BlueStar Infrared
Certified Infrared Inspection Services
PO Box 6126
Stuart, Fl. 34997
"We Bring Bad Things to Light"
COMMERCIAL • INSTITUTIONAL • RESIDENTIAL
(772) 215-8794

Thermal Scanning Report

Description: Thermal Energy Loss Comparison – A Qualitative Survey

Client:
HomeCrete Homes
759 South Federal Hwy
Stuart, Florida 34997
(772) 873-6707

Project Locations:
4080 Edisto Dr. Grant, Florida
3036 SW Ellsworth Ave, Palm City Florida
225 Bayshore Drive, Port St Lucie Florida
3771 SW Savona Blvd Port St Lucie Florida

Certified Infrared Thermographer:
Scott Eves, LEED® AP, CIT
Level III # 7187
Building Science # 2981

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Forward

Energy loss impacts our renewable resources, by reducing energy consumption we can obviously lower our monthly utility bills, but more importantly, we can reduce our carbon foot print and help to foster sustainability.

Building insulation deficiencies, air leakage, inefficient heating and cooling systems and leaking ductwork can all waste a tremendous amount of energy. Thermal imaging is an important technology used to identify and document areas of excessive heat loss or gain.

Introduction

Thermal energy or Infrared Radiation is all around us, its part of the Electromagnetic Spectrum that is invisible to us and to see it, we use a specially designed camera that converts these invisible wave lengths to images we can see. One of the many uses of Thermography is in the area of Building Science where it is used as a non-destructive inspection technique to view temperature variations of building materials.

To help understand the Thermal data presented in the Images on the following pages, the darker colors represent cooler temperatures and lighter colors are warmer. The lighter colors of the CBS (Concrete, Block & Stucco) homes are a good indication of excessive heat loss through the building envelope. The darker colors of the ICF (Insulated Concrete Forms) homes indicate this type of construction has a high resistance to heat flow and will reduce energy usage.

Description

BlueStar Infrared was contracted by HomeCrete Homes to perform an Infrared Energy loss survey of multiple ICF type construction homes in the South East, Florida area

The purpose of this Infrared survey is to provide a qualitative comparison of energy loss between the Insulated Concrete Form (ICF) type construction and the standard Concrete Block Stucco (CBS) construction typically use in residential construction.

Inspection Summery

This Thermal Infrared Energy Loss survey includes four, ICF and comparable CBS homes in the Treasure Coast area of South East Florida. The thermograms and/or daylight photographs of these properties appear on the Image Pages found below

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Thermal Scanning Report

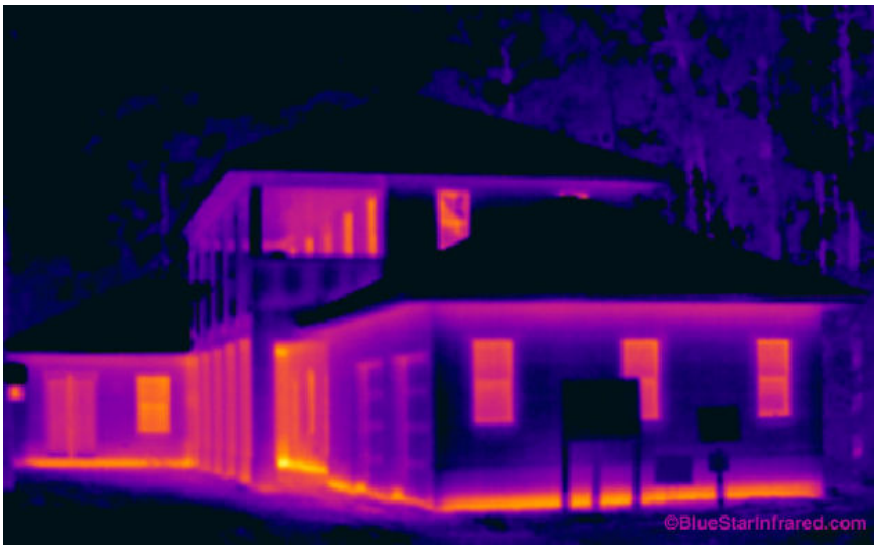
Company: HomeCrete Homes

Contact: Jeff Alexander

Location:
3036 SW Ellsworth Ave
Palm City, Florida

Infrared Image #1

ICF Construction:
Thermal image shows very little heat loss of this two story home on a cold night as indicated by the darker colors of the exterior walls.



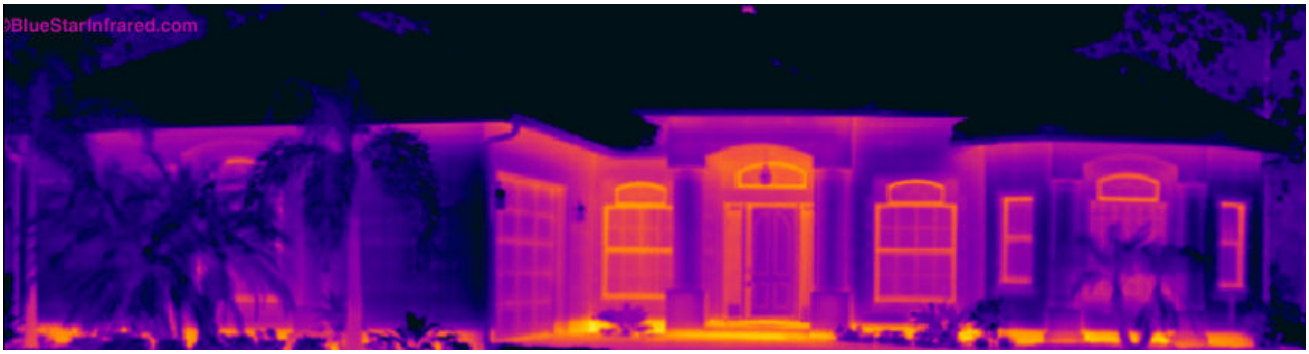
Infrared Image #2

CBS / Frame Construction:
The bright colors in this thermal image of a 2 story, standard construction home emphases the many areas of excessive energy loss.

Note the vertical stripes on the 2nd floor indicating thermal bridging of the stud walls that conducts heat to the conditioned space and reduces the effective insulating value of the walls.

Location:
4080 Edisto Drive
Grant, Florida

Infrared Image #3



ICF Construction:
The darker colors of the walls, doors and windows of this single story, ICF home indicate there is very little heat transfer through the building envelope.

Infrared Image #4

CBS Construction:
The many areas of lighter colors in this thermal image of a single story, CBS home illustrates the low insulating value of this type of construction, resulting in increased energy consumption through out the year.

Location:
225 Bayshore Drive
Port St Lucie Florida

Infrared Image #5

ICF Construction:
The darker colors of this ICF home, illustrates the high insulating value of the exterior walls which substantially reduces heating and cooling energy consumption year round.

Infrared Image #6

CBS Construction:
Thermal image of a comparable, single story, CBS home highlighting the poor insulating value of this type of construction that will substantially increase energy consumption in both the cooling and heating seasons.

Location:
3771 SW Savona Blvd
Port St Lucie Florida

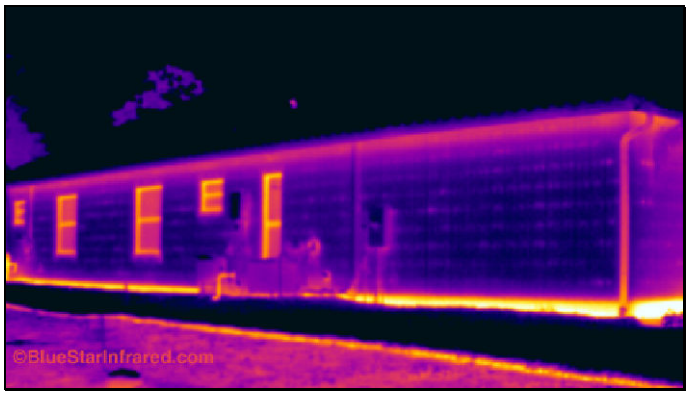
Infrared Image #7

ICF Construction:
The high insulating quality of the ICF type construction used in this home is evident by the darker colors of the walls which will substantially reduce energy consumption.

Infrared Image #8

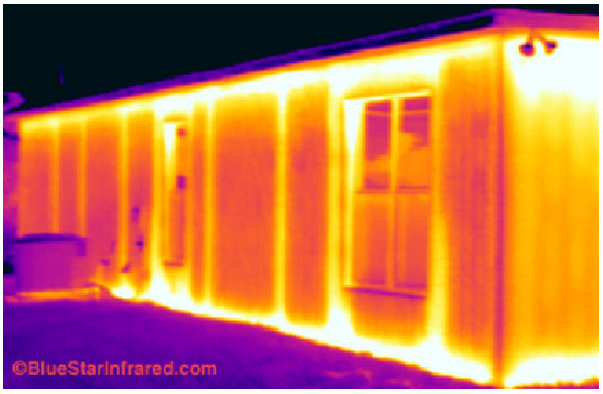
CBS Construction:
The brighter colors in this thermal image of a standard CBS home indicate many areas of substantial energy loss.

Infrared Image #9



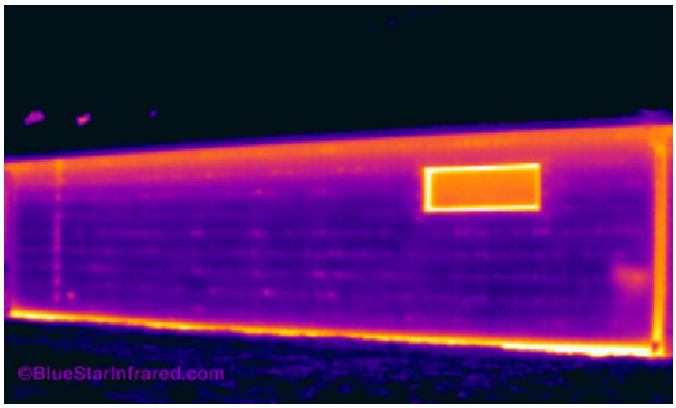
The ICF type Construction of these exterior walls is well insulated and will reduce cooling and heating costs.

Infrared Image #10



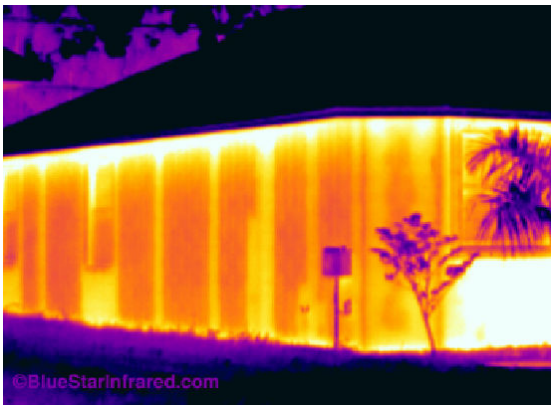
The exterior walls of this CBS type construction home are poorly insulated and wasting energy

Infrared Image #11



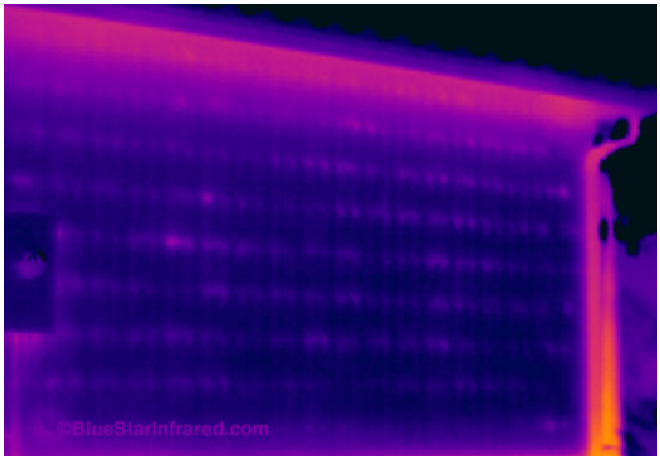
Thermal Image of this home illustrates the energy efficient quality of its ICF construction.

Infrared Image #12



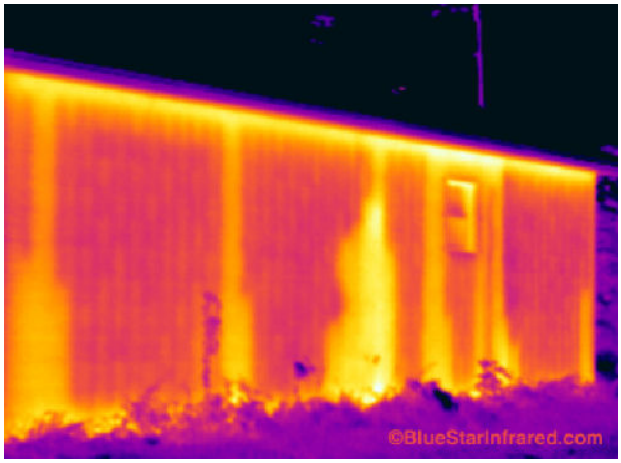
Thermal image highlighting energy loss typical of standard CBS type construction.

Infrared Image #13



Close-up thermal image of an exterior, ICF wall Illustrating a remarkable lack of energy loss.

Infrared Image #14



Thermal image showing excessive thermal bridging and heat loss due to faulty CBS reinforcement pours.

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