

North Carolina 2018 - R402.1.5 Total UA

Property 53 Norris Farm Drive Angier , NC 27501 Model: 2098 Devin I-01_2 Community: Norris Farm	Organization Performance Point, LLC. 704-614-7175 Rick Blair	Inspection Status Results are projected
True_Norris Farm 2_2098 Devin I-01 Norris Farm 2	Builder True Homes	

Building UA

Elements	NC Reference	As Designed
Ceilings	38.9	33.5
Above-Grade Walls	176.4	178.9
Windows, Doors and Skylights	85.5	71.3
Slab Floor:	84.2	84.2
Framed Floors	0.0	0.0
Foundation Walls	0.0	0.0
Rim Joists	6.7	6.6
Overall UA (Design must be equal or lower):	391.7	374.5

Requirements

<input checked="" type="checkbox"/>	402.1.5	Total UA alternative for insulation and fenestration
<input checked="" type="checkbox"/>	402.3.2 Glazed Fenestration SHGC	Average SHGC: 0.30 Max SHGC: 0.30
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	R402.5	Area-weighted average fenestration SHGC
<input checked="" type="checkbox"/>	R402.5	Area-weighted average fenestration U-Factor
<input checked="" type="checkbox"/>	R404.1	Lighting Equipment Efficiency
<input checked="" type="checkbox"/>	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.
<input checked="" type="checkbox"/>	R403.3	Duct Insulation
<input checked="" type="checkbox"/>	403.3.3	Duct Testing

Design exceeds requirements for North Carolina 2018 Prescriptive compliance by 4.4%.

Name:	<u> Rick Blair </u>	Signature:	<u>  </u>
Organization:	<u> Performance Point, LLC. </u>	Digitally signed:	<u> 12/2/19 at 4:55 PM </u>

Energy Code Inspection Checklist

Property

53 Norris Farm Drive
Angier , NC 27501
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Norris Farm 2

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True Homes

General Building Information

Conditioned Area (sq ft)	2,095.8
Conditioned Volume (cubic ft)	19,058.98
Insulated Shell Area (sq ft)	5,246.9

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(1,295.8 s.f., 172 ft. exterior perimeter)
R-10 perimeter insulation, R-0 under slab insulation.

Framed Floor

None Present

Foundation Wall

None Present

Above Grade Wall

- Name: 2x4 Ambient (1,955.8 s.f.)
R-0 continuous insulation, R-15 cavity insulation
Insulation Grade: I
- Name: 2x4 Garage (361.1 s.f.)
R-0 continuous insulation, R-15 cavity insulation
Insulation Grade: I
- Name: 2x4 Knee wall (218.4 s.f.)
R-0 continuous insulation, R-15 cavity insulation
Insulation Grade: I

Rim Joist

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Name: Ambient (74.5 s.f.)
R: 13.30

Name: Attic (45.5 s.f.)
R: 13.30

Roof

Name: 1 st FL/ Ceiling (495.8 s.f.)
R-28.5 continuous insulation, R-9.5 cavity insulation
Insulation Grade: I

Name: 2nd FL/ Ceiling (800 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 door (17.8 s.f.)
R: 7.00

Name: Attic Door (17.8 s.f.)
R: 5.00

Glazing

Name: Front (45 s.f.), U: 0.330, SHGC: 0.3, Orientation: WEST

Name: Front sh (30 s.f.), U: 0.330, SHGC: 0.3, Orientation: WEST

Name: Left (15 s.f.), U: 0.330, SHGC: 0.3, Orientation: NORTH

Name: Back (75 s.f.), U: 0.330, SHGC: 0.3, Orientation: EAST

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Name: Back door (17.8 s.f.), U: 0.330, SHGC: 0.3, Orientation: EAST

Name: Right (6 s.f.), U: 0.330, SHGC: 0.3, Orientation: SOUTH

Skylight

None Present

Mechanical Ventilation

None Present

Mechanical Equipment

Air-source heat pump • Electric • 100% Heating Load @ 8.2 HSPF, 100% Cooling Load @ 14 SEER

Water Heating • Electric • 100% Hot Water Load @ 0.95 Energy Factor

Air Leakage Control

Test Status: Blower-door tested
House is air-sealed as to achieve 1,588 CFM50 (5.00 ACH50) or less at final blower-door test.

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.

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)

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Duct Leakage Code Requirements for IECC

2009 IECC:

Postconstruction Leakage Test: Duct Leakage to Outdoors ≤ 8 CFM25 / 100 sq ft CFA.
Rough in Test with AHU: Total Duct Leakage ≤ 6 CFM25 / 100 sq ft CFA.
Rough in Test without AHU: Total Duct Leakage ≤ 4 CFM25 / 100 sq ft CFA.

2012 IECC and 2015 IECC Prescriptive Path:

Postconstruction Leakage Test: Total Duct Leakage ≤ 4 CFM25 / 100 sq ft CFA.
Rough in Test with AHU: Total Duct Leakage ≤ 4 CFM25 / 100 sq ft CFA.
Rough in Test without AHU: Total Duct Leakage ≤ 3 CFM25 / 100 sq ft CFA.

2015 Performance Path (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

DG_12/02/19

-Changed: Slab to R10 2' down, walls to R15, ceiling to R38, set duct location %

-Used worst orientation (current = west)

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HG_11/28/2019__N/S Performance Report
True_2098 Devin I-01_2

Energy Specifications Label

53 Norris Farm Drive

Model: 2098 Devin I-01_2

Ekotrope RATER - Version: 3.2.2.2306

Building Envelope Specs

Ceiling: R-38

Above Grade Walls: R-15

Foundation Walls: N/A

Exposed Floor: N/A

Slab: R-10

Infiltration: 5 ACH50

Duct Insulation: R-8

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: Water Heater • Electric • 0.95 Energy
Factor

Builder or Design Professional

Signature: _____