



**City of Houston  
Building Inspection  
CODE WORD 2015**

INTERPRETATIONS AND APPLICATIONS OF  
THE HOUSTON ADOPTED CODES  
*2015 IBC, 2015 IRC, 2015 IFC, 2020 NEC, 2015 UMC, 2015 UPC,  
2015 IECC, and ASHRAE 90.1-2013*

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<b>PUBLICATION:</b>	<b>January 1, 2022</b>				
<b>SUBJECT:</b>	<b>Appendix U – Clarification</b>				
<b>CODE(S):</b>	<b>Houston Adopted Residential Code (2015)</b>				
<b>SECTION(S)</b>	<b>U103</b>				

This interpretation clarifies that one- and two-family dwellings, and multiple single-family dwellings (townhouses) that does not contain a minimum 600 square feet roof area oriented between 110 degrees and 270 degrees of true north is exempt from the provisions of Appendix U. This appendix does not require increased load capacities for the residential roofing systems. It does not require any specific physical orientation of any residential building. It does not require the redesign of plans or structural roof assemblies. The requirement is for a solar-ready zone to be identified on the plan sheet showing the roof layout for the future installation of solar electric and solar thermal systems where a south-facing roof plane contains a roof area of  $\geq 600$  square feet and oriented between 110 degrees and 270 degrees of true north.

The provisions of Appendix U intend designers to identify areas on the roof of certain residential buildings, called a solar-ready zone. This solar-ready zone is for potential future installation of components of renewable energy systems such as photovoltaic solar panels. Planning ahead for possible future solar equipment starts with documenting necessary solar-ready zone information on the building plans prior to the code review of the permit process.

This appendix also requires the builder to post specific information from the plans about the design of the home for use by the homeowner(s). The documentation of solar-ready zones, as well as the roof load (which is already provided in the plans due to Sections R106.1.1 and R301.1 of the IRC) will assist building departments as well as future contractors seeking to install renewable energy systems.

The builders/designers are very knowledgeable on the intricacies of each model and plan they produce and can easily identify unobstructed roof areas. This will save building departments and solar designers time and effort when installing future solar systems. If a homeowner wishes to install a solar energy system later, this documentation can save thousands of dollars in research, labor, installation, design, and integration of the solar system into the house.

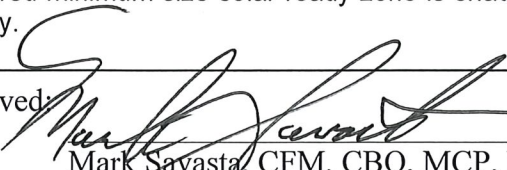
The provisions of IRC Section U103.1 requires certain new detached one- and two-family dwellings, and multiple single-family dwelling (townhouse) structures to document compliance with the provisions for a solar-ready zone as described in U103.3 of the Houston residential code, where those dwelling structures meet both following conditions:

- a) The dwelling contains a roof plane having not less than a 600 square feet roof area, and
- b) the roof area is oriented between 110 degrees and 270 degrees of true north.

In addition, there are two exceptions to IRC Section U103.1 that exempts buildings from the requirements of U103 where either of the following conditions exist:

- (1) The new residential building includes a permanently installed on-site renewable energy system, or
- (2) A building with the required minimum size solar-ready zone is shaded for more than 70 percent of daylight hours annually.

Approved:

  
Mark Savasta, CFM, CBO, MCP, FM  
Houston Building Official