

North Carolina 2018 - R402.1.5 Total UA

Property

216 Walker Grove
Lillington, NC 27546
Model: 2816 Kipling E-F4_1
Community: Walkers Grove

Walkers Grove 9
True_Walkers Grove 9_2816 Kipling
E-F4_1_GL_WinPerPlan

Organization

Performance Point, LLC.
Rick Blair
704-614-7175

Builder

True Homes

Inspection Status










Results are projected

This report is based on a proposed design and does not confirm field enforcement of design elements.

Building UA

Elements	NC Reference	As Designed
Ceilings	48.2	41.6
Above-Grade Walls	193.9	193.2
Windows, Doors and Skylights	118.1	104.3
Slab Floor:	79.2	79.2
Framed Floors	18.6	18.8
Foundation Walls	0.0	0.0
Rim Joists	11.1	10.9
Overall UA (Design must be equal or lower):	469.1	448.0

Requirements

	402.1.5	Total UA alternative compliance passes by 4.5%.
	402.3.2	Average SHGC: 0.30 Max SHGC: 0.30
	R402.4.2.2	Air Leakage Testing Air sealing is 5.00 ACH at 50 Pa. It must not exceed 5.00 ACH at 50 Pa.
	R402.5	Area-weighted average fenestration SHGC
	R402.5	Area-weighted average fenestration U-Factor
	R404.1	Lighting Equipment Efficiency
	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.
	R403.3.1	Duct Insulation
	403.3.3	Duct Testing

Design exceeds requirements for North Carolina 2018 Prescriptive compliance by 4.5%.

Name: Rick Blair

Signature: 

Organization: Performance Point, LLC.

Digitally signed: 12/27/21 at 6:55 PM

Ekotrope RATER - Version 4.0.1.2803

North Carolina 2018 Prescriptive compliance results calculated using Ekotrope RATER's energy and code compliance algorithm, including appropriate amendments. Ekotrope RATER is a RESNET Accredited HERS Rating Tool. All results are based on data entered by Ekotrope users. Ekotrope disclaims all liability for the information shown on this report.

Energy Code Inspection Checklist

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General Building Information

Conditioned Area (sq ft)	2,820
Conditioned Volume (cubic ft)	25,525
Insulated Shell Area (sq ft)	6,271.1

The building energy model in Ekotrope reflects the building assemblies and energy features listed below. Sometimes energy features will change in the field from what has been modeled. The inspection process should identify any changes and ensure that the home continues to meet the applicable energy code.

Slab



Name: House Slab(1,212 s.f., 162 ft. exterior perimeter)
R-10 perimeter insulation, R-0 under slab insulation.

Framed Floor



Name: Over Garage (396 s.f.)
R-0 continuous insulation, R-19 cavity insulation
Insulation Grade: I

Foundation Wall

None Present

Above Grade Wall



Name: 2x4/ Ambient (2,463.5 s.f.)
R-0 continuous insulation, R-15 cavity insulation
Insulation Grade: I



Name: Niche (2 s.f.)
R-3 continuous insulation, R-0 cavity insulation
Insulation Grade: I



Name: 2x4/ Garage (269.4 s.f.)
R-0 continuous insulation, R-15 cavity insulation
Insulation Grade: I

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Name: 2x4/ Kneewall (48.6 s.f.)
R-0 continuous insulation, R-15 cavity insulation
Insulation Grade: I



Name: 2x6 Garage (72.4 s.f.)
R-0 continuous insulation, R-19 cavity insulation
Insulation Grade: I

Rim Joist



Name: Ambient (124.2 s.f.)
R: 13.30



Name: Garage (31.6 s.f.)
R: 13.30



Name: Attic (43.4 s.f.)
R: 13.30

Ceiling / Roof



Name: Flat Ceiling 8:12 (1,238 s.f.)
R-28.5 continuous insulation, R-9.5 cavity insulation
Insulation Grade: I



Name: Flat Ceiling 12:12 (370 s.f.)
R-28.5 continuous insulation, R-9.5 cavity insulation
Insulation Grade: I

Opaque Door



Name: Front Door (20 s.f.)
R: 7.00



Name: Garage Entry (17.8 s.f.)
R: 7.00

Glazing

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- Name: Front (90 s.f.), U: 0.330, SHGC: 0.3, Orientation: EAST
- Name: Front Shd. SL (13.33 s.f.), U: 0.330, SHGC: 0.3, Orientation: EAST
- Name: Right (30 s.f.), U: 0.330, SHGC: 0.3, Orientation: NORTH
- Name: Right Fxd. (12 s.f.), U: 0.330, SHGC: 0.3, Orientation: NORTH
- Name: Back (100 s.f.), U: 0.330, SHGC: 0.3, Orientation: WEST
- Name: Back door Shd. /Most (1/2) (16.67 s.f.), U: 0.330, SHGC: 0.3, Orientation: WEST
- Name: Back door Shd. Fxd. /Most (1/2) (16.67 s.f.), U: 0.330, SHGC: 0.3, Orientation: WEST
- Name: Left (21 s.f.), U: 0.330, SHGC: 0.3, Orientation: SOUTH

Skylight

None Present

Mechanical Ventilation

None Present

Mechanical Equipment

- Water Heater • Electric • 100% Hot Water Load @ 0.95 Energy Factor
- Heat Pump / All • Electric • 100% Heating Load @ 8.2 HSPF, 100% Cooling Load @ 14 SEER

Air Leakage Control

- Test Status: Blower-door tested
House is air-sealed as to achieve 2,127 CFM50 (5.00 ACH50) or less at final blower-door test.

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Infiltration Requirements for IECC in Climate Zone 4

2009 IECC Infiltration limit for the design home is 7 ACH50.

2012 IECC Infiltration limit for the design home is 3 ACH50.

2015 IECC Infiltration limit for the design home is 3 ACH50.

2018 IECC Infiltration limit for the design home is 3 ACH50.

2021 IECC Infiltration limit for the design home is 5 ACH50.

Duct Leakage

Duct System 1

NOT entirely within conditioned space, testing required

Leakage to Outside specified as: 4 CFM25 / 100 ft²

Total Leakage specified as: 4 CFM25 / 100 ft² (Post-Construction)

Duct Leakage Code Requirements for IECC

2009 IECC:

Postconstruction Leakage Test: Duct Leakage to Outdoors \leq 8 CFM25 / 100 sq ft CFA.

Rough in Test with AHU: Total Duct Leakage \leq 6 CFM25 / 100 sq ft CFA.

Rough in Test without AHU: Total Duct Leakage \leq 4 CFM25 / 100 sq ft CFA.

2012 IECC Mandatory, 2015 and 2018 IECC Prescriptive Paths:

Postconstruction Leakage Test: Total Duct Leakage \leq 4 CFM25 / 100 sq ft CFA.

Rough in Test with AHU: Total Duct Leakage \leq 4 CFM25 / 100 sq ft CFA.

Rough in Test without AHU: Total Duct Leakage \leq 3 CFM25 / 100 sq ft CFA.

2015 and 2018 IECC Performance Paths (Cost Compliance):

Leakage testing is required UNLESS all ducts and air handlers are located entirely within the thermal envelope.

There is no pass/fail threshold for duct leakage on the performance path.

Project Notes

EP_12/24/2021_Performance Report

True_2816 Kipling E-F4_1

Used Worst Orientation (E)

DG_12/27/2021

Revised

Energy Specifications Label

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Building Envelope Specs

Ceiling: R-38

Above Grade Walls: R-15

Foundation Walls: N/A

Exposed Floor: R-19

Slab: R-10

Infiltration: 5 ACH50

Duct Insulation: Supply: R8, Return: R8

Duct Lkg to Outdoors: 4 CFM25 / 100 ft²

Window & Door Specs

U-Value: 0.33, SHGC: 0.3

Door: R-7

Mechanical Equipment Specs

Heating: Air Source Heat Pump • Electric • 8.2
HSPF

Cooling: Air Source Heat Pump • Electric • 14
SEER

Hot Water: Residential Water Heater • Electric •
0.95 Energy Factor

Average Mechanical Ventilation: 0 CFM

Builder or Design Professional

Signature: _____

Builder Affidavit

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Important Notice to Builder

Builder affirms in this affidavit that all building characteristics described in the Building Summary Report accurately reflect this New Home. Builder agrees to allow the Home Energy Rating System (HERS) Provider and/or Rater to verify building characteristics of this New Home fully at the HERS Rater/Provider's discretion. The HERS Provider and Rater do not create or imply any duty or obligations to Builder or any subsequent owner. Builder is responsible for taking any actions necessary to protect Builder's interest. There is no guarantee or warranty whatsoever expressed or implied from the HERS Provider or Rater.

HERS® Index Score:80

Builder Name: True Homes

Builder Signature: _____

Name: Rick Blair

Signature: 

Organization: Performance Point, LLC.

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