CITY OF SANTA FE, NEW MEXICO

ORDINANCE NO. 2016-40

AN ORDINANCE

AMENDING SECTION 7-4.2 SFCC 1987, RESIDENTIAL GREEN BUILDING CODE BY REPEALING EXHIBIT A TO CHAPTER VII SFCC 1987; ADDING A REQUIREMENTS SECTION; AND AMENDING SECTION 14-8.2(D) BEST MANAGEMENT PRACTICES FOR GRADING BEFORE AND DURING CONSTRUCTION.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF SANTA FE

Section 1. Section 7-4.2 SFCC 1987 (being Ord. #2009-9, as amended) is amended to read:

7-4.2 Residential Green Building Code

A. *Purpose*. The purpose of this section is to:

(1) Provide criteria for rating the environmental performance of single- family residential construction and site design practices and provide guidelines for documentation that demonstrates conformance with those criteria;

(2) Encourage cost-effective and sustainable building methods by encouraging conservation of fossil fuels, water and other natural resources, reduction of greenhouse gas emissions, recycling of construction materials, reducing solid waste and improving indoor air quality;

(3) Identify the specific requirements for complying with the requirements of the Residential Green Building Code; and

(4) Encourage more aggressive green building development through incentives

and rewards to work toward the goals of the 2030 challenge as adopted by the governing body by Resolution No. 2006-55.

B. *Residential Green Building Code; Applicability.*

(1) The provisions of the Santa Fe Residential Green Building Code shall apply to:

(a) new single-family, attached and detached, residential units as defined by the 2009 International Residential Code or its successor as adopted by the city;

(b) modular homes which are built off-site and brought onto the site, provided that the *land use director* may approve exceptions to specific code requirements upon a showing by the applicant or modular home supplier that compliance would cause undue burden; and

(c) Residential additions that provide for living, sleeping, eating, cooking and sanitation. Only the addition is subject to the code provisions, not the existing structure.

(2) Upon request of an applicant, applications for permits submitted prior to March 1, 2017, may be issued in compliance with the prior version of Residential Green Building Code. The permit fee in paragraph F of this subsection shall apply.

C. *Relationship to Other Codes; Compliance; Exceptions.*

(1) The requirements of this section are in addition to and do not replace the requirements of other sections of this chapter and other chapters of this Code, including without limitation, all of the life safety codes, historic preservation ordinance, land development code and adopted building codes and development standards.

(2) All submittals and approvals required under this Residential Green Building

Code shall be rendered in conjunction with a residential building permit application and related field inspections. The application shall be on a form approved by the land use director. The applicant shall demonstrate compliance with all of the provisions of this section prior to the issuance of a certificate of occupancy by the land use director.

(3) For a structure located in an historic overlay district where it can be demonstrated that strict compliance with the requirements of this section cannot be achieved without an exception to the historic overlay district requirements, the requirements of this section may be adjusted so as to resolve the conflict between the two (2) sections of the Code.

D. Administration.

(1) The land use director shall:

(a) Administer and enforce the Residential Green Building Code; and

(b) Require an applicant for a building permit, to prepare and submit Residential Green Building Code documentation to the green code administrator or designee to assure compliance with this section.

E. *Requirements.*

(1) Energy performance levels.

A documented analysis of the building's energy performance using software in accordance with 2009 ICC IECC Section 405 is required. A projected Home Energy Rating System (HERS) index, or equivalent, shall be submitted as part of a building permit application and a report of the confirmed HERS index, or equivalent, meeting the standards of this section is required prior to issuance of a certificate of occupancy. The required HERS index for residences up to and including 3000 square feet of conditioned space shall be 65 until January 1, 2018, when it shall be

reduced to 60. The required HERS index for residences over 3000 feet of conditioned space shall be reduced by one point for each 100 square feet of conditioned space over 3000, or pro-rata portion thereof, until the required HERS index is zero and shall be zero for those and larger residences.

(2) HERS raters.

HERS raters shall be certified to conduct HERS analysis by passing educational courses and obtaining continuing education credits as required by the land use director. In addition HERS raters shall:

a. confirm ventilation rates of the ventilation equipment used to satisfy the required house ventilation and report the findings to the land use department;

b. supply a report that includes the building components contributing to achievement of the required HERS index to be compared to the building plans submitted for a building permit. Reports approved to supply this information shall be approved by the land use director; and

c. supply an estimation of the greenhouse gas emissions avoided and the electricity and natural gas usage avoided when submitting the final or confirmed HERS index. Reports approved to supply this information shall be approved by the land use director.

(3) Building envelope insulation values.

Building insulation levels shall meet the requirements of overall UA for 2015 IECC. A report of compliance shall be provided to the city as part of a building permit application. Reports approved to supply this information shall be approved by the land use director.

(4) Building thermal envelope insulation confirmation.

The insulation installers shall provide a certification complying with a template to be provided by the land use department listing the type, manufacturer and R-value of insulation installed in each element of the building thermal envelope. For blown or sprayed insulations (fiberglass and cellulose), the initial installed thickness, settled thickness, settled R-value, installed density, coverage area and number of bags installed shall be listed on the certification. For insulated siding, the R-value shall be listed on the product's package and shall be listed on the certification. The insulation installer shall sign, date and provide the certification in a conspicuous location on the job site. (consistent with 2015 IRC Section N1101.10.1)

(5) Air sealing and insulation.

The air barrier and insulation installation criteria from Table 402.4.2 from the 2009 International Energy Conservation Code shall be visually inspected pursuant to Section 402.4.2.2 whether or not the testing option from Section 402.4.2.1 has been achieved. Insulation values shall be verified to match those used to obtain the required HERS rating.

(6) Duct installation.

The installation instructions for heating, ventilation and air conditioning equipment shall be made available to the inspector conducting the duct installation inspection to ensure ducting meets the manufacture's specifications. It shall be located on the equipment or in a conspicuous location adjacent to the equipment to be easily located by the inspector.

(7) Duct leakage.

Duct tightness shall be verified in accordance with 2009 IECC section 403.2.2 and shall not exceed 6 percent of total fan flow.

(8) Duct protection during construction.

All boots, ducts and ventilation openings shall be sealed during construction to prevent dust and debris from entering them and shall remain sealed until they are put into operation.

(9) Water conservation levels.

Water conservation features are implemented to achieve conservation performance shall be required. A documented analysis using the water efficiency rating score (WERS) tool showing a maximum score of 70 shall be submitted to the land use department as part of a building permit application and a report of the confirmed rating with a maximum score of 70 shall be submitted to the land use department prior to receiving a certificate of occupancy.

(10) Whole-house mechanical ventilation requirement.

Mechanical ventilation shall be required at a rate based on the following formula: required cubic feet per minute of ventilation = (total heated floor area X .01) + ((number of bedrooms + 1) X 7.5)

(11) Heating and cooling equipment sizing and system design.

a. Heating and cooling equipment shall be sized in accordance with Air Conditioning Contractors of America (ACCA) Manual S based on building loads calculated in accordance with ACCA Manual J (version 8 or higher) or other approved heating and cooling methodologies.

b. Duct systems serving heating, cooling, and ventilation equipment shall be designed and installed in accordance with ACCA Manual D, the manufacturer's installation instructions or other approved methodologies.

c. Radiant hydronic systems shall be designed using manufacturer's recommendations, mechanical engineer design specifications or other approved hydronic heating design methods, and shall include equipment

specifications, the number of zones, pipe diameter, length, and flow rate for each zone.

d. ACCA Manual J, and S, and Manual D and radiant design reports, as applicable, along with an AHRI (Air-Conditioning, Heating and Refrigeration Institute) certificate or equivalent mechanical equipment certification shall be submitted to the land use department either at time of building permit application or no later than the completion of rough framing. Duct design reports shall be submitted before ducts are installed. Radiant hydronic system in concrete shall be submitted before installation.

e. All HVAC documents submitted are subject to review and approval by the land use director before installation. Other approved HVAC design methodologies shall be approved by the land use director."

(2) Disclosure of building performance and homeowner's manual.

The following items shall be documented and included in a homeowners manual provided to the first homeowner and available for review for homes that are for sale on forms provided by the land use director:

a. the confirmed HERS index;

b. the blower door result at ACH 50;

c. the required amount of ventilation and the archived ventilation rate in air changes per hour;

d. the type of ventilation system used;

e. the percentage better that the UA is above the 2015 IECC maximum requirement;

f. the confirmed WERS;

g. a diagram showing the location of shut off valves for water,

electricity and any combustions fuels (natural gas or propane) with labels in English and Spanish;

h. the manuals for all major equipment and fixtures in English and in Spanish if available; and

i. All other homeowner manual items available from the land use department at the time of certificate of occupancy for that purpose.

F. *Permit Fee.*

(1) Applicants for residential building permits shall pay a green building code permit fee of one hundred dollars ($100.00) for each residential unit, subject to the provisions for fee waivers under Subsection 14-8.11(G)(2)(a).

G. *Effective Date.*

(1) Section 7-4.1 SFCC 1987 shall be effective July 1, 2009.

Section 2. Section 14-8.2(D) SFCC 1987 (being Ord. #2011-37, as amended) is amended to read:

14-8.2 Terrain and Stormwater Management

(D) Standards for All Grading

(7) Best Management Practices.

The following best management practices shall be used before and during the construction process:

(a) disturbed areas shall be protected from *erosion* during construction by diverting stormwater around the disturbed area, dissipating the energy of stormwater adequate to prevent *erosion*, retaining sediment on the disturbed area or other means adequate to retain soil on site, or a notice of intent (NOI) is filed;

(b) except as necessary to install temporary *erosion* and sediment control

devices, land shall not be *graded* or cleared of vegetation until all such temporary devices have been properly installed and inspected. Temporary *erosion* and sediment control devices may include silt fencing, *swales*, straw bales, berms, geotextiles, sediment basins or traps and fencing. Control devices shall be kept in place and functional until the disturbed area is permanently stabilized; or notice of termination (NOT) is filed;

(c) all *significant trees*, and other trees and vegetation, areas with substantial grass coverage and *drainageways* that are to remain undisturbed shall be fenced off prior to the use of any heavy machinery on-site and shall remain fenced during the entire construction process. Fencing material may include snow fencing, plastic mesh or other similar fencing material. To protect the root zone of all *significant trees*, and other trees and vegetation, fencing shall be placed five (5) feet to the outside of their dripline;

(d) to prevent soil from leaving a site, soil stockpiles shall be protected from wind and water *erosion* throughout the time the stockpile remains by using appropriate *erosion* control techniques. Staging and soil stockpile areas shall be clearly designated on the site. All topsoil shall be kept on site, within the disturbance zone of a construction site and then reintroduced into planting areas to the extent possible. Stockpiled soil shall not be allowed to enter arroyos or other *drainageways*;

(e) techniques to prevent the blowing of dust or sediment from the site, such as watering down exposed areas, are required for projects that disturb greater than five thousand (5,000) square feet; and alternate forms shall be readily available and used if watering is not sufficient;

(f) protection for storm drain inlets, *drainageways* and any stormwater

conveyance shall be provided to prevent the entry of sediment and pollutants from the site while still allowing the entry of stormwater.

PASSED, APPROVED and ADOPTED, this 26th day of October, 2016.

JAVIER M. GONZALES, MAYOR

ATTEST:

YOLANDA Y. VIGIL, CITY CLERK

APPROVED AS TO FORM:

KELLEY A. BRENNAN, CITY ATTORNEY

M/Legislation/Ordinances 2016/2016-40 Residential Green Building Code Updates