

**National Capital Planning Commission Project Report
W126 Energy Demonstration Project
Washington Navy Yard, DC**

1. Project Report

This Project Report has been prepared regarding the Washington Navy Yard Energy Demonstration Project. This report has been prepared for the submission of this project to the National Capital Planning Commission for their preliminary and final review and approval. This project consists of energy enhancements to Building 126 and an associated renewable energy component located on the adjacent parking garage (Building 386). The energy enhancements are interior to the building while the renewable energy component consists of solar panels mounted on a new canopy as well as wind turbines on the top deck of the existing parking garage. Refer to the site plan drawings and aerial provided for more information.

- a. The Project Manager for the project is Steven Miller, 202-685-8499. Julie Darsie, 202-685-1754, is NAVFAC Washington's NCPC Liaison for this project.
- b. The purpose of the project is to enhance the energy efficiency of Building 126 and generate enough renewable energy to supply the building's needs. Building 126 is a one-story brick building constructed as a laundry in 1939. It is a contributing resource within the National Register-eligible Eastern Extension of the Washington Navy Yard. It currently serves as a Visitors' Center and registration office. Building 386 is a 7-deck parking garage constructed in 1987. The project will not change the function or extent of either building.

The project's energy conservation measures consist of the following:

- i. The existing HVAC system and all associated ductwork is being replaced by a new ground source heat pump system with all new ductwork.
- ii. The existing 2x4 recessed fluorescent lights are being replaced by dimmable LED lighting fixtures.
- iii. The existing insulation is being removed and replaced with new bio-based spray foam insulation in the attic and blown-in insulation in the walls.
- iv. The existing hot water heater is being replaced with a new on-demand hot water system.
- v. The existing windows on the south and west side of the lobby are being replaced with automatic tinting electrochromic windows.
- vi. A Solatube skylight is being concealed in the existing roof vent.
- vii. The existing plumbing fixtures will be replaced with new low-flow fixtures.
- viii. The lobby flooring will be replaced with recycled rubber flooring.

The project's renewable energy measures consist of the following:

- ix. Solar panels will be mounted on a parking canopy located on top of the adjacent parking garage (Building 386). The Solar Parking Canopy is located in the middle of the parking garage spanning over the top parking deck. This location conceals it from all ground level visibility. The canopy will cover 3,000 square feet.

- x. A maximum of 4 wind turbines will be mounted on top of the stair towers of the adjacent parking garage. Each turbine has a six foot diameter.

The above measures constitute the project's compliance with Executive Order 13514.

- c. The project does not involve any change to the existing site or allocation of land.
- d. Building 126 has a footprint of about 3,000 square feet. Its extent will not change. Building 386 has a footprint of about 47,500 square feet. Its extent will not change.
- e. Approximately 10 employees work in Building 126. The employment number is not expected to change.
- f. The project is included in the upcoming Master Plan for the Washington Navy Yard. The Master Plan is scheduled for submission to NCPC in the fall of 2011. Staff members from NCPC and NAVFAC have consultation meetings scheduled for August 2011 to discuss the Master Plan.
- g. The project is wholly within the perimeter of the Washington Navy Yard and does not involve any change to the extent of facilities or employment. No additional coordination is required with local or state governments or the Metropolitan Washington Council of Governments.
- h. The project is wholly within the perimeter of the Washington Navy Yard and does not involve any change to the extent of facilities or employment. No additional coordination is required with the surrounding community.
- i. The construction of this project has been divided into two phases:
 - i. Phase 1: Energy conservation measures – all interior work. This phase is currently under construction and is scheduled for completion August 30, 2011.
 - ii. Phase 2: Renewable Energy – New windows, solar panels, canopy, and wind turbines on the adjacent parking garage. Pending final approval, phase 2 is scheduled to begin construction on September 15, 2011. The duration is 3 weeks for this phase.
- j. The total cost of construction is \$499,768. The project is fully funded, and the construction contract has been awarded.
- k. The project does not change the number of employees at the Washington Navy Yard, therefore a Transportation Management Plan is not required. The proposed construction does not add or eliminate any parking

2. Environmental Documentation

- a. A CATEX was prepared for this project with a date of 03 June, 2011 and is attached.

3. Historic Preservation Documentation

- a. The DC Historic Preservation Office was consulted on both phases. DCHPO concurred that Phase I and the solar canopy would have no adverse effect (attached). DC HPO requested construction of mock-ups and a visual analysis of the wind turbines before issuing a decision about the wind turbines. The mock-ups and visual analysis are forthcoming.

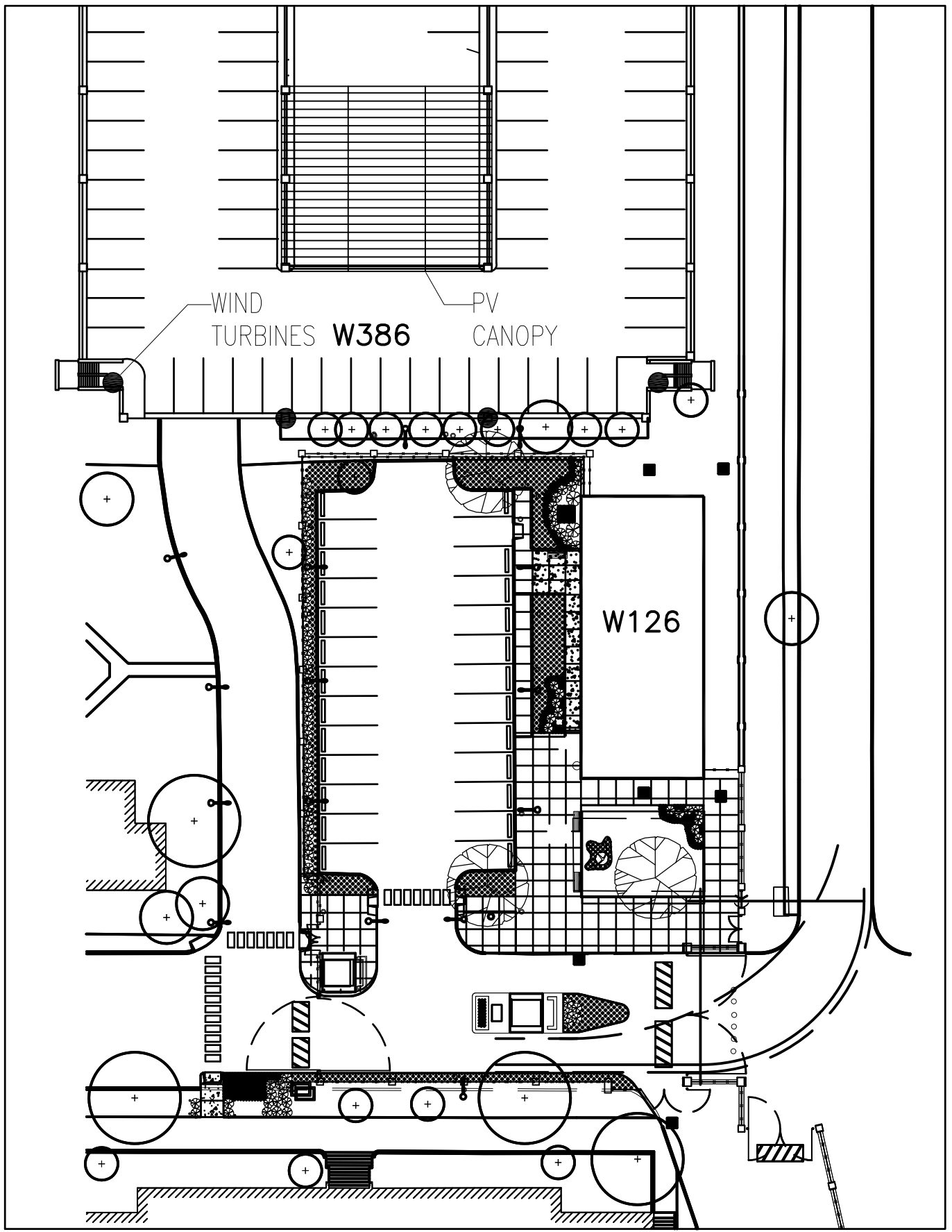
4. Floodplain Management and Wetlands Protection

- a. This project does not involve any modification to the site, therefore floodplain management and wetland protection do not apply.

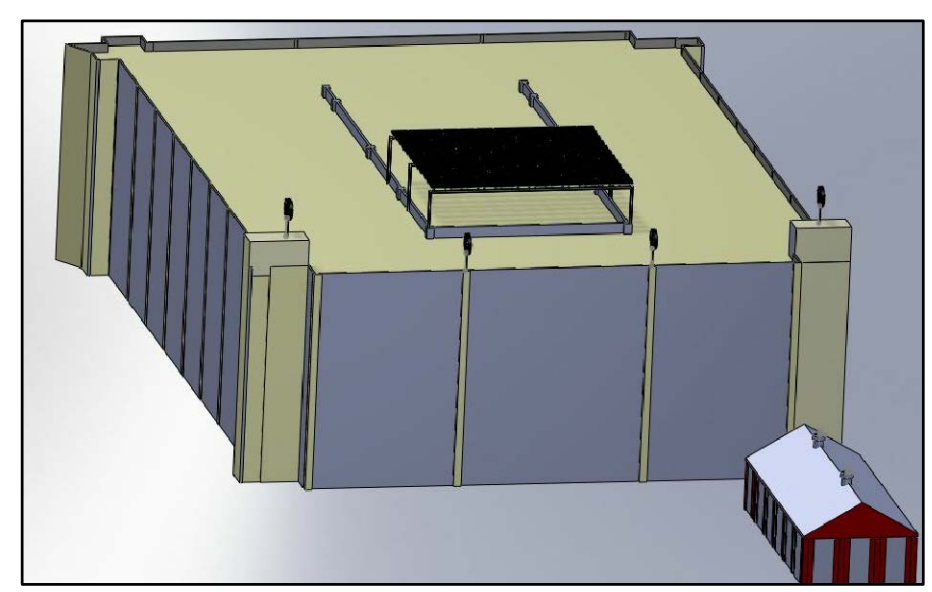
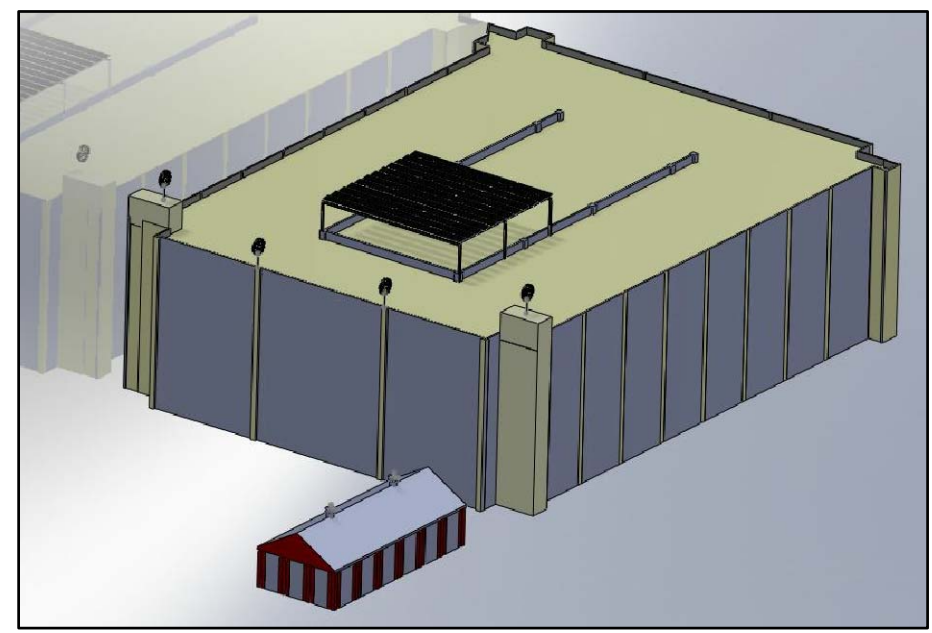
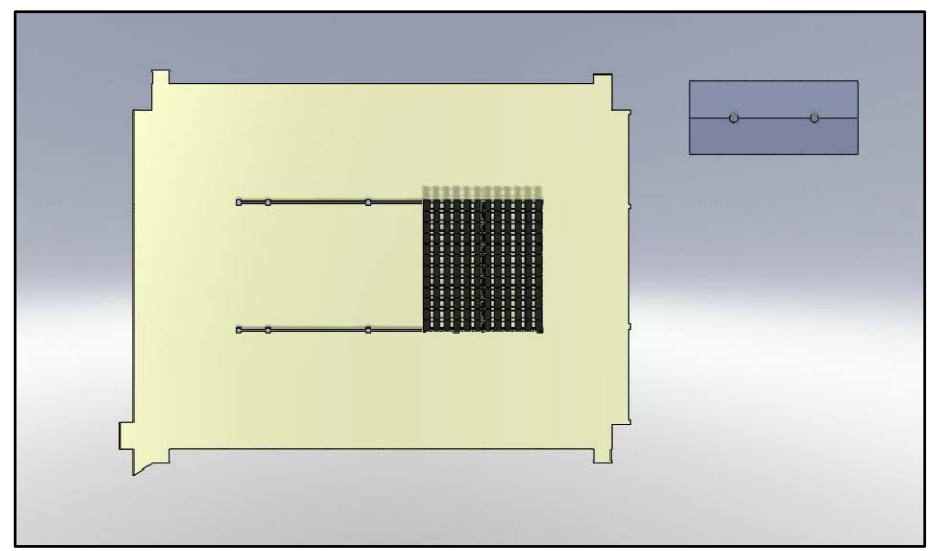
ENCLOSURE 1: MAP OF WNY SHOWING LOCATION OF BUILDINGS 126 AND 386



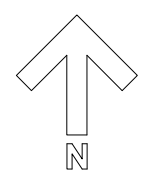
FILE NAME: J:\6-FAED\Projects\W126\Zero Energy Model Building\Construction\11_Safety-Environmental\Site plan.dwg LAYOUT NAME: Layout2 PLOTTED: Wednesday, July 27, 2011 - 1:56pm USER: steven.m.miller5



1 SITE PLAN



2 3D VIEWS



APPROVED	DATE	APPR
FOR COMMANDER NAFAC		
ACTIVITY		
XXXXXXXX		
SATISFACTORY TO DATE DD/MM/YY		
DES XXX DRW XXX CHK XXX		
<<PM/DM>> XXXX		
BRANCH MANAGER XX		
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DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND	WASHINGTON, DC
NAVAL FACILITIES ENGINEERING COMMAND WASHINGTON		
NAVAL DISTRICT WASHINGTON		
W126 ENERGY DEMONSTRATION PROJECT		
NCPC SUBMITTAL SHEET		
SCALE: AS NOTED		
PROJECT NO.: 1141260		
CONSTR. CONTR. NO. TBD		
NAVFAC DRAWING NO.		
SHEET 1 OF 1		
A-1		
DRAWFORM REVISION: 10 MARCH 2009		