

Project Address: 1421 Beryl Street

Project Number: 1090909

SECTION 1: Construction Stormwater Best Management Practices (BMP) Requirements

All construction sites are required to implement construction BMPs per the performance standards in the Stormwater Standards Manual. Some sites are also required to obtain coverage under the State Construction General Permit (CGP)¹, administered by the

For all projects, complete Part A - If the project is required to submit a Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP), continue to Part B.

PART A – Determine Construction Phase Stormwater Requirements

- 1. Is the project subject to California's statewide General National Pollutant Discharge Elimination System (NPDES) permit for Stormwater Discharges Associated with Construction Activities, also known as the State Construction General Permit (CGP)? (Typically projects with land disturbance greater than or equal to 1 acre.)
- O Yes, SWPPP is required; skip questions 2-4. No; proceed to the next question.
- 2. Does the project propose construction or demolition activity, including but not limited to, clearing, grading, grubbing, excavation, or any other activity resulting in ground disturbance and/or contact with stormwater?
- Yes, WPCP is required; skip questions 3-4. O No; proceed to the next question.
- 3. Does the project propose routine maintenance to maintain the original line and grade, hydraulic capacity, or original purpose of the facility? (Projects such as pipeline/utility replacement)
- O Yes, WPCP is required; skip question 4. No; proceed to the next question.
- 4. Does the project only include the following Permit types listed below?
- Electrical Permit, Fire Alarm Permit, Fire Sprinkler Permit, Plumbing Permit, Sign Permit, Mechanical Permit, Spa Permit.
- Individual Right of Way Permits that exclusively include only ONE of the following activities: water service, sewer lateral,
- Right of Way Permits with a project footprint less than 150 linear feet that exclusively include only ONE of the following activities: curb ramp, sidewalk and driveway apron replacement, potholing, curb and gutter replacement, and retaining wall encroachments.
- ☐ Yes, no document is required.

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City's Stormwater Standards manual?

projects on public or private land.

PART E – Determine if Project is a Priority Development Project (PDP)

any natural slope that is twenty-five percent or greater.

or more of impervious surface (collectively over the project site).

PART D - PDP Exempt Requirements

Check one of the boxes below and continue to Part B

- If you checked "Yes" for question 1, an SWPPP is REQUIRED continue to Part B
- (a) If you checked "No" for question 1 and checked "Yes" for question 2 or 3, a WPCP is REQUIRED. If the project proposes less than 5,000 square feet of ground disturbance AND has less than a 5-foot elevation change over the entire project area, a Minor WPCP may be required instead. Continue to Part B
- () If you check "No" for all questions 1-3 and checked "Yes" for question 4, Part B does not apply, and no document is required. Continue to Section 2.

¹ More information on the City's construction BMP requirements as well as CGP requirements can be found at http://www.sandiego.gov/stormwater/regulations/index.shtml

PDP Exempt projects are required to implement site design and source control BMPs.

1. Does the project ONLY include new or retrofit sidewalks, bicycle lanes, or trails that:

O Yes, PDP exempt requirements apply

No, proceed to next question

O Yes, PDP exempt requirements apply No, proceed to next question

accordance with the Green Streets guidance in the City's Stormwater Standards Manual?

• If "no" is checked for all questions in Part D, continue to Part E.

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• If "yes" is checked for any questions in Part D, continue to Part F and check the box labeled "PDP Exempt."

• Are designed and constructed to be hydraulically disconnected from paved streets and roads? Or;

the project site. This includes commercial, industrial, residential, mixed-use, and public development

2. Redevelopment project that creates and/or replaces 5,000 square feet or more of impervious

surfaces on an existing site of 10,000 square feet or more of impervious surfaces. This includes

commercial, industrial, residential, mixed-use, and public development projects on public or private land.

for consumption, including stationary lunch counters and refreshment stands selling prepared foods and

or more of impervious surface (collectively over the project site) and where the development will grade on

6. New development or redevelopment of streets, roads, highways, freeways, and driveways. The

project creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the

drinks for immediate consumption (Standard Industrial Classification (SIC) 5812), and where the land

development creates and/or replaces 5,000 square feet or more of impervious surface.

• Are designed and constructed to direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable

2. Does the project ONLY include retrofitting or redeveloping existing paved alleys, streets or roads designed and constructed in

Projects that match one of the definitions below are subject to additional requirements, including preparation of a Stormwater Quality

• If "yes" is checked for any number in Part E, continue to Part F and check the box labeled "Priority Development Project." • If "no" is checked for every number in Part E, continue to Part F and check the box labeled "Standard Development Project."

1. New development that creates 10,000 square feet or more of impervious surfaces collectively over OYes ONO

3. **New development or redevelopment of a restaurant.** Facilities that sell prepared foods and beverages **O**Yes **O**No

4. **New development or redevelopment on a hillside.** The project creates and/or replaces 5,000 square feet Oyes ONO

5. New development or redevelopment of a parking lot that creates and/or replaces 5,000 square feet ○ Yes No

• Are designed and constructed with permeable pavements or surfaces in accordance with the Green Streets guidance in the

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PART B - Determine Construction Site Priority

Complete Part B and continue to Section 2

A. Projects located in the ASBS watershed.

Section 2: Construction Stormwater BMP Requirements

PART C - Determine if Not Subject to Permanent Stormwater Requirements

• If "no" is checked for all the numbers in Part C: Continue to Part D.

1. ASBS

2. High Priority

3. Medium Priority

4. Low Priority

Requirements.'

O Yes

No

from adjacent lands).

have the potential to contact stormwater?

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This prioritization must be completed within this form, noted on the plans, and included in the SWPPP or WPCP. The city reserves the

right to adjust the priority of projects both before and after construction. Construction projects are assigned an inspection frequency

based on if the project has a "high threat to water quality." The City has aligned the local definition of "high threat to water quality" to

specific sediment risk and receiving water risk. Additional inspection is required for projects within the Areas of Special Biological Sig-

nificance (ASBS) watershed. NOTE: The construction priority does NOT change construction BMP requirements that apply to projects;

A. Projects that qualify as Risk Level 2 or Risk Level 3 per the Construction General Permit (CGP) and are not located in the

C. WPCP projects (>5,000 square feet of ground disturbance) located within the Los Peñasquitos watershed management

B. Projects that qualify as LUP Type 2 or LUP Type 3 per the CGP and are not located in the ASBS watershed.

B. Projects that qualify as Risk Level 1 or LUP Type 1 per the CGP and are not located in an ASBS watershed.

A. Projects not subject to a Medium or High site priority designation and are not located in an ASBS watershed.

Projects that are considered maintenance or otherwise not categorized as "new development projects" or "redevelopment projects"

• If "yes" is checked for any number in Part C: Proceed to Part F and check "Not Subject to Permanent Stormwater BMP

1. Does the project only include interior remodels and/or is the project entirely within an existing enclosed structure and does not

2. Does the project only include the construction of overhead or underground utilities without creating new impervious surfaces?

replacement, resurfacing or reconfiguring surface parking lots or existing roadways without expanding the impervious footprint,

3. Does the project fall under routine maintenance? Examples include but are not limited to roof or exterior structure surface

A. Projects that are not located in an ASBS watershed or designated as a High priority site.

Additional information for determining the requirements is found in the Stormwater Standards Manual.

according to the Stormwater Standards Manual are not subject to Permanent Stormwater BMPs.

and routine replacement of damaged pavement (grinding, overlay and pothole repair).

the risk determination approach of the State Construction General Permit (CGP). The CGP determines risk level based on project

rather, it determines the frequency of inspections that will be conducted by city staff.

7. New development or redevelopment discharging directly to an environmentally sensitive area. The project creates and/or replaces 2,500 square feet of impervious surface (collectively over the project site), and discharges directly to an Environmentally Sensitive Area (ESA). "Discharging directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or

open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows

8. New development or redevelopment projects of retail gasoline outlet (RGO) that create and/or replaces 5,000 square feet of impervious surface. The development project meets the following criteria: (a) 5,000 square feet or more or (b) has a projected Average Daily Traffic (ADT) of 100 or more vehicles per

9. New development or redevelopment projects of an automotive repair shop that creates and/or replaces 5,000 square feet or more of impervious surfaces. Development projects categorized in any one

of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534 or 7536-7539 10. **Other Pollutant Generating Project.** These projects are not covered in any of the categories above but OYes No

involve the disturbance of one or more acres of land and are expected to generate post-construction phase pollutants, including fertilizers and pesticides. This category does not include projects creating less than 5,000 square feet of impervious area and projects containing landscaping without a requirement for the regular use of fertilizers and pesticides (such as a slope stabilization project using native plants). Impervious area calculations need not include linear pathways for infrequent vehicle use, such as emergency maintenance access or bicycle and pedestrian paths if the linear pathways are built with pervious surfaces

PART F - Select the appropriate category based on the outcomes of Part C through Part E

or if runoff from the pathway sheet flows to adjacent pervious areas.

1. The project is **NOT SUBJECT TO PERMANENT STORMWATER REQUIREMENTS** OYes No 2. The project is a **STANDARD DEVELOPMENT PROJECT**. Site design and source control BMP requirements

apply. See the Stormwater Standards Manual for guidance. 3. The Project is **PDP EXEMPT**. Site design and source control BMP requirements apply. Refer to the

5/2/2023

4. The project is a **PRIORITY DEVELOPMENT PROJECT**. Site design, source control and structural pollutant control BMP requirements apply. Refer to the Stormwater Standards Manual for guidance on determining if the project requires hydromodification plan management.

Sarah Potter

Stormwater Standards Manual for guidance.

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Page 2

"Minor" Water Pollution DS-570 Control Plan (MWPCP)

MWPCP REQUIREMENTS

6250

Minimum Required Best Minimum

Required Best Management

Practices

The City requires a Water Pollution Control Plan (WPCP), a Minor Water Pollution Control Plan (MWPCP) or a Storm Water Pollution Prevention Plan (SWPPP), for all construction projects that have potential for storm water pollution. Some construction project types, such as interior plumbing, electrical and mechanical work, may be considered exempt. The appropriate plan is determined by the following guidelines:

- Any project subject to the Construction General Permit (CGP) (typically projects with 1 acre or more of ground disturbance) requires a SWPPP and may not utilize a WPCP or MWPCP. If coverage under the CGP (Permit
- which requires a SWPPP) is not required for the project, see below: The following approval types (see Form DS-3032) require a WPCP: Grading, Public Right-of-Way, and Demoli-
- tion/Removal. Exceptions may be made allowing use of this MWPCP for minor work.
- The following approval types (see Form DS-3032) require a WPCP whenever a submittal for Drainage and Grades review is required: Exceptions may be made allowing use of this MWPCP for minor work.
- This MWPCP may be utilized for projects that create less than 5,000sf of ground disturbance and have less than a 5ft elevation differential over the entire project area.

NOTE: It is the responsibility of the project owner to ensure that all construction activities comply with local and state regulations, including San Diego Municipal Code Sect. 43.03. The guidance and template provided here is for the applicants' convenience and do not alleviate responsibility on part of the project owner to determine the appropriate level of BMP planning and implementation to prevent pollutant discharges.

STEP 1. IDENTIFY RELEVAN	NT PROJECT INFORMATION		2.	Will there be asphalt paving, including patching? Reference Table 1 items C and E
Applicant Name: Sarah Potter	Contact Name: Sarah Potter	Project Number:	3.	Will there be slurries from mortar mixing, coring, or concrete saw c Reference Table 1 items C and E
Contact Information:				
Mailing Address:	City: Stat	te: Zip Code:	4.	Will there be solid wastes from concrete demolition and removal, we Reference Table 1 items C and E
1236 CHALCEDONY STREET, SAN				Reference Table 1 Items C and E
Telephone No.:	E-mail Address:			
650-475-6868	sarah@cle	ar-story.com	5.	Will there be stockpiling (soil, compost, asphalt, concrete, solid was Reference Table 1 items C and E
Project Information:				Reference Table I Items C and E
Address:	City: Stat	ze: Zip Code:	6.	Will there be dewatering operations?
1421 BERYL STREET	San Diego CA	92109		Reference Table 1 items B and C
APN:	Permit Application	Number:		
416-301-22-00			7.	Will there be temporary on-site storage of construction materials, i
Brief Project Description:				and soil stabilization materials, treated lumber, rebar, and plated n
ABATE LEAD PAINT & ASBESTOS PER PLAN RENOVATE EXISTING MAIN DWELLING, LIKE FOF DEMO EXISTING RUMPUS ROOM	R LIKE (NEW WINDOWS, UPGRADE ELECTRICAL, UPGRADE F	'LUMBING, NEW INSULATION, NEW SHEETROCK, NOW ROO	DF)	Reference Table 1 items D and E
			8.	Will trash or solid waste product be generated from this project?
				Reference Table 1 item E
Improvements (overall square foo	tage): Estimate Project Start Date	e: Estimate Project Finish Dat	te: 9.	Will construction equipment be stored on site (e.g.: fuels, oils, truck
1027 SF	6/1/2023	10/1/2023		Reference Table 1 item E
Total Lot Size in ft ² :	Estimated Amount of Distu			
	Differential Acreage:	Differential over Project Area	u: 10.	Will Portable Sanitary Services ("Porta-potty") be used on the site?

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MINIMUM REQUIRED STANDARD CONSTRUCTION STORMWATER BMPs

City of San Diego • Development Services Department • "Minor" Water Pollution Control Plan (MWPCP)

Stormwater

Handbook Detail | section below

BMP from each

A. Select Erosion Control Method			
Vegetation Stabilization Planting	SS-2, SS-4	П	
(Summer)	55-2, 55-4		
Hydraulic Stabilization Hydroseeding (Summer)	SS-4		
Bonded Fiber Matrix or Stabilized Fiber Matrix (Winter)	SS-3		
Physical Stabilization Erosion Control Blanket (Winter)	SS-7		
Lot Perimeter Protection Detail	SC-2		
Mulch, Straw, Woodchips, Soil Application	SS-6, SS-8	X	
B. If Runoff or Dewatering Operation	on is concentrated, v	velocity must be cont	rolled using an energy dissipater
Energy Dissipater Outlet Protection	SS-10		NO DEWATERING
C. Select Sediment Control method	for all disturbed are	eas (Chose at least on	e)
Silt Fence	SC-1		
Fiber Rolls (Straw Wattles)	SC-5	X	
Gravel Bags	SC-6, SC-8		
Dewatering Filtration	NS-2		
Storm Drain Inlet Protection	SC-10		
D. Select method for preventing off	site tracking of sedi	ment (choose at least	one)
Stabilized Construction Entrance	TC-1		
Entrance/Exit Tire Wash	TC-3		
Street Sweeping & Vacuuming	SC-7	X	
E. Select the General Site Managem	ent BMPs for each v	waste that will be on	site
Material Delivery & Storage	WM-1	X	Drip pan will be used with porta-potty
Spill Prevention & Control	WM-4	Ø	Waste will be consolidated and removed by
Concrete Waste Management	WM-8	X	debris company promptly or dumpster will be used for waste stockpiling and removal.
Solid Waste Management	WM-5		
Sanitary Waste Management	WM-9		
Hazardous Waste Management	WM-6		

The applicant must print and sign the following certification before a permit will be issued. I have read and understand that the City of San Diego has adopted minimum requirements for managing urban runoff, including storm water, from construction and land development activities. I certify that the BMPs selected on this form will be implemented to minimize the potentially negative impacts of this project's construction and land development activities on water quality. he selected BMPs to ensure their effectiveness. I also understand that nonay result in enforcement by the City, including fines, cease and desist orders, compliance with the City's

or other actions.

Signature:

4/7/2023

City of San Diego • Development Services Department • "Minor" Water Pollution Control Plan (MWPCP) Page 2 of 2

STEP 2: IDENTIFY CONSTRUCTION STORM WATER BMPs

Unprotected construction sites have the potential to discharge sediment and other pollutants into local waterways. All construction projects are required to reduce pollution to the maximum extent practicable by implementing best management practices (BMPs). Part 2 of the Storm Water Standards Manual outlines the requirements for Construction Stormwater BMPs. There are five categories:

Erosion control practices

trenching.)

Reference Table items A

Reference Table 1 item E

ENFORCING AGENCY PER SECTION 4.406.1

Page 3 of 3

Check at least one | If your project requires no BMP from

any of the sections below, please

explain within space provided

- Velocity reduction
- Sediment control practices Offsite sediment tracking control
- General site and materials management

BMPs from each of the five categories must be used together as a system in order to prevent potential discharges.

If you answer "Yes" to any of the questions below, your project is subject to Table 1 on the following page (Minimum Required Standard Construction Stormwater BMPs). As noted in the table, please select at least the minimum number of required BMPs, or as many as are feasible for your project. If no BMP is selected, an explanation must be given in the box provided. The following questions are intended to aid in determining construction BMP requirements for your project, please check box either "Yes" or "No".

Will there be soil disturbing activities that will result in exposed soil areas? (This includes minor grading and

	2.	Will there be asphalt paving, including patching? Reference Table 1 items C and E	☐ Yes	☑ N
	3.	Will there be slurries from mortar mixing, coring, or concrete saw cutting? Reference Table 1 items C and E	☐ Yes	✓ N
	4.	Will there be solid wastes from concrete demolition and removal, wall construction, or form work. Reference Table 1 items C and E	rk? 🏿 Yes	□ N
	5.	Will there be stockpiling (soil, compost, asphalt, concrete, solid waste) for over 24 hours? Reference Table 1 items C and E	☐ Yes	✓ N
	6.	Will there be dewatering operations? Reference Table 1 items B and C	☐ Yes	✓ N
	7.	Will there be temporary on-site storage of construction materials, including mortar mix, raw la and soil stabilization materials, treated lumber, rebar, and plated metal fencing materials? Reference Table 1 items D and E	ndscapi:	Ü
	8.	Will trash or solid waste product be generated from this project? Reference Table 1 item E	✓ Yes	□ N
1	9.	Will construction equipment be stored on site (e.g.: fuels, oils, trucks, etc.?		

ARCHITECTURAL DESIGN:

☐ Yes ☑ No

STRUCTURAL DESIGN:

CONSTRUCTION WASTE REDUCTION, DISPOSAL REGYOUNG

A MINIMUM OF 75% OF THE NON-HAZARDOUS CONSTRUCTION AND DEMOLITION WASTE GENERATED AT THIS SITE SHALL BE DIVERTED TO AN OFFSITE

BUILDING MAINTENANCE AND OPERATION

RECYCLE, DIVERSION, OR SALVAGE FACILITY

CALGREEN NOTES

OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY, OR SIMILAR METHOD ACCEPTABLE TO THE

2. BUILDING MATERIALS WITH VISABLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND

FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19% MOISTURE CONTENT. MOISTURE CONTENT SHALL BE CHECKED PRIOR TO FINISH MATERIAL BEING APPLIED PER

3. UPON REQUEST, VERIFICATION OF COMPLIANCE WITH THIS CODE MAY INCLUDE TOWNS HOLD HON-

DOCUMENTATION, PLANS, SPECIFICATIONS, BUILDER OR INSTALLER CERTIFICATION PLANS, SPECIFICATIONS, BUILDER OR INSTALLER CERTIFICATION OF THE PROPERTY OF THE PROP

REPORTS, OR OTHER METHODS ACCEPTABLE TO THE BUILDING OFFICIAL WHICH SHOW SUBSTANTIAL

1. ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUIT OR OTHER OPENINGS IN

SOLE/BOTTOM PLATEA AT EXTERIOR WALLS SHALL BE RODENT PROOFED BY CLOSING SUCH

PRJ-10909 Ana Rios

OPERATION AND MAINTENANCE MANUAL WILL BE PROVIDED TO THE BUILDING OCCUPANT OR OWNER PER SECTION 4.410.0

POLLUTANT CONTROL

1. AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATION EQUIPMENT, ALL DUCTS AND OTHER RELATED AIR DISTRIBUTION COMPONENET OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL. OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF WATER, DUST OR DEBRIS, WHICH MAY ENTER THE SYSTEM PER SECTION 4.504.1

2. PAINTS AND COATING SHALL COMPY WITH VOC LIMITS PER SECTION 4.504.2.2

3. AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC AND OTHER REQUIREMENTS PER SECTION 4.504.2.3

4. DOCUMENTATION WILL BE PROVIDED, AT THE REQUEST OF THE BUILDING DIVISION, TO VERIFY COMPLIANCE WITH VOC FINISH MATERIAL PER SECTION 4.504.2.4

5. CARPET SYSTEMS INSTALLED IN THE BUILDING INTERIOR SHALL MET THE TESTING AND PRODUCT REQUIREMENTS PER SECTION 4.504.3

6. WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80% OF THE FLOOR AREA RECEIVING RESILIENT FLOORING WILL COMPLY WITH THE REQUIREMENTS PER SECTION 4.504.4

7. HARDWOOD PLYWODD, PARTICLE BOARD, AND MDF COMPOSITE WODD PRODUCTS USED ON THE INTERIOR AND EXTERIOR OF THE BUILDING SHALL COMPLY WITH THE LOW FORMALDEHYDE EMISSION STANDARDS OER SECTION 4.504.5

SITE DEVELOPMENT

A PLAN HAS BEEN DEVELOPED AND WILL BE IMPLEMENTED TO MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION PER SECTION 4.106.2 & 4.106.3 SEE A-6 LANDSCAPE PLAN

WATER EFFICIENCY AND CONSERVATION

AND INSTALLED AT THE TIME OF THE FINAL IMSPECTION SHALL COMPLY WITH SECTION 4.304

AUTOMATIC IRRIGATION SYSTEM CONTROLLER FOR LANDSCPAING PROVIDED BY THE BUILDER

WATER MANAGEMENT AND USE REDUCTION

1. FINISHED GRADE SHOULD BE SLOPED AT LEAST 5% FOR THE FIRST 10' FROM THE BUILDING CBC 2. 2% SLOPE AT ALL FLATWORK AND PAVING

3. ALL DOWNSPOUTS DIRECTED TO 24" SPLASHBLOCKS. SPLASHBLOCKS TO DIRECT WATER TO AWAY

FROM STRUCTURE AND TOWARDS LANDSCAPED FOR WATER RETENTION.

STO

REVISIONS

PROJECT NUMBER: PRJ-1090909

ClearStory Construction sarah@clear-story.con

RELATED DEMO PROJECT:

1421 BERYL STREET DIEGO, CALIFORNIA, 92

SCALE:

AS SHOWN

STORMWATER MANAGEMENT &

GREEN BUILDING

SHEET NUMBER

DATE

5/10/2023

DRAWN:

SHEET NAME

GENERAL INFORMATION Project Name Residential Building Run Title Title 24 Analysis Project Location 1421 Beryl Street Standards Version 2022 City San Diego 05 **Zip code** 92109 07 Software Version EnergyPro 9.1 Climate Zone Front Orientation (deg/ Cardinal) 11 Number of Dwelling Units 1 Building Type | Single family Project Scope | Addition and/or Alteration Number of Bedrooms Number of Stories 1 Addition Cond. Floor Area (ft²) 15 Existing Cond. Floor Area (ft²) 1027 Fenestration Average U-factor 0.32 Glazing Percentage (%) 18.50%

20		ADU Bedroom Count	n/a	
COMP	LIANCE RE	SULTS		
	01	Building Complies with Computer	Performance	
	02	Building does not require field tes	ting or HERS verification	
	03	This building incorporates one or	more Special Features shown below	

Registration Date/Time: Registration Number:

CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Generated: 2023-04-10 09:31:21 Report Version: 2022.0.000 Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Residential Building

Calculation Description: Title 24 Analysis

Total Cond. Floor Area (ft²) 1027

Calculation Date/Time: 2023-04-10T09:31:01-07:00 Input File Name: LivewireVenturesRemodel.ribd22x

HERS Provider:

HERS Provider:

CF1R-PRF-01E

(Page 4 of 9)

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft ²)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
North Wall	First Floor	Default Wall Prior to 197	0	Front	288	82.1	90	none	Existing	No
East Wall	First Floor	Default Wall Prior to 197	90	Left	272	47.9	90	none	Existing	No
South Wall	First Floor	Default Wall Prior to 197	180	Back	288	57.6	90	none	Existing	No
West Wall	First Floor	Default Wall Prior to 197	270	Right	272	39.2	90	none	Existing	No
Roof (Slope 0/12)	First Floor	Default Roof Prior to 197	n/a	n/a	947	n/a	n/a		Existing	No
Roof (Slope 5.5/12)	First Floor	Default Roof Prior to 197	n/a	n/a	80	n/a	n/a		Existing	No
Raised Floor	First Floor	Default Floor Crawlspace	n/a	n/a	1027	n/a	n/a		Existing	No

[ATTIC									
	01	02	03	04	05	06	07	08	09	10
	Name	Construction	Туре	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof	Status	Verified Existin
Γ	Attic First Floor	Attic RoofFirst Floor	Ventilated	0	0.1	0.85	No	No	Existing	No

FENESTRATION	/ GLAZING														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Туре	Surface	Orientatio n	Azimuth	Width (ft)	Heigh t (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Window (New)	Window	North Wall	Front	0			1	62.1	0.32	NFRC	0.23	NFRC	Bug Screen	Altered	No

Registration Date/Time: Registration Number:

Report Generated: 2023-04-10 09:31:21 CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Residential Building Calculation Description: Title 24 Analysis

CF1R-PRF-01E Calculation Date/Time: 2023-04-10T09:31:01-07:00 (Page 7 of 9) Input File Name: LivewireVenturesRemodel.ribd22x

WATER HEA	TERS													
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency Type	Efficiency	Rated Input Type	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	Tank Location	Status	Verific Existi Condit
DHW Heater 1	Gas	Small Storage	1	50	EF	0.57	Btu/Hr	75000	0	80	n/a		Existing	No

WATER HEATING - HERS VE	RIFICATION					
01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water H Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required

_												
	SPACE CONDITI	ONING SYSTEMS	5									
	01	02	03	04	05	06	07	08	09	10	11	12
	Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Existing HVA System
	HVAC System1	Heating and cooling system other	Heating Component 1	1	Cooling Component 1	1	HVAC Fan 1	Air Distribution System 1	n/a	Existing	No	

HVAC - HEATING UNIT TYPES			
01	02	03	04
Name	System Type	Number of Units	Heating Efficiency
Heating Component 1	Central gas furnace	1	AFUE-78

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01E Calculation Date/Time: 2023-04-10T09:31:01-07:00 Project Name: Residential Building (Page 2 of 9) Calculation Description: Title 24 Analysis Input File Name: LivewireVenturesRemodel.ribd22x

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft ² -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft ² -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft ² -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft ² -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2
Space Heating	0	19.02	0	17.63	0	1.39
Space Cooling	0	16.58	0	17.79	0	-1.21
IAQ Ventilation	0	0	0	0	0	0
Water Heating	0	50.86	0	50.86	0	0
Self Utilization/Flexibility Credit						
Efficiency Compliance Total	0	86.46	0	86.28	0	0.18
Photovoltaics		0		0		
Battery				0		
Flexibility						
Indoor Lighting	0	8.76	0	8.76		
Appl. & Cooking	0	33.05	0	33.07		
Plug Loads	0	46.56	0	46.56		
Outdoor Lighting	0	1.89	0	1.89		

HERS Provider: Registration Number: Registration Date/Time:

Report Version: 2022.0.000

Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01E Project Name: Residential Building Calculation Date/Time: 2023-04-10T09:31:01-07:00 (Page 5 of 9) Calculation Description: Title 24 Analysis Input File Name: LivewireVenturesRemodel.ribd22x FENESTRATION / GLAZING 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

		US	04	05	UB	07	08	09	10	11	12	13	14	15	16
ame	Туре	Surface	Orientatio n	Azimuth	Width (ft)	Heigh t (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
ndow ew) 2	Window	East Wall	Left	90			1	31.2	0.32	NFRC	0.23	NFRC	Bug Screen	New	NA
ndow ew) 3	Window	South Wall	Back	180			1	57.6	0.32	NFRC	0.23	NFRC	Bug Screen	New	NA
ndow ew) 4	Window	West Wall	Right	270			1	39.2	0.32	NFRC	0.23	NFRC	Bug Screen	New	NA
UE DOORS	<u> </u>		•												
ew) 3 ndow	Window						1								_

OPAQUE DOORS					
01	02	03	04	05	06
Name	Side of Building	Area (ft ²)	U-factor	Status	Verified Existing Condition
Door	North Wall	20	0.5	Existing	No
Door 2	East Wall	16.7	0.5	Existing	No

OPAQUE SURFACE CONST	RUCTIONS						
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Default Wall Prior to 197	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-O	None / None	0.361	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: 3 Coat Stucco
Attic RoofFirst Floor	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-O	None / 0	0.633	Roofing: 5 PSF (Normal Gravel) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4

Registration Number: Registration Date/Time: **HERS Provider:**

Report Generated: 2023-04-10 09:31:21 CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01E Calculation Date/Time: 2023-04-10T09:31:01-07:00 (Page 8 of 9) Project Name: Residential Building Calculation Description: Title 24 Analysis Input File Name: LivewireVenturesRemodel.ribd22x

•								
HVAC - COOLING UN	IT TYPES							
01	02	03	04	05	06	07	08	09
Name	System Type	Number of Units	Efficiency Metric	Efficiency EER/EER2/CEER	Efficiency SEER/SEER2	Zonally Controlled	Mulit-speed Compressor	HERS Verification
Cooling Component 1	No Cooling	1		n/a	n/a	Not Zonal	Single Speed	n/a

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Nama	Time	Decien Tone	Duct R-va			ıct ition	Surfac	e Area	Province Duret	Dust Lasks	HERS	Status	Verified	Existing	New Duct
Name	Type	Design Type	Suppl y	Retur n	Suppl y	Retur n	Suppl y	Retur n	bypass Duct	Duct Leakage	Verification	Status	Existing Condition	Distribution system	25 ft
Air Distribution System 1	Unconditio ned crawl space	Non- Verified	R- 4.2	R-6	Cra wl Spa ce	Cra wl Spa ce	n/a	n/a	No Bypass Duct	Existing (not specified)	Air Distribution System 1-hers-dist	Existing + New	No		No

		2 11313 41131	
LINAS FAN SUSTENAS			
HVAC - FAN SYSTEMS			
01	02	03	04
Name	Туре	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.58	n/a

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building Calculation Date/Time: 2023-04-10T09:31:01-07:00 Calculation Description: Title 24 Analysis Input File Name: LivewireVenturesRemodel.ribd22x

ENERGY USE INTENSITY

ENERGY OSE INTENSITY				
	Standard Design (kBtu/ft ² - yr)	Proposed Design (kBtu/ft ² - yr)	Compliance Margin (kBtu/ft ² - yr)	Margin Percentage
Gross EUI ¹	33.58	33.31	0.27	0.8
Net EUI ²	33.58	33.31	0.27	0.8
Notes 1. Gross EUI is Energy Use Total (no	t including PV) / Total Building Area.			

CF1R-PRF-01E

Report Generated: 2023-04-10 09:31:21

(Page 3 of 9)

2. Net EUI is Energy Use Total (including PV) / Total Building Area.

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

New ductwork added is less than 25 ft. in length Ducts in crawl space

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

BUILDING - FEATURES INFORMA	ATION					
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft ²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Residential Building	1027	1	2	1	0	1

	 			_		
ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft ²)	Avg. Ceiling Height	Water Heating System 1	Status
First Floor	Conditioned	HVAC System1	1027	8	DHW Sys 1	Existing Unchanged

Registration Date/Time: **HERS Provider:** Registration Number:

Report Version: 2022.0.000

Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CA Building Energy Efficiency Standards - 2022 Residential Compliance

CF1R-PRF-01E Calculation Date/Time: 2023-04-10T09:31:01-07:00 (Page 6 of 9) Project Name: Residential Building Calculation Description: Title 24 Analysis Input File Name: LivewireVenturesRemodel ribd22x

Calculation Description:	Title 24 Analysis		Input	File Name: Liv	ewire Ventures Ren	nodel.ribd2	?2x
OPAQUE SURFACE CONSTR	RUCTIONS				•		
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Default Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.216	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2
Default Roof Prior to 197	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 16 in . O . C.	R-11	None / None	0.083	Over Ceiling Joists: R-1.9 in: Cavity / Frame: R-9.1 / 2x Inside Finish: Gypsum Boa

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

WATER HEATING	G SYSTEMS										
01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)	Status	Verified Existing Condition	Existing V Heatin Systen
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)	Existing	No	

Registration Date/Time: **HERS Provider:** Registration Number: CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2023-04-10 09:31:21 Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01E Project Name: Residential Building Calculation Date/Time: 2023-04-10T09:31:01-07:00 (Page 9 of 9) Input File Name: LivewireVenturesRemodel.ribd22x Calculation Description: Title 24 Analysis DOCUMENTATION AUTHOR'S DECLARATION STATEMENT 1. I certify that this Certificate of Compliance documentation is accurate and complete.

Rick Rocklewitz	Rick Rocklewitz CEPE
Company:	Signature Date: 4/10/2023
NRG Compliance, LP	
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	·
I certify the following under penalty of perjury, under the laws of the State of	of California:
1. I am eligible under Division 3 of the Business and Professions Co	ode to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications	s identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
 The building design features or system design features identified calculations, plans and specifications submitted to the enforcem 	d on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, nent agency for approval with this building permit application.
Responsible Designer Name:	Responsible Designer Signature:
Sarah Potter	M B A
Company:	Date Signed:
Clearstory Construction	4/10/2023
Address:	License:
1236 Chalcedony Street	994301

HERS Provider:

ARSTOR

REVISIONS

PROJECT NUMBER: PRJ-1090909 ARCHITECTURAL DESIGN: ClearStory Construction Sarah Potter

sarah@clear-story.com (650) 475-6868 STRUCTURAL DESIGN:

RELATED DEMO PROJECT: PRJ-1092811

This set of plans and specifications shall be kept on the site of the structure of work at all times during which work authorized by these plans is in progress, and shall be made available to City officials upon request. It is unlawful to change, modify, or alter the approved plans and specifications without authorization of the Building Official. The stamping of these plans and specifications SHALL NOT be held to permit nor approve the violation of any City, County, State, or Federal laws, nor restrictions.

5/22/2023, 10:50:09 AM PRJ-1090909 **Ana Rios**

BERYL (

1421 BERYL STREET DIEGO, CALIFORNIA, (

DATE 5/10/2023

SCALE:

AS SHOWN

DRAWN:

SHEET NAME

TITLE 24-1

SHEET NUMBER

.T1

CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Number:

Report Version: 2022.0.000 Schema Version: rev 20220901

Registration Date/Time:

HERS Provider:

Report Generated: 2023-04-10 09:31:21 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Number:

TOTAL COMPLIANCE

CA Building Energy Efficiency Standards - 2022 Residential Compliance

Report Version: 2022.0.000 Schema Version: rev 20220901

Registration Date/Time:

Report Generated: 2023-04-10 09:31:21

HERS Provider:

Report Generated: 2023-04-10 09:31:21

CA Building Energy Efficiency Standards - 2022 Residential Compliance

San Diego, CA 92109

Registration Number:

Report Version: 2022.0.000

Registration Date/Time:

Schema Version: rev 20220901

650-475-6868

Report Generated: 2023-04-10 09:31:21

RESI	DENT	IAL MEA	SURES S	SUMM	ARY						RMS-1
Project Na	ame				ling Type				Addition Alone		Date
		res Remode	1		200		ti Family		Existing+ Addition		4/10/2023
Project Address 1421 Beryl Street San Diego				Tamerina and gy camera and process and pro				Addition	# of Units		
			ego .	C,	A CIIIII		e 07		1,027	0	1
	ATION			Con	:4	Area (<i>ft</i> ²)	c.		al Factures		Ctatus
	ruction			Cav			ગ	oe ci	al Features		Status
-loor		ramed w/Crawl S	Space		sulation	1,027					Existing
Wall	Wood Fi	100			sulation	206					Existing
Door	Opaque				sulation	20					Existing
Wall	Wood F				sulation	224					Existing
Door	Opaque			- no ins		17					Existing
Nall	Wood F				sulation	230					Existing
Wall	Wood F				sulation	233					Existing
Roof		ramed Attic	ř	R 11		947	1987	-			Existing
	STRAT		Total Area:	190	cg	Percentag	J -	8.5%	New/Altered Avera	_	0.32
Orient	ation	Area(ft ²)	U-Fac	SHGC	Overh	nang	Sidefi	ins	Exterior Sh	ades	Status
Front (N)		62.1	0.320	0.23	none		none		N/A		Altered
_eft (E)		31.2	0.320	0.23	none		none	10	N/A		New
Rear (S)		57.6	0.320	0.23	none		none		N/A		New
Right (W)		39.2	0.320	0.23	none		none		N/A		New
		200	7/								
Шулс	eveti	EMC									
	SYSTI		Min Ef	f Co	alina		Min		The		Status
Qty.	Heatin	g	Min. Ef		oling			. Eff		rmostat	Status
Qty.	Heatin		Min. Ef		oling Cooling			. Eff	The		Status Existing
Qty.	Heatin	g									
Qty.	Heatin Gas Centr	g ral Furnace							Setback	K	
Qty.	Heatin Gas Centr	g ral Furnace	78% AFUE	. No	Cooling		14.0	SEER	Setback	Duct	Existing
Qty.	Heatin Gas Centr	g ral Furnace		. No		Duc		SEER	Setback	K	
Qty. 1 HVAC Locati	Heatin Gas Centr DISTR on	g ral Furnace	78% AFUE	. No	Cooling	Duc Crawls	14.0 s	SEER	Setback	Duct	Existing
Qty. f HVAC Locati	Heatin Gas Centr DISTR on	g ral Furnace RIBUTION He	78% AFUE	Co	Cooling		14.0 s	SEER	Setback	Ouct R-Value	Existing Status
Qty. f HVAC Locati	Heatin Gas Centr DISTR on	g ral Furnace RIBUTION He	78% AFUE	Co	Cooling		14.0 s	SEER	Setback	Ouct R-Value	Existing Status
Qty. 1 HVAC Locati	Heatin Gas Centr DISTR on	g ral Furnace RIBUTION He Ducte	78% AFUE	Co	Cooling		14.0 s	SEER	Setback	Ouct R-Value	Existing Status
Qty. 1 HVAC Locati	Heatin Gas Centr DISTR ion stem	g ral Furnace RIBUTION He Ducte	78% AFUE eating	Co	Cooling	Crawls	14.0 s	seer	Setback	Ouct R-Value	Existing Status
Qty. 1 HVAC Locati	Heatin Gas Centr DISTR on	g ral Furnace RIBUTION He Ducte	78% AFUE eating	Co Duct	Cooling oling	Crawls	14.0 s	seer	Setback	Ouct R-Value	Status Altered
Qty. 1 HVAC Locati	Heatin Gas Centr DISTR ion stem	g ral Furnace RIBUTION He Ducte	78% AFUE eating	Co Duct	Cooling oling	Crawls	14.0 s	seer	Setback	Ouct R-Value	Status Altered
Qty. 1 HVAC Locati	Heatin Gas Centr DISTR ion stem	g ral Furnace RIBUTION He Ducte	78% AFUE eating	Co Duct	Cooling oling	Crawls	14.0 s	seer	Setback	Ouct R-Value	Status Altered
Qty. 1 HVAC Locati	Heatin Gas Centr DISTR ion stem	g ral Furnace RIBUTION He Ducte	78% AFUE eating	Co Duct	Cooling oling	Crawls	14.0 s	seer	Setback	Ouct R-Value	Status Altered
HVAC Locati	Heatin Gas Centr DISTR ion stem	g ral Furnace RIBUTION He Ducte	78% AFUE eating	Co Duct	Cooling oling	Crawls	14.0 s	seer	Setback	Ouct R-Value	Status Altered

ENROY COMMISSION	2022 Single-Family Residential Mandatory Requirements Summary
§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool at
	spa heaters. n
§ 150.0(h)1:	Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment' maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater
§ 150.0(n)3:	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.
ucts and Fans:	the type by a moning agoine, that to approve by the encountry and constitution
	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If
§ 110.8(d)3:	contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	CMC Compliance. All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼", If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board of flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	Protection of Insulation. Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	Porous Inner Core Flex Duct. Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to are occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

RESIDENTIAL MEA	ASURES SU	IMMARY					RMS-
Project Name	1-1	Building Type			Addition Alone	m / A l&c == # = =	Date
Livewire Ventures Remod Project Address	el	California En	☐ Multi Fan ergy Climate Zor	-	Existing+ Additio Cond. Floor Area		4/10/202
1421 Beryl Street San D	ieao		ergy Climate Zor nate Zone 07		1,027	Addition 0	# of Uni
INSULATION	-90		Area		.,		153
Construction Type		Cavity	(ft^2)	Speci	al Features		Status
Roof Wood Framed Attic		R 11	80				Existing
		=1 =	20 20 20 20 20 20 20 20 20 20 20 20 20 2				
FENESTRATION		400	100 90000000000000000000000000000000000	10.50/		0.55445450.00.00590.00544.00.00	0.00
Orientation Area (ft^2)	Total Area: U-Fac Sh		g Percentage: hang Sid		New/Altered Aver		0.32 Status
Orientation Area(n)	U-Fac SF	iGC Over	nang Sid	enns	Exterior Si	ades	Status
	7	*					
				14.75 14.75			
,		d'a					
ψ	10	TP.					<u> </u>
		7					
				- 30			
,							
							4
HVAC SYSTEMS							
HVAC SYSTEMS Qty. Heating	Min. Eff	Cooling	M	lin. Eff	The	rmostat	Status
	Min. Eff	Cooling	M	in. Eff	The	rmostat	Status
	Min. Eff	Cooling	M	lin. Eff	The	rmostat	Status
Qty. Heating	Min. Eff	Cooling	M	in. Eff			Status
Qty. Heating HVAC DISTRIBUTION				900		Duct	
Qty. Heating HVAC DISTRIBUTION	Min. Eff	Cooling		900			Status Status
Qty. Heating HVAC DISTRIBUTION				900		Duct	
Qty. Heating HVAC DISTRIBUTION				900		Duct	
Qty. Heating HVAC DISTRIBUTION Location H				900		Duct	
Qty. Heating HVAC DISTRIBUTION Location H WATER HEATING	eating	Cooling	Duct Lo	cation	I F	Duct	Status
Qty. Heating HVAC DISTRIBUTION Location H		Cooling	Duct Lo	900	I F	Duct	
Qty. Heating HVAC DISTRIBUTION Location H WATER HEATING	eating	Cooling	Duct Lo	cation	I F	Duct	Status
Qty. Heating HVAC DISTRIBUTION Location H WATER HEATING	eating	Cooling	Duct Lo	cation	I F	Duct	Status
Qty. Heating HVAC DISTRIBUTION Location H WATER HEATING	eating	Cooling	Duct Lo	cation	I F	Duct	Status



2022 Single-Family Residential Mandatory Requirements Summary

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 § 150.0(m)13: be \geq 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy \leq 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. *

	Neierence Nesidential Appendix 1445.5.
entilation and In	door Air Quality:
§ 150.0(o)1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and controlled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses. Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G
ool and Spa Sys	tems and Equipment:
§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.*
ighting:	
	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable
§ 110.9:	requirements of § 110.9. *
§ 150.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
150.0(k)1B:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.
§ 150.0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k). *



2022 Single-Family Residential Mandatory Requirements Summary

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

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

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

Space Conditioning, Water Heating, and Plumbing System:

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

Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

EMINOY COMMISSION	2022 Single-Family Residential Mandatory Requirements Summary
§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	Energy Management Control Systems. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	Automatic Shutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	Dimmers. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	Independent controls. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
olar Readiness:	
§ 110.10(a)1:	Single-family Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet.

solar zone, measured in the vertical plane.* Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for § 110.10(b)4: roof dead load and roof live load must be clearly indicated on the construction documents. Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a § 110.10(c): 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)-(c) must be

circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

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

§ 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: horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the

§ 110.10(b)2: Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.

§ 110.10(e)1: Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps. Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole

Electric and Energy Storage Ready:

CLEARSTORY

REVISIONS

PROJECT NUMBER: PRJ-1090909

ARCHITECTURAL DESIGN: ClearStory Construction Sarah Potter sarah@clear-story.com (650) 475-6868 STRUCTURAL DESIGN: NA

RELATED DEMO PROJECT: PRJ-1092811

This set of plans and specifications shall be kept on the site of the structure of work at all times during which work authorized by these plans is in progress, and shall be made available to City officials upon request. It is unlawful to change, modify, or alter the approved plans and specifications without authorization of the Building Official. The stamping of these plans and specifications SHALL NOT be held to permit nor approve the violation of any City, County, State, or Federal laws, nor restrictions.

5/22/2023, 10:50:09 AM PRJ-1090909

Ana Rios

1421 BERYL STREET DIEGO, CALIFORNIA, 92

DATE

5/10/2023

SCALE: AS SHOWN

DRAWN:

SHEET NAME

TITLE 24 - 2

SHEET NUMBER

5/6/22



2022 Single-Family Residential Mandatory Requirements Summary

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

*Exceptions may apply.

CLEARSTORY
CONSTRUCTION
1236 CHALCEDONY STREET
SAN DIEGO, CA 92109
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(650)475-6868

layout purposes only. The general contractor is responsible for making he project meet local municipal and building codes. The dimensions shown are approximations. The general contractor is responsible for taking accurate measurements in

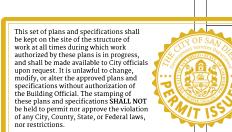
REVISIONS

PROJECT NUMBER: PRJ-1090909

ARCHITECTURAL DESIGN:
ClearStory Construction
Sarah Potter
sarah@clear-story.com
(650) 475-6868

STRUCTURAL DESIGN:
NA

RELATED DEMO PROJECT: PRJ-1092811



5/22/2023, 10:50:09 AM PRJ-1090909 Ana Rios BERYL
RENOVATION
1421 BERYL STREET
SAN DIEGO, CALIFORNIA, 92109

DATE

5/10/2023

SCALE:
AS SHOWN

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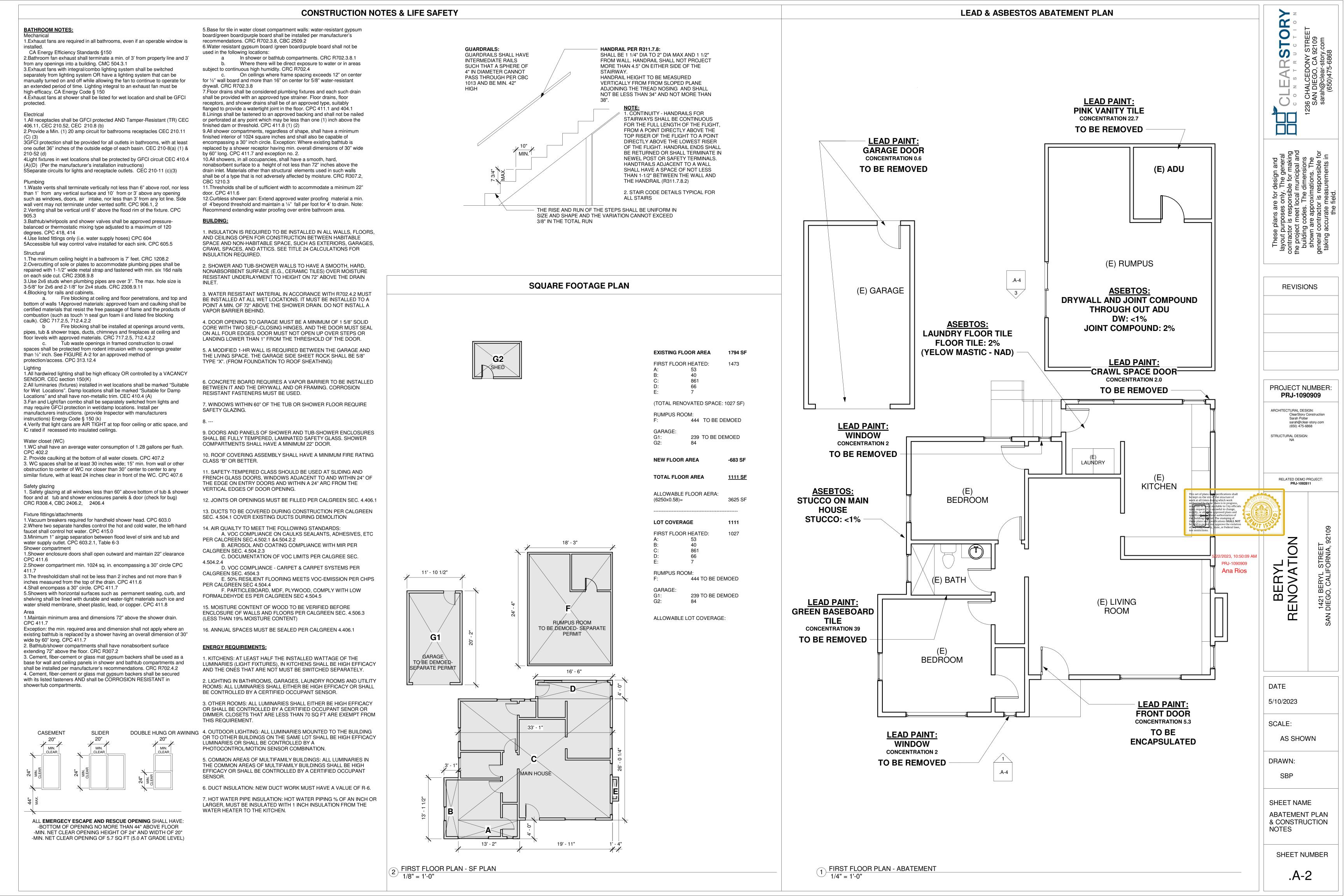
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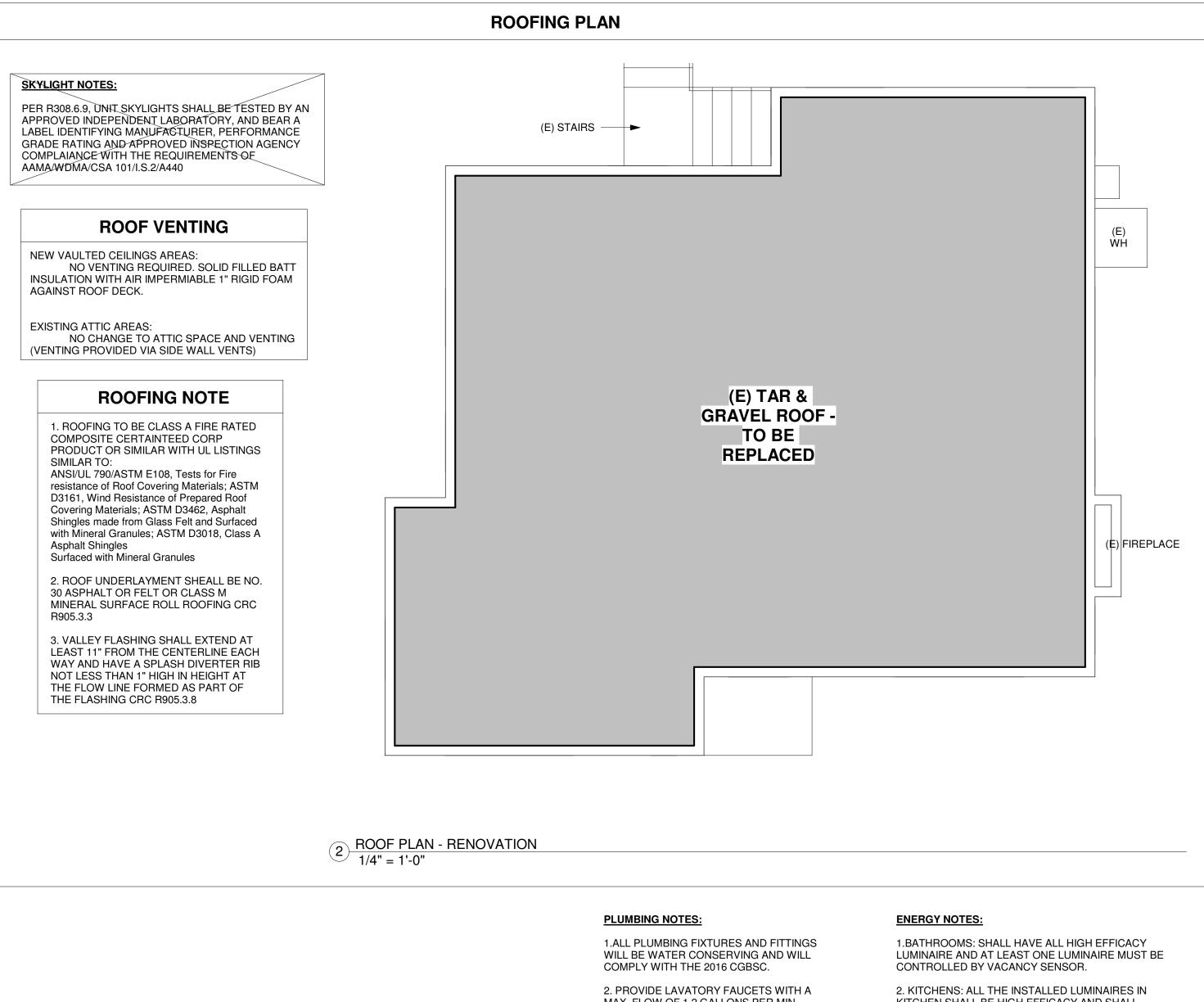
TITLE 24 -3

SHEET NUMBER

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5/6/22





ENERGY REQUIREMENTS:

1. KITCHENS: AT LEAST HALF THE INSTALLED WATTAGE OF THE LUMINARIES (LIGHT FIXTURES), IN KITCHENS SHALL BE HIGH EFFICACY AND THE ONES THAT ARE NOT MUST BE SWITCHED SEPARATELY.

2. LIGHTING IN BATHROOMS, GARAGES, LAUNDRY ROOMS AND UTILITY ROOMS: ALL LUMINARIES SHALL EITHER BE HIGH EFFICACY OR SHALL BE CONTROLLED BY A CERTIFIED OCCUPANT SENSOR.

3. OTHER ROOMS: ALL LUMINARIES SHALL EITHER BE HIGH EFFICACY OR SHALL BE CONTROLLED BY A CERTIFIED OCCUPANT SENOR OR DIMMER. CLOSETS THAT ARE LESS THAN 70 SQ FT ARE EXEMPT FROM THIS REQUIREMENT.

4. OUTDOOR LIGHTING: ALL LUMINARIES MOUNTED TO THE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY LUMINARIES OR SHALL BE CONTROLLED BY A PHOTOCONTROL/MOTION SENSOR COMBINATION.

5. COMMON AREAS OF MULTIFAMILY BUILDINGS: ALL LUMINARIES IN THE COMMON AREAS OF MULTIFAMILY BUILDINGS SHALL BE HIGH EFFICACY OR SHALL BE CONTROLLED BY A CERTIFIED OCCUPANT SENSOR.

6. DUCT INSULATION: NEW DUCT WORK MUST HAVE A VALUE OF

7. HOT WATER PIPE INSULATION: HOT WATER PIPING % OF AN INCH OR LARGER, MUST BE INSULATED WITH 1 INCH INSULATION FROM THE WATER HEATER TO THE KITCHEN.

ELECTRICAL REQUIREMENTS:

1. ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLTM SINGLE PHASE, 15 AND 20 AMP HERE RECEPTACLE OUTLETS INSTALLED IN A DWELLING UNIT LIVING, DINING AND FAMILY ROOMS, PARLORS, BEDROOMS, LIBRARIES, DENS, HALLWAYS, RECREATION ROOM, CLOSET OR SIMILAR ROOMS OR AREAS SHALL BE PROETCTED BY A LISTED ARC-FAULT INTERRUPTER TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT. CEC ARTICLE 210.12

2. ALL EXTERIOR OUTLETS SHALL BE GFCI PROTECTED AND WEATHER PROOFED.

3. FIXTURES IN TUB/SHOWER AREA TO BE SUITABLE FOR DAMP LOCATIONS

4. ALL LIGHTING TO BE HIGH EFFICACY

5. EXTERIOR LIGHTING SHALL BE HIGH EFFICACY OR LOW EFFICATY CONTROLLED BY A MOTION SENSOR IN COMBO WITH A PHOTO-CONTOL AND CONTOLLED BY AN ON OFF SWITCH.

6. VERIFY OR PROVIDE SMOKE AND CO2 DETECTORS IN EXISTING BEDROOMS.

7. GARAGE AND LAUNDRY LIGHTS TO BE HIGH EFFICACY AND CONTROLLED BY VACANCY SENSORS.

MAX. FLOW OF 1.2 GALLONS PER MIN. 3. PROVIDE KITCHEN FAUCETS WITH MAX.

FLOW OF 1.8 GALLONS PER MIN. 4. PROVIDE SHOWER HEADS WITH A MAX.

FLOW OF 2.0 GALLONS PER MIN. 5. PROVIDE WATER CLOSETS WITH MAX.

FLOW OF 1.28 GALLONS PER FLUSH

6. PER 2016 CGBSC, PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE

SMOKE & C02

DETECTORS

SMOKE DETECTORS TO BE

PROVIDED IN EACH

BEDROOM, AT AREA

DIRECTLY LEADING TO EACH

BEDROOM, AND AT LEAST

ONE ON EACH STORY PER

CRC R315.2

2. CARBON MONOXIDE

ALARMS TO BE PROVIDED AT

AREA DIRECTLY LEADING TO

EACH BEDROOM, AND AT

LEAST ONE IN EACG STORY

PER CRC R315.2

ALL NEW PLUMBING SUPPLY

LINES TO BE COPPER.

NEW WASTE LINES TO BE

PERMANENT VACCUM

BREAKERS SHALL BE

INCLUDED WITH ALL NEW

HOSE BIBS

WITH THE CA PLUMBING

CODE (CPC)

KITCHEN SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER. UNDER CABINET LIGHTINGS SHALL BE SWITCHED SEPARATELY.

3. OTHER ROOMS: ALL LUMINAIRES SHALL BE HIGH IFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER.

4. OUTDOOR: ALL LUMINAIRES SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON AND OFF SWITCH, AND BE CONTROLLED BY ONE OF THESE AUTOMATIC CONTROL TYPES: PHOTOCONTROL AND A MOTION SENSOR, OR ASTRONOMICAL TIME CLOCK OR ENEGRY MANAGEMENT CONTROL SYSTEM (EMCS).

INDOOR WATER

ELEC/HVAC KEY

RECESSED CAN

COACH LIGHT

WALL MOUNTED

WALL SCONCE

UNDER CABINET

CFM

DUAL SENSOR SMOKE

DETECTOR/CARBON

VENTED BATHROOM

FAN- LOW SONE, E-

HUMIDISTAT, MIN. 50

STAR, TIMER &

POWER OUTLET

AIR RETURN

HVAC VENT IN ABOVE

ALL NEW ELECTRICAL,

PLUMBING AND MECHAINCAL

WORK

MONOXIDE DETECTOR

FLUSH MOUNT

PENDANT

PER CALGREEN 4.303.1 1. THE EFFECTIVE FLUSH **VOLUME OF ALL WATER**

CLOSETS SAHLL NOT

EXCEED 1.28 GPF SECTION 2. KITCHEN FAUCET: 1.8 GPM MAX. SECTION 4.303.1.3 AND

3. **VANITY FAUCETS**: 1.5 GPM MAX. SECTION 4.303.1.3 AND

403.1.4 4. **SHOWER HEADS**: 1.8 GPM MAX. SECTION 4.303.1.3 AND 403.1.4 - MULTIPLE SHOWER HEADS MAX. 2.0 GPM.

5. **UNINALS**: 0.5 GPM MAX.

ALL PLUMBING FIXTURES AND FITTINGS WILL BE **EXHAUST DUCTS** WATER CONSERVING

1. ENVIRONMENTAL AIR **DUCTS AND EXHAUST TERMINATIONS SHALL** TERMINATE NOT LESS THAN 3' FROM A PROPERTY LINE AND 3' FROM OPENING INTO

BUILDING.

DAMPERS.

PLUMBING FIXTURES 2. EXHAUST DUCTS AND (WATER CLOSETS AND DRYER VENTS SHALL BE URINALS) AND FITTINGS **EQUIPPED WITH BACK-DRAFT** (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORANCE

LIGHTING **EFFICACY NOTES**

1. ALL LIGHTING TO BE HIGH EFFICACY AND HAVE A MAUNAL ON/OFF IN ADDITION TO A VACANY SENSOR OR DIMMER.

BATHROOM FAN NOTES

4.506.1 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 OR FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION

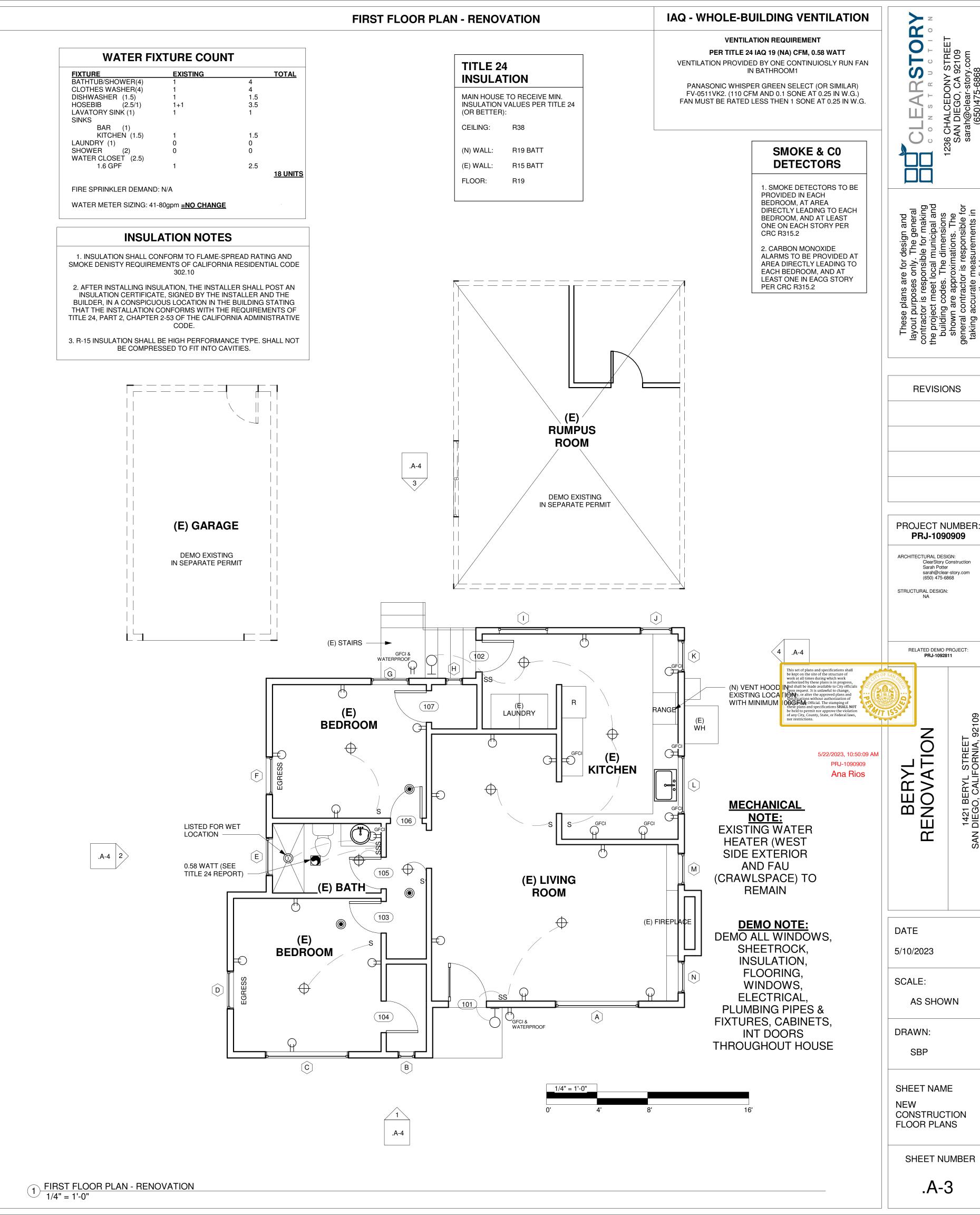
SYSTEM. 3. HUMIDITY CONTROLS WITH MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT, CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF LESS THAT 50% TO A MAX OF 80%

SHOWER ENCLOSURE

ALL SHOWER ENCLOSURES TO BE 1/2" DENSGLASS UNDERLAYMENT OR SIM WITH WATERPROOF MEMBRANE AND TILE TO 72" ABOVE DRAIN. SHOWER DOOR TO BE TEMPERED SAFETY GLASS

A. BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FT ABOVE THE FLOOR, CR B. GYPSUM WALL BAORD SHALL NOT BE USED WHERE THER EWILL BE DIRECT EXPOSURE TO WATER, OR IN AREAS SUBJECT TO CONTINUOUS

HIGH HUMIDITY. CRC R702.3.7



1421 BERYL STREE DIEGO, CALIFORNIA

