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Pro	ject Name:	Highri	se M	ulti-Family Example	Date Pre	pared: 2023-08-11
A. G	General Information					
1	Project Name	Highrise Multi-Family Example				
2	Run Title	Title 24 Analysis				
3	Project Location	7188 Pleasant Way				
4	City	Rocklin	5	Standards Version		Compliance 2022
6	Zip code	95650	7	Compliance Software	(version)	EnergyPro 9.1
8	Climate Zone	11	9	Building Orientation (deg)	0
10	Building Type(s)	High-Rise Residential	11	Weather File		AUBURN_STYP20.epw
12	Project Scope	New complete scope	13	Number of Dwelling L	Jnits	25
14	Total Conditioned Floor Area in Scope (ft ²)	16000	15	Total # of hotel/mote	l rooms	0
16	Total Unconditioned Floor Area (ft ²)	0	17	Fuel Type		Natural gas
18	Nonresidential Conditioned Floor Area	0	19	Total # of Stories (Hat Above Grade)	pitable	4
20	Residential Conditioned Floor Area	16000				
		otusoat				
		Ö				
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B. PROJECT SUMMARY

Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within the permit application.

В	uilding Comp	onents Complyin	ng via Performance			Building Components Complying Pre-	scriptively	
Envelope (See Table G)	Nonres	Not Included	Solar Thermal Water	\boxtimes	Performance	The following building components are ONLY eligible for prescriptive compliar and should be documented on the NRCC form listed if within the scope of th		
Envelope (see Table G)	MultiFam	Performance	Heating (See Table I3)		Not Included	permit application (i.e. compliance will not be shown of		
Machanical (See Table II)	Nonres	Not Included	Covered Process: Commercial Kitchens (see		Performance	Indoor Lighting (Unconditioned) 140.6 & 170.2(e)	NRCC-LTI-E is required	
Mechanical (See Table H)	MultiFam Performance Table J) Not Included Outdoor Lighting 140.7 & 170.2(e) NRCC-req Image: Structure of the structu	NRCC-LTO-E is required						
Domestic Hot Water (See	Nonres	Not Included	Covered Process: Laboratory Exhaust (see		Performance	Sign Lighting 140.8 & 170.2(e)	NRCC-LTS-E is required	
Table I)	MultiFam	Performance	Table J)	\boxtimes	Not Included	Building Components Complying with Man	datory Measures	
Lighting (Indoor Conditioned, see Table K)	Nonres	Not Included	Photovoltaics (see Table F)		Performance	Electrical power systems, commissioning, solar escalator requirements are mandatory and sho on the NRCC form listed if applicable (i.e. com shown on the NRCC-PRF-E.)	uld be documented pliance will not be	
	MultiFam	Performance			Not Included	Electrical Power Distribution 110.11	.) NRCC-ELC-E is required	
					Performance	Commissioning 120.8	NRCC-CXR-E is required	
			Battery (see Table F)	Ø	Not Included	Solar and Battery 110.10	NRCC-SAB-E is required	
	200	1500						

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C1. COMPLIANCE SUMMARY			
	DOES NOT COMPLY ³		
	Time Dependent	t Valuaton (TDV)	Source Energy Use
	Efficiency ¹ (kBtu/ft ² - yr)	Total ² (kBtu/ft ² - yr)	Total ² (kBtu/ft ² - yr)
Standard Design	88.05	8.71	3.03
Proposed Design	137.86	56.96	3.03
Compliance Margins	-49.81	-48.25	-7.88
	Fail	Fail	Fail

¹ Efficiency measures include improvements like a better building envelope and more efficient equipment

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² Compliance Totals include efficiency, photovoltaics and batteries

³ New Construction, Complete Addition Scope: Building complies when all efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

Existing, Addition and Alteration Scope: Building complies when efficiency compliance margin is greater than or equal to zero and unmet load hour limits are not exceeded

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Nonresidential Performance Compliance Method

	DOES NOT COMPLY ²		
Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Space Heating	0.19	14.49	-14.3
Space Cooling	29.8	72.05	-42.25
Indoor Fans	15.96	18.98	-3.02
Heat Rejection	0	0	0
Pumps & Misc.	0.59	5.51	-4.92
Domestic Hot Water	41.51	26.83	14.68
Indoor Lighting	0	0	0
Flexibility			
EFFICIENCY COMPLIANCE TOTAL	88.05	137.86	-49.81 (-56.6%)
Photovoltaics	-67.81	-80.9	13.09
Batteries	-11.53		-11.53
TOTAL COMPLIANCE	8.71	56.96	-48.25 (-554%)

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Nonresidential Performance Compliance Method

C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS ¹			
Non-Regulated Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Receptacle	70.72	70.72	
Process	42.48	41.52	0.96
Other Ltg	10.25	10.25	
Process Motors			
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	132.16	179.45	-47.29 (-35.8%)
¹ Notes: This table is not used for Energy Code Compliance.		•	•

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	DOES NOT COMPLY ²		
Energy Component	Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE) ¹
Space Heating	0.03	4.78	-4.75
Space Cooling	1.46	3.85	-2.39
Indoor Fans	1.24	1.4	-0.16
Heat Rejection	0	0	0
Pumps & Misc.	0.07	0.47	-0.4
Domestic Hot Water	3.88	2.66	1.22
Indoor Lighting	0	0	0
Flexibility			
EFFICIENCY COMPLIANCE TOTAL	6.68	13.16	-6.48 (-97%)
Photovoltaics	-1.92	-2.25	0.33
Batteries	-1.73		-1.73
TOTAL COMPLIANCE	3.03	10.91	-7.88 (-260.1%)

¹ Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

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C5. SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS ¹			
Non-Regulated Energy Component	Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE)
Receptacle	6.77	6.77	
Process	5.57	5.46	0.11
Other Ltg	1.03	1.03	
Process Motors	8		
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	16.4	24.17	-7.77 (-47.4%)
¹ Notes: This table is not used for Energy Code Compliance.		•	
C6. 'ABOVE CODE' QUALIFICATIONS	2		
□ This project is pursuing CalGreen Tier 1	☐ This project	is pursuing CalGreen Tier 2	
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C7. ENERGY USE SUMMARY						
Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	0.1				82.1	
Space Cooling	10.8	24.4	-13.6			
Indoor Fans	8.2	9.2	-1			
Heat Rejection			G			
Pumps & Misc.	0.3	2.5	-2.2			
Domestic Hot Water	24.9	16.4	8.5			
Indoor Lighting						
Flexibility						
EFFICIENCY TOTAL	44.3	52.5	-8.2	0	82.1	-82.1
Photovoltaics	-55.3	-65.2	9.9			
Batteries	0.9					
ENERGY USE SUBTOTAL	-10.1	-12.7	2.6	0	82.1	-82.1
Receptacle	40.3	40.3	0			
Process	18.3	17.6	0.7	51.8	51.8	0
Other Ltg	5.3	5.3	0			
Process Motors	· · · ·					
ENERGY USE TOTAL	53.8	50.5	3.3	51.8	133.9	-82.1

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C8. ENERGY USE INTENSITY (EUI)				
	Standard Design (kBtu/ft ² / yr)	Proposed Design (kBtu/ft ² / yr)	Margin (kBtu/ft ² / yr)	Margin Percentage
GROSS EUI ¹	26.5	33.04	-6.54	-24.68
NET EUI ¹	14.71	19.14	-4.43	-30.12
¹ Notes: Gross EIII is Energy Use To	tal (not including PV)/Total Building	Area Net ELII is Energy Lise Total (ir	cluding DV)/Total Building Area	

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

D2. MULTIFAMILY REQUIRED SPECIAL FEATURES

- Indoor air quality, balanced fan
- Non-standard duct location (any location other than attic)
- Solar water heating credit, multifamily building
- Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

E1. HERS VERIFICATION 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-level Verifications:

- Indoor air quality ventilation
- Kitchen range hood

Cooling System Verifications:

• -- None --

Heating System Verifications:

• -- None --

HVAC Distribution System Verifications:

• -- None --

Domestic Hot Water System Verifications:

- Compact distribution system expanded credit
- Multifamily: Drain water heat recovery system

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01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception ¹	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
40	n/a	Standard (14-17%)	Fixed	none	false	180	Degrees	22	4.85	96	100
¹ See Table D1	for any PV exce	eptions used.		·						·	
						<i>a</i> ,					
F1B. PV BATTE	RY BUILDING TY	′PE(S)				6					
			01					02		03	
	Buildin	ng Occupancy Typ	e [*] (From Table :	140.10-A/B and 1	70.2-U/V)		Condit	ioned Floor Area	(ft ²)	Unconditioned Flo	oor Area (ft ²)
			Grocery					0		0	
			gh-Rise Multifa		~			16000		0	
	0	ffice, Financial I		leased Tenant S	pace			0		0	
			Retail					0		0	
			School	6				0		0	
			Warehouse				_	0		0	
Auditorium, (Convention Cer	nter, Hotel/Mote	-	lical Office Build	ing/Clinic, Re	estaurant, Theat	er	0		0	
*			None					0		0	
Building Occu	ipancy Types a			he Energy Code							
			15000								

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01	02	03	04
Dwelling Unit Name	Dwelling Unit Type	Zone	Zone Group Multiplie
DDU-1-(1/5)	DU-1	S-1-1st Floor Apts	1
DDU-1-(2/5)	DU-1	S-1-1st Floor Apts	1
DDU-1-(3/5)	DU-1	S-1-1st Floor Apts	1
DDU-1-(4/5)	DU-1	S-1-1st Floor Apts	1
DDU-1-(5/5)	DU-1	S-1-1st Floor Apts	1
DDU-2-(1/5)	DU-2	S-2-2nd Floor Apts	1
DDU-2-(2/5)	DU-2	S-2-2nd Floor Apts	1
DDU-2-(3/5)	DU-2	S-2-2nd Floor Apts	1
DDU-2-(4/5)	DU-2	S-2-2nd Floor Apts	1
DDU-2-(5/5)	DU-2	S-2-2nd Floor Apts	1
DDU-3-(1/5)	DU-3	S-3-3rd Floor Apts	1
DDU-3-(2/5)	DU-3	S-3-3rd Floor Apts	1
DDU-3-(3/5)	DU-3	S-3-3rd Floor Apts	1
DDU-3-(4/5)	DU-3	S-3-3rd Floor Apts	1
DDU-3-(5/5)	DU-3	S-3-3rd Floor Apts	1
DDU-4-(1/10)	DU-4	S-4-4th Floor Apts	1
DDU-4-(2/10)	DU-4	S-4-4th Floor Apts	1
DDU-4-(3/10)	DU-4	S-4-4th Floor Apts	1
DDU-4-(4/10)	DU-4	S-4-4th Floor Apts	1
DDU-4-(5/10)	DU-4	S-4-4th Floor Apts	1
DDU-4-(6/10)	DU-4	S-4-4th Floor Apts	1
DDU-4-(7/10)	DU-4	S-4-4th Floor Apts	1
DDU-4-(8/10)	DU-4	S-4-4th Floor Apts	1
DDU-4-(9/10)	DU-4	S-4-4th Floor Apts	1

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F4. DWELLING UNIT TYPES	5					
01	02	03	04	05	06	07
Name	CFA (ft ²)	Number of Bedrooms	Number in Building	Space Conditioning Systems Assigned	DHW System Name	IAQ Vent Fan Name
DU-1	800	3	5	DU-1 :FPFC2:Air Distribution System 1:HVAC Fan 1:4:3	MF0-A. O. Smith FPTU 50 1203	Default Minimum Balanced IAQ Fan
DU-2	800	3	5	DU-2 :FPFC4:Air Distribution System 3:HVAC Fan 3:4:3	MF0-A. O. Smith FPTU 50 1203	Default Minimum Balanced IAQ Fan
DU-3	800	3	5	DU-3 :FPFC6:Air Distribution System 5:HVAC Fan 5:4:3	MF0-A. O. Smith FPTU 50 1203	Default Minimum Balanced IAQ Fan
DU-4	400	0	10	DU-4 :FPFC8:Air Distribution System 7:HVAC Fan 7:4:3	MF0-A. O. Smith FPTU 50 1203	Default Minimum Balanced IAQ Fan

01	02	03	04
Opaque Surfaces & Orientation	Total Gross Surface Area (ft ²)	Total Fenestration Area (ft ²)	Window to Wall Ratio (%)
North-Facing ¹	3200	800	25
East-Facing ²	1280	112	8.75
South-Facing ³	3200	720	22.5
West-Facing ⁴	1280	128	10
Total	8960	1760	19.64

Notes

¹North-Facing is oriented to within 45 degrees of true north, including 45 00'00" east of north (NE), but excluding 45 00'00" west of north (NW), ²East-Facing is oriented to within 45 degrees of true east, including 45 00'00" south of east (SE), but excluding 45 00'00" north of east (NE), ³South-Facing is oriented to within 45 degrees of true south, including 45 00'00" west of south (SW), but excluding 45 00'00" east of south (SE), ⁴West-Facing is oriented to within 45 degrees of true west, including 45 00'00" north of west (NW), but excluding 45 00'00" south of west (SW),

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01		02	03		04					
Opaque Surfaces & Orie	entation Total	Gross Surface Area (ft ²)	Total Fenestration Are	a (ft ²) Windo	Window to Wall Ratio (%)					
Roof		0	0		0					
West-Facing is oriented to w	ithin 45 degrees of true west,	, including 45 00'00" north of w	vest (NW), but excluding 45 00	'00" south of west (SW),						
			<u> </u>							
G2B. ROOFING PRODUCT SUMMARY (MULTIFAMILY AND COMMON AREAS)										
01	02	03	04	05	06					
Name	Roof Pitch	Roof Rise (x in 12)	Aged Solar Reflectance	Thermal Emittance	SRI					

			8		-			
Attic S-2-2nd Floor Apts	Low slope	0	0.1	0.85	N/A			
Attic S-3-3rd Floor Apts	Low slope	0	0.1	0.85	N/A			
Attic S-4-4th Floor Apts	Low slope	0	0.1	0.85	N/A			

NameConstructionTypeRadiant BarrierAttic S-2-2nd Floor AptsRoof-Attic S-2-2nd Floor AptsVentilatedNoAttic S-3-3rd Floor AptsRoof-Attic S-3-3rd Floor AptsVentilatedNoAttic S-4-4th Floor AptsRoof-Attic S-4-4th Floor AptsVentilatedYes	01 02		04
Attic S-3-3rd Floor Apts Roof-Attic S-3-3rd Floor Apts Ventilated No	Name Construction	on Type	Radiant Barrier
	Attic S-2-2nd Floor Apts Roof-Attic S-2-2nd	Floor Apts Ventilated	No
Attic S-4-4th Floor Apts Roof-Attic S-4-4th Floor Apts Ventilated Yes	Attic S-3-3rd Floor Apts Roof-Attic S-3-3rd	Floor Apts Ventilated	No
	Attic S-4-4th Floor Apts Roof-Attic S-4-4th	Floor Apts Ventilated	Yes
	-0°-15°		

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01	02	03	04	05	0	6	07	08	09	10	
Surface Name	Construction	Area (ft²)	Framing	Cavity	Continuo	us R-Value	Units	Value	Description of Assembly Layers	Status ¹	
Surface Marine	Туре	Area (It.)	Туре	R-Value	Interior	Exterior	Onits	value	Description of Assembly Layers	Status	
R-15 Wall w/R-4	Exterior Walls	8,960	Wood Framed Wall	15	0	4	U-factor	0.0642	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Sheathing / Insulation: R-4 Sheathing Exterior Finish: 3 Coat Stucco	N	
Default Roof Prior to 197	Ceilings (below attic)	8,000	Wood Framed Ceiling	11	0	0	U-factor	0.0827	Over Ceiling Joists: R-1.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board	N	
R-0 Floor No Crawlspace	Interior Floors	12,000	Wood Framed Floor	0	0	0	U-factor	0.1957	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board	N	
R-30 Roof Attic	Ceilings (below attic)	4,000	Wood Framed Ceiling	30	0	0	U-factor	0.0317	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board	N	
Roof-Attic S-2-2nd Floor Apts	Attic Roofs	4,000	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N	
Roof-Attic S-3-3rd Floor Apts	Attic Roofs	4,000	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N	
Roof-Attic S-4-4th Floor Apts	Attic Roofs	4,000	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N	

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01	02	03	04
Name	Area (ft ²)	Overall U-factor	Status ¹
Entry Door	100	0.5	N
Door	100	0.5	N
Door 2	100	0.5	N
Door 3	100	0.5	N
Status: N - New, A - Altered, E - Existing			·
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01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft ²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status ¹
Front Windows	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Front Wall	0	1	200	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Left Windows	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Left Wall	90	1	40	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Back Windows	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Back Wall	180	1	180	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Right Windows	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Right Wall	270		32	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Front Windows 2	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Front Wall 2	0	1	200	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Left Windows 2	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Left Wall 2	90	1	24	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Back Windows 2	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Back Wall 2	180	1	180	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N

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G7B. FENESTR/	ATION SUMMARY (MULTIFAMILY	AND COMMON	AREAS)									
01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft ²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status ¹
Right Windows 2	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Right Wall 2	270	1	32	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Front Windows 3	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Front Wall 3	0	1	200	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Left Windows 3	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Left Wall 3	90	1	24	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	Ν
Back Windows 3	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Back Wall 3	180	CI	180	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Right Windows 3	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Right Wall 3	270	1	32	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Front Windows 4	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Front Wall 4	0	1	200	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Left Windows 4	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Left Wall 4	90	1	24	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
¹ Status: N - N	ew, A - Altered, E - Existing											

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01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft ²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status ¹
Back Windows 4	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Back Wall 4	180	1	180	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
Right Windows 4	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	Right Wall 4	270	1	32	0.32	NFRC	0.24	NFRC	N/A	Standard bug screens	N
¹ Status: N - New, A - Altered, E - Existing												

HSa. MOETHAMIET / COMMON USE	AREA FAIN STSTEINIS SOMIMART			
01	02	03	04	05
Name	Туре	Power	Power Units	Status
HVAC Fan 1	Fixed speed	0.45	W/cfm	N/A
HVAC Fan 3	Fixed speed	0.45	W/cfm	N/A
HVAC Fan 5	Fixed speed	0.45	W/cfm	N/A
HVAC Fan 7	Fixed speed	0.45	W/cfm	N/A

HVAC Fan 7 TIXEU Spece CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance NRCC-PRF-E

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H4. MULTIFAMILY HVAC DISTRIBUTION

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01	02	03	04	05	06	07	08
Name	Turce	Duct Ins. R-value	Duct Ins. R-value	Duct Location	Duct Location	Verified Duct Design Surface Are	
Name	Туре	Supply	Return	Supply	Return	Supply	Return
Air Distribution System 1	Conditioned space-entirely (Non-Verified)	R-8	R-8	Conditioned Zone	Conditioned Zone	n/a	n/a
Air Distribution System 3	Conditioned space-entirely (Non-Verified)	R-8	R-8	Conditioned Zone	Conditioned Zone	n/a	n/a
Air Distribution System 5	Conditioned space-entirely (Non-Verified)	R-8	R-8	Conditioned Zone	Conditioned Zone	n/a	n/a
Air Distribution System 7	Conditioned space-entirely (Non-Verified)	R-8	R-8	Conditioned Zone	Conditioned Zone	n/a	n/a

TypeIAQ OptionIAQ Fan Type TypeSupply Airflow CFMSupply Efficacy W/CFMExhaust CFMExhaust Efficacy W/CFMIAQ Fan TypeAirflow CFMFan Efficacy W/CFMAirflow Efficiency SREFan Efficacy Efficiency AsDU-1Default Minimum Balanced IAQ FanN/A <td< th=""><th>01</th><th>02</th><th>03</th><th>04</th><th>05</th><th>06</th><th>07</th><th>08</th><th>09</th><th>10</th><th>11</th><th>12</th><th>13</th></td<>	01	02	03	04	05	06	07	08	09	10	11	12	13	
TypeIAQ Fan Type TypeSupply Airflow CFMEfficacy W/CFMEfficacy W/CFMEfficacy W/CFMIAQ Fan TypeCountAirflow CFMFan Efficacy W/CFMEfficacy AsDU-1Default Minimum Balanced IAQ FanN/A <t< th=""><th></th><th></th><th colspan="4">Central Fan (If applical</th><th colspan="3">ble)</th><th colspan="5">Individual Fan (if applicable)</th></t<>			Central Fan (If applical				ble)			Individual Fan (if applicable)				
DU-1 Balanced IAQ Fan N/A N/A <th>-</th> <th>IAQ Option</th> <th></th> <th></th> <th>Efficacy</th> <th></th> <th>Efficacy</th> <th></th> <th>Count</th> <th></th> <th></th> <th>Efficiency</th> <th>Recovery Efficiency ASRE</th>	-	IAQ Option			Efficacy		Efficacy		Count			Efficiency	Recovery Efficiency ASRE	
DU-2 Balanced IAQ Fan N/A N/A N/A N/A N/A N/A N/A S4 N/A N/A N/A DU-3 Default Minimum Balanced IAQ Fan N/A <td< td=""><td>DU-1</td><td></td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>54</td><td>N/A</td><td>N/A</td><td>N/A</td></td<>	DU-1		N/A	N/A	N/A	N/A	N/A	N/A	N/A	54	N/A	N/A	N/A	
DU-3 Balanced IAQ Fan N/A Default Minimum <t< td=""><td>DU-2</td><td></td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>54</td><td>N/A</td><td>N/A</td><td>N/A</td></t<>	DU-2		N/A	N/A	N/A	N/A	N/A	N/A	N/A	54	N/A	N/A	N/A	
Default Minimum	DU-3		N/A	N/A	N/A	N/A	N/A	N/A	N/A	54	N/A	N/A	N/A	
DU-4 Balanced IAQ Fan N/A	DU-4	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	27	N/A	N/A	N/A	

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01	02		03	04	05	06	07	08	09	10	11	12	13	14	1
Name	Heater Eleme Type	nt Tan	k Type	Qty	Tank Vol (gal)	Rated Input	Rated Input Unit	Efficiency	Efficiency Unit	Tank Insulation R-value Int/Ext	Standby Loss Fraction	1st Hr. Rating or Flow Rate (gal)	Heat Pump Type	Tank Loca Ambi Condi	ient
A. O. Smith FPTU 50 12030	Heat Pump		N/A	1	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Residentia (NEEA RATED) PRODUCT	Outs	ide
12. MULTI-FAMILY \	VATER HEATIN	SYSTEM DE	TAIL												
01)2	1	03		04	1		05	06		07		08	
System Name		uration		Туре		Qty in S		Dwell	ing Unit tion Type	Water Heat		Solar Heating	System	ls Compa Distribut	
MF0-A. O. Smith FPTU 50 1203		Hot Water HW)	U	Initary					Distribution stem	A. O. Smith 1203		Solar-DH	W	Yes	
I6. SOLAR HOT WA	TER HEATING S	JMMARY													
01			02		10	03		04		05	06	07	08		09
							·	C	ollector	•		•	·	•	
System Nam	e	Man	ufacturer	0	U	Brand		Mod	el	Count	Area (ft ²)	Solar Savings Fraction	Azimı from (deş	N Hor	t from z. (deg)
Solar-DHW	/	Acevedo So	lar Systen	ns LLC	Inte	ernationa System		0420	12	10	18	N/A	45		20
	10		N.		11		•		1	2			13		
Name o	f program use		J	Ρ	rogram V	ersion			Tank Vol	ume (gal)			Tank Volum	e (gal)	
	CSE			<u></u>	19 0.91			300				25			

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17. WATER HEATING - COM	IPACT DISTRIBUTION					
01	02	03	04	05	06	07
Dwelling Unit Type	Water Heating System Name	Master Bath distance of furthest fixture to Water Heater (ft)	Kitchen distance of furthest fixture to Water Heater (ft)	Furthest Third furthest fixture to Water Heater (ft)	Compactness Factor	HERS Verification

I8. WATER HEATING - DRAIN WATER HEAT RECOVERY								
01	02	03	04	05				
Dwelling Unit Type	DHW System and DWHR Names	Installation Configuration	Shower Drains	HERS Verification				
DU-1	MF0-A. O. Smith FPTU 50 1203 - 1 - DWHR-1	Equal Flow	1	Required				
			·					

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-E - For all buildings with Plumbing Systems
Plumbing	NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/motel single dwelling unit hot water distribution systems to be recognized for compliance.
	NRCI-SAB-E - Solar Water Heating, PV and Battery Storage Systems
Indoor Lighting	NRCI-LTI-01-E - Must be submitted for all buildings

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M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections made by Documentation Author indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP).

Building Component	Form/Title
Indoor Lighting	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls.
Indoor Lighting	NRCA-LTI-04-A - Demand Responsive Lighting Controls.
Mechanical	NRCA-MCH-08-A Valve Leakage Test
Mechanical	NRCA-MCH-09-A Supply Water Temperature Reset Controls
Mechanical	NRCA-MCH-10-A Hydronic System Variable Flow Controls
Mechanical	NRCA-MCH-20-H Multifamily Ventilation

Selections made by Documentation Author indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online

Building Component	Form/Title
Mechanical	NRCV-MCH-27 Indoor Air Quality & Mechanical Ventilation
Mechanical	NRCV-MCH-32 Local Mechanical Exhaust
Plumbing	NRCV-PLB-22-H HERS verified single dweliing unit systems in high-rise residential, hotel/motel application

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Documentation Author's Declaration Statement

1. I certify that this Certificate of Compliance documentation is accurate and complete.					
Documentation Author Name:	Documentation Author Signature:				
Company: DEBUG	Signature Date:				
Address:	CEA/HERS Certification Identification (if applicable):				
City/State/Zip: ,	Phone:				

Responsible Person's Declaration statement

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

- 1. The information provided on this Certificate of Compliance is true and correct.
- 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
- 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- 5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement.
- 6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: Bernard	Responsible Designer Name: Bernard Parker & Assoc.			Responsible Designer Signature:		
Company:						
Address: 573 Oak Drive		Date Signed:				
City/State/Zip: Sacramento, CA 95000		License #:				
Phone:		Title:		Scope:		
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