



Compliance Certificate

Project 1222 Timbergrove Lane

Energy Code: **2015 IECC**
Location: **Houston, Texas**
Construction Type: **Single-family**
Project Type: **New Construction**
Orientation: **Bldg. faces 270 deg. from North**
Conditioned Floor Area: **4,822 ft2**
Glazing Area: **17%**
Climate Zone: **2 (1371 HDD)**
Permit Date:
Permit Number:

Construction Site:
1222 Timbergrove Lane
Houston, TX 77008

Owner/Agent:

Designer/Contractor:

Compliance: Passes using performance alternative

Compliance: **0.1% Better Than Code**

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss	3,123	38.0	0.0	0.030	94
Wall 1: Wood Frame, 16" o.c. Orientation: Front	1,070	15.0	0.0	0.077	60
Window 3: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	16			0.300	5
Window 3 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	16			0.300	5
Window 5: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	14			0.300	4
Window 5 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	14			0.300	4
Window 7: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	26			0.300	8
Window 8: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	28			0.300	8
Window 9: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	10			0.300	3

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Window 10: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	13			0.300	4
Window 11: Metal Frame:Double Pane SHGC: 0.25 Orientation: Front	5			0.300	2
Window 11 copy 1: Metal Frame:Double Pane SHGC: 0.25 Orientation: Front	5			0.300	2
Window 13: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	14			0.300	4
Window 13 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	14			0.300	4
Window 13 copy 2: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	14			0.300	4
Window 19: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	14			0.300	4
Window 19 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Front	14			0.300	4
Door 1: Glass SHGC: 0.25 Orientation: Front	32			0.300	10
Door 2: Glass SHGC: 0.25 Orientation: Front	24			0.300	7
Door 2 copy 1: Glass SHGC: 0.25 Orientation: Front	24			0.300	7
Wall 2: Wood Frame, 16" o.c. Orientation: Back	1,070	15.0	0.0	0.077	52
Window 21: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	48			0.300	14
Window 21 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	48			0.300	14
Window 21 copy 2: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	48			0.300	14
Window 24: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	54			0.300	16
Window 24 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	54			0.300	16
Window 26: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	24			0.300	7
Window 27: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	15			0.300	5
Window 27 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	15			0.300	5
Window 29: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	11			0.300	3

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Window 29 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	11			0.300	3
Window 29 copy 2: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	11			0.300	3
Window 32: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	18			0.300	5
Window 32 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	18			0.300	5
Window 32 copy 2: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	18			0.300	5
Wall 3: Wood Frame, 16" o.c. Orientation: Left side	1,450	15.0	0.0	0.077	108
Window 36: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Left side	8			0.300	2
Window 36 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Left side	8			0.300	2
Window 38: Metal Frame:Double Pane SHGC: 0.25 Orientation: Left side	14			0.300	4
Window 38 copy 1: Metal Frame:Double Pane SHGC: 0.25 Orientation: Left side	14			0.300	4
Wall 4: Wood Frame, 16" o.c. Orientation: Right side	1,450	15.0	0.0	0.077	102
Window 40: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Right side	11			0.300	3
Window 41: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Right side	10			0.300	3
Window 42: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Right side	48			0.300	14
Window 43: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Right side	8			0.300	2
Window 44: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Right side	18			0.300	5
Window 44 copy 1: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Right side	18			0.300	5
Window 44 copy 2: Metal Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Right side	18			0.300	5
Floor 1: All-Wood Joist/Truss:Over Unconditioned Space	3,357	30.0	0.0	0.033	111

Mechanical Equipment

Description	Fuel type	Efficiency
Electric Central Air		14 SEER
Forced Hot Air		78 AFUE

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2015 IECC requirements in REScheck Version 4.6.5 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Damian Lopez

Name - Title

Damian Lopez

Signature

02.11.2021

Date

Project Notes:

Ingeniously Designed, LLC
550 Westcott St, Ste 410
Houston, Tx 77008

Damian Lopez
Residential Energy Inspector / Plans Examiner
Certificate #: 5318201-79



Inspection Checklist

Energy Code: 2015 IECC

Requirements: 100.0% were addressed directly in the REScheck software

Text in the "Comments/Assumptions" column is provided by the user in the REScheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Pre-Inspection/Plan Review	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
103.1, 103.2 [PR1] ¹ 	Construction drawings and documentation demonstrate energy code compliance for the building envelope. Thermal envelope represented on construction documents.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
103.1, 103.2, 403.7 [PR3] ¹ 	Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple dwelling units must demonstrate compliance with the IECC Commercial Provisions.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
302.1, 403.7 [PR2] ² 	Heating and cooling equipment is sized per ACCA Manual S based on loads calculated per ACCA Manual J or other methods approved by the code official.	Heating: Btu/hr____ Cooling: Btu/hr____	Heating: Btu/hr____ Cooling: Btu/hr____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

Section # & Req.ID	Foundation Inspection	Complies?	Comments/Assumptions
303.2.1 [FO11] ² 	A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.9 [FO12] ² 	Snow- and ice-melting system controls installed.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement is not applicable.

Additional Comments/Assumptions:

Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.1, 402.3.3, 402.5 [FR2] ¹ 	Glazing U-factor (area-weighted average).	U-____	U-____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Envelope Assemblies table for values.
402.1.1, 402.3.2, 402.3.3, 402.5 [FR3] ¹ 	Glazing SHGC value (area-weighted average).	SHGC:____	SHGC:____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Envelope Assemblies table for values.
303.1.3 [FR4] ¹ 	U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
402.4.1.1 [FR23] ¹ 	Air barrier and thermal barrier installed per manufacturer's instructions.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
402.4.3 [FR20] ¹ 	Fenestration that is not site built is listed and labeled as meeting AAMA /WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
402.4.5 [FR16] ²	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤2.0 cfm leakage at 75 Pa.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
405.2 [FR25] ¹ 	All ducts in unconditioned spaces or outside the building envelope are insulated to ≥R-6.	R-____	R-____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.3.5 [FR15] ³ 	Building cavities are not used as ducts or plenums.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.4 [FR17] ² 	HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to ≥R-3.	R-____	R-____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.4.1 [FR24] ¹ 	Protection of insulation on HVAC piping.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.6 [FR19] ²	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13] ² 	All installed insulation is labeled or the installed R-values provided.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
402.1.1, 402.2.6 [IN1] ¹ 	Floor insulation R-value.	R-_____ ☐ Wood ☐ Steel	R-_____ ☐ Wood ☐ Steel	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Envelope Assemblies table for values.
303.2, 402.2.7 [IN2] ¹ 	Floor insulation installed per manufacturer's instructions and in substantial contact with the underside of the subfloor, or floor framing cavity insulation is in contact with the top side of sheathing, or continuous insulation is installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
402.1.1, 402.2.5, 402.2.6 [IN3] ¹ 	Wall insulation R-value. If this is a mass wall with at least ½ of the wall insulation on the wall exterior, the exterior insulation requirement applies (FR10).	R-_____ ☐ Wood ☐ Mass ☐ Steel	R-_____ ☐ Wood ☐ Mass ☐ Steel	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Envelope Assemblies table for values.
303.2 [IN4] ¹	Wall insulation is installed per manufacturer's instructions.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2, 402.2.6 [FI1] ¹	Ceiling insulation R-value.	R-_____ ☐ Wood ☐ Steel	R-_____ ☐ Wood ☐ Steel	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Envelope Assemblies table for values.
303.1.1.1, 303.2 [FI2] ¹	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft ² .			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
402.2.3 [FI22] ²	Vented attics with air permeable insulation include baffle adjacent to soffit and eave vents that extends over insulation.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
402.4.1.2 [FI17] ¹	Blower door test @ 50 Pa. <=5 ach in Climate Zones 1-2, and <=3 ach in Climate Zones 3-8.	ACH 50 = ____	ACH 50 = ____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.3.4 [FI4] ¹	Duct tightness test result of <=4 cfm/100 ft ² across the system or <=3 cfm/100 ft ² without air handler @ 25 Pa. For rough-in tests, verification may need to occur during Framing Inspection.	____ cfm/100 ft ²	____ cfm/100 ft ²	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.3.3 [FI27] ¹	Ducts are pressure tested to determine air leakage with either: Rough-in test: Total leakage measured with a pressure differential of 0.1 inch w.g. across the system including the manufacturer's air handler enclosure if installed at time of test. Postconstruction test: Total leakage measured with a pressure differential of 0.1 inch w.g. across the entire system including the manufacturer's air handler enclosure.	____ cfm/100 ft ²	____ cfm/100 ft ²	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.3.2.1 [FI24] ¹	Air handler leakage designated by manufacturer at <=2% of design air flow.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.1.1 [FI9] ²	Programmable thermostats installed for control of primary heating and cooling systems and initially set by manufacturer to code specifications.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.1.2 [FI10] ²	Heat pump thermostat installed on heat pumps.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.5.1 [FI11] ²	Circulating service hot water systems have automatic or accessible manual controls.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.6.1 [FI25] ²	All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
403.2 [FI26] ²	Hot water boilers supplying heat through one- or two-pipe heating systems have outdoor setback control to lower boiler water temperature based on outdoor temperature.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.5.1.1 [FI28] ²	Heated water circulation systems have a circulation pump. The system return pipe is a dedicated return pipe or a cold water supply pipe. Gravity and thermos-syphon circulation systems are not present. Controls for circulating hot water system pumps start the pump with signal for hot water demand within the occupancy. Controls automatically turn off the pump when water is in circulation loop is at set-point temperature and no demand for hot water exists.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.5.1.2 [FI29] ²	Electric heat trace systems comply with IEEE 515.1 or UL 515. Controls automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.5.2 [FI30] ²	Water distribution systems that have recirculation pumps that pump water from a heated water supply pipe back to the heated water source through a cold water supply pipe have a demand recirculation water system. Pumps have controls that manage operation of the pump and limit the temperature of the water entering the cold water piping to 104°F.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
403.5.4 [FI31] ²	Drain water heat recovery units tested in accordance with CSA B55.1. Potable water-side pressure loss of drain water heat recovery units < 3 psi for individual units connected to one or two showers. Potable water-side pressure loss of drain water heat recovery units < 2 psi for individual units connected to three or more showers.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
404.1 [FI6] ¹	75% of lamps in permanent fixtures or 75% of permanent fixtures have high efficacy lamps. Does not apply to low-voltage lighting.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
404.1.1 [FI23] ³ 	Fuel gas lighting systems have no continuous pilot light.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
401.3 [FI7] ²	Compliance certificate posted.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.3 [FI18] ³	Manufacturer manuals for mechanical and water heating systems have been provided.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

Additional Comments/Assumptions:



2015 IECC Energy Efficiency Certificate

Insulation Rating	R-Value
Above-Grade Wall	15.00
Below-Grade Wall	0.00
Floor	30.00
Ceiling / Roof	38.00
Ductwork (unconditioned spaces):	R-8

Glass & Door Rating	U-Factor	SHGC
Window	0.30	0.25
Door	0.30	0.25

Heating & Cooling Equipment	Efficiency
Electric Central Air	14 SEER
Forced Hot Air	78 AFUE
Water Heater:	

Name: _____ Date: _____

Comments