

LIBERTY  
PROPERTY  
TRUST

ONE WATER STREET

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# GREEN BUILDING FEATURES & CASE STUDY

AMERICAN WATER

Liberty Property Trust worked closely with American Water to reach ambitious and common goals for the project, thus identifying synergies for achieving the most efficient and sustainable outcomes, aligned with LEED goals, from early on in the design process.

**LEED Version** LEEDv2009 (Version 3) Core & Shell

**LEED Target Level** Platinum

## What is LEED®?

LEED stands for Leadership in Energy & Environmental Design and is a certification program focused primarily on new commercial building projects and based upon a point system.

## What is USGBC®?

USGBC stands for the U.S. Green Building Council. The USGBC launched the first pilot LEED version 1.0 in August of 1998. The LEED program consists of a self-selected scorecard of aspects and capabilities to be included and documented in a building's design and construction.

## Why LEED?

The choice to pursue certification reflects Liberty Property Trust's commitment to the environment, energy efficiency, and overall sustainability of our organization and the communities we serve by preserving and providing access to the world's greatest natural resource.

## Why a Case Study?

Every building pursues a unique set of goals. At One Water Street, Liberty Property Trust pushed the envelope with sustainable design and intends to educate building occupants, as well as inform future building projects, based on these successes.

*“ At Liberty, we understand that our core business has profound effects on our neighbors, our communities, our customers' businesses... our world. There is an inherent responsibility to always do better, and this responsibility is embraced by Liberty. We continue to challenge ourselves to view sustainability not as a means to an end, but as an integral component of our long-term value creation strategies, always seeking the most meaningful efforts that will enhance our portfolio, our company, and our communities. ”*

**BILL HANKOWSKY**  
Chairman, CEO

# Sustainable Sites

Recognized as stewards of the environment, American Water has reflected this mission in their LEED certification pursuit by earning all possible points within the Sustainable Site credit category. The following design strategies and conscious decisions made this achievement possible:

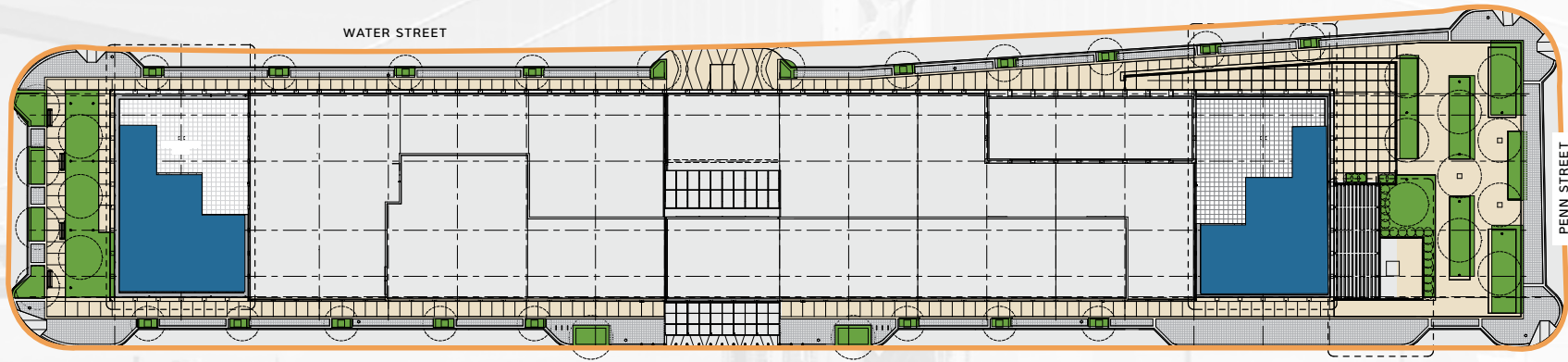
- The project is located in a previously developed site
- Preferred parking is provided for low-emitting and fuel-efficient vehicles, accounting for 7.14% of the total parking capacity
- The heat island effect has been reduced through the use of white EPDM roofing material and green roof areas
- The site has increased storm water quality, with 90% of the average annual rainfall runoff being captured and treated to remove 95% of the average annual post-development Total Suspended Solids (TSS) through a combination of best management practices (BMPs)
- The open space provided is equal to 40.8% of the total site area, including vegetated roof terraces, pedestrian-oriented hardscaped areas, and vegetated open space
- The urban environment selected puts the project within proximity to public transportation and existing developments with basic services for building occupants to utilize, which ultimately minimizes the reliance on cars to commute to the site. Public transportation access to rail stations, bus stations, and the ferry terminal is within 0.5 miles
- Bicycle storage and changing rooms infrastructure has been included to serve the active commuting population
- Tenant Design & Construction Guidelines were developed to guide future tenants to take full advantage of LEED strategies being incorporated into the Core & Shell project



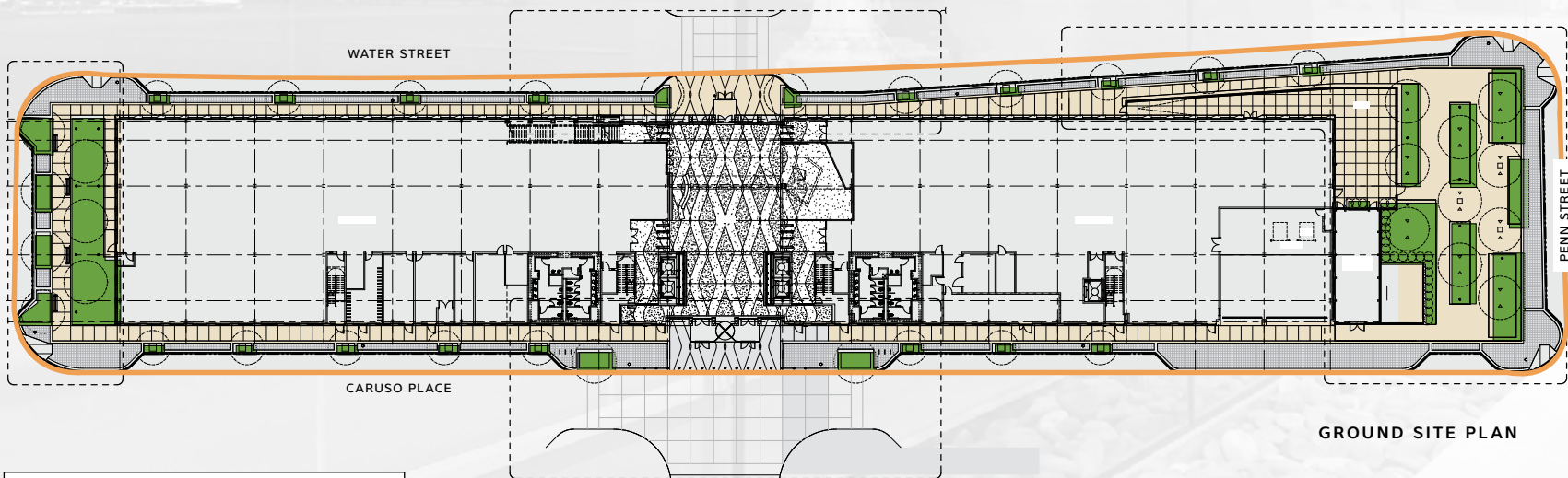
***Through the use of white EPDM roofing material and green roof areas, Liberty has reduced the site's heat island effect.***



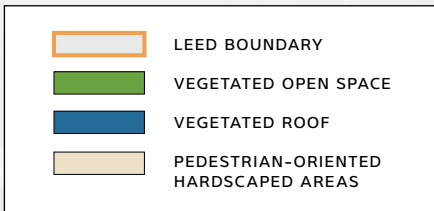
# Site Plan



GREEN ROOF SITE PLAN



GROUND SITE PLAN



*More than 40% of the total site area is dedicated to open spaces, including vegetated roof terraces, pedestrian-oriented hardscaped areas, and vegetation.*

# Water Efficiency

Future tenant employees—including scientists, experts in technology and innovation, engineers, and operations specialists—will be able to work together under one roof to solve the world’s biggest water challenges, including repairing the country’s aging water and wastewater infrastructure and solving water source and quality issues, allowing for better collaboration and innovation to better serve customers.

- With a central mission of water stewardship education, the Innovation Center was developed, featuring an interactive video wall providing occupants and visitors with information about American Water’s core business
- Videos have included the following topics: water recycling, general information on American Water’s headquarters, desalination, household leaks, microfiltration, and much more
- The LEED Water Efficiency category is based on an “efficiency-first” approach to water conservation, recognizing the innovative use of non-potable and/or alternative sources of water
- No potable water is used for irrigation at this site
- Potable water usage for sewage conveyance was reduced by 95.7% by using rain water, low-flow water closets, low-flow faucets, and waterless urinals
- **Water Use Reduction:** Flush and flow fixtures water use was reduced by 77.32% compared to an office space with typical fixtures. A major contributor to this reduction was the installation of waterless urinals



*Innovation Center interactive video wall*

# Energy & Atmosphere

All systems within One Water Street have been commissioned to assure their full functionality for maximum performance.

- **Energy Use:** The project utilizes the following strategies to realize an actual reduction in energy consumption:
  - Improved envelope performance through iterative energy modeling of the building to optimize energy performance
  - Reduced interior lighting power, achieving a 30% reduction in lighting power through LED bulbs and daylight and occupancy sensors
  - Installation of a highly efficient HVAC system that realizes a 30.08% reduction in total HVAC energy costs in its efficient operation, achieved by use of variable volume reheat air handling units, high-efficiency chillers, boilers, heat pumps, condensers, cooling tower, and LED lighting
- **Energy Metering:** The building has installed energy metering equipment to ensure the facility is responsible and efficient in its consumption of energy
- **Green Power:** One Water Street has committed to offsetting electricity demand for a minimum period of two years, with the option to renew



# Materials & Resources

- Recycling bins are provided within One Water Street
- 88.37% of the construction waste was diverted from landfills and appropriately recycled
- Materials that have high recycled content and are locally manufactured were prioritized for use on the project



### Indoor Environmental Quality

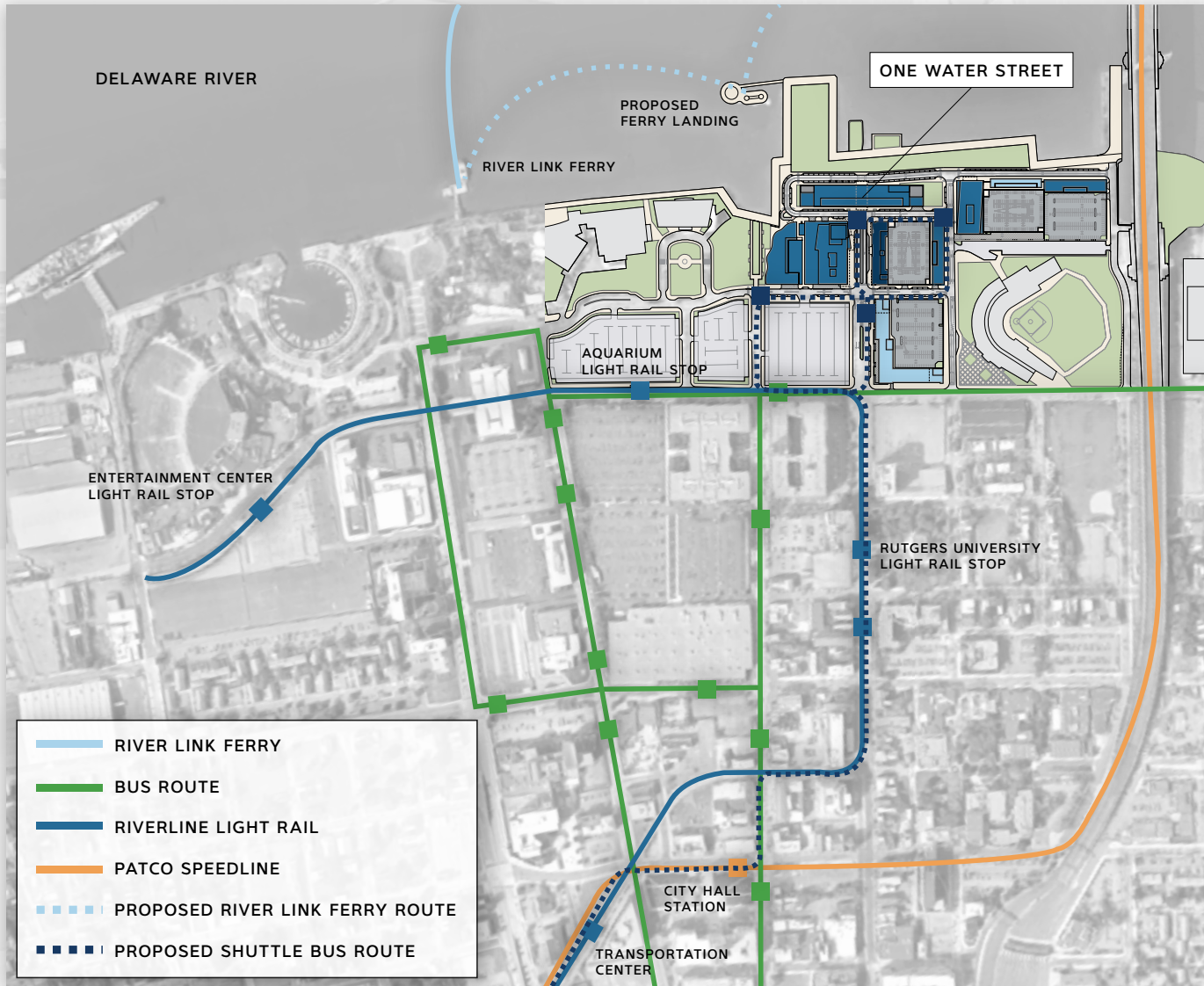
- **Construction Indoor Air Quality (IAQ) Management:** During construction, stringent practices were implemented to provide a clean construction zone that protected the building materials, finishes, and mechanical equipment from damage or contamination
- Materials with low Volatile Organic Compound (VOC) content and emissions, such as Shaw carpet products, were selected to contribute to a healthy indoor environmental quality for all building occupants
- All janitors' closets and the print room were separately exhausted to prevent chemical and pollutant contamination into the office space



### Innovation Features

- The prominence of the main stairwell encourages active vertical circulation and creates a connected community atmosphere throughout the new facility, which ultimately increases employee health and activity levels
- The fit-out utilizes 100% LED bulbs, adding to the facility's energy efficiency and the reduction of mercury-containing products brought into the space
- A comprehensive Transport Management Plan has been developed to encourage building users to use public transportation and carpooling options and avoid single-occupancy vehicle trips
- A green cleaning program has been implemented

# Community Connectivity Plan



*With access to public transportation and existing development, the selection of this urban environment minimizes the reliance on cars to commute to the site.*