Sustainable Design Assessment Report

CANVAS Mixed-Use/Multi-Family Development
3131 Princeton Pike
Lawrenceville, NJ 08648

By
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1. Introduction

This report is intended to address Lawrence Township Ordinance Section 523: Energy Conservation, and outlines the sustainable design features to be included in the design for the CANVAS project.

The project will comply with the Energy Star Multifamily New Construction program, Version 1.1.

2. Sustainable Site Development

- Soil Compaction Mitigation is included in the soil erosion and control measures provided to mitigate excusive soil compaction prior to placement of topsoil.
- Additional Soil Erosion control measures including silt fences, construction stabilized entrances, and inlet filter bags will be utilized during construction to prevent any soil runoff or erosion.
- A serious of porous pavement systems are proposed throughout the parking areas on site which collect stormwater and provide water quality treatment prior to discharging into the series of small and large scale biorientation areas.
- The project site does not contain any wetlands, streams or regulated water bodies and is not located in any FEMA or NJDEP flood areas. Additionally, there are no endangered species found on site.
- The majority of the trees that exist on site will remain and be protected throughout construction. In order to offset the removal of trees, additional landscaping is proposed throughout the development to provide a buffer and additional green space for site users and neighbors.
- The development will comply with NJ Senate Bill S3223 by providing the appropriate number of make-ready electric vehicle spaces.
- The development will include 59 make-ready electric vehicle spaces out of the 386 spaces proposed. Per the EV requirements, 5% of the EV spaces need to be accessible which equates to 3 of the 59 provided.

3. Water Efficiency

- Shower heads and tub faucets will have a maximum flow of 2.5 GPM @ 80 psi.
- Kitchen faucets will have a maximum flow of 1.5 GPM @ 60 psi.
- Bathroom faucets will have a maximum flow of 1.2 GPM @ 60 psi.
- Water closets will have an effective flush volume of 1.6 gallons or less.

4. Energy Efficiency

- All eligible residential appliances, bathroom fans, and kitchen hoods will be Energy Star certified.
- Water heaters will be located in each dwelling unit, significantly reducing the length of piping and energy loss for hot water.
- Dwelling unit heating and cooling are designed around Variable Refrigerant Packaged Heat Pumps (VRPs) which perform at 15 SEER efficiency. The heat pumps have the capability of operating at sub-zero temperatures to provide the required heat for space comfort without supplemental electric resistance heat.
- All supply air ductwork will be internally insulated.

- A 7-day electronic, digital, programmable thermostat with high and low limit set points shall be provided for each heat pump system.
- All building lighting shall be LED. All dwelling unit and interior common area lighting will be Energy Star certified LED.
- Common area, trash rooms mechanical rooms, and office lighting will be controlled by occupancy sensors.
- The building envelope will meet or exceed the requirements of the current (2021) International Energy Conservation Code, New Jersey Edition, for wall and roof insulation, window and door efficiency.
- The exterior walls and roofs are designed with continuous insulation, which avoids thermal bridging through framing. The continuous insulation is polyisocyanurate, which has zero Ozone Depletion Potential, very low Global Warming Potential, and is recyclable.
- The typical roofing materials will be a white “cool roof” material, which reduces heat island effects and reduces cooling energy loads.

5. Indoor Environmental Quality

- Low or zero VOC paints and primers will be used.
- Low or zero VOC carpets will be used.
- All dwelling units will have operable windows to provide natural ventilation as needed.

6. Building Material Waste Reduction

- Typical framed walls are set at 9’-0” and have been designed to use pre-cut lumber to reduce waste from both lumber and gypsum wallboard.
- Floor and roof framing will use prefabricated trusses, which optimizes lumber use.

End of Report