

ENERGY STAR Multifamily High Rise Building Profile

55 South Essex Avenue

55 South Essex Avenue
Orange, New Jersey 07050



Building Developer:

L+M Development Partners

Licensed Professional:

Inglese A+E

Year Certified:

2014

Construction Type:

New Construction

Sector:

Mixed Use, Mixed Income

Technologies Used:

- ENERGY STAR certified gas furnaces and 1.5 ton ENERGY STAR split AC units
- 95% efficient central gas hot water, with low-flow showerheads, faucets and toilets
- Through-wall exhaust to meet ASHRAE 62.2-2007

Building Description:

55 South Essex Avenue is a 36 unit, 5-story, building in Orange, New Jersey, with a mix of one, two and three bedroom apartments.

The project earned the ENERGY STAR using the Prescriptive Path which mandates high thermal performance of the envelope and equipment efficiencies. To comply with the requirements, the 2x6 wood framed building used R-19 fiberglass batts and 1" of rigid XPS on the exterior walls. The roof trusses were filled with 18" of blown cellulose and insulated further at the roof deck with 2" of rigid polyisocyanurate, for an overall R-value of close to 70. The slab-on-grade has 3" of XPS for 2 feet and the floors above the garage have 4" of spray insulation. The vinyl framed windows are ENERGY STAR certified, with U-0.30 and SHGC-0.27. Performance testing shows the units to have compartmentalization of 0.20 CFM50/ft², which is 30% tighter than the ENERGY STAR requirement.

ENERGY STAR certified gas furnaces (96% AFUE) and ENERGY STAR certified split AC (15 SEER) provide forced air heating and cooling in each apartment. This ductwork was also tested to meet the ENERGY STAR thresholds for leakage of 8 CFM25 per 100 ft² of floor area, resulting in leakage of less than 10% of the design flow. Occupant-controlled kitchen exhaust is vented to the outside and a continuously running bathroom exhaust fan provides both local exhaust to remove moisture from the bathroom and "whole-house" ventilation to ensure good indoor air quality.

Domestic hot water is centrally provided (95% efficient), and low-flow bathroom faucets (0.5 gpm), showerheads (1.5 gpm) and toilets (1.28 gpf) are all WaterSense certified. Appliances are ENERGY STAR certified and high efficacy lights are installed, at less than 0.75 Watts/ft².