- 2. TREE PROTECTION SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION.
- 3. NO WORK SHALL BE DONE IN THE PUBLIC RIGHT OF WAY

GENERAL NOTES

1.DO NOT SCALE DRAWINGS.

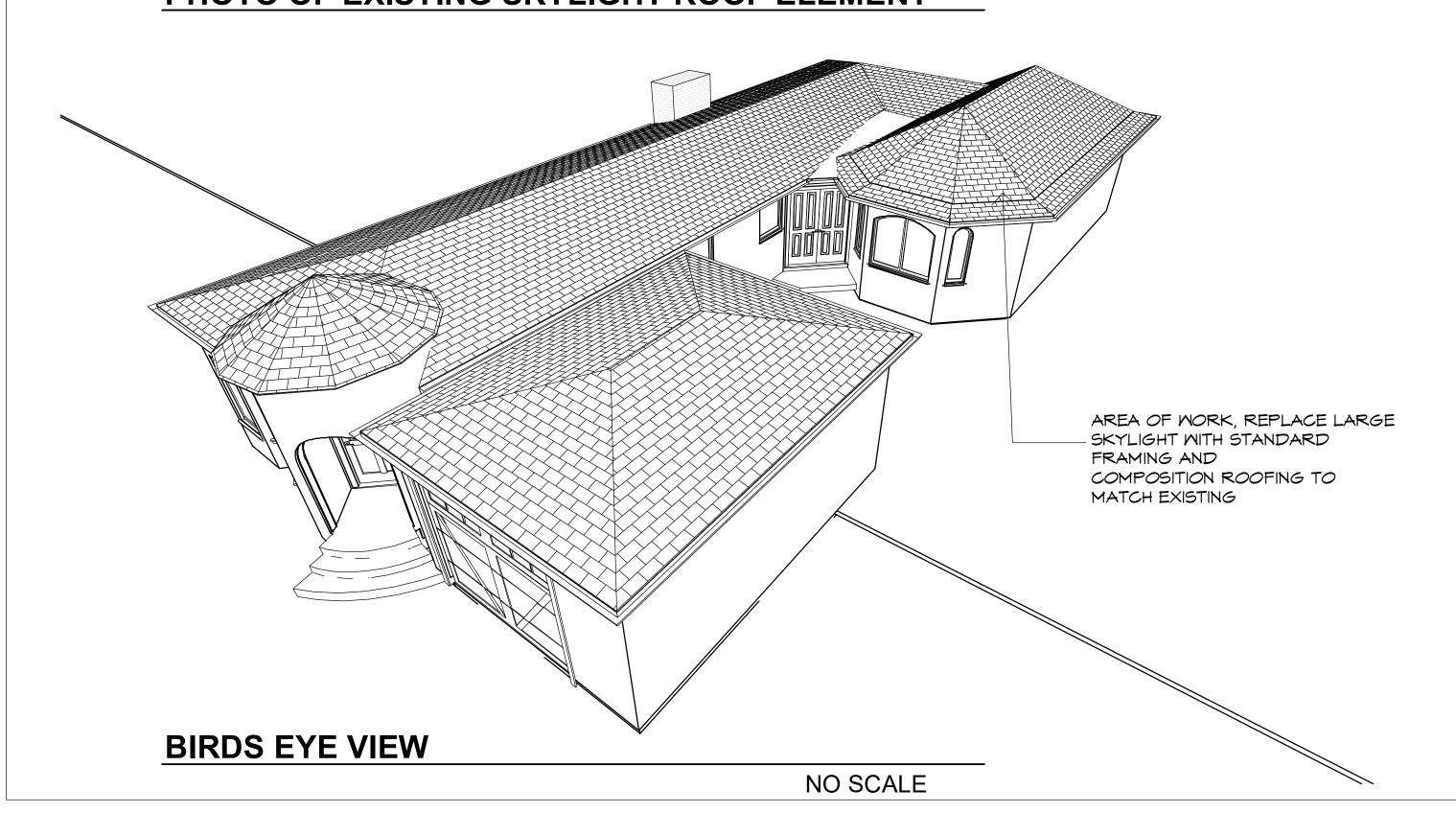
2.CONTRACT DOCUMENTS WHICH DESCRIBE EXISTING CONSTRUCTION HAVE BEEN BASED ON FIELD INSPECTION, BUT ARE NOT BASED ON EXTENSIVE FIELD MEASUREMENTS, OPENING OF CONCEALED CONDITIONS OR EXCAVATION OF BURIED ITEMS. NO RELIABLE CONSTRUCTION DOCUMENTS FOR THE EXISTING STRUCTURE WERE AVAILABLE. THESE DRAWINGS ARE INTEDED AS A GUIDE TO THE CONTRACTOR WHO SHALL VERITY DIMENSIONS BEFORE PROCEEDING WITH WORK. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE DESIGNER BEFORE PROCEEDING WITH WORK REGARDING CHANGES, DISCREPANCIES OR ALTERATIONS THAT ARE INCONSISTENT WITH THESE DRAWINGS. NOTIFY THE DESIGNER IMMEDIATELY OF PRE-EXISTING CONDITIONS WHICH PROHIBIT EXECUTION OF WORK AS DESCRIBED HEREIN.

3..NEW CONSTRUCTION TO MATCH EXISTING DETAILS AND FINISHES. WHERE NEW CONSTRUCTION MEETS EXISTING CONSTRUCTION, PATCH AND MATCH SURFACES AND FINISHES TO ALIGN CONSISTENTLY SO NO VISUAL EVIDENCE OF CORRECTED WORK REMAINS UPON COMPLETION.

4.FLOOR ELEVATIONS = TOP OF PLYWOOD SUB-FLOOR OR TOP OF SLAB.

5.ALL WALLS DIMENSIONED TO FACE OF STUD (UNLESS OTHERWISE NOTED).

PHOTO OF EXISTING SKYLIGHT ROOF ELEMENT



PLANNING APPROVAL

DS 15-410 (Stallings) Conditions of Approval November 20, 2015

AUTHORIZATION:

1. This approval of Design Study (DS 15-410) authorizes the removal of a large skylight and its replacement with truss framing and asphalt composition roofing to match existing roofing. This approval also authorizes the extension of the roof eaves at the rear door porch area. The construction shall be consistent with the November 20, 2015, approved plan set.

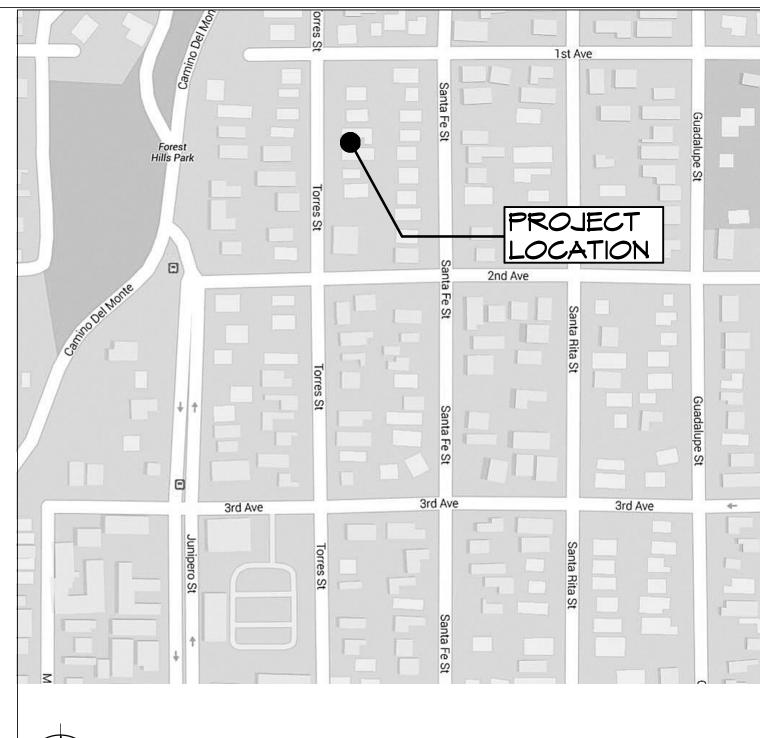
SPECIAL CONDITIONS:

- 2. The applicant shall apply for and obtain a building permit for the re-roof prior to commencing work.
- 3. The applicant agrees, at the applicant's sole expense, to defend, indemnify, and hold harmless the City, its public officials, officers, employees, and assigns, from any liability; and shall reimburse the City for any expense incurred, resulting from, or in connection with any project approvals. This includes any appeal, claim, suit, or other legal proceeding, to attack, set aside, void, or annul any project approval. The City shall promptly notify the applicant of any legal proceeding, and shall cooperate fully in the defense. The City may, at its sole discretion, participate in any such legal action, but participation shall not relieve the applicant of any obligation under this condition. Should any party bring any legal action in connection with this project, the Superior Court of the County of Monterey, California, shall be the situs and have jurisdiction for the resolution of all such actions by the parties hereto.

*Acknowledgement and acceptance of conditions of approval.

Property Owner Signature Printed Name

Once signed, please return to the Community Planning and Building Department.



VIC VIC

VICINITY MAP

NO SCALE

SCOPE OF WORK

ROOF REPAIR TO REMOVE LARGE SKYLIGHT AND REPLACE WITH TRUSS FRAMING AND ASPHLAT COMPOSITION ROOFING (TO MATCH EXISTING ROOFING)

EXTEND ROOF AT REAR DOOR PORCH AREA.

REVISION NOTES - BP 15-423

ADD SHOWER TO EXISTING POWDER ROOM.
ROTATE LAUNDRY DIRECTION AT SAME LOCATION.
RELOCATE OVEN AND REFRIGERATOR.
ADD EXHAUST FANS AT SKYLIGHT WELLS.

PROJECT INFORMATION

OWNER	STALLINGS
SITE ADRESS	Torres 5 n.e. of 2nd Carmel CA 93921
APN	APN 010-101-015
LEGAL	MAP OF CARMEL CITY LOT 10 BLK
	14.
LOT/BLOCK	LOT 10, BLK 14
YEAR BUILT	1957
ZONING	R-2
CONST. TYPE	V-B
OCCUPANCY	R-3
FIRE SPRINKLERS	NO
HISTORIC	NO
·	

LOT SIZE	4000 S.F.
EXISTING BUILDING AREA	1573 S.F.
EXISTING GARAGE	278 S.F.
EXISTING TOTAL BUILDING AREA	<u>1851 S.F</u>
SITE COVERAGE	
FRONT PORCH, LANDING	166 S.F.
DRIVEWAY	224 S.F.
SIDE AND REAR EXTERIOR LANDINGS	45 S.F.
SIDE YARD STEPS AT GRADE	19 S.F.
FRONT YARD PATH	80 S.F.
REAR PATIO AND PATH	260 S.F.
SITE COVERAGE TOTAL	652 S.F.

CONTACT INFORMATION

OWNER - Jill Stallings 408.807.1635

DESIGNER - Alan Lehman 831.747.4718

CONTRACTOR - Tom Reynolds 831-915-1477

DRAWING INDEX

A1	PROJECT DATA, NOTES
A2	SITE PLAN
A3	FLOOR PLANS
A4	FRAMING PLAN, ELECTRICAL PLAN,
	BUILDING SECTION
A5	ELEVATIONS
A6	TITLE 24
A7	TITLE 24

REVISIONS

/1 1/4/2016

ph 831.747.471826453 mission fields road carmel CA 93923



ALAN LEHMAN

PROJECT INFORMATIC PERSPECTIVE VIEW

3S Residential Remode

Torres 5 n.e. of 2nd Ca APN 010-101-015

10/19/2015

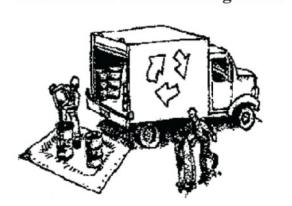
SHEET
A1

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Water Pollution Prevention Program Clean Water. Healthy Community.

Materials & Waste Management



Non-Hazardous Materials

☐ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within

☐ Use (but don't overuse) reclaimed water for dust control.

☐ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.

☐ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of

every work day or during wet weather or when rain is forecast. ☐ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours. ☐ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

☐ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.

☐ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.

☐ Clean or replace portable toilets, and inspect them frequently for ☐ Dispose of all wastes and debris properly. Recycle materials and

wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.) ☐ Dispose of liquid residues from paints, thinners, solvents, glues, and

Construction Entrances and Perimeter

cleaning fluids as hazardous waste.

☐ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.

☐ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control



Maintenance and Parking

☐ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage. ☐ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.

☐ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.

☐ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.

☐ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control

until repairs are made.

☐ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times. ☐ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks

☐ Clean up spills or leaks immediately and dispose of cleanup materials properly. Do not hose down surfaces where fluids have spilled.

Use dry cleanup methods (absorbent materials, cat litter, and/or rags). ☐ Sweep up spilled dry materials immediately. Do not

try to wash them away with water, or bury them. Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.

☐ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving



☐ Schedule grading and excavation work during dry weather.

☐ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established. ☐ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately

☐ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.

☐ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

If any of the following conditions are observed, test for contamination and contact the Regional Water Quality

Control Board: - Unusual soil conditions, discoloration,

- Abandoned underground tanks

 Abandoned wells Buried barrels, debris, or trash.

Paving/Asphalt Work



 Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.

☐ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc. ☐ Collect and recycle or appropriately

dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters. ■ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal ☐ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry

out of the storm drain system. ☐ Shovel, abosorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is

☐ If sawcut slurry enters a catch basin, clean it up immediately.



☐ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.

■ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as

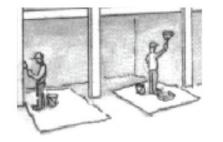
■ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.



☐ Protect stockpiled landscaping materials from wind and rain by storing them under Stack bagged material on pallets and

☐ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

Painting & Paint Removal



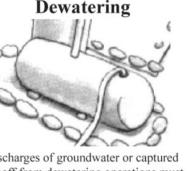
Painting Cleanup and Removal ☐ Never clean brushes or rinse paint containers into a street, gutter, storm

drain, or stream. $\ \square$ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer.

Never pour paint down a storm drain. ☐ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.

☐ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash. ☐ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin

must be disposed of as hazardous waste. Lead based paint removal requires a statecertified contractor.



☐ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.

☐ Divert run-on water from offsite away from all disturbed areas.

☐ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.

☐ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.



3



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PLAN NAGE

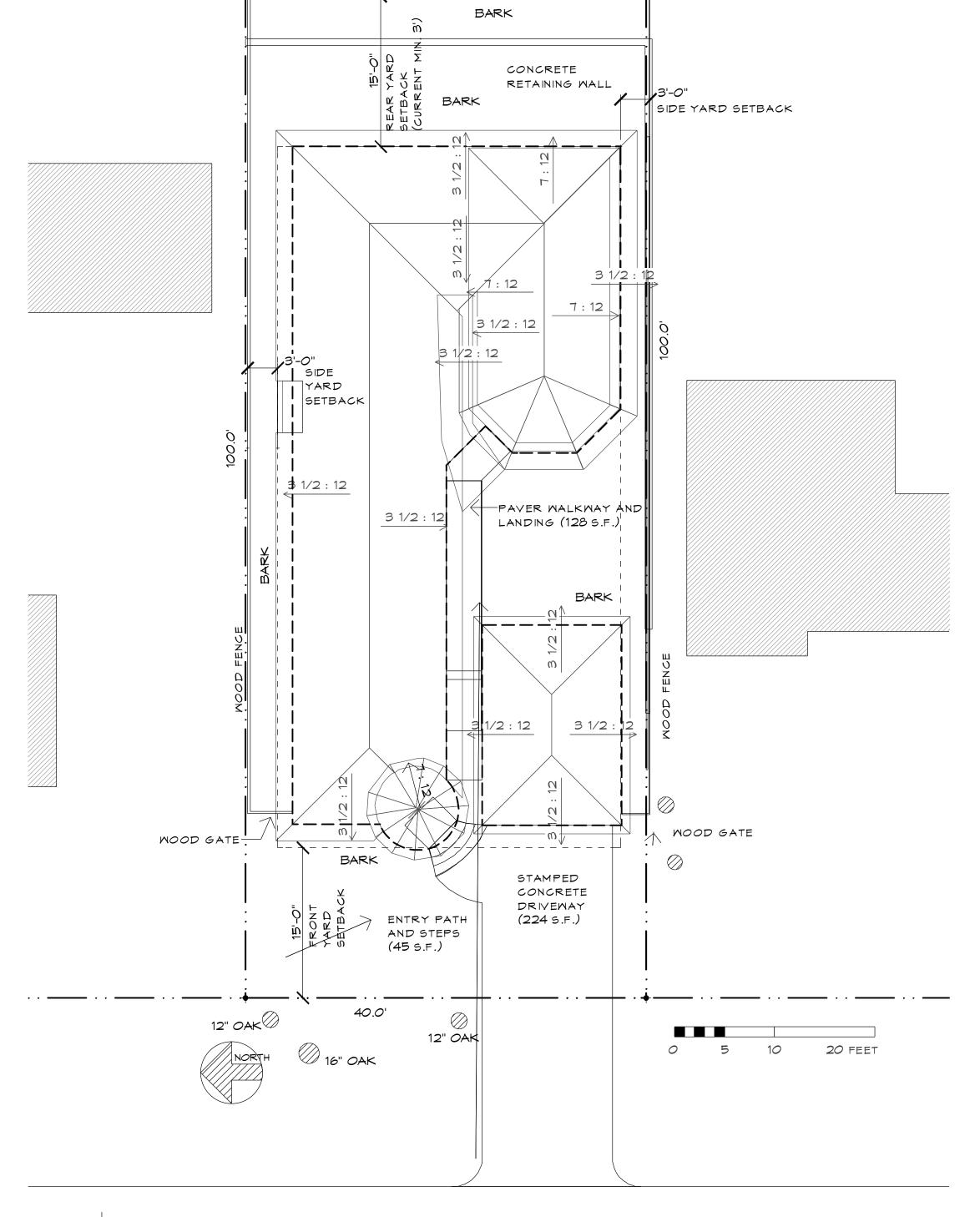
C Torres 5 n.e. of 2nd APN 010-101-015

10/19/2015

STALLINGS BLDG

SHEET

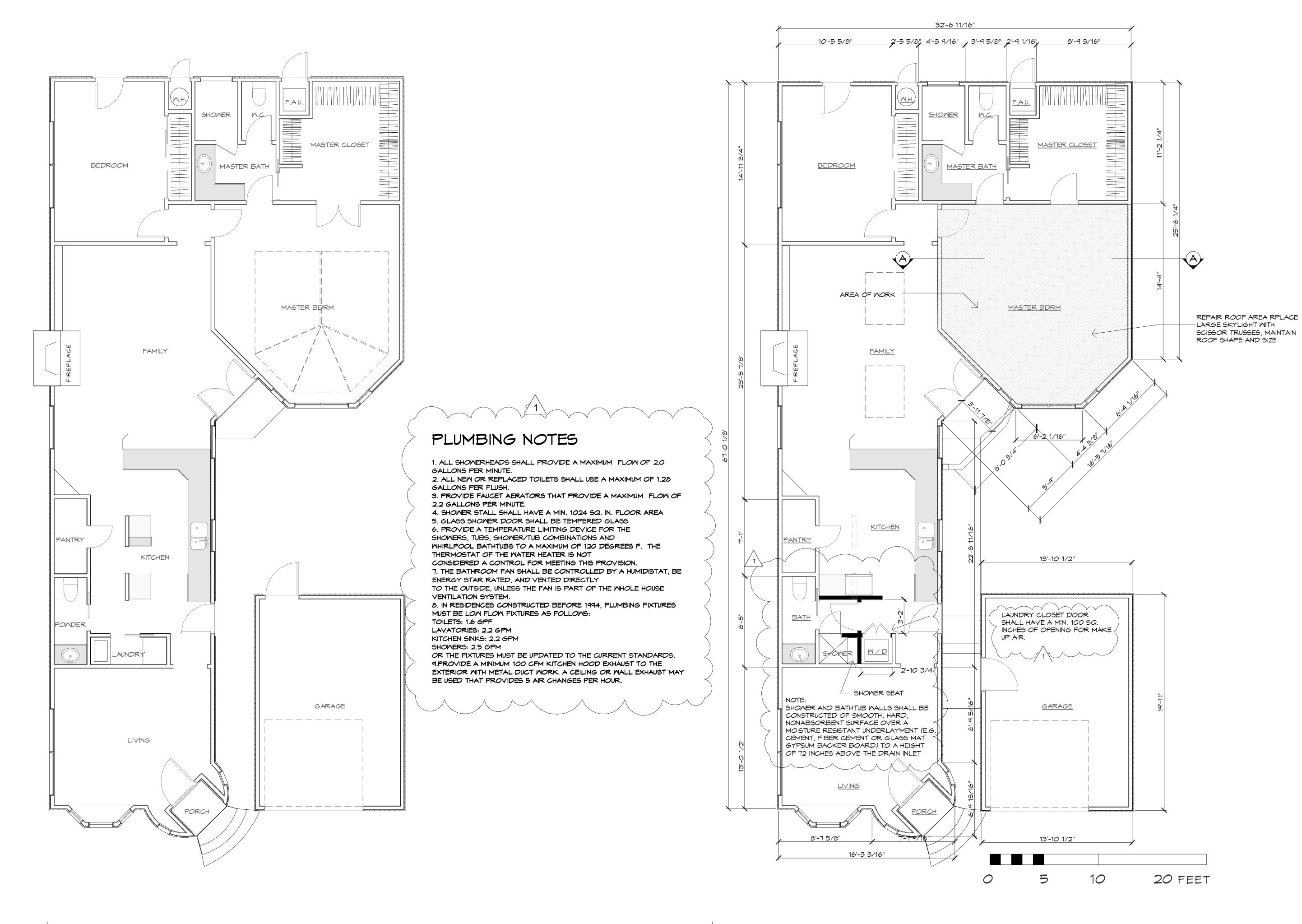
Storm drain polluters may be liable for fines of up to \$10,000 per day!



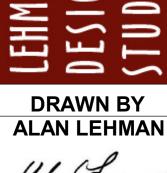


SCALE 1/8" = 1'-0"

NO SITE WORK OR TREE REMOVAL ON THIS PERMIT. TREE PROTECTIONS SHALL BE IN PLACE BEFORE ANY CONSTRUCTION WORK COMMENCES.



REVISIONS 1 1/4/2016



Torres 5 n.e. of 2 APN 010-101-015

10/19/2015

SHEET

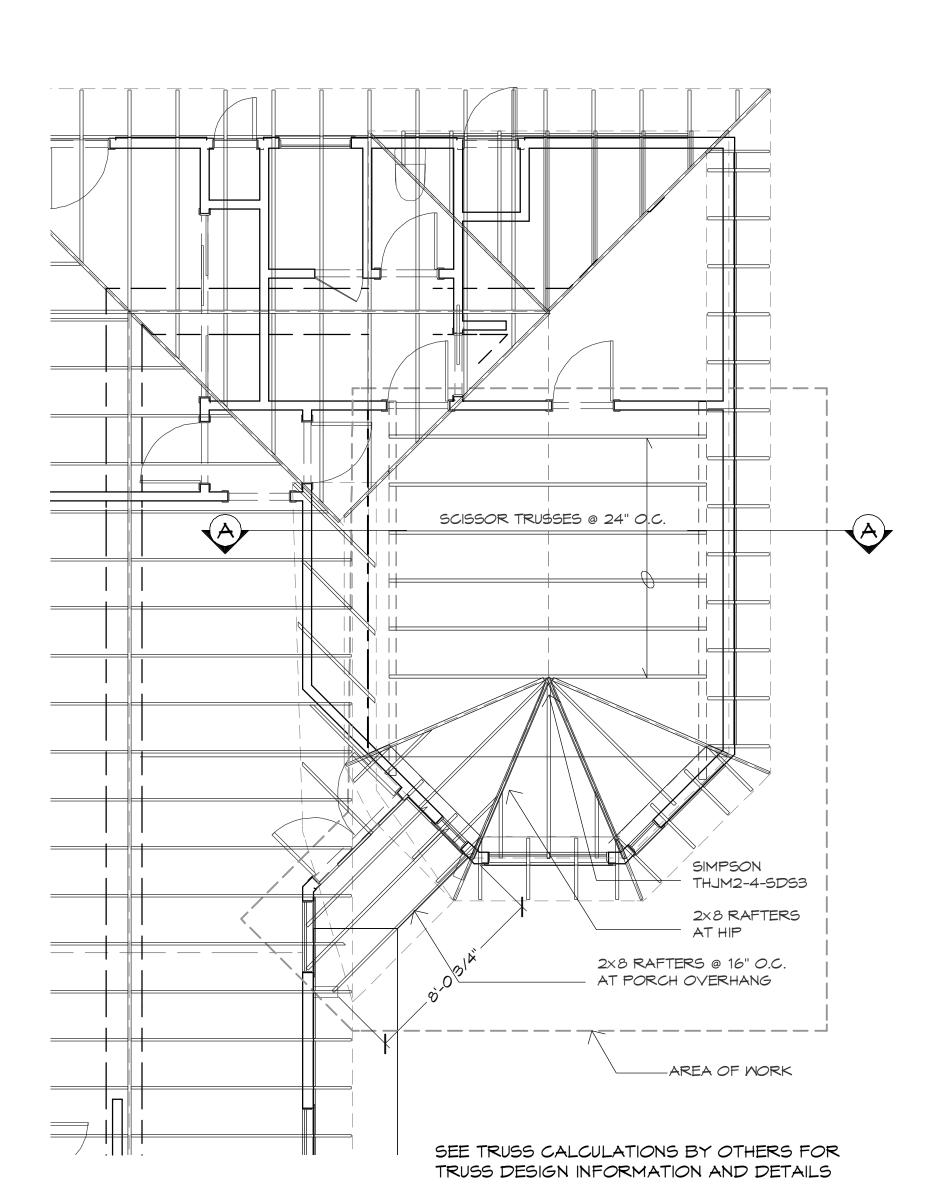
SCALE 1/4" = 1'-0"

FLOOR PLAN - EXISTING

FLOOR PLAN - PROPOSED

BUILDING SECTION A

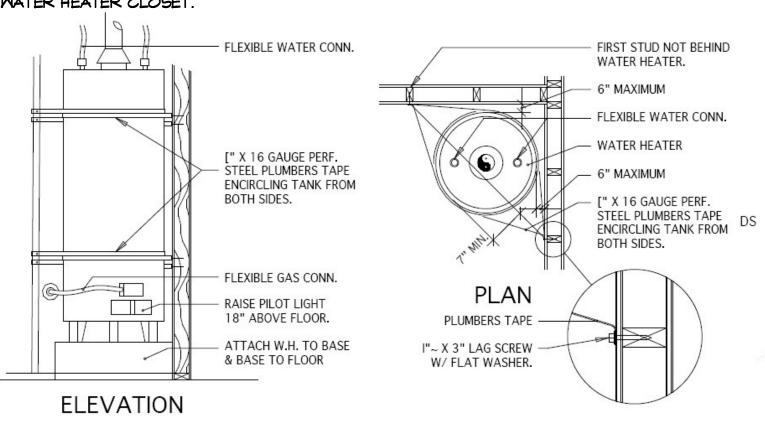
SCALE 1/4" = 1'-0"



WATER HEATER NOTES

1. ALL MATER HEATERS SHALL HAVE A TEMPERATURE AND PRESSURE (T&P) VALVE WHICH WILL DISCHARGE TO THE EXTERIOR. END OF PIPE SHALL NOT BE MORE THAN 2' NOR LESS THAN 6" ABOVE GROUND.

2. WATER HEATERS REQUIRE (2) 100 SQUARE INCHES NET AIR OPENINGS WITHIN TOP AND BOTTOM OF DOOR (2' WIDE MIN.) TO WATER HEATER CLOSET.



MATER HEATER STRAPPING (SIM.) NO SCALE

ELECTRICAL NOTES

1. ALL BATHROOM LIGHTING THAT IS NON FLUORESCENT SHALL HAVE VACANCY SENSOR SMITCHES.

2 NEW BATH FANS IN EACH BATH SHALL BE 50 CFM MIN.

3. ALL FIXTURES IN KITCHEN SHALL BE FLUORESCENT OR HIGH EFFICACY.

4. SMITCH ADJACENT TO SINK OPERATES ONE RECEPTACLE OF OUTLET BELOW SINK FOR GARBAGE DISPOSAL. 5. HARDWIRED AND INTERCONNECTED SMOKE DETECTORS SHALL BE

LOCATED IN HALLMAY AND IN ALL BEDROOMS AS SHOWN. HARDWIRED CO DETECTORS SHALL BE LOCATED AS SHOWN ON PLANS.(CRC SECTION R314 AND R315)

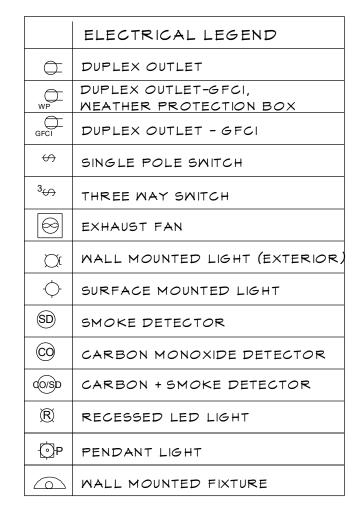
6. ALL LIGHTING (NOT NOTED ABOVE) THAT IS NOT HIGH EFFICACY SHALL BE CONTROLLED BY A VACANCY SENSOR OR DIMMER.

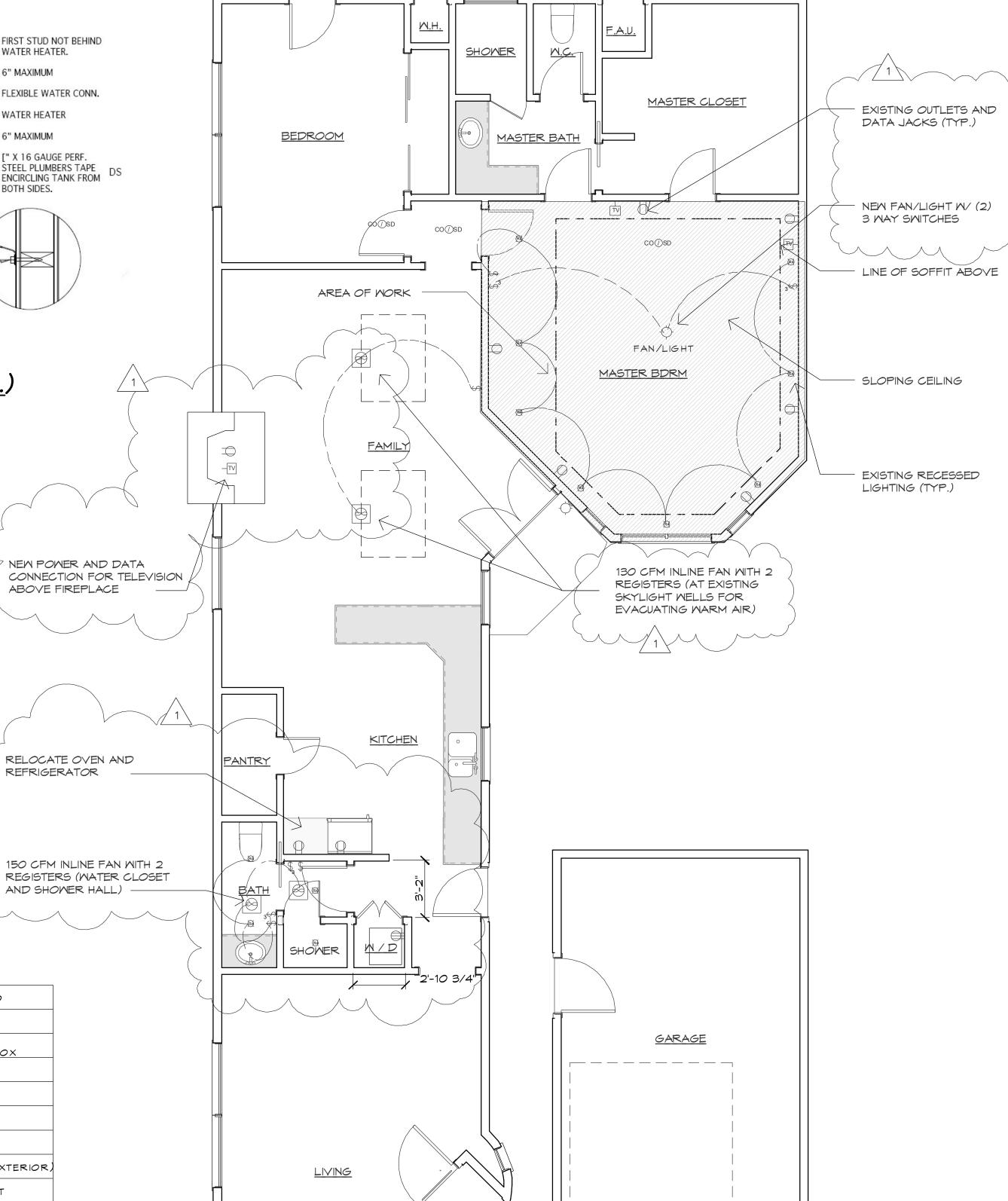
7. OUTDOOR LIGHTING FIXTURES THAT ARE ATTACHED TO THE BUILDINGS SHALL BE HIGH EFFICACY OR CONTROLLED BY A COMBINATION PHOTO-CONTROL/MOTION SENSOR.

8. ARC-FAULT CIRCUIT INTERRUPTER (AFCI), COMBINATION TYPE FOR ALL AREAS EXCEPT, EXTERIOR, LAUNDRY ROOM, MECHANICAL EQUIPMENT, KITCHENS, BATHROOMS, GARAGES AND ATTIC SPACE WHICH REQUIRE GROUND FAULT CIRCUIT INTERRUPTERS (GFCI).

9. KITCHEN SHALL HAVE (2) 20 AMP DEDICATED BRANCH CIRCUITS, LAUNDRY AND BATHROOM AREA SHALL HAVE (1) 20 AMP DEDICATED BRANCH CIRCUIT (MIN.)., EACH FORCED AIR HEATING UNIT (FAU) SHALL HAVE (1) 20 AMP DEDICATED BRANCH CIRCUIT.

10. ALL NEW RECEPTACLES SHALL BE TAMPER RESISTANT.





FRAMING PLAN - PARTIAL

SCALE 1/4" = 1'-0"

ELECTRICAL PLAN (PARTIAL)

SCALE 1/4" = 1'-0"

REVISIONS 1/4/2016

31

ph MAN 16N D10

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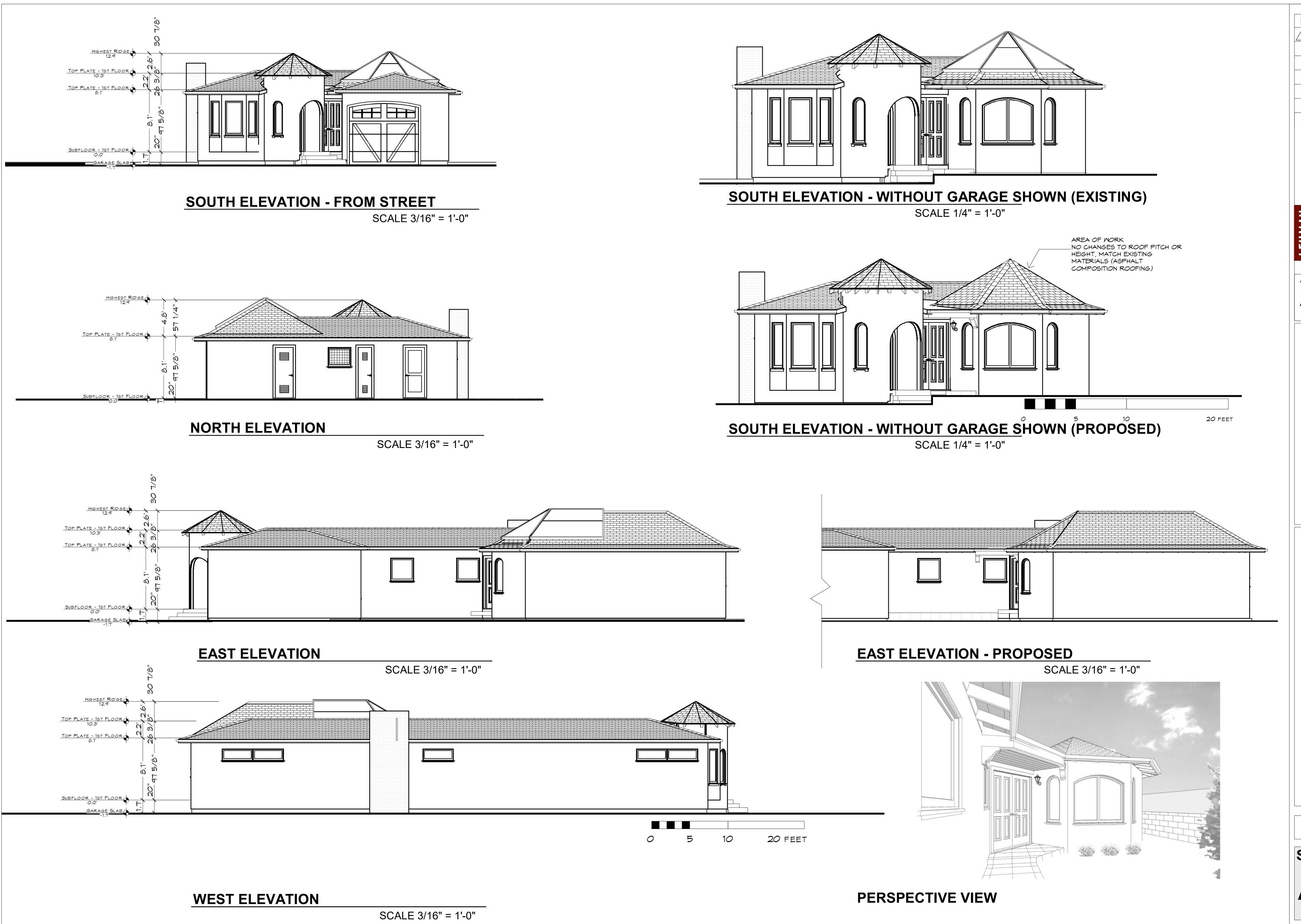
Torres 5 n.e. of 2 APN 010-101-015

10/19/2015

SHEET

20 FEET

STALLINGS BLDG



REVISIONS

1/4/2016

ph 831.747.4718
26453 mission fields road
carmel CA 93923
info @

DRAWN BY
ALAN LEHMAN

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ALAN LEHMAN

ELEVATIONS

TALLINGS Residential Remode

10/19/2015

Torres 5 n.e. of 2nd Carmel APN 010-101-015

SHEET A5

STALLINGS BLDG

This compliance document is only applicable to simple alterations that do not require HERS verification for compliance. When HERS verification is required, a CF1R-ALT-01 shall first be registered with a HERS Provider Data Registry.

Alterations to Space Conditioning Systems that are exempt from HERS verification requirements may use the CF1R-ALT-05 and CF2R- ALT-05 Compliance Documents. Possible exemptions from duct leakage testing include: less than 40 ft of ducts were added or replaced; or the existing duct system was insulated with asbestos; or the existing duct system was previously tested and passed by a HERS Rater. If space conditioning systems are altered and are not exempt from HERS verification, then a CF1R-ALT-02 must be completed and registered with a HERS Provider Data Registry.

Alterations that utilize Closed Cell Spray Polyurethane Foam (ccSPF) with a density of 1.5 to less than 2.5 pounds per cubic foot having an R-value other than 5.8 per inch, or Open Cell Spray Polyurethane Foam (ocSPF) with a density of 0.4 to less than 1.5 pounds per cubic foot having an R-value of 3.6 per inch, shall complete and register a CF1R-ALT-01 with a HERS Provider Data

If more than one person has responsibility for installation of the items on this certificate, each person shall prepare and sign a certificate applicable to the portion of construction for which they are responsible. Alternatively, the person with chief responsibility for construction shall prepare and sign this certificate for the entire construction. All applicable Mandatory Measures shall be met. Temporary labels shall not be removed before verification by the building inspector.

201					
Α. (GENERAL INFORM	ATION			
01	Project Name:	Stallings Residence	02	Date Prepared:	11/3/2015
03	Project Location:	Torres 5 n.e. of 2nd	04	Building Front Orientation (deg or cardinal):	270
05	CA City:	Carmel	06	Number of Altered Dwelling Units:	1
07	Zip Code:	93921	08	Fuel Type:	Gas
09	Climate Zone:	3	10	Total Conditioned Floor Area (ft ²):	1573 ft2
11	Building Type	Single Family	12	Slab Area (ft ²)	n/a
13	Project Scope:	Alteration to Residence			

STATE OF CALIFORNIA Prescriptive Residential Alterations That Do Not Require HERS Field Verification	
CEC-CF1R-ALT-05-E (Revised 01/15)	CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE	CF1R-ALT-05-E
Prescriptive Residential Alterations That Do Not Require HERS Field Verification	(Page 4 of 8)
Project Name: Stallings Posidones	Date Prepared: 11/2/2015

January 2015

January 2015

CA Building Energy Efficiency Standards - 2013 Residential Compliance

F. FENESTRATION/GLAZING PROPOSED AREAS AND EFFICIENCIES – Replace (Section 150.2(b)1B)

CA Building Energy Efficiency Standards - 2013 Residential Compliance

CA Building Energy Efficiency Standards - 2013 Residential Compliance

Prescri	ptive Residential Al	terations T	hat Do Not	Require HEF	RS Field Ver	rification							e 4 of 8)
Project Name	e: Stallings Residen	ce								Date Prepar	^{red:} 11/3/201	5	
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	ESTRATION PROPO		1			1	1	ī	10	1	T		
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Tag/ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, E	Number of Panes	Proposed Fenestration Area (ft ²)	Proposed West Facing Fenestration Area (ft ²)	U-factor	Source	SHGC	Source	Exterior Shading Device	Combined SHGC from CF1R-ENV- 03
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
			+								1		
			+										
15	Existing + Proposed Fe	enestration A	rea	1					<u> </u>			n/a net	add<75 ft2
16	Maximum Allowed Fe	nestration Ar	·ea									n/a net	add<75 ft2
17	Compliance Statemen	t	Is the Existin	g + Proposed	Fenestration .	Area ≤ the Ma:	ximum Allowe	d Fenestratio	n Area			☑ Yes	□No
18	Existing + Proposed W	est-Facing Fe	enestration Are	a								n/a net	add<75 ft2
19	Maximum Allowed W	est Fenestrat	ion Area									n/a net	add<75 ft2
20	Compliance Statemen	t	Is the Existin	g + Proposed \	West-Facing F	enestration A	rea ≤ he Maxii	mum Allowed	West Fenesti	ration Area		☑ Yes	□ No
21	Proposed Fenestration	n U-factor (W	/indows)									n/a	
22	Required Fenestration	u-factor (W	indows)									n/a	
23	Compliance Statemen	t	Is the Propo	sed Fenestrati	on U-factor ≤	the Required	Fenestration l	J-factor				☑ Yes	□ No
24	Proposed Fenestration	n SHGC (Wind	dows)									n/a	
25	Required Fenestration	SHGC (Wind	lows)									n/a	
26	Compliance Statemen	t	Is the Propo	sed Fenestrati	on SHGC ≤ th	e Required Fer	nestration SHG	GC .				☑ Yes	□ No
27	Proposed Fenestration	n U-factor (Sk	(ylights)									n/a	
28	Required Fenestration	u-factor (Sk	ylights)									n/a	
29	Compliance Statemen	t	Is the Propo	sed Fenestrati	on U-factor ≤	the Required	Fenestration (J-factor				☑ Yes	□ No
30	Proposed Fenestration	n SHGC (Skyli	ghts)									n/a	
31	Required Fenestration	sHGC (Skylig	ghts)									n/a	
32	Compliance Statemen	t	Is the Propo	sed Fenestrati	on SHGC ≤ th	e Required Fer	nestration SHG	GC				✓ Yes	□No

	tive Residentia	al Alterat	ions Th	at Do No	ot Require HERS Field	Verificat	ion			1	
C-CF1R-AL	T-05-E (Revised 01/15)									CALIFORNIA ENERGY COMMISSION	
CERTIFICA	ATE OF COMPLIAN	CE								CF1R-ALT-05-	-E
rescripti	ive Residential Alte	rations Tha	t Do Not	Require H	ERS Field Verification					(Page 2 of	8)
roject Name:	Stallings Residence	Э							Date Pr	epared: 11/3/2015	
BIIIIDI	ING INSULATION D	ETAILS (So	ction 1EA	2/6\1\							
B. BUILDI	ING INSULATION D	OETAILS (Se	ction 150	. 2(b)1)	06	07	00	00	10	11	

01	02	03	04	05	06		07	08	09	10	11
						Propos	ed			Required	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-factor	Append Refer Table	dix JA4 ence Cell	U-Factor	Comments
	Roof/Ceiling	Wood	2x	24" oc	R-30	n/a	.031	4.2.1	20A	.031	Altered areas only
	Wall	Wood	2x4	16" oc	R-13	n/a	.102	4.3.1	3A	.102	Altered areas only
	Floor	Wood	2x	16" oc	R-19	n/a	.037	4.4.1	4A	.037	Altered areas only

Prescriptive Residential Alterations That Do Not Require HERS Field Verification	
EC-CF1R-ALT-05-E (Revised 01/15)	CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE	CF1R-ALT-05-E
Prescriptive Residential Alterations That Do Not Require HERS Field Verification	(Page 5 of 8)
Project Name: Stallings Residence	Date Prepared: 11/3/2015

January 2015

January 2015

01	02	03	04	05	06	07	08	9	10	11	12	13	14
Tag/ ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, E	Area Removed (ft ²)	Area Added (ft²)	Net Added Area (ft ²)	U-factor	Source	SHGC	Source	Exterior Shading Device	Combined SHGC from CF1R-ENV-03
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
				N-+ A - - - NA/+ F	:	-4: 4							
15				Net Added West-f			n/a						
16				ng + Added West-f			n/a						
17			Maximu	m Allowed West-f	acing Fenestr	ation Area	n/a						
18	Is West-faci	ng Fenestrati	on Area ≤ Ma	ximum Allowed W	est-facing Fe	nestration Area	✓ Yes ☐ No						
19			Net A	Added Fenestratio	n Area (all ori	entations)	n/a	1					
20			Existing +	Added Fenestratio	n Area (all ori	entations)	n/a	1					
21			Maximum Al	lowed Fenestratio	n Area (all ori	entations)	n/a	1					
22	Is Existing	g + Added Fer	nestration Are	ea <u><</u> Maximum Allo		ation Area entations)	☑ Yes ☐ No	1					

CA Building Energy Efficiency Standards - 2013 Residential Compliance	

CEC-CF1R-ALT-0			terations That D	o Not Requir	e HEKS F	ieia veriti	cation		CALIFORNIA EN	ERGY COMMIS	SSION
CERTIFICAT	E OF COM	PLIANCE								CF1R-A	LT-0
Prescriptive	Residenti	al Alteratio	ns That Do Not Requ	ire HERS Field V	erification					(Page	e 3 o
Project Name: Sta	allings Res	idence						Date Prepare	ed: 11/3/2015		

01	02	03	04	05	06	07	08	09	10	11	12	13
					R-value		Propos	ed		Mi	nimum Requ	ired
Method of	Roof		CRRC Product ID		Deck	Initial Solar	Aged Solar	Thermal	SRI	Aged Solar	Thermal	SRI
Compliance	Pitch	Exception	Number	Product Type	Insulation	Reflectance	Reflectance	Emittance	(Optional)	Reflectance	Emittance	(Optiona
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

D EENES	TRATION/GLA	ZING AREAS	ALLOWED (Sec	rtion 150 2/h	111					
01)2	03	· · ·)4	05	5	0	6	07
Alteration Type	Maximum Allowed Fenestration Area For All Orientations (ft²) (Windows)	Maximum Allowed Fenestration Area For All Orientations (ft²) (Skylights)	Maximum Allowed West-Facing Fenestration Area Only (ft ²)	Existing Fenestration Area for All Orientations (ft ²)	Existing West-Facing Fenestration Area (ft ²)	Maximum Allowed U-factor (Windows)	Maximum Allowed U-factor (Skylights)	Maximum Allowed SHGC (Windows)	Maximum Allowed SHGC (Skylights)	Comments
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	

CA Building Energy Efficiency Standards - 2013 Residential Compliance	January 2015
state of CALIFORNIA Prescriptive Residential Alterations That Do Not Require HERS Field Verification	

CEC-CF1R-ALT-05-E (Revised 01/15)	CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE	CF1R-ALT-05-I
Prescriptive Residential Alterations That Do Not Require HERS Field Verification	(Page 6 of 8
Project Name: Stallings Residence	Date Prepared: 11/3/2015

G. SPACE CONDITIONING (SC) SYSTEMS – HEATING/COOLING (Prescriptive section 150.2(b))
Alterations to Space Conditioning Systems shall be exempt from HERS verification requirements as prerequisite for use of the CF1R-ALT-05 and CF2R- ALT-05 Compliance Documents. If new space
conditioning systems are installed or existing systems are altered and are not exempt from HERS verification, then a CF1R-ALT-01 shall be completed and registered with a HERS Provider Data
Registry. In each row below for each dwelling unit in the building, check the box that indicates the exemption from HERS verification compliance:
a: space conditioning system was not altered;
□ b: less than 40 ft of ducts were added or replaced;

a: space conditioning system was not altered	d;					
☐ b: less than 40 ft of ducts were added or rep	laced;					
c: (exempt from duct leakage testing) if: the	existing duct system was insulated with asbestos	;				
d: (exempt from duct leakage testing) if: the	e existing duct system was previously tested and p	assed by a HERS Rater.				
01	02	03		04	4	
Dwelling Unit Name	SC System Identification or Name	SC System Location or Area Served	Exem	ption from I	HERS Verifi	cation
Stallings Residence	Existing HVAC to remain	Existing	⊠ a	☑ b	С	□d
	No HERS verification required		□а	□b	□ c	□d

01	02	03		U	4	
Dwelling Unit Name	SC System Identification or Name	SC System Location or Area Served	Exemp	otion from	HERS Verifi	cation
Stallings Residence	Existing HVAC to remain	Existing	⊠ a	☑ b	□ c	□d
	No HERS verification required		□a	□b	□ c	□d
			□a	□b	□с	□d
			□a	□b	С	□d
			□a	□b	□с	□d
			□a	□b	□ c	□d
			□а	□b	□с	□d
			□a	□b	С	□d
			□a	□b	□с	□d
			□а	□b	□ c	□d
			□а	□b	□ c	□d
			□a	□b	□ c	□d
			□a	□Ь	□с	□d
			□a	□Ь	□ c	□d
			□а	□Ь	□с	□d

CA Building Energy Efficiency Standards - 2013 Residential Compliance

REVISIONS 1/4/2016

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Torres 5 n.e. of 2nd APN 010-101-015

10/19/2015

SHEET

STATE OF CALIFORNIA Prescriptive Residential Alterations That Do Not Require HERS Field Verification	CALIFORNIA ENERGY COMMISSION
CEC-CF1R-ALT-05-E (Revised 01/15)	CALIFORNIA ENERGY COMMISSION ************************************
CERTIFICATE OF COMPLIANCE	CF1R-ALT-05-E
Prescriptive Residential Alterations That Do Not Require HERS Field Verification	(Page 7 of 8)
Project Name: Stallings Residence	Date Prepared: 11/3/2015

0.5	0.5							00	4.0	4.4	4.0	4.2		4.5
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Dwelling Unit	Water Heating System Identification or	Water Heating System Location	Water Heating System	Water Heater	# of Water Heaters	Water Heater Storage Volume		Rated Input	Rated Input	Heating Efficiency	Heating Efficiency	Standby	Exterior Insulation	Back-U Solar Saving
Name	Name	or Area Served	Туре	Туре	in System	(gal)	Fuel Type	Туре	Value	Туре	Value	Loss (%)	R-Value	Fraction
Stallings Res.	Existing WH	Existing Res.	DHW	Storage	1	40 gal.	Gas	Btuh	40KBtuh	EF	.58 EF	n/a	n/a	n/a
														-

CA Building Energy Efficiency Standards - 2013 Residential Compliance

CERTIFICATE OF COMPLIANCE	CF1R-ALT-05-
Prescriptive Residential Alterations That Do Not Require HERS Fie	ld Verification (Page 8 of 8
Project Name: Stallings Residence	Date Prepared: 11/3/2015
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and	omplete.
Documentation Author Name:	Documentation Author Signature:
Michael Kunz, CEPE	Michael Kunz
Company:	Signature Date:
Energy Performance Services	11/3/2015
Address:	CEA/ HERS Certification Identification (if applicable):
P.O. Box 7483	n/a
City/State/Zip:	Phone:
South Lake Tahoe, CA 96158	888-828-9488
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
 designer). That the energy features and performance specifications, materials, compound compliance conform to the requirements of Title 24, Part 1 and Part 6 of the English to the building design features or system design features identified on this Compound worksheets, calculations, plans and specifications submitted to the enforces. I will ensure that a registered copy of this Certificate of Compliance shall be 	or responsibility for the building design or system design identified on this Certificate of Compliance (responsible onents, and manufactured devices for the building design or system design identified on this Certificate of the California Code of Regulations. Pertificate of Compliance are consistent with the information provided on other applicable compliance documents agency for approval with this building permit application. Per made available with the building permit(s) issued for the building, and made available to the enforcement agency for compliance is required to be included with the documentation the builder provides to the building
Alan Lehman	Responsible Designer Signature:
	- , ,
Company:	Date Signed:
Lehman Design Studio	11/3/2015
Address:	License:
26453 Mission Fields Road	
City/State/Zip:	Phone:

CA Building Energy Efficiency Standards - 2013 Residential Compliance January 2015

For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300.

831-747-4718

example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation protected as specified or painted with coating that is water retardant and provides shielding from solar radiation that degrades the material. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I §150.0(j)3B: or Class II vapor retarding facing, or the insulation shall be installed at the thickness that qualifies as a Class I or Class II vapor Systems using gas or propane water heaters to serve individual dwelling units shall include: a 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 termination and the §150.0(n)1: space where the water heater is installed; a condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 §150.0(n)2: Recirculating loops serving multiple dwelling units shall meet the requirements of §110.3(c)5. Solar water-heating systems and collectors shall be certified and rated by the Solar Rating and Certification Corporation (SRCC) §150.0(n)3: or by a testing agency approved by the Executive Director. **Ducts and Fans Measures:** All air-distribution system ducts and plenums installed are 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. Supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-6.0 (or higher if required by CMC §605.0) or enclosed entirely in directly 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 are mechanically fastened. Openings shall be sealed §150.0(m)1: 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 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 shall be used. Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than sealed sheet metal, duct board or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts. Factory-Fabricated Duct Systems shall comply with specified requirements for duct construction, connections, and closures; joints and seams of duct systems and their components shall not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands. Field-Fabricated Duct Systems shall comply with requirements for: pressure-sensitive tapes, mastics, sealants, and other §150.0(m)3-6: requirements specified for duct construction; duct insulation R-value ratings; duct insulation thickness; and duct labeling. All fan systems that exchange air between the conditioned space and the outside of the building must have backdraft or automatic §150.0(m)7: Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers except combustion inlet and outlet air openings and elevator shaft vents. Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind but not limited to the following: insulation exposed to weather shall be suitable for outdoor service. For example, protected by aluminum §150.0(m)9: sheet metal, painted canvas, or plastic cover. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation. §150.0(m)10: Flexible ducts cannot have porous inner cores. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts shall be §150.0(m)11: sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Mechanical systems that supply air to an occupiable space through ductwork exceeding 10 feet in length and through a thermal §150.0(m)12: conditioning component, except evaporative coolers, shall be provided with air filter devices that meet the requirements of Space conditioning systems that utilize forced air ducts to supply cooling to an occupiable space shall have a hole for the placement of a static pressure probe (HSPP), or a permanently installed static pressure probe (PSPP) in the 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

Zonally controlled central forced air cooling systems shall be capable of simultaneously delivering, in every zonal control mode,

an airflow from the dwelling, through the air handler fan and delivered to the dwelling, of \geq 350 CFM per ton of nominal cooling

All dwelling units shall meet the requirements of ASHRAE Standard 62.2. Neither window operation nor continuous operation of

capacity, and operating at an air-handling unit fan efficacy of ≤ 0.58 W/CFM as confirmed by field verification and diagnostic

central forced air system air handlers used in central fan integrated ventilation systems are permissible methods of providing the

Whole Building Ventilation airflow shall be confirmed through field verification and diagnostic testing, in accordance with

Any pool or spa heating system shall be certified to have: 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 shall not use electric resistance heating.

Pipe for cooling system lines shall be insulated as specified in §150.0(j)2A. Piping insulation for steam and hydronic heating

Insulation exposed to weather shall either be rated for outdoor use or installed with a cover suitable for outdoor service. For

systems or hot water systems with pressure > 15 psig shall meet the requirements in TABLE 120.3-A.

Insulation is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.

Carmel, CA 93923

January 2015

2013 Low-Rise Residential Mandatory Measures Summary

accordance with Reference Residential Appendix RA3.

Whole Building Ventilation.

Pool and Spa Heating Systems and Equipment Measures:

Reference Residential Appendix RA3.

testing, in accordance with Reference Residential Appendix RA3.

§150.0(j)3A:

§150.0(m)15:

§110.4(b)1:	Any pool or spa heating equipment shall be installed with at least 36 inches of pipe between filter and heater or dedicated suction and return lines, or built-up connections for future solar heating.
§110.4(b)2:	Outdoor pools or spas that have a heat pump or gas heater shall have a cover.
	Pools shall have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or pro-
§110.4(b)3:	grammed to run only during off-peak electric demand periods.
§110.5:	Natural gas pool and spa heaters shall not have a continuous burning pilot light.
§150.0(p):	Residential pool systems or equipment shall meet specified pump sizing, flow rate, piping, filters, and valve requirements.
Lighting Meas	
§110.9:	All lighting control devices and systems, ballasts, and luminaires shall meet the applicable requirements of §110.9.
§150.0(k)1A:	Installed luminaires shall be classified as high-efficacy or low-efficacy for compliance with §150.0(k) in accordance with TABLE 150.0-A or TABLE 150.0-B, as applicable.
§150.0(k)1B:	When a high efficacy and low efficacy lighting system are combined in a single luminaire, each system shall separately comply with the applicable provisions of §150.0(k).
§150.0(k)1C:	The wattage and classification of permanently installed luminaires in residential kitchens shall be determined in accordance with §130.0(c). In residential kitchens, the wattage of electrical boxes finished with a blank cover or where no electrical equipment has been installed, and where the electrical box can be used for a luminaire or a surface mounted ceiling fan, shall be calculated as 180 watts of low efficacy lighting per electrical box.
§150.0(k)1D:	Ballasts for fluorescent lamps rated 13 watts or greater shall be electronic and shall have an output frequency no less than 20 kHz.
§150.0(k)1E:	Permanently installed night lights and night lights integral to installed luminaires or exhaust fans shall 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 by vacancy sensors.
§150.0(k)1F:	Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) shall meet the applicable requirements of §150.0(k).
§150.0(k)2A:	High efficacy luminaires must be switched separately from low efficacy luminaires.
§150.0(k)2B:	Exhaust fans shall be switched separately from lighting systems.
150.0(k)2C:	Luminaires shall be switched with readily accessible controls that permit the luminaires to be manually switched ON and OFF.
150.0(k)2D:	Controls and equipment are installed in accordance with manufacturer's instructions.
150.0(k)2E:	No control shall bypass a dimmer or vacancy sensor function if the control is installed to comply with §150.0(k).
150.0(k)2F:	Lighting controls comply with applicable requirements of §110.9.
150.0(k)2G:	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 Installation Certificate requirements of §130.4; the EMCS requirements of §130.5; and all other requirements in §150.0(k)2.
§150.0(k)2H:	An Energy Management Control System (EMCS) may be used to comply with vacancy sensor requirements of §150.0(k) if: it functions as a vacancy sensor according to §110.9; meets Installation Certificate requirements of §130.4; the EMCS requirements of §130.5; and all other requirements in §150.0(k)2.
§150.0(k)2I:	A multiscene programmable controller may be used to comply with dimmer requirements of this section 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)3A:	A minimum of 50 percent of the total rated wattage of permanently installed lighting in kitchens shall be high efficacy.
§150.0(k)3B:	Kitchen lighting includes all permanently installed lighting in the kitchen except internal lighting in cabinets that illuminate only the inside of the cabinets. Lighting in areas adjacent to the kitchen, including but not limited to dining and nook areas, are considered kitchen lighting if they are not separately switched from kitchen lighting.
§150.0(k)4:	Permanently installed lighting that is internal to cabinets shall use no more than 20 watts of power per linear foot of illuminated cabinet.
§150.0(k)5:	A minimum of one high efficacy luminaire shall be installed in each bathroom; and all other lighting installed in each bathroom shall be high efficacy or controlled by vacancy sensors.
§150.0(k)6:	Lighting installed in attached and detached garages, laundry rooms, and utility rooms shall be high efficacy luminaires and controlled by vacancy sensors.
§150.0(k)7:	Lighting installed in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, and utility rooms shall be high efficacy, or shall be controlled by either dimmers or vacancy sensors. Luminaires recessed into ceilings shall: be listed for zero clearance insulation contact (IC) by Underwriters Laboratories or other
§150.0(k)8:	nationally recognized testing/rating laboratory; have a label that certifies that the luminaire is airtight with air leakage less than 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283; be sealed with a gasket or caulk between the luminaire housing and ceiling, and shall have all air leak paths between conditioned and unconditioned spaces sealed with a gasket or caulk; and allow ballast maintenance and replacement without requiring cutting holes in the ceiling. For recessed compact fluorescent luminaries with ballasts to qualify as high efficacy for compliance with §150.0(k), the ballasts shall be certified to the Energy Commission to comply with the applicable requirements in §110.9.
§150.0(k)9A:	For single-family residential buildings, outdoor lighting permanently mounted to a residential building or other buildings on the same lot shall be high efficacy, or may be low efficacy if it meets all of the following requirements: i. Controlled by a manual ON and OFF switch that does not override to ON the automatic actions of Items ii or iii below; and ii. Controlled by a motion sensor not having an override or bypass switch that disables the motion sensor, or controlled by a motion sensor having a temporary override switch which temporarily bypasses the motion sensing function and automatically reactivates the motion sensor within 6 hours; and iii. Controlled by one of the following methods:

ompliance approach used. Exceptions may apply. Review the respective code section for more information. **Building Envelope Measures:** Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage. Fenestration products (except field-fabricated windows) have a label listing the certified U-Factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration that meets the requirements of §10-111(a) Exterior doors and windows are weatherstripped; all joints and penetrations are caulked and sealed. Insulation specified or installed meets Standards for Insulating Material. Indicate type and include on the CF2R. The thermal emittance and aged solar reflectance values of the cool roofing material meets the requirements of \$110.8(i) when the installation of a cool roof is specified on the CF1R. A radiant barrier shall have an emittance of 0.05 or less when the installation of a radiant barrier is specified on the CF1R. Minimum R-30 insulation in wood-frame ceiling; or the weighted average U-factor shall not exceed 0.031. Minimum R-19 in a §150.0(a): rafter roof alteration. Attic access doors shall have permanently attached insulation using adhesive or mechanical fasteners. The attic access shall be gasketed to prevent air leakage. Loose fill insulation shall conform with manufacturer's installed design labeled R-value. §150.0(b): Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less (R-19 in 2x6 or 0.074 maximum U-§150.0(c): Minimum R-19 insulation in raised wood-frame floor or 0.037 maximum U-factor. §150.0(d): In Climate Zones 14 and 16 a Class II vapor retarder shall be installed on the conditioned space side of all insulation in all exterior walls, vented attics and unvented attics with air-permeable insulation In Climate Zones 1-16 with unvented crawl spaces the earth floor of the crawl space shall be covered with a Class I or Class II In a building having a controlled ventilation crawl space, a Class I or Class II vapor retarder shall be placed over the earth floor or the crawl space to reduce moisture entry and protect insulation from condensation, as specified in the exception to Section Slab edge insulation shall: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3%; have water vapor permeance rate is no greater than 2.0 perm/inch, be protected from physical damage and UV light deterioration; and when installed as part of a heated slab floor meets the requirements of §110.8(g). Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors shall have a maximum Ufactor of 0.58; or the weighted average U-factor of all fenestration shall not exceed 0.58. Fireplaces, Decorative Gas Appliances and Gas Log Measures: Masonry or factory-built fireplaces have a closable metal or glass door covering the entire opening of the firebox. Masonry or factory-built fireplaces have a combustion outside air intake, which is at least six square inches in area and is §150.0(e)1B: equipped with a readily accessible, operable, and tight-fitting damper or a combustion-air control device. \$150.0(e)1C: Masonry or factory-built fireplaces have a flue damper with a readily accessible control. Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket, when that indoor air is vented to the outside §150.0(e)2: of the building, are prohibited. Space Conditioning, Water Heating and Plumbing System Measures: 110.0-§110.3: HVAC equipment, water heaters, showerheads, faucets and all other regulated appliances are certified to the Energy Commission Water heating recirculation loops serving multiple dwelling units meet the air release valve, backflow prevention, pump isolation valve, and recirculation loop connection requirements of §110.3(c)5. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces, household cooking appliances (appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool Heating and/or cooling loads are calculated in accordance with ASHRAE, SMACNA or ACCA using design conditions specified §150.0(h)1: in §150.0(h)2. Installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least five feet from the outlet of any §150.0(h)3A: Heating systems are equipped with thermostats that meet the setback requirements of §110.2(c).

with insulation having an installed thermal resistance of R-12 or greater.

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

The main electrical service panel shall have a minimum busbar rating of 200 amps.

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

indicated on the construction documents.

shall be provided to the occupant.

For areas of the roof designated as solar zone, the structural design loads for roof dead load and roof live load shall be clearly

interconnection will be the main service panel); a pathway for routing of plumbing from the solar zone to the water-heating

from the solar zone to the point of interconnection with the electrical service (for single family residences the point of

The construction documents shall indicate: a location for inverters and metering equipment and a pathway for routing of conduit

A copy of the construction documents or a comparable document indicating the information from §110.10(b) through §110.10(c)

The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a

future solar electric installation. The reserved space shall be: positioned at the opposite (load) end from the input feeder location of

2013 Low-Rise Residential Mandatory Measures Summary a. Photocontrol not having an override or bypass switch that disables the photocontrol; or b. Astronomical time clock not having an override or bypass switch that disables the astronomical time clock, and which is programmed to automatically turn the outdoor lighting OFF during daylight hours; or c. Energy management control system which meets all of the following requirements: At a minimum provides the functionality of an astronomical time clock in accordance with §110.9; meets the Installation Certification requirements in §130.4; meets the requirements for an EMCS in §130.5; does not have an override or bypass switch that allows the luminaire to be always ON; and, is programmed to automatically turn the outdoor lighting OFF during daylight hours. 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 shall comply with one of the §150.0(k)9B: following requirements: i. Shall comply with §150.0(k)9A; or ii. Shall comply with the applicable requirements in $\S110.9$, $\S130.0$, $\S130.2$, $\S130.4$, $\S140.7$ and $\S141.0$. For low-rise residential buildings with four or more dwelling units, outdoor lighting not regulated by §150.0(k)9B or 150.0(k)9D shall comply with the applicable requirements in \$110.9, \$130.0, \$130.2, \$130.4, \$140.7 and \$141.0. Outdoor lighting for residential parking lots and residential carports with a total of eight or more vehicles per site shall comply with the applicable requirements in §110.9, §130.0, §130.2, §130.4, §140.7 and §141.0. Internally illuminated address signs shall comply with §140.8; or shall consume no more than 5 watts of power as determined according to §130.0(c). Lighting for residential parking garages for eight or more vehicles shall comply with the applicable requirements for nonresidential garages in §110.9, §130.0, §130.1, §130.4, §140.6, and §141.0 In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less o \$150.0(k)12A: the floor area, permanently installed lighting for the interior common areas in that building shall be high efficacy luminaires or controlled by an occupant sensor. 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 shall i. Comply with the applicable requirements in §110.9, §130.0, §130.1, §140.6 and §141.0; and ii. Lighting installed in corridors and stairwells shall be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors shall be capable of turning the light fully On and Off from all designed paths o Solar Ready Buildings: Single family residences located in subdivisions with ten or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete, by the enforcement agency, on or after January 1, 2014, shall comply with the requirements of §110.10(b) through §110.10(e). 10.10(a)2: Low-rise multi-family buildings shall comply with the requirements of §110.10(b) through §110.10(d). The solar zone shall have a minimum total area as described below. The solar zone shall comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24. Part 9 or other Parts of Title 24 or in any requirements adopted by local jurisdiction. The solar zone total area shall 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 §110.10(b)1: buildings with roof areas greater than 10,000 square feet. For single family residences the solar zone shall be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone shall 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. 110.10(b)2: All sections of the solar zone located on steep-sloped roofs shall be oriented between 110 degrees and 270 degrees of true north. No obstructions, including but not limited to, vents, chimneys, architectural features, and roof mounted equipment, shall be §110.10(b)3A: located in the solar zone. Any obstruction, located on the roof or any other part of the building that projects above a solar zone shall be located at least twice \$110.10(b)3B: the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the

§110.10(b)4:

110.10(d):

2013 Low-Rise Residential Mandatory Measures Summary REVISIONS /1\ 1/4/2016 NOTE: Low-rise residential buildings subject to the Standards must comply with all applicable mandatory measures listed, regardless of the 田以印 **ALAN LEHMAN** Storage gas water heaters with an energy factor equal to or less than the federal minimum standards shall be externally wrapped Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank. For domestic hot water system piping, whether buried or unburied: 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, 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 must be insulated according to the requirements of TABLE 120.3-All domestic hot water pipes that are buried below grade must be installed in a water proof and non-crushable casing or sleeve that allows for installation, removal, and replacement of the enclosed pipe and insulation.

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