

Project Title..... BRIDLE RIDGE Date..02/11/10 09:48:56  
 Project Address..... PLAN 1 \*\*\*\*\*  
 SAN DIEGO - CZ 7 \*v8.0\*  
 Documentation Author... TONY MARTINEZ, CEA/CEPE \*\*\*\*\*  
 ConSol  
 7407 Tam O'Shanter Drive  
 Stockton, CA 95210  
 209-473-5000  
 Climate Zone..... 07  
 Compliance Method..... MICROPAS8 v8.0 for 2008 CEC Standards (r11)

Building Permit #
Plan Check / Date
Field Check/ Date

MICROPAS8 v8.0 File-PBR1 Wth-CTZ07S08 Program-FORM CF-1R  
 User#-MP0105 User-ConSol Run-PARDEE HOMES - PLAN 1

MICROPAS8 ENERGY USE SUMMARY				
Energy Use (kTDV/sf-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating.....	7.87	8.55	-0.68	-8.6%
Space Cooling.....	5.66	1.71	3.95	69.8%
Ventilation Fans.....	1.00	1.00	0.00	0.0%
Water Heating.....	15.77	14.60	1.17	7.4%
North Total	30.30	25.86	4.44	14.6%
Space Heating.....	7.87	9.11	-1.24	-15.8%
Space Cooling.....	5.66	1.84	3.82	67.5%
Ventilation Fans.....	1.00	1.00	0.00	0.0%
Water Heating.....	15.77	14.60	1.17	7.4%
East Total	30.30	26.55	3.75	12.4%
Space Heating.....	7.87	10.17	-2.30	-29.2%
Space Cooling.....	5.66	1.63	4.03	71.2%
Ventilation Fans.....	1.00	1.00	0.00	0.0%
Water Heating.....	15.77	14.60	1.17	7.4%
South Total	30.30	27.40	2.90	9.6%
Space Heating.....	7.87	9.59	-1.72	-21.9%
Space Cooling.....	5.66	1.04	4.62	81.6%
Ventilation Fans.....	1.00	1.00	0.00	0.0%
Water Heating.....	15.77	14.60	1.17	7.4%
West Total	30.30	26.23	4.07	13.4%

\*\*\* Building complies with Computer Performance \*\*\*  
 \*\*\* HERS Verification Required for Compliance \*\*\*

GENERAL INFORMATION

HERS Verification..... Required  
 Conditioned Floor Area..... 2353 sf  
 Building Type..... Single Family Detached  
 Construction Type ..... New  
 Natural Gas at Site ..... Yes  
 Building Front Orientation. Cardinal - N,E,S,W  
 Number of Dwelling Units... 1  
 Number of Building Stories. 2  
 Weather Data Type..... FullYear  
  
 Floor Construction Type.... Slab On Grade  
 Number of Building Zones... 1  
 Conditioned Volume..... 20973 cf  
 Slab-On-Grade Area..... 1033 sf  
 Glazing Percentage..... 16.9 % of floor area  
 Average Glazing U-factor... 0.32 Btu/hr-sf-F  
 Average Glazing SHGC..... 0.29  
 Average Ceiling Height..... 8.9 ft

BUILDING ZONE INFORMATION

Zone Type	Floor Area (sf)	Volume (cf)	# of Dwell Units	# of People	Cond- it- ioned	Thermo- stat Type	Vent Height (ft)	Vent Area (sf)	Verified Leakage or Housewrap
Residence	2353	20973	1.00	5.0	Yes	Setback	8.0	Standard	No

ATTIC AND ROOF DETAILS

Roof Type	Roof Mass (lb/sqft)	Roof Rise	Re- flect- ance	Emiss- ivity	Frame Depth (in.)	Frame Spac- ing (in.)	R- Value Above Deck	R- Value Below Deck	Vent Area Ratio	Vent High
Tile	10	5:12	0.10	0.85	3.5	24 oc	0.85	0.00	1/150	0.30

OPAQUE SURFACES

Surface	Frame Type	Area (sf)	U- factor	Cavity R-val	Sheath- ing R-val	Act Azm	Tilt	Solar Gains	Appendix JA4 Reference	Location/ Comments
1 Wall	Wood	304	0.102	13	0	0	90	Yes	4.3.1 A3	Front Wall
2 Wall	Wood	516	0.102	13	0	90	90	Yes	4.3.1 A3	Left Wall
3 Wall	Wood	215	0.074	19	0	90	90	Yes	4.3.1 A5	2x6 Left Wall
4 Wall	Wood	370	0.102	13	0	180	90	Yes	4.3.1 A3	Back Wall
5 Wall	Wood	368	0.102	13	0	270	90	Yes	4.3.1 A3	Right Wall
6 Wall	Wood	284	0.074	19	0	270	90	Yes	4.3.1 A5	2x6 Right Wall

OPAQUE SURFACES

Surface	Frame Type	Area (sf)	U-factor	Cavity R-val	Sheathing R-val	Act Azm	Tilt	Solar Gains	Appendix JA4 Reference	Location/Comments
7 Wall	Wood	21	0.102	13	0	45	90	Yes	4.3.1 A3	< WALL 45
8 Wall	Wood	262	0.102	13	0	0	90	No	4.3.1 A3	Garage Wall
9 Wall	Wood	63	0.074	19	0	0	90	No	4.3.1 A5	2x6 Garage
10 Door	Wood	24	0.179	0	0	45	90	Yes	4.5.1 A7	Entry Door
11 Door	Wood	17	0.500	0	0	0	90	No	4.5.1 A4	Garage Door
12 FloorExt	Wood	562	0.048	19	0	n/a	0	No	4.4.2 A4	Above Garage
13 FloorExt	Wood	48	0.048	19	0	n/a	0	No	4.4.2 A4	At Cantilever
14 Attic	Wood	1593	0.025	38	0	n/a	0	Yes	4.2.1 A21	Flat w/ Attic
15 Attic	Wood	50	0.048	19	0	n/a	0	Yes	4.2.1 A16	At Furnace

PERIMETER LOSSES

Surface	Length (ft)	F2 Factor	Insul R-val	Solar Gains	Appendix JA4 Reference	Location/Comments
16 SlabEdge	29	0.730	R-0/0in	No	4.4.7 A1	Exposed edge
17 SlabEdge	118	0.730	R-0/0in	No	4.4.7 A1	Covered edge

FENESTRATION SURFACES

Orientation	Area (sf)	U-factor	SHGC	Act Azm	Tilt	Exterior Shade Type	Location/Comments
1 Wind Front (N)	2.3	0.300	0.300	0	90	Standard	FIXED / VINYL / SSGLZ
2 Wind Front (N)	16.0	0.320	0.280	0	90	Standard	SNGL HNG / VINYL / SSGLZ
3 Wind Front (N)	4.5	0.320	0.280	0	90	Standard	SNGL HNG / VINYL / SSGLZ
4 Wind Front (N)	9.0	0.320	0.280	0	90	Standard	SNGL HNG / VINYL / SSGLZ
5 Wind Left (E)	16.5	0.320	0.280	90	90	Standard	SNGL HNG / VINYL / SSGLZ
6 Door Left (E)	20.0	0.330	0.270	90	90	Standard	FRNCH DR /NON-MTL/ SSGLZ
7 Wind Left (E)	11.3	0.320	0.280	90	90	Standard	SNGL HNG / VINYL / SSGLZ
8 Wind Left (E)	22.6	0.320	0.280	90	90	Standard	SNGL HNG / VINYL / SSGLZ
9 Wind Left (E)	33.9	0.300	0.300	90	90	Standard	FIXED / VINYL / SSGLZ
10 Wind Left (E)	15.0	0.320	0.280	90	90	Standard	SNGL HNG / VINYL / SSGLZ
11 Wind Back (S)	33.0	0.320	0.280	180	90	Standard	SNGL HNG / VINYL / SSGLZ
12 Wind Back (S)	33.0	0.300	0.300	180	90	Standard	FIXED / VINYL / SSGLZ
13 Door Back (S)	48.0	0.330	0.270	180	90	Standard	FRNCH DR /NON-MTL/ SSGLZ
14 Wind Back (S)	9.0	0.300	0.300	180	90	Standard	FIXED / VINYL / SSGLZ
15 Wind Back (S)	20.0	0.320	0.280	180	90	Standard	SNGL HNG / VINYL / SSGLZ
16 Door Back (S)	40.2	0.330	0.270	180	90	Standard	FRNCH DR /NON-MTL/ SSGLZ
17 Wind Right (W)	6.9	0.300	0.300	270	90	Standard	FIXED / VINYL / SSGLZ
18 Wind Right (W)	15.0	0.320	0.280	270	90	Standard	SNGL HNG / VINYL / SSGLZ
19 Wind Right (W)	4.5	0.320	0.280	270	90	Standard	SNGL HNG / VINYL / SSGLZ
20 Wind Right (W)	11.3	0.550	0.670	270	90	Standard	GLASS BLOCK /NON-MTL/ OP
21 Wind Right (W)	16.0	0.320	0.280	270	90	Standard	SLIDER / VINYL / SSGLZ

FENESTRATION SURFACES

Orientation	Area (sf)	U-factor	SHGC	Act Azm	Tilt	Exterior Shade Type	Location/Comments
22 Wind Right (W)	4.5	0.320	0.280	270	90	Standard	SNGL HNG / VINYL / SSGLZ
23 Wind Right (W)	4.5	0.320	0.280	270	90	Standard	SNGL HNG / VINYL / SSGLZ

OVERHANGS

Surface	Area (sf)	Window		Overhang			
		Width	Height	Depth	Height	Left Extension	Right Extension
1 Window	2.3	n/a	1.5	1.0	1.0	n/a	n/a
2 Window	16.0	n/a	4.0	1.0	1.0	n/a	n/a
3 Window	4.5	n/a	3.0	9.8	0.8	n/a	n/a
4 Window	9.0	n/a	3.0	1.0	0.3	n/a	n/a
5 Window	16.5	n/a	5.5	7.0	0.8	n/a	n/a
6 Door	20.0	n/a	6.7	5.8	0.0	n/a	n/a
7 Window	11.3	n/a	4.5	1.0	1.0	n/a	n/a
8 Window	22.6	n/a	4.5	1.0	1.0	n/a	n/a
10 Window	15.0	n/a	5.0	1.0	1.0	n/a	n/a
12 Window	33.0	n/a	5.5	1.0	0.8	n/a	n/a
13 Door	48.0	n/a	8.0	6.5	0.3	n/a	n/a
14 Window	9.0	n/a	3.0	1.0	0.3	n/a	n/a
15 Window	20.0	n/a	5.0	1.0	1.0	n/a	n/a
16 Door	40.2	n/a	6.7	1.0	1.0	n/a	n/a
18 Window	15.0	n/a	5.0	1.0	1.0	n/a	n/a
19 Window	4.5	n/a	3.0	1.0	1.0	n/a	n/a
20 Window	11.3	n/a	4.5	1.0	1.0	n/a	n/a
21 Window	16.0	n/a	4.0	1.0	1.0	n/a	n/a
22 Window	4.5	n/a	3.0	1.0	1.0	n/a	n/a
23 Window	4.5	n/a	3.0	1.0	1.0	n/a	n/a

SLAB SURFACES

Slab Type	Area (sf)
Standard Slab	1033

HVAC SYSTEMS

System Type	Minimum Efficiency	Verified EER	Verified Refrigerant Charge or CID	Verified Adequate Airflow	Verified Fan Draw	Verified Maximum Cooling Capacity
Furnace	0.800 AFUE	n/a	n/a	n/a	n/a	n/a
ACsplit	13.00 SEER	11.0	No	No	No	No

HVAC SIZING

System Type	Total Heating Load (Btu/hr)	Sensible Cooling Load (Btu/hr)	Design Cooling Capacity (Btu/hr)	Verified Maximum Cooling Capacity (Btu/hr)
Furnace	31651	n/a	n/a	n/a
ACsplit	n/a	25167	29511	n/a

Orientation of Maximum..... Front Facing 0 deg (N)  
 Sizing Location..... SAN DIEGO AP  
 Winter Outside Design..... 38 F  
 Winter Inside Design..... 70 F  
 Summer Outside Design..... 93 F  
 Summer Inside Design..... 75 F  
 Summer Range..... 13 F

DUCT SYSTEMS

System Type	Duct Location	Duct R-value	Verified Duct Leakage	Verified Surface Area	Verified Buried Ducts
Furnace	Attic	R-4.2	No	No	No
ACsplit	Attic	R-4.2	No	No	No

FAN SYSTEMS

System Type	Flow (cfm)	Power (W/cfm)
Standard	61.03	.25

WATER HEATING SYSTEMS

Tank Type	Heater Type	Distribution Type	Number in System	Energy Factor	Tank Size (gal)	External Insulation R-value
1 SmallStorage	Gas	Standard	1	0.62	50	R-n/a

SPECIAL FEATURES AND MODELING ASSUMPTIONS

\*\*\* Items in this section should be documented on the plans, \*\*\*  
 \*\*\* installed to manufacturer and CEC specifications, and \*\*\*  
 \*\*\* verified during plan check and field inspection. \*\*\*

This is a multiple orientation building. This printout is for the front facing North.

This building incorporates a Radiant Barrier.

HERS REQUIRED VERIFICATION

\*\*\* Items in this section require field testing and/or \*\*\*  
 \*\*\* verification by a certified home energy rater under \*\*\*  
 \*\*\* the supervision of a CEC-approved HERS provider using \*\*\*  
 \*\*\* CEC approved testing and/or verification methods and \*\*\*  
 \*\*\* must be reported on the CF-4R installation certificate. \*\*\*

This building incorporates HERS verified High Energy Efficiency Ratio (EER).

REMARKS

DUAL PANE, VINYL WITH SPECTRALLY SELECTIVE GLASS  
 U-FACTORS = 0.32 (SL) / 0.32 (SH) / 0.30 (FX) / 0.34 (PATIO)  
 SHGC = 0.28 (SL) / 0.28 (SH) / 0.30 (FX) / 0.33 (PATIO)  
 SEE MANUFACTURER'S SPECIFICATION SHEET

DUAL PANE, NON-METAL WITH SPECTRALLY SELECTIVE GLASS  
 U-FACTOR = 0.33 (FRENCH DOOR)  
 SHGC = 0.27 (FRENCH DOOR)  
 SEE MANUFACTURER'S SPECIFICATION SHEET

DUAL PANE, NON-METAL WITH OPAQUE GLASS  
 U-FACTOR = 0.55 (GLASS BLOCK)  
 SHGC = 0.67 (GLASS BLOCK)  
 SEE DEFAULT FENESTRATION SHEET

ELEVATION 'C' TAKEN AS WORST CASE GLAZING SCENARIO.

COMPLIANCE STATEMENT

This certificate of compliance lists the building features and performance specifications needed to comply with Title-24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement them. This certificate has been signed by the individual with overall design responsibility.

DESIGNER or OWNER

DOCUMENTATION AUTHOR

Name.... \_\_\_\_\_  
Company. PARDEE HOMES  
Address. 6025 EDGEWOOD BEND CT  
SAN DIEGO CA 92130  
Phone... (858) 794-2509  
License. \_\_\_\_\_

Name.... TONY MARTINEZ, CEA/CEPE  
Company. ConSol  
Address. 7407 Tam O'Shanter Drive  
Stockton, CA 95210  
Phone... 209-473-5000

Signed.. \_\_\_\_\_  
(date)

Signed.. \_\_\_\_\_  
(date)

ENFORCEMENT AGENCY

Name.... \_\_\_\_\_  
Title... \_\_\_\_\_  
Agency.. \_\_\_\_\_  
Phone... \_\_\_\_\_  
Signed.. \_\_\_\_\_  
(date)