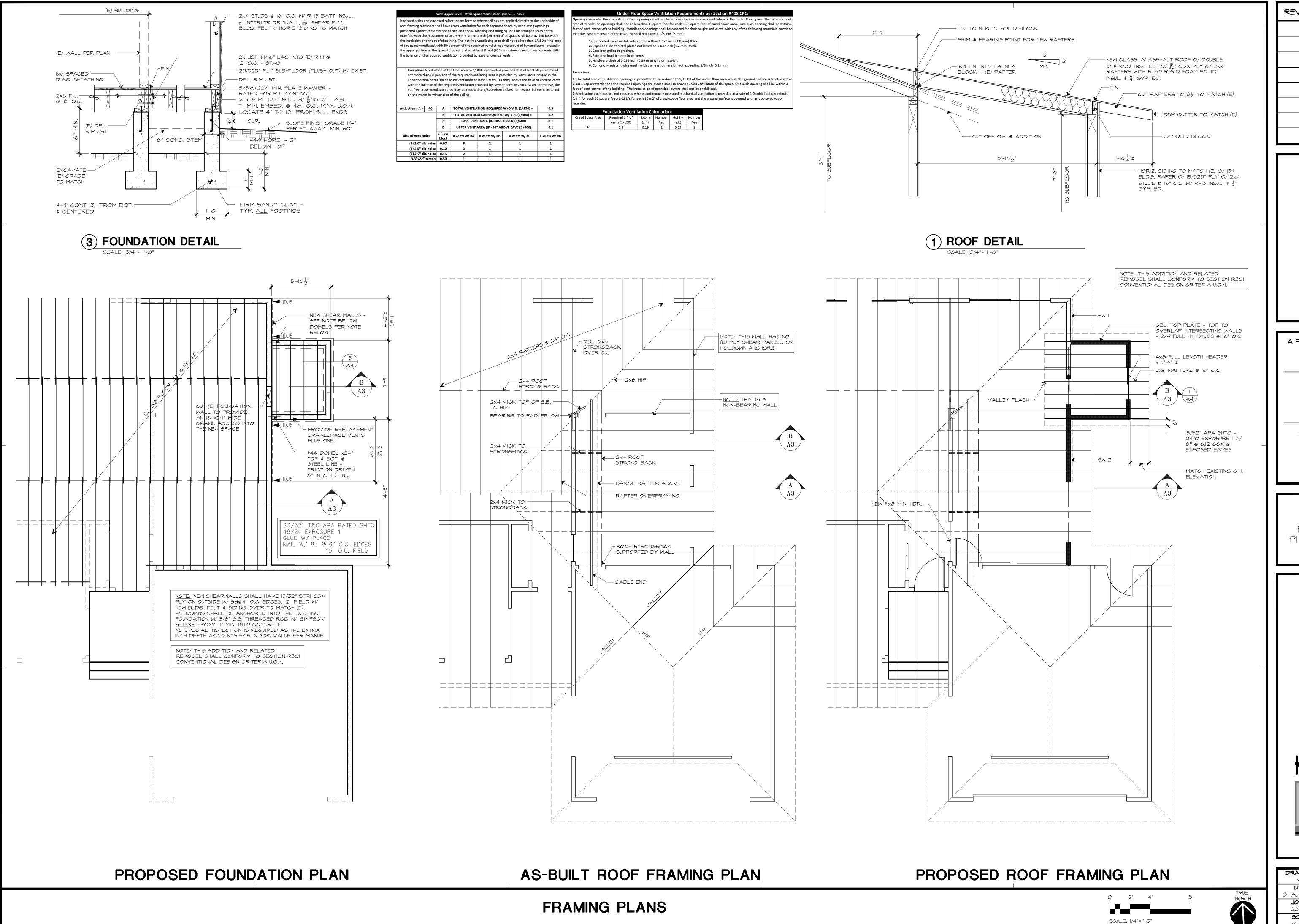
43 SAN GABRIEL DR FAIRFAX, CA

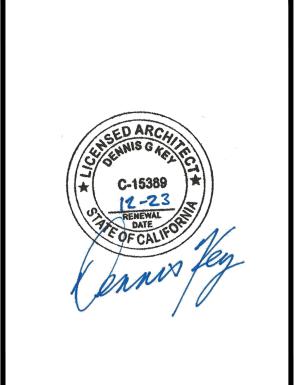
APN: 001-261-08

BEFORE AND AFTER ELEVATIONS & SECTIONS

A ARCHI ECTURE







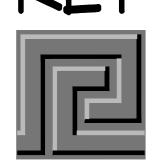
A RESIDENTIAL REMODEL & ADDITION FOR:

## **SHINE** & JONES

43 SAN GABRIEL DR FAIRFAX, CA 94930

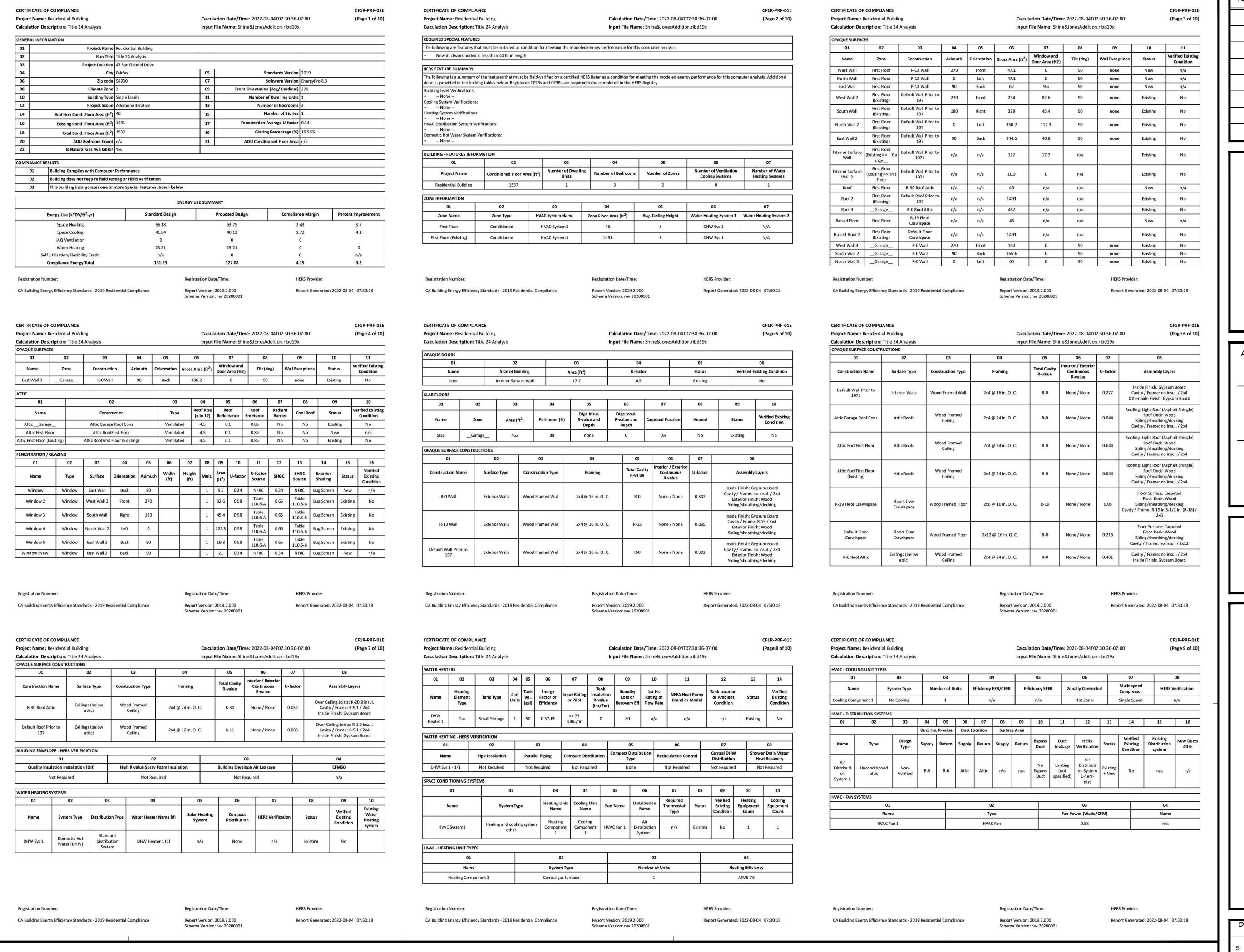
APN: 001-261-08

FOUNDATION \$ ROOF FRAMING PLANS W/ DETAILS



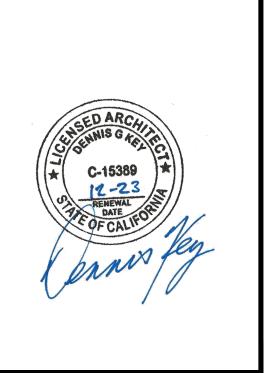
31 Aug, 2022 **JOB NO.** 220203 SCALE:

|/4"=|'-0"



**T24 ENERGY DOCUMENTS** 

REVISIONS: BY:



A RESIDENTIAL REMODEL & ADDITION FOR:

## SHINE & JONES

43 SAN GABRIEL DR FAIRFAX, CA 94930

APN: 001-261-08

T24 ENERGY DOCUMENTS



DRAWN BY:

KEY

DATE:

31 Aug, 2022

JOB NO.

220203

SCALE:

NONE

A5

of 8 TOTAL SHTS

IXE OI	DENI	IAL WEA	SURES	SUMM.	<u>ARY</u>					RMS-1
Project Na Shine &		Addition		Buile	ding Type	☑ Single Fam ☐ Multi Famil		Addition Alone Existing+ Addition	/Alteration	Date 8/4/2022
Project Ad						ergy Climate Zone		Cond. Floor Area	Addition	# of Units
43 San	Gabrie	l Drive Fair	fax	C	A Clim	ate Zone 02		1,537	46	1
	_ATION truction			Cav	dtv	Area (ft²) S	neci	al Features		Status
Floor		ramed w/Crawl	Snace	R 19	/ity	46	ресі	ai i catales		New
Wall	Wood F	S 0	Space	R 13		147				New
Roof	90700000000000000000000000000000000000	ramed Attic		R 30		46				New
Floor	2255500	ramed w/Crawl	Snace	2000000	sulation	1,491				Existing
Wall	Wood F		Space		sulation	171				Existing
Wall	Wood F	ALL OF THE THE		5-3-0376/100	sulation	283				Existing
Wall	Wood F	MT1327071		- 20.5.55	sulation	228				Existing
Wall	Wood F				sulation	204				Existing
VELOVEDED	STRAT	AMERICANIA III	Total Av				19.6%	Now/Altered Assess	go II Faster	0.34
Orient	NEW STREET, SALES	Area(ft <sup>2</sup> )	U-Fac	SHGC	Overl	, orderitage.	Grown and Chi	New/Altered Avera		Status
Rear (E)	lation	30.5	0.340	0.34	none	none	1113	N/A	aucs	New
Front (W)	8	82.6	0.340	0.34	none	none		N/A		Existing
Right (S)	<u> </u>	45.4	0.580	0.65	none	none		N/A		Existing
Left (N)		122.3	0.580	0.65	10946500000000	1078(4040)		N/A		Existing
Rear (E)		19.8	0.580	0.65	none	none		N/A		Existing
ne reserve vrese o	SYSTI									Otata:
Qty.	Heatin	g	Min. E		ooling		n. Eff		mostat	Status
	NECTOR DECTOR	g	<b>Min. E</b> 78% AF		ooling Cooling		n. Eff		mostat	Status Existing
Qty.	Heatin Central Fu	g						Setback	mostat	
Qty.	Heatin Central Fo	g umace RIBUTION		UE No			SEER	Setback		
Qty.  f  HVAC Locati	Heatin Central Fu	g umace RIBUTION	78% AF	UE No	Cooling	14.0	SEER	Setback D I R	uct	Existing
Qty.  1  HVAC Locati HVAC Sys	Heatin Central Fu  DISTR ion stem	g umace RIBUTION He Ducte	78% AF	Co Duc	cooling	Duct Loc	ation	Setback  D R 6.	uct -Value	Status Altered
Qty.  1  HVAC Locati	Heatin Central Fu  DISTR ion stem	g umace RIBUTION He Ducte	78% AF	UE No	Cooling	Duct Loc	ation	Setback  D R 6.	uct -Value	Existing Status

2019 Low-Rise Residential Mandatory Measures Summary

buried below grade, and from the heating source to kitchen fixtures.\*

agency that is approved by the Executive Director.

reductions in the cross-sectional area."

tapes unless such tape is used in combination with mastic and draw bands.

mastics, sealants, and other requirements specified for duct construction.

accordance with § 150.0(m)11 and Reference Residential Appendix RA3.

§ 150.0(j)3:

110.8(d)3:

§ 150.0(m)2:

150.0(m)3:

§ 150.0(m)7:

Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer

Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.

Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is: associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks,

Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and

wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes).

Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.

Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two 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 per hour.

Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing

Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a

CMC Compliance. All air-distribution system ducts and plenums must meet the requirements of the 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 a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. 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 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ 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 sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms must not be compressed to cause

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

Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes,

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.

Protection of Insulation. Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed

foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.

Porous Inner Core Flex Duct. Porous inner core flex ducts 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 occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in

Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or

Space Conditioning System Airflow Rate and Fan Efficacy. Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per

CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.\*

§ 150.0(m)9: to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular

§ 150.0(m)12: equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.\*

Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.

contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.

Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.

Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the

CERTIFICATE OF COMPLIANCE	CF1R-PRF-0
Project Name: Residential Building	Calculation Date/Time: 2022-08-04T07:30:36-07:00 (Page 10 of 1
Calculation Description: Title 24 Analysis	Input File Name: Shine&JonesAddition.ribd19x
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	Λ
1. I certify that this Certificate of Compliance documentation is accurate and	d complete.
Documentation Author Name:	Documentation Author Signature:
Rick Rocklewitz	Flick Rockhawtz CEPE
Company:	Signature Date: 8/4/2022
NRG Compliance, LP	0/4/2022
Address:	CEA/ HERS Certification Identification (If applicable):
PO Box 3777	
City/State/Zip:	Phone:
Santa Rosa, California 95402	707-237-6957
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
2. I certify that the energy features and performance specifications identified	ept responsibility for the building design identified on this Certificate of Compliance. d on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. Certificate of Compliance are consistent with the information proyided on other applicable compliance documents, worksheets,
Responsible Designer Name: Dennis Key Architect	Responsible Designer Signature:
Company: Key Architecture	Date Signed: 8/09/22
Address: 8170 Clifford Street	C-015389
City/State/Zip: Cotati, CA 94931	Phone: 707-795-5758

Registration Number:	Registration Date/Time:	HERS Provider:
CA Building Energy Efficiency Standards - 2019 Residential Compliance	Report Version: 2019.2.000 Schema Version: rev 20200901	Report Generated: 2022-08-04 07:30:18

INSULATION Construction Type	Cav	Area ity (ft²)	Speci	al Features	Status
Roof Wood Framed Attic	R 11	1,491	~   > 0 3 1		Existing
Demising Wood Framed	- no ins	ulation 94			Existing
Demising Wood Framed	- no ins	ulation 10			Existing
FENESTRATION Orientation Area(ft²)	Total Area: 301 U-Fac SHGC	Glazing Percentage	e: 19.6% Sidefins	New/Altered Average U-Factor: Exterior Shades	0.34 Status
	Min Eff Co		Min E	Thermonetat	Chahara
HVAC SYSTEMS Qty. Heating	Min. Eff Co	oling	Min. Eff	Thermostat	Status
HVAC SYSTEMS Qty. Heating  HVAC DISTRIBUTION	Min. Eff Co	oling	Min. Eff	Thermostat Duct	Status
Qty. Heating  HVAC DISTRIBUTION			Min. Eff	Duct	Status
Qty. Heating  HVAC DISTRIBUTION	ating Co	oling Duct	Location	Duct R-Value	Status
Qty. Heating  HVAC DISTRIBUTION  Location Heat  WATER HEATING		oling Duct		Duct R-Value	
Qty. Heating  HVAC DISTRIBUTION Location Heat  WATER HEATING Qty. Type	ating Co	oling Duct	Location	Duct R-Value	Status

Building Type 
☐ Single Family ☐ Addition Alone

☐ Multi Family ☐ Existing+ Addition/Alteration 8/4/2022

California Energy Climate Zone | Total Cond. Floor Area | Addition | # of Units

CA Climate Zone 02 1,537 46

RESIDENTIAL MEASURES SUMMARY

Project Address

43 San Gabriel Drive Fairfax

	2019 Low-Rise Residential Mandatory Measures Summary
<b>C</b>	•

Requirements f	or Ventilation and Indoor Air Quality:
§ 150.0(o)1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.
§ 150.0(o)1C:	Single Family Detached Dwelling Units. Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C.
§ 150.0(o)1E:	Multifamily Attached Dwelling Units. Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
§ 150.0(o)1F:	Multifamily Building Central Ventilation Systems. Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance
§ 150.0(o)1G:	Kitchen Range Hoods. Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
Pool and Spa S	ystems and Equipment Measures:
§ 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 weather proof plate or card with operating instructions; and must not use electric resistance heating.*
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
C 450 0/=)-	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow
§ 150.0(p):	rate, piping, filters, and valves.*
Lighting Measu	
§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.*
§ 150.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.0(k)1B:	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device 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(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.
§ 150.0(k)1D:	Electronic Ballasts for Fluorescent Lamps. Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.0(k)1E:	Night Lights, Step Lights, and Path Lights. Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
§ 150.0(k)1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).
§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems."
§ 150.0(k)2C:	Interior Switches and Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.*
§ 150.0(k)2D:	Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E:	Interior Switches and Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).

§ 150.0(k)2F: Interior Switches and Controls. Lighting controls must comply with the applicable requirements of § 110.9.



RMS-1

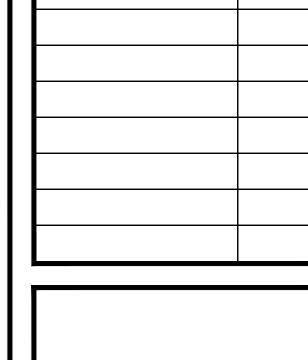
#### 2019 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. \*Exceptions may apply.

Building Envelop	
§ 110.6(a)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.*
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped."
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affair
§ 150.0(a):	Ceiling and Rafter Roof Insulation. Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.*
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing that have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.*
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*
§ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2:	Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.*
Fireplaces, Deco	rative Gas Appliances, and Gas Log Measures:
§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device."
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control."
Space Condition	ng, Water Heating, and Plumbing System Measures:
§ 110.0-§ 110.3:	Certification. Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission."
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.*
§ 110.2(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.*
§ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.*
§ 110.3(c)4:	Water Heating Recirculation Loops Serving Multiple Dwelling Units. Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4.
§ 110.3(c)6:	<b>Isolation Valves.</b> Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters
§ 150.0(h)1:	Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards

### 2019 Low-Rise Residential Mandatory Measures Summary

LWINDA COMMUNION	2013 Low-Rise Residential mandatory measures outlinary
§ 150.0(k)2G:	Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H:	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.
§ 150.0(k)2I:	Interior Switches and Controls. In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C.
§ 150.0(k)2J:	Interior Switches and Controls. Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls."
§ 150.0(k)2K:	Interior Switches and Controls. Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aii (astronomical time clock), or an EMCS.
§ 150.0(k)3B:	Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C:	Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply wit the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c).
§ 150.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A:	Interior Common Areas of Low-rise Multifamily 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 building must be comply with Table 150.0-A and be controlled by an occupant sensor.
§ 150.0(k)6B:	Interior Common Areas of Low-rise Multifamily 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 for the interior common areas in that building must:  i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and  ii. Lighting installed in corridors and stairwells 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.
Solar Ready Buil	dings:
§ 110.10(a)1:	Single Family Residences. Single family residences located in subdivisions with 10 or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2:	Low-rise Multifamily Buildings. Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d).
§ 110.10(b)1:	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. 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 than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.*
§ 110.10(b)2:	Azimuth. All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north.
§ 110.10(b)3A:	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment."
§ 110.10(b)3B:	Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane."
§ 110.10(b)4:	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
	Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through
§ 110.10(d):	§ 110.10(c) must be provided to the occupant.
§ 110.10(d): § 110.10(e)1:	



REVISIONS:



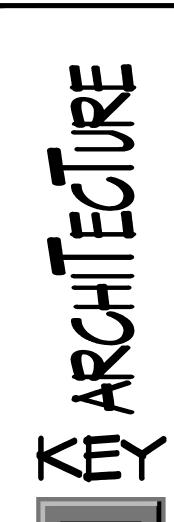
A RESIDENTIAL REMODEL & ADDITION FOR:

## SHINE & JONES

43 SAN GABRIEL DR FAIRFAX, CA 94930

APN: 001-261-08

T24 ENERGY DOCUMENTS



DRAWN BY:

NONE

DRAWN BY:

KEY

DATE:

31 Aug, 2022

JOB NO.

220203

SCALE:

OF 8 TOTAL SHTS.

**T24 ENERGY DOCUMENTS** 

### MARIN COUNTY 2019 CALGREEN CHECKLIST CALGreen Standards for Residential Additions & Alterations less than 1,200 square feet This checklist is effective January 1, 2020 and applies to additions and alterations of low-rise residential buildings including hotels, motels, lodging houses, dwellings, dormitories, condominiums, shelters, congregate residences, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations, and accessory structures. The provisions of this checklist apply only to the portions of the building being added to or altered within the scope of the permitted work when the cumulative square footage of the project is less than 1,200 square feet. Existing site and landscaping improvements that are not otherwise disturbed are also not subject to the requirements of CALGreen. Submit this checklist with your plans to demonstrate compliance with the green building ordinance. This checklist includes modifications specific to Marin County. For more information on the County's Green Building requirements, please visit <a href="https://www.maringreenbuilding.org">www.maringreenbuilding.org</a> For more information on CALGreen and complete measure language, see Chapters 4 and Appendix 4 here: https://codes.iccsafe.org/content/CAGBSC2019/table-of-contents PROJECT DETAILS 43 SAN GABRIEL DR, FAIRFAX 001-261-08 Project Address SHINE &JONES Applicant Name (Please Print) PROJECT VERIFICATION The green building professional has reviewed the plans and certifies that the mandatory and elective measures listed below are hereby incorporated into the project plans and will be implemented into the project in accordance with the requirements set forth in the 2019 California Green Building Standards Code as amended by the County Marin AUG. 20, 2022 MINIS Signature DENNIS KEY, ARCHITEOT &-015389 EXP. 12/23 Name & Title (Please Print)

as a CALGreen Special inspector. Last Updated: February 18, 2021 Page 1

<sup>1</sup> A qualified building professional can be an <u>architect,</u> engineer, contractor, or qualified green building professional, such

MARIN COUNTY 2019 CALGREEN CHECKLIST CALGreen Standards for Residential Additions & Alterations less than 1,200 square feet

#### **DIVISION 4.1 PLANNING AND DESIGN**

Note: All measures are mandatory unless not in project scope (Select Completed or Not Applicable [N/A])

**4.106.2 (MANDATORY)** A plan is developed and implemented to manage stormwater runoff from the construction activities through compliance with the County of Marin's stormwater management

Link: County of Marin's stormwater management ordinance

Completed □ N/A ■

Completed □ N/A ■

Completed □ N/A ■

**4.106.3 (MANDATORY)** Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Completed ■ N/A □ Plan sheet reference (if applicable): A I

Plan sheet reference (if applicable):

A4.106.4.1 (MANDATORY) One- and two-family dwellings, and townhouses with attached private garages. If the project scope includes an upgrade of the electrical service panel, achieve Level 2 EV readiness including a raceway and dedicated 208/240-volt branch circuit, as required in the Marin County Building Code, Chapter 19.04, Subchapter 2.

Link: Marin County Building Code, Chapter 19.04, Subchapter 2

A4.106.4.2 (MANDATORY) Multifamily dwellings and hotels/motels. If the project scope includes an upgrade of the electrical service panel or modification of the parking lot, comply with EV Readiness requirements outlined in the Marin County Building Code, Chapter 19.04, Subchapter 2.

Plan sheet reference (if applicable):

Plan sheet reference (if applicable):

Link: Marin County Building Code, Chapter 19.04, Subchapter 2

**DIVISION 4.2 ENERGY EFFICIENCY** 

Note: All measures are mandatory unless not in project scope (Select Completed or Not Applicable [N/A])

**4.201.1 (MANDATORY)** Building meets or exceeds the requirements of the California Building Energy Efficiency Standards.

Plan sheet reference (if applicable): A6 Completed ■ N/A □

**DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION** 

Note: All measures are mandatory unless not in project scope (Select Completed or Not Applicable [N/A])

Last Updated: February 18, 2021 Page 2

#### MARIN COUNTY 2019 CALGREEN CHECKLIST CALGreen Standards for Residential Additions & Alterations

less than 1,200 square feet

**4.303.1 (MANDATORY)** Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the prescriptive requirements of Sections 4.303.1.1 through 4.303.1.4.4.

Plan sheet reference (if applicable): A2 Completed ■ N/A □

**4.303.2 (MANDATORY)** Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the California Plumbing Code and shall meet the applicable referenced standards.

Plan sheet reference (if applicable): A2 Completed ■ N/A □

**4.304.1 (MANDATORY)** Residential developments shall comply with local water efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

Plan sheet reference (if applicable):

#### **DIVISION 4.4 MATERIAL CONSERVATION & RESOURCE EFFICIENCY**

Note: All measures are mandatory unless not in project scope (Select Completed or Not Applicable [N/A])

4.406.1 (MANDATORY) Annular spaces around pipes, electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.

Plan sheet reference (if applicable): A2 Completed ■ N/A □

4.408.1 (MANDATORY) Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with the reporting standards outlined by Zero Waste Marin. Link: Zero Waste Marin

Plan sheet reference (if applicable): A2 Completed ■ N/A □

4.410.1 (MANDATORY) An operation and maintenance manual shall be provided to the building occupant or owner.

Completed □ N/A ■ Plan sheet reference (if applicable):

**4.410.2 (MANDATORY)** Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible areas that serve all buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance if more restrictive

Completed □ N/A ■ Plan sheet reference (if applicable):

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#### MARIN COUNTY 2019 CALGREEN CHECKLIST CALGreen Standards for Residential Additions & Alterations less than 1,200 square feet

### **DIVISION 4.5 ENVIRONMENTAL QUALITY**

Note: All measures are mandatory unless not in project scope (Select Completed or Not Applicable [N/A])

**4.503.1 (MANDATORY)** Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with he U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances including the County of Marin Municipal Code (Wood-Burning Devices). Link: County of Marin Municipal Code (Wood-Burning Devices)

Plan sheet reference (if applicable):

4.504.1 (MANDATORY) Duct openings and other related air distribution component openings shall be covered during construction.

Completed ■ N/A □

Plan sheet reference (if applicable): A2

**4.504.2.1 (MANDATORY)** Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.

Completed ■ N/A □

Plan sheet reference (if applicable): A2

4.504.2.2 (MANDATORY) Paints, stains and other coatings shall be compliant with VOC limits.

Plan sheet reference (if applicable): A2 Completed ■ N/A □

4.504.2.3 (MANDATORY) Aerosol paints and coatings shall be compliant with product weighted MIR Limits for ROC and other toxic compounds.

Plan sheet reference (if applicable): A2 Completed ■ N/A □

**4.504.2.4 (MANDATORY)** Documentation shall be provided to verify that compliant VOC limit finish materials have been used. Documentation may include (but isn't limited to) the Manufacturer's product specification or field verification of on-site product containers.

Plan sheet reference (if applicable): A2 Completed ■ N/A □

4.504.3 (MANDATORY) Carpet and carpet systems shall be compliant with VOC limits.

Plan sheet reference (if applicable):

Completed □ N/A ■ Plan sheet reference (if applicable): \_\_\_\_

4.504.4 (MANDATORY) 80 percent of floor area receiving resilient flooring shall comply with specified VOC criteria.

Last Updated: February 18, 2021

Page 4

### MARIN COUNTY 2019 CALGREEN CHECKLIST

CALGreen Standards for Residential Additions & Alterations less than 1,200 square feet

**4.504.5 (MANDATORY)** Particleboard, medium density fiberboard (MDF), and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.

Completed □ N/A ■ Plan sheet reference (if applicable):

A4.504.2 (MANDATORY) Install VOC compliant resilient flooring systems. Ninety (90) percent of floor area receiving resilient flooring shall comply with the VOC-emission limits established in section A4.504.2.

Completed □ N/A ■ Plan sheet reference (if applicable):

A4.504.3 (MANDATORY) Thermal insulation installed in the building shall install thermal insulation in compliance with VOC limits

Completed □ N/A ■ Plan sheet reference (if applicable): \_\_\_

**4.505.2 (MANDATORY)** Vapor retarder and capillary break is installed at slab on grade foundations.

Plan sheet reference (if applicable): Completed □ N/A ■

4.505.3 (MANDATORY) Moisture content of building materials used in wall and floor framing is checked before enclosure.

Completed ■ N/A □ Plan sheet reference (if applicable):

**4.506.1 (MANDATORY)** Each bathroom shall be provided with the following:

- 1. ENERGY STAR fans ducted to terminate outside the building.
- 2. Fans must be controlled by a humidity control (Separate or built-in); OR functioning as a component of a whole-house ventilation system.
- 3. Humidity controls with manual or automatic means of adjustment, capable of adjustment between a relative humidity range of ≤ 50 percent to a maximum of 80 percent.

Completed □ N/A ■ Plan sheet reference (if applicable):

4.507.2 (MANDATORY) Duct systems are sized, designed, and equipment is selected using the following methods:

- 1. Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2016 or
- 2. Size duct systems according to ANSI/ACCA 1 Manual D 2016 or equivalent.
- 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 or equivalent.

Plan sheet reference (if applicable):

Last Updated: February 18, 2021

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REVISIONS:



A RESIDENTIAL REMODEL & ADDITION FOR:

## **SHINE** & JONES

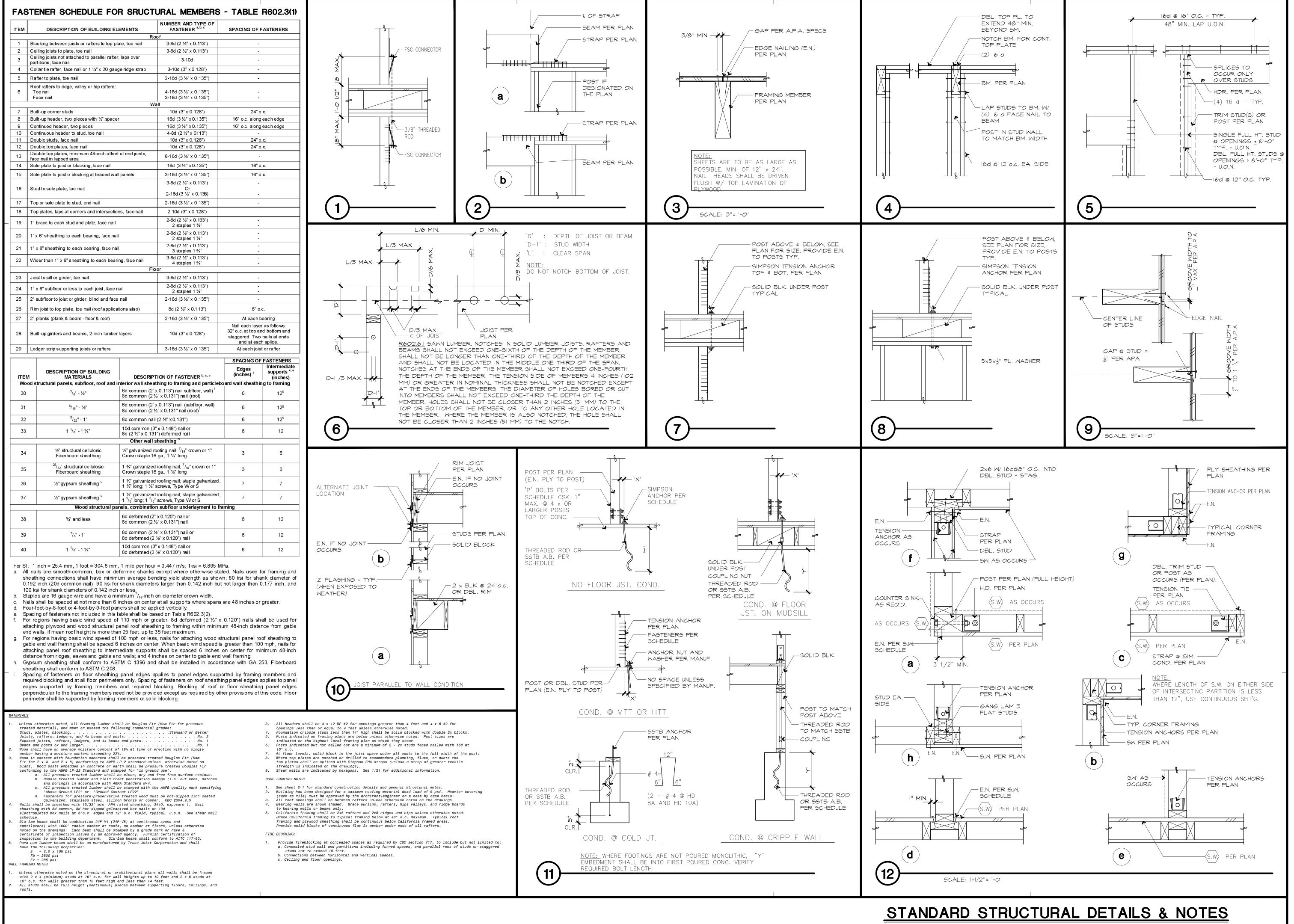
43 SAN GABRIEL DR FAIRFAX, CA 94930

APN: 001-261-08

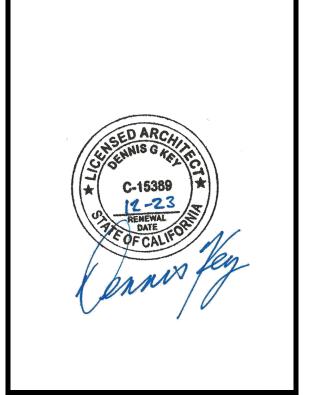
CALGREEN CHECKLIST

DRAWN BY JOB NO. 220203

SCALE: OF 8 TOTAL SHTS NONE



REVISIONS:



A RESIDENTIAL REMODEL & ADDITION FOR:

# SHINE & JONES

43 SAN GABRIEL DR FAIRFAX, CA 94930

APN: 001-261-08

STANDARD DETAILS & NOTES



DRAWN BY KEY

JOB NO. 220203 SCALE:

1/8"=1'-0"

OF 8 TOTAL SHTS