2100 Pennsylvania Avenue NW

Sustainable Approaches

Overview
This project has been mandated to be environmentally responsible and to be certified using the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) criteria. The project Owner/Developer was already planning to incorporate sustainable design and construction elements in the project, some of which are rewarded by the LEED rating system. A brief summary of sustainable strategies being considered and implemented follows.

LEED
The U.S. Green Building Council (USGBC) established the LEED program as a tool to evaluate the energy efficiency and environmental impacts of building projects. The LEED building rating system uses seven categories in which projects can obtain credits to achieve certification (Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality and Innovation & Design Process, and Regional Priority). Four levels of certification are available. The credit threshold for each level of certification varies for different rating systems. To qualify for certification a project must meet certain prerequisite credits. The number of additional credits required is dependent on the level of certification that the project is seeking to attain.

The project has been registered as a LEED®v4 Core and Shell (CS) projects with USGBC. All documentation will be submitted via USGBC’s website (www.leedonline.com) to be reviewed and approved by a third party for both the design and construction phases of the project. SDC, the LEED consultant, is maintaining a tracking tool and checklist to manage the responsibilities of team members, to record documentation progress, and to identify tasks required to complete documentation.

The LEED checklist, or scorecard provided shows the breakdown of points being pursued. Sixty (60) points are required for the targeted Gold certification level. The current scorecard shows slightly less than 60 points in the ‘yes’ column due to the project being in an early phase. The criteria for credits shown with additional points in the ‘maybe-yes’ (‘Y) and ‘maybe-no’ (TN) of the scorecard will be analyzed further for feasibility, and some will be pursued in order to reach the LEED-CS Gold Certification level.

Many of the targeted points are related to energy and water efficiency, which reflects a commitment to delivering a high-performance mixed-use project. Preliminary interdisciplinary analysis with the Owner and the Design Team has been conducted to identify the targeted credits and the strategies needed to fulfill credit criteria. Credits are identified as achievable based on design feasibility and potential environmental benefits. Those credits deemed achievable are scored as ‘yes’; several additional credits that are being evaluated further for feasibility are scored as ‘maybe-yes’.

While some credits have a greater first cost associated with them, the long term environmental and economic benefits justify including them in the LEED goals. The credits pursued are those that will help provide quality space at a greatly reduced environmental impact. Goals include the following:
- Significantly reducing or eliminating storm water runoff / pollution through rainwater collection and through a vegetated roof.
- Reducing potable water usage:
  - Irrigation will be limited and will be designed to use little or no potable water.
  - Water savings of 30 - 35% for interior plumbing will be realized through the use of water conserving fixtures such as low-flush toilets, and low flow faucets and showerheads.
  - Reuse of rainwater for cooling tower make-up is proposed.
- Reducing energy consumption by designing a high-performance building envelope and adopting high efficiency HVAC systems
- Improving productivity and occupant health by access to daylight and views
- Meeting ASHRAE 55 standards to ensure thermal comfort and providing thermal controls to ensure accommodation of the individual preferences of its occupants.
- Installing low-emitting paints, adhesives, sealants and flooring systems.

Other Strategies
In keeping with Boston Properties’ vision that the project addresses environmental issues “beyond” LEED, the Design Team is exploring several aspects of sustainable strategies. The goal is do more than obtain a LEED plaque; it is to create a building that stays ‘green’ during operation and supports both inhabitants and neighbors.

This started with selecting a site that meets Smart Growth initiatives. The project’s location is in line with urban planning and transportation goals of concentrating growth in walkable, bike-friendly and transit-oriented areas.

In keeping with the District’s benchmarking requirements and Boston Properties’ goals, operational energy and water use will be reported. The company’s website, http://www.bostonproperties.com/pages/sustainability, includes an annual Sustainability Report in addition to the goals and key performance indicators of green building features.

Operational Policies under consideration include Green Leasing as well as Health and Wellness Programs such as Green Housekeeping.
STANDARD EROSION AND SEDIMENT CONTROL MEASURES AND SEQUENCE:

1. **SSM** shall be installed at the toe of each excavation slope and adjacent to all temporary access roads.
2. **SSM** shall be installed in accordance with the manufacturer's instructions and be closely monitored.
3. **SSM** shall be installed where there is potential for erosion.
4. **SSM** shall be installed where there is potential for sedimentation.
5. **SSM** shall be installed where there is potential for soil movement.
6. **SSM** shall be installed where there is potential for vegetation damage.

DUST CONTROL NOTES:

1. **SSM** shall be maintained in accordance with the manufacturer's instructions and be closely monitored.
2. **SSM** shall be maintained where there is potential for dust generation.
3. **SSM** shall be maintained where there is potential for soil movement.
4. **SSM** shall be maintained where there is potential for vegetation damage.
5. **SSM** shall be maintained where there is potential for erosion.

CONSTRUCTION AND STABILIZATION NOTES:

1. **SSM** shall be maintained in accordance with the manufacturer's instructions and be closely monitored.
2. **SSM** shall be maintained where there is potential for dust generation.
3. **SSM** shall be maintained where there is potential for soil movement.
4. **SSM** shall be maintained where there is potential for vegetation damage.
5. **SSM** shall be maintained where there is potential for erosion.

Erosion and Sediment Control Measures:

1. **SSM** shall be maintained in accordance with the manufacturer's instructions and be closely monitored.
2. **SSM** shall be maintained where there is potential for dust generation.
3. **SSM** shall be maintained where there is potential for soil movement.
4. **SSM** shall be maintained where there is potential for vegetation damage.
5. **SSM** shall be maintained where there is potential for erosion.
EROSION AND SEDIMENT CONTROL DETAILS

DETAIL 1 - STABILIZED CONSTRUCTION ENTRANCE
DETAIL 2 - STRAW BALE DIKE
DETAIL 3 - STRAW BALE DIKE
DETAIL 4 - SLT FENCE
DETAIL 5A - STANDARD INLET PROTECTION
DETAIL 6A - STANDARD INLET PROTECTION
DETAIL 6B - AT GRADE INLET PROTECTION
DETAIL 6C - CURB INLET PROTECTION (COG OR COS INLETS)
DETAIL 9 - EARTH DIKE
DETAIL 11 - PERIMETER DIKE / SWALE PIPE OUTLET SEDIMENT TRAP - ST I
DETAIL 22 - SEDIMENT BASIN/TRAP BAFFLES
DETAIL 74 - TREE PROTECTION
DETAIL 6E - AT GRADE INLET GUARD

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Washington, DC

Date
Project Name
Project Number
Description
Scale

C- 501
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09/21/2017
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EROSION AND SEDIMENT CONTROL DETAILS