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COMcheck Software Version 4.1.1.0 Mechanical Compliance Certificate

Section 1: Project Information

Energy Code: 2008 IECC
Project Title: Viva Chicken
Project Type: Alteration

Construction Site: 1139 Woodruff RD suite B Greenville, SC 29607
Owner/Agent: Designer/Contractor:

Section 2: General Information

Building Location (for weather data): Greenville, South Carolina
Climate Zone: 3a

Section 3: Mechanical Systems List

Quantity System Type & Description

- 1 HVAC System 1 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 80 kBtu/h
Proposed Efficiency = 80.00% Ef, Required Efficiency: 80.00 % Ef (or 78% AFUE)
Fan System: None
- 2 Water Heater 1:
Gas Instantaneous Water Heater, Capacity: 5 gallons, Input Rating: 199 kBtu/h
Proposed Efficiency: 0.61 EF, Required Efficiency: 0.61 EF

Section 4: Requirements Checklist

Requirements Specific To: HVAC System 1 :

- 1. Equipment minimum efficiency: Central Furnace (Gas): 80.00 % Ef (or 78% AFUE)

Requirements Specific To: Water Heater 1 :

- 1. Water heating equipment meets minimum efficiency requirements: Gas Instantaneous Water Heater efficiency: 0.61 EF
- 2. First 8 ft of outlet piping is insulated

Generic Requirements: Must be met by all systems to which the requirement is applicable:

- 1. Plant equipment and system capacity no greater than needed to meet loads
Exception(s):
 - Standby equipment automatically off when primary system is operating
 - Multiple units controlled to sequence operation as a function of load
- 2. Minimum one temperature control device per system
- 3. Minimum one humidity control device per installed humidification/dehumidification system
- 4. Load calculations per ASHRAE/ACCA Standard 163.
- 5. Automatic Controls: Setback to 55°F (heat) and 85°F (cool), 7 day clock, 2-hour occupant override, 10-hour backup
Exception(s):
 - Continuously operating zones
- 6. Outside-air source for ventilation; system capable of reducing OSA to required minimum
- 7. R-5 supply and return air duct insulation in unconditioned spaces
R-8 supply and return air duct insulation outside the building
R-8 insulation between ducts and the building exterior when ducts are part of a building assembly
Exception(s):

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- Ducts located within equipment
- Ducts with interior and exterior temperature difference not exceeding 15°F.
- 8. Mechanical fasteners and sealants used to connect ducts and air distribution equipment
- 9. Ducts sealed - longitudinal seams on rigid ducts, transverse seams on all ducts; UL 181A or 181B tapes and mastic
- 10. Hot water pipe insulation: 1.5 in. for pipes <=1.5 in. and 2 in. for pipes >1.5 in.
Chilled water/refrigerant/pipe insulation: 1.5 in. for pipes <=1.5 in. and 1.5 in. for pipes >1.5 in.
Steam pipe insulation: 1.5 in. for pipes <=1.5 in. and 3 in. for pipes >1.5 in.
Exception(s):
 - Piping within HVAC equipment.
 - Fluid temperatures between 85 and 105°F.
 - Fluid not heated or cooled with renewable energy
 - Piping within room fan coil (with AHRM40 rating) and unit ventilators (with AHRM40 rating).
 - Runouts <4 ft in length.
- 11. Operation and maintenance manual provided to building owner
- 12. Balancing devices provided in accordance with IMC 603.17
- 13. Demand control ventilation (DCV) present for high design occupancy areas (>40 person/1000 ft² in spaces >500 ft²) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 3000 cfm.
Exception(s):
 - Systems with heat recovery.
 - Multiple-zone systems without DDC of individual zones communicating with a central control panel.
 - Systems with a design outdoor airflow less than 1200 cfm.
 - Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1200 cfm.
- 14. Motorized, automatic shut-off dampers required on exhaust and outdoor air supply openings
Exception(s):
 - Gravity dampers acceptable in buildings <3 stories
- 15. Automatic controls for freeze protection systems present
- 16. Exhaust air heat recovery included for systems 5,000 cfm or greater with more than 70% outside air fraction or specifically exempted
Exception(s):
 - Hazardous exhaust systems, commercial kitchen and clothes dryer exhaust systems that the International Mechanical Code prohibits the use of energy recovery systems.
 - Systems serving spaces that are heated and not cooled to less than 60°F
 - Where more than 80 percent of the outdoor heating energy is provided from site-recovered or site solar energy.
 - Heating systems in climates with less than 3600 HDD.
 - Cooling systems in climates with a 1 percent cooling design wet-bulb temperature less than 64°F.
 - Systems requiring dehumidification that employ energy recovery in series with the cooling coil.
 - Laboratory fume hood exhaust systems that have either a variable or volume system capable of reducing exhaust and makeup air volume to 50 percent or less of design values or, a separate makeup air supply meeting the following makeup air requirements: a) at least 75 percent of exhaust flow rate, b) heated to no more than 2°F below room setpoint temperature, c) cooled to no lower than 3°F above room setpoint temperature, d) no humidification added, e) no simultaneous heating and cooling.

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical alteration project has been designed to meet the 2008 IECC, Chapter 8, requirements in COMcheck Version 4.1.1.0 and to comply with the mandatory requirements in Requirements Checklist.

Brandon R Dillard, Mechanical Engineer P.E. 02/08/21
Name - Title Signature Date

Section 6: Post Construction Compliance Statement

- HVAC record drawings of the actual installation, system capacities, calibration information, and performance for each equipment provided to the owner.
 - HVAC O&M documents for all mechanical equipment and systems provided to the owner by the mechanical contractor.
 - Written HVAC balancing and operations report provided to the owner.
- The above post construction requirements have been completed.

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Principal Mechanical Designer-Name _____ Signature _____ Date _____

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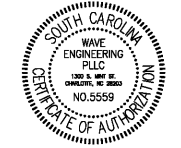
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| REVISION | | |
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| no. | date | comment |
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DRAWN BY: BRD
CHECKED BY: BRD
SUBMITTAL DATE: 02.08.2021
PROJECT NUMBER: 02-2031

MECHANICAL COMCHECK

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