

# GOVERNMENT OFFICE CENTER

MID-ATLANTIC U.S.



ALEXANDER WARD | Construction Management

<http://www.engr.psu.edu/ae/thesis/portfolios/2012/AWW5024/index.html>

## PROJECT SUMMARY

U.S. General Services Administration  
Balfour Beatty Construction  
TranSystems Corporation  
Thornton Tomasetti  
Greenman - Pedersen, Inc.

OWNER  
CM  
ARCHITECT  
STRUCTURAL ENGR.  
MEP ENGINEER



## ARCHITECTURAL FEATURES

The East and West facades consist of a uniform and continuous tan brick from the top of the building to the bottom, while the North and South facades are large glass curtain walls spanning almost the entire building height. The replacement of the existing curtain walls with an improved unitized curtain wall system constitutes a significant portion of the project.

The first three floors contain courtrooms and rooms that serve functions relating to courtroom activities, while the remainder of the building contains the offices, file storage, IT spaces, and other functions needed to serve an office building of this size.

BUILDING HEIGHT: 14 Stories

SIZE: 316,000 SF

## STRUCTURAL SYSTEM

Existing structural steel frame supports the building, with a middle bay spanning East to West, flanked on either side by narrower bays of equal width which connect to the curtain wall frame. Floor loads are handled by one-way slab-on-deck before being transferred to trusses. Existing W-Shape steel columns transfer loads vertically to the foundations. New Hollow Structural Section steel members will be installed to support the load of the new curtain wall.

## MECHANICAL SYSTEM

This renovation project calls for the replacement of six (6) air handling units with an average cooling capacity of 80 tons. Existing perimeter electric baseboard heating will be replaced with VAV boxes with hot-water reheat. Five (5) natural gas-fired boilers with rated outputs of 1800 MBH will replace existing boilers.

## LIGHTING / ELECTRICAL SYSTEMS

A significant portion of the scope of the lighting work in this renovation includes the replacement of existing lamps with more energy efficient LED lighting. This renovation project also calls for the addition of a new photovoltaic array on the lower roof of the existing structure.

## CONSTRUCTION LOGISTICS

Due to the needs of the owner, the demolition and construction work for this project will be phased and performed such that the building can be safely occupied while minimizing impact on the ongoing functions within the building. The cost for this project is capped at \$42.5 million, and the project will be delivered under a Design-Build system with an Advisor to the Owner and a Construction Management Contractor.

