

Midtown – LEED Case Study

Project Description

- The Midtown project is a mixed use building located at 1100 15th Street NW in Washington, DC.
- The building will consist of two connected office towers and ground floor retail. Parking will be provided in an underground parking garage.



Sustainable Sites

- Site is located in a densely developed area with access to numerous community services.
- Charging stations have been provided for 18 parking spaces.
- Open space, including landscaped area and pedestrian hardscape, is 45% of the total site area. The green roof contributes 22,008 sf to site open space.
- Rainwater is collected in a cistern with storage capacity of approximately 90,000 gallons, and reused for cooling tower make-up water.
- The project's green roof will provide additional stormwater retention and treatment.

Water Efficiency

- Landscaping is irrigated with a drip irrigation system, which helps to reduce water use by 74% compared to the LEED baseline .
- Plumbing fixture flow rates result in 36% water savings compared to the LEED baseline. This is achieved with the below flow rates.
 - Lav faucets: 0.5 gpm sensor operated faucets
 - Toilets: 1.28 gpf
 - Urinals: 0.125 gpf
- The above fixture flow rates result in approximately 837,460 gallons of anticipated water savings per year.

Energy and Atmosphere

- The project's energy model demonstrated 7.7% energy cost savings compared to the ASHRAE 90.1-2010 baseline.
- Savings are due to the following energy efficiency measures:
 - Efficient lighting design in parking garage is 0.11 W/sf.
 - Glazing is improved (U-0.31 to U-0.35, 0.19-0.27 typical SHGC) compared to the ASHRAE 90.1 baseline
 - Frictionless VFD centrifugal chillers with 0.55 kW/ton full load efficiency and 0.241-0.335 NPLV
 - Efficient dedicated outside air (DOAS) HVAC system
 - 98% efficient condensing boilers for the service hot water system

Materials and Resources

- Construction waste recycling resulted in 96% construction waste either recycled or otherwise diverted from disposal.
- Recycled content materials totals over 10% of materials, by cost.
- Regional content materials constitute over 20% of all materials, by cost.
- Forest Stewardship Council (FSC) certified wood products were installed for doors, architectural woodwork and rough carpentry.

Indoor Environmental Quality

- The project conducted a Construction IAQ Management Plan during construction. Absorptive materials were wrapped to prevent moisture damage during construction.
- Low VOC paints, coatings, adhesives, sealants and flooring were installed during construction.
- MERV 13 filters have been specified for DOAS units serving the building.