This construction is required to meet guidelines of the:

STATE OF ALABAMA

ENERGY CODE

Please complete forms before the framing inspection and keep in inspection box. These forms will be required before CO is issued.

Thank you, Building Official

How to Pass an Energy Conservation Inspection
CITY OF DOTHAN, AL

1) Educate and Evaluate:

Know and understand what a *building thermal envelope* is and how to properly identify it on your building.

2) Prepare and Provide:

Prepare your building plan submittals in sufficient detail and provide the necessary documentation for plan review and approval.

3) Communicate and Confirm:

Explain to your framers that it is important to follow the energy conservation requirements and confirm that they know what they are supposed to do.

4) Visit and Verify:

Visit your project often to verify that the work is being done correctly.

./ Ensure that all penetrations, joints, seams, gaps, etc. in the *building thermal envelope* are sealed creating a continuous air barrier between the conditioned spaces inside and the unconditioned spaces outside. The goal is to make the *building thermal envelope* virtually airtight.

./ Make sure that all windows and doors are installed and flashed correctly and have legible NFRC labels confirming that they meet or exceed the prescriptive U-Factor and SHGC requirements for Climate Zone 3 in Table 402.1.1 of the IECC or the values listed on the REScheck report if you chose the REScheck option for plan approval.

TABLE R402.1.2 (N1102.1.2)
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT [a]

CLIMATE ZONE	FENESTRATION U-FACTOR[b]	SKYLIGHT U-FACTOR[b]	GLAZED FENESTRATION SHGC[b]	CEILING R-VALUE[f]	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE[e]	FLOOR R-VALUE	BASEMENT WALL R-VALUE[c]	SLAB R-VALUE & DEPTH	CRAWL SPACE WALL R-VALUE[c]
2	0.35[f]	0.55	0.27	30	13	4/6	13	0	0	0
3	0.35[f]	0.55	0.27	30	13	5/8	19	5/13[d]	0	5/13

./ Confirm that the *building thermal envelope* is insulated to code requirements and that the insulation is installed correctly by being in continuous contact throughout the entire envelope.

./ Ensure that your HVAC contractor has installed a heating and cooling system according to "Manual J" calculations and that the system was approved during the plan review. Also check for the proper sealing and insulation of the duct system. Beginning July 1st 2013 a duct blaster test will be required unless air handler and all of the systems duct work is located completely inside conditioned spaces. Also make sure that all mechanical, ventilation, and/or exhaust systems are installed correctly. Additionally, as of April 21, 2017 in order to pass the final inspection and receive a Certificate of Occupancy, you will be required to submit a successful blower door test by a qualified person approved by the Building Official to perform such tests.

./ If you have a circulating water heater or swimming pool, be certain that the specific requirements for each have been met.

./ See to it that at least half of the light bulbs installed in permanent light fixtures are high-efficacy. The definition of high-efficacy is: Compact fluorescent lamps, T-8 or smaller diameter linear fluorescent lamps or lamps with a minimum capacity to produce: 60 lumens per watt for lamps over 40 watts, 50 lumens per watt for lamps over 15 watts up to 40 watts, or 40 lumens per watt for lamps 15 watts or less.

./ The City of Dothan Energy Code Compliance Certificate is posted on or near the electrical panel or air handler.

For C/O Submit:

1. Prescriptive Approach Worksheet or Rescheck
2. Energy Code Duct & Envelope Testing Results
3. Manual J

STATEMENT OF COMPLIANCE WITH ALABAMA STATE ENERGY CODES FOR RESIDENTIAL BUILDINGS

CITY OF DOTHAN, AL

(2015 IECC with State of Alabama Amendments for Residential Dwellings)

The 2015 International Energy Conservation Code, published by the International Codes Council, when used in conjunction with the State of Alabama Energy and Residential Codes, constitutes the official Alabama State Energy Code for Residential Buildings. This Code establishes minimum regulations for energy efficient design, erection, construction, and/or alternation of one-and-two family dwellings and townhouses not more than three stories above grade in height with a separate means of egress and their accessory structures. Compliance with this Energy Code by designers and builders is mandatory.

This form must be completed entirely, signed and submitted at the time of permit application.

BUILDING PERMIT NUMBER:_____ **DATE:** _____

JOB SITE ADDRESS:_____

CONTRACTOR/BUILDER:_____

I/we do certify by signature below that the above permitted structure shall be built in compliance with the State of Alabama Energy Codes using one of the following methods: (Indicate with an "x" the appropriate choice.)

☐ Insulation, Window and Door Requirements by Component (Prescriptive Component Approach)

This approach is assumed unless documentation is provided by the builder that either the trade-off or simulated performance options are being used. Insulation and window requirements prescribed in the 2015 IECC or Chapter 11 of the International Residential Code must be strictly adhered to in addition to the *mandatory* requirements for building envelope air sealing and mechanical systems (plumbing, electrical, HVAC). Applicants must complete the Energy Code Prescriptive Approach Worksheet and submit it along with the permit application and the construction plans for review.

☐ REScheck with 2015 IECC as chosen option (Component UA Trade-off Approach)

Applicant must prepare and submit a REScheck report along with a building permit application, this form, and the construction plans for review. REScheck is available as a free download at *http://www.energycodes.gov/rescheck/.* REScheck allows you to demonstrate compliance with the weighted-average SHGC requirement and to perform simple trade-offs among building envelope components as well as receive credit for higher than standard heating and cooling equipment efficiencies. If using REScheck, you must use the Alabama version. Unless you are familiar with using REScheck software, download the *'REScheck Software User's Guide'*, while at the DOE website. The user's guide is imperative to understanding and using the software program correctly. After download and to establish the correct minimum compliance values for use in Lee County, select the City of Auburn or City of Opelika as your destination location. REScheck will automatically preset all climatic defaults specifically for *IECC Codes* compliance in Lee County.

Two (2) signed copies of the REScheck printed report for the work to be permitted must be submitted with each building permit application. One copy will be stamped "Reviewed For Codes Compliance" and will be given back to you at permit issue. This copy must be on the construction site and available to inspectors during inspections. The remaining copy will be retained for County records.

Mandatory requirements for building envelope air sealing and mechanical systems must be met even if using REScheck.

☐ IECC Section R405 (Simulated Performance Approach)

Section R405 provides an alternative way to meet the code's goal of effective use of energy based on a comprehensive analysis showing that the predicted annual energy costs of a *proposed home design* is less than or equal to that of a *standard reference design* (the same home built to meet the prescriptive criteria in the code). Because of the level of detail required in the analysis, this method is not often used for residential buildings. Please contact the Building Official for more information.

Mandatory requirements for building envelope air sealing and mechanical systems must be met even if using the Simulated Performance Approach.

Energy Code Prescriptive Approach Worksheet
CITY OF DOTHAN, AL

Building Permit No.:_____ Date:_____

Builder:_____ Phone Number: _____
Insulation Co.:_____ Phone Number: _____
Heating & Air Co.:_____ Phone Number: _____

Building Envelope Information

	Type (batt / blown / spray foam)	R-value
Flat Ceiling R-value: {R30 min)		
Sloped Ceiling / Roof Deck R-value: {R30 min), {R19 w/REScheck)		
Exterior Wall R-value: {R13 min)		
Attic Knee Wall R-value: {R13 min)		
Attic Knee Wall Sheathing R-value: {RS min)		
Basement Stud Wall R-value: {R13 min)		
Basement Mass Wall R-value: {RS min)		
Sealed Crawlspace Stud Wall R-value: {R13 min)		
Sealed Crawlspace Mass Wall R-value: {RS min)		
Floor over Unconditioned Space R-value: {R19 min)		
Floor over Air R-value: {R19 min)		

Other Insulation Ralue and description:_____

Window Size	LI-Factor (from NFRC label)	SHGC (from NFRC label)
Skylight		
Glazed Door	(> 50% glazed)	
Opaque Door	{< 50% glazed)	

Mechanical (Systems) Information

Water Heater Type: _Gas _Electric Circulating Pump? _Yes _No

Number and Size of Heating & Cooling Systems:_____/_____
Number of Air Handlers:_____
Heating System Type: ___Gas ___Heat Pump ___Other (explain)_____
Cooling System Type: ___ Split ___Heat Pump ___Other (explain)_____

Total House Heating Load:_____Btu/h Based on ACCA Manual J
Total House Cooling Load:_____Btu/h Based on ACCA Manual J

Heating & Cooling Load Calculations Performed By: NAME: _____
Date: _____ Signature: _____
Alabama State License Number or P.E. Registration Number: _____

SIGNATURE: (Applicant)_____
COMPANY NAME:_____

PRINTED NAME: _____

ADDRESS:_____

CITY _____STATE_____ ZIP_____

****NOTE: SUBMIT TO BUILDING OFFICIAL

Alabama Duct & Building Envelope Tightness Testing & Compliance Certification Form

Date					
HVAC Contractor		HVAC Cert.#			
DET Verifier		DET Cert.#			
City		State		Zip	
Phone		E-mail			

Home Owner		City			
Address		State		Zip	
Builder/Contractor		Permit #			

Building Envelope Tightness Verification

$ACH_{50} = CFM_{50}$ X 60/Volume

Fan Flow @ 50 Pascals (CFM_{50})	Total Conditioned Volume	*ACH_{50}	Code Compliant
			☐

* IECC R402.4.1.2 (Modified for Zones 2 and 3) The building or dwelling unit shall have an air leakage rate not exceeding 5 air changes per hour (@ 50 pascals).

Duct Tightness Verification

% Duct Leakage Result = CFM25 X 100/Conditioned Floor Area Served

System		*Test	*Max. % Leakage	CFM_{25}	Floor Area (ft^2)	% Leakage	Code Compliant
1							☐
2							☐
3							☐
4							☐

* Duct Testing is Mandatory (IECC R403.3.3)

Exception - No test is required where the ducts and air handlers are located entirely within the building envelope.

NTR = No Test Required	Maximum % Leakage	N/A
Maximum Leakage per 100 square feet of conditioned floor area. (IECC R403.3.4)		
RITnah = Rough in total Leakage with no air handler or furnace installed	Maximum % Leakage	3%
RIT = Rough in total leakage with air handler or furnace installed	Maximum % Leakage	4%
PCT = Post construction total leakage with system complete	Maximum % Leakage	4%

I certify that I have inspected the duct work associated with the HVAC unit referenced by the permit listed above (if applicable and where required) and found it complies with the requirements of chapter 305-2-4 of the Administrative Code of Alabama, known as the Alabama Energy and Residential Code.

DET Contractor Signature _____ Date

*Note: Submit this document to Building Official.