



AIR LEAKAGE REPORT

Date:	September 28, 2016	Rating No.:	42048
Building Name:	Reunion Homes	Rating Org.:	EnergyLogic, Inc
Owner's Name:	Reunion Homes Homeowner	Phone No.:	(970) 556-0839
Property:	7345 Bonterra Ln	Rater's Name:	Phil Drotar
Address:	Colorado Springs, CO 80925	Rater's No.:	9147374
Builder's Name:	Reunion Homes		
Weather Site:	Colorado Springs, CO	Rating Type:	Confirmed
File Name:	7345 Bonterra Ln Reunion Homes REM.blg	Rating Date:	9/28/2016

Whole House Infiltration	Blower door test	
	Heating	Cooling
Natural ACH:	0.31	0.25
ACH @ 50 Pascals:	4.01	4.01
CFM @ 25 Pascals:	1693	1693
CFM @ 50 Pascals:	2656	2656
Eff. Leakage Area: [sq.in]	145.8	145.8
Specific Leakage Area:	0.00024	0.00024
ELA/100 sf shell: [sq.in]	1.74	1.74

Duct Leakage	Main
Leakage to Outside Units	
CFM @ 25 Pascals:	70
CFM25 / CFMfan:	0.0311
CFM25 / CFA:	0.0163
CFM per Std 152:	N/A
CFM per Std 152 / CFA:	N/A
CFM @ 50 Pascals:	110
Eff. Leakage Area: [sq.in]	6.03
Thermal Efficiency:	N/A
Total Duct Leakage Units	CFM25/CFA
Total Duct Leakage:	0.2801

Ventilation	Mechanical:	Exhaust Only	ASHRAE
Sensible Recovery Eff. (%):	0.0		62.2-2010
Total Recovery Eff. (%):	0.0		
Rate (cfm):	35		73
Hours/Day:	24.0		24
Fan Watts:	100.0		
Cooling Ventilation:	No Ventilation		

Regarding ASHRAE 62.2 Ventilation Compliance

The ASHRAE 62.2 flow rates shown above are the CONTINUOUS mechanical fresh air ventilation which will meet the 'whole-building' requirement under that version of the standard. Both values incorporate any appropriate 'infiltration credit'. Intermittent mechanical ventilation may be used if the flow rate is adjusted accordingly. For example, the runtime can be reduced to 12 hours per day using a doubled flow rate, as long as the system provides ventilation at least once every 3 hours. For more detail, refer to the appropriate standard.



COMPONENT LOAD SUMMARY

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Reunion Homes

HEATING SEASON (MMBtu/yr)

Ceilings/Roofs	5.2
Rim/Band Joists	2.0
Above Grade Walls	23.5
Foundation Walls	6.0
Doors	0.9
Windows/Skylights	7.5
Floors	2.5
Crawl Space/Unht Bsmt	0.0
Slab Floors	6.0
Infiltration	22.4
Mechanical Ventilation	4.5
Ducts	6.4
Active Solar	0.0
Sunspace	0.0
Internal Gains	-16.7
Total	70.2

COMPONENT LOAD SUMMARY

Reunion Homes

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Reunion Homes

COOLING SEASON (MMBtu/yr)

Ceilings/Roofs	0.6
Rim/Band Joists	-0.3
Above Grade Walls	-1.3
Foundation Walls	-1.0
Doors	-0.1
Windows/Skylights	11.5
Floors	-0.4
Crawl Space/Unht Bsmt	0.0
Slab Floors	-1.6
Infiltration	-2.4
Mechanical Ventilation	-0.6
Ducts	1.0
Active Solar	0.0
Sunspace	0.0
Internal Gains	13.0
Whole House Ventilation	0.0
Total	18.4



2005 EPACT ENERGY EFFICIENT HOME TAX CREDIT (13-001)

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Normalized, Modified End-Use Loads (MMBtu/year)

	2006 IECC	
	50% Target	As Designed
Heating:	40.7	44.7
Cooling:	6.4	11.5
Total:	47.2	56.2

Envelope Loads (MMBtu/year)

	2006 IECC	
	90% Target	As Designed
Heating:	73.3	65.1
Cooling:	11.5	13.3
Total:	84.9	78.4

This home DOES NOT meet the requirements for the residential energy efficiency tax credits under Section 1332, Credit for Construction of New Energy Efficient Homes, of the Energy Policy Act of 2005 extended to December 31, 2014.

Building Features

Ceiling Flat: R-40.0	Slab: R-0.0 Edge, R-0.0 Under
Sealed Attic: NA	Duct: Uninsulated
Vaulted Ceiling: NA	Window: U-Value: 0.310, SHGC: 0.400
Above Grade Walls: R-20.0	Heating Fuel-fired air distribution, Natural gas, 93.0 AFUE.
Foundation Walls: R-11.0	Cooling Air conditioner, Electric, 13.0 SEER.
Exposed Floor: R-38.0	

Under penalties of perjury, I declare that I have examined this certification, including accompanying documents, and to the best of my knowledge and belief, the facts presented in support of this certification are true, correct, and complete.

Name: <u>Phil Drotar</u>	Signature: _____
Company: <u>EnergyLogic, Inc</u>	Date: <u>9/28/2016</u>
Address: <u>PO Box N, Berthoud, CO 80513</u>	



2009 IECC ANNUAL ENERGY COST COMPLIANCE

Date: September 28, 2016 Rating No.: 42048
Building Name: Reunion Homes Rating Org.: EnergyLogic, Inc
Owner's Name: Reunion Homes Homeowner Phone No.: (970) 556-0839
Property: 7345 Bonterra Ln Rater's Name: Phil Drotar
Address: Colorado Springs, CO 80925 Rater's No.: 9147374
Builder's Name: Reunion Homes
Weather Site: Colorado Springs, CO Rating Type: Confirmed
File Name: 7345 Bonterra Ln Reunion Homes REM.blg Rating Date: 9/28/2016

	Annual Energy Cost (\$)	
	2009 IECC	As Designed
Heating:	1178	821
Cooling:	211	211
Water Heating:	157	157
SubTotal - Used to Determine Compliance:	1545	1189
Lights & Appliances:	1036	1106
Photovoltaics:	-0	-0
Service Charge:	0	0
Total:	2581	2295 *

Mandatory Requirements:

Duct Insulation R-Value Check (per Section 405.2)
Minimum Duct Insulation (Design must be equal or higher) 6.0 19.0

Window U-Factor Check (Section 402.5)
Window U-Factor (Design must be equal or lower): 0.480 0.308

Home Infiltration (Section 402.4.2): PASSES
Duct Leakage (Section 403.2.2): PASSES

This home MEETS the annual energy cost requirements of Section 405 of the 2009 International Energy Conservation Code based on a climate zone of 5B. In fact, this home surpasses the requirements by 23.0%.

Name: Phil Drotar
Organization: EnergyLogic, Inc

Signature: *Phil Drotar*
Date: September 28, 2016

* Design energy cost is based on the following systems:
Heating: Fuel-fired air distribution, 104.0 kBtuh, 93.0 AFUE.
Cooling: Air conditioner, 48.0 kBtuh, 13.0 SEER.
Water Heating: Conventional, Gas, 0.67 EF.
Window-to-Floor Area Ratio: 0.11
Blower door test: Htg: 2656 Clg: 2656 CFM50

In accordance with IECC, building inputs, such as setpoints, infiltration rates, and window shading may have been changed prior to calculating annual energy cost. Furthermore, the standard reference design HVAC system efficiencies are set equal to those in the design home as specified in the 2009 IECC. These standards are subject to change, and software updates should be obtained periodically to ensure the compliance calculations reflect current federal minimum standards.

HOME CERTIFIED TO MEET THE PROVISIONS OF THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE

This home built at

7345 Bonterra Ln, Colorado Springs, CO

by Reunion Homes

exceeds the minimum requirements for the 2009 International Energy Conservation Code

9/28/2016

Building Features

Ceiling Flat: R-40.0	Duct Leakage to Outside: 70.00 CFM @ 25 Pascals
Sealed Attic: NA	Total Duct Leakage: 1200.00 CFM @ 25 Pascals
Vaulted Ceiling: NA	Infiltration: Htg: 2656 Clg: 2656 CFM50
Above Grade Walls: R-20.0	Window: U-Value: 0.310, SHGC: 0.400
Foundation Walls: R-11.0	Heating Fuel-fired air distribution, Natural gas, 93.0 AFUE.
Exposed Floor: R-38.0	Cooling Air conditioner, Electric, 13.0 SEER.
Slab: R-0.0 Edge, R-0.0 Under	Water Heating Conventional, Natural gas, 0.67 EF, 50.0 Gal.
Duct: Uninsulated	

The organization below certifies that the proposed building design described herein is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2009 IECC requirements in compliance with Chapter 4 based on Climate Zone 5B and with all mandatory requirements.

Name: Phil Drotar

Signature: 

Organization: EnergyLogic, Inc

Date: September 28, 2016

*The 2009 International Energy Conservation Code is a registered trademark of the International Code Council, Inc. ("ICC").
No version of this software has been reviewed or approved by ICC or its affiliates.
REM/Rate - Residential Energy Analysis and Rating Software v14.6.4*

2009 IECC Certificate

7345 Bonterra Ln, Colorado Springs, CO 80925

Building Envelope Insulation

Ceiling: R-40.0
Above Grade Walls: R-20.0
Foundation Walls: R-11.0
Exposed Floor: R-38.0
Slab: R-0.0 Edge, R-0.0 Under
Infiltration: Htg: 2656 Clg: 2656 CFM50
Duct: Uninsulated
Duct Leakage to Outside: 70.00 CFM @ 25 Pascals

Window Data

U-Factor

SHGC

Window: 0.310 0.400

Mechanical Equipment

HEAT: Fuel-fired air distribution, Natural gas, 93.0 AFUE.

COOL: Air conditioner, Electric, 13.0 SEER.

DHW: Conventional, Natural gas, 0.67 EF, 50.0 Gal.

Builder or Design Professional

Signature _____



Home Energy Rating Certificate

Reunion Homes
7345 Bonterra Ln

Colorado Springs, CO 80925



**5 Stars Plus
Confirmed**

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

Energy Efficient

HERS Index: 59

General Information

Conditioned Area:	4284 sq. ft.	HouseType:	Single-family detached
Conditioned Volume:	39789 cubic ft.	Foundation:	More than one type
Bedrooms:	3		

Mechanical Systems Features

Heating:	Fuel-fired air distribution, Natural gas, 93.0 AFUE.
Cooling:	Air conditioner, Electric, 13.0 SEER.
Water Heating:	Conventional, Natural gas, 0.67 EF, 50.0 Gal.
Duct Leakage to Outside:	70.00 CFM25.
Ventilation System:	Exhaust Only: 35 cfm, 100.0 watts.
Programmable Thermostat:	Heating: Yes Cooling: Yes

Building Shell Features

Ceiling Flat:	R-40.0	Slab:	R-0.0 Edge, R-0.0 Under
Sealed Attic:	NA	Exposed Floor:	R-38.0
Vaulted Ceiling:	NA	Window Type:	U-Value: 0.310, SHGC: 0.400
Above Grade Walls:	R-20.0	Infiltration Rate:	Htg: 2656 Clg: 2656 CFM50
Foundation Walls:	R-11.0	Method:	Blower door test

Lights and Appliance Features

Percent Interior Lighting:	95.00	Range/Oven Fuel:	Natural gas
Percent Exterior Lighting:	50.00	Clothes Dryer Fuel:	Electric
Refrigerator (kWh/yr):	709.00	Clothes Dryer EF:	3.01
Dishwasher Energy Factor:	0.68	Ceiling Fan (cfm/Watt):	0.00

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM/Rate - Residential Energy Analysis and Rating Software v14.6.4

This information does not constitute any warranty of energy cost or savings.
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Registry ID: 205059457

Rating Number: 42048

Certified Energy Rater: Phil Drotar

Rating Date: 9/28/2016

Rating Ordered For: Reunion Homes Homeowner

Estimated Annual Energy Cost

Use	Confirmed		
	MMBtu	Cost	Percent
Heating	77.7	\$760	35%
Cooling	3.9	\$135	6%
Hot Water	17.4	\$158	7%
Lights/Appliances	34.1	\$1106	51%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$0	0%
Total	133.1	\$2158	100%

**This home meets or exceeds the minimum
criteria for all of the following:**

2009 International Energy Conservation Code

Home Energy Rating Provider

EnergyLogic, Inc.

P.O. Box N

Berthoud, CO 80513

Phone # 1-800-315-0459

www.nrglogic.com

Phil Drotar

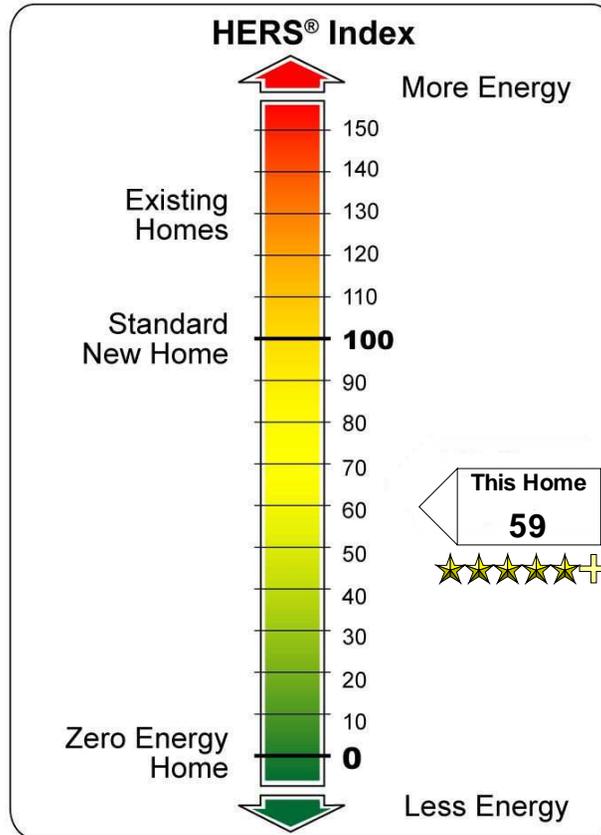
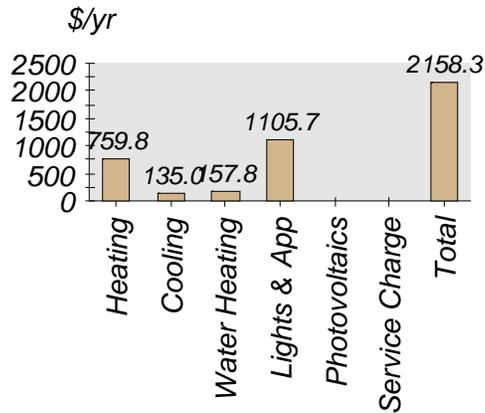
Certified Energy Rater



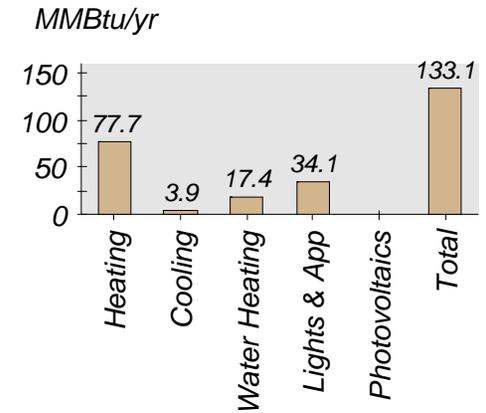
HOME PERFORMANCE ENERGY RATING CERTIFICATE



Estimated Annual Energy Cost



Estimated Annual Energy Consumption



Name: Reunion Homes
 Address: 7345 Bonterra Ln
 Colorado Springs, CO 80925
 House Type: Single-family detached
 Cond. Area: 4284 sq. ft.
 Rating No.: 42048
 Issue Date: September 28, 2016
 Certification: Verified

Annual Estimates*:
 Electric(kWh): 10882
 Natural gas(Therms): 960
 CO2 emissions(Tons): 15
 Annual Savings**: \$2012

* Based on standard operating condition.
 ** Based on a HERS 130 Index Home

Home Energy Rating Provider
EnergyLogic, Inc.
 P.O. Box N
 Certified Rater: Phil Drotar
 Rater ID: 9147374
 Registry ID: 205059457
 Rating Date: 9/28/2016

Signature: *Phil Drotar*



RESNET HOME ENERGY RATING Standard Disclosure

For home located at: 7345 Bonterra Ln

City: Colorado Springs

State: CO

1. The Rater or the Rater's employer is receiving a fee for providing the rating on this home.
2. In addition to the rating, the Rater or Rater's employer has also provided the following consulting services for this home:

- A. Mechanical system design
- B. Moisture control or indoor air quality consulting
- C. Performance testing and/or commissioning other than required for the rating itself
- D. Training for sales or construction personnel
- E. Other (specify below)

3. The Rater or Rater's employer is:
- A. The seller of this home or their agent
 - B. The mortgagor for some portion of the financed payments on this home
 - C. An employee, contractor or consultant of the electric and/or natural gas utility serving this home

4. The Rater or Rater's employer is a supplier or installer of products, which may include:

	Installed in this home by:		OR	Is in the business of:	
HVAC systems	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	OR	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Thermal insulation systems	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	OR	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Air sealing of envelope or duct systems	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	OR	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Windows or window shading systems	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	OR	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Energy efficient appliances	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	OR	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Construction (builder, developer, construction contractor, etc.)	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	OR	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Other (specify below):	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	OR	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer

I attest that the above information is true and correct to the best of my knowledge. As a Rater or Rating Provider I abide by the rating quality control provisions of the Mortgage Industry National Home Energy Rating Standard as set forth by the Residential Energy Services Network (RESNET). The national rating quality control provisions of the rating standard are contained in Chapter One 4.C.8. of the standard and are posted at http://resnet.us/standards/RESNET_Mortgage_Industry_Nat. The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

Phil Drotar

Rater's Printed Name



Rater's Signature

9147374

Certification #

September 28, 2016

Date