[Arena Stage]

1101 6th Street, SW • Washington, DC • 20024

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Construction Management

BASIC PROJECT INFORMATION

Occupancy Type: Performing Arts Center
Size: 200,000 SF
Number of Stories: (3) Above Grade, (1) Below Grade
Dates of Construction: January 2008 – June 2010
Overall Project Cost: $125 million
Delivery Method: Cost Plus Fee with a GMP

DESIGN AND CONSTRUCTION TEAM

Owner: Washington Drama Society Inc. (Arena Stage)
Owner's Representative: KCM, Inc.
General Contractor: Clark Construction Group, LLC
Architect: Bing Thom Architects Inc.
Structural Engineer: Fast + Epp
Mechanical Engineer: Yoneda & Associates
Electrical Engineer: Stantec Consulting Ltd.

STRUCTURAL SYSTEM & ARCHITECTURAL FEATURES

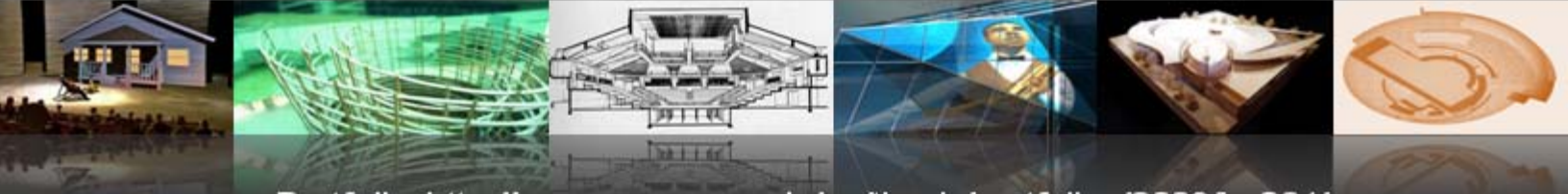
The existing Fichandler and Kreeger Theatres will maintaining their original structures of CIP concrete, CMU, and masonry veneer. The new Cradle Theatre is using a PERI RUNDFLEX formwork system to achieve the sloped ellipse-shaped CIP nestled walls. The three theatres are encased in a 45' glass façade supported by several 30" diameter parallam timber columns that extend to the roof. A series of wide flange trusses support the roof which is composite deck with a waterproof membrane. The building is then accented by a 150' cantilever made of steel members and scalloped metal cladding.

MECHANICAL SYSTEM

The HVAC system consists of a four pipe, air-water Fan Coil System, including (31) Fan Coil Units with capacities ranging from 220 to 2,900 cfm. These are served by (18) Air Handling Units with sizes ranging from 3,000 to 43,100 cfm. The (2) Cooling Towers, located on an outdoor terrace, operate in conjunction with (2) Chillers and (4) Boilers. Fire Suppression is combination of a wet and dry system using a Class I standpipe with an open water supply valve.

ELECTRICAL SYSTEM

Arena Stage's power is provided by Pepco Supply. The main feed is brought into the building and is stepped down to a 3Φ, 4 wire, 277/480V, 3000A Bus. The electrical system is adjusted throughout the building with (8) Dry Type Transformers. Emergency power is supplied by (1) 275kW/344kVA separately derived fixed Generator which feeds (3) emergency multi-duct conduit systems. Stage lighting includes a number of 20A high-density, solid-state dimmers above the stages.



e-Portfolio: http://www.engr.psu.edu/ae/thesis/portfolios/2009/jra204/