



Fig. 1 | Exterior at Night

THE BARNES FOUNDATION

PROJECT TEAM

OWNER | The Barnes Foundation
ARCHITECT | Todd Williams Billie Tsien Architects
LIGHTING | Fisher Marantz Stone
MEP | Altieri Sebor Wieber
STRUCTURAL | Severud Associates
CONTRACTOR | Aegis Property Group

BUILDING STATISTICS

LOCATION | Philadelphia, PA
OCCUPANCY | Art Education Facility
SIZE | 91,748 GSF
LEVELS | 2 Above Ground, 3 Total
CONSTRUCTION | November 2009 - February 2012
COST | \$75,890,374
DELIVERY | Guaranteed Maximum Price (GMP)

ARCHITECTURE

The Barnes accomplishes the goal of “a gallery in a garden and a garden in a gallery” with the use of a large exterior public garden and multiple interior courtyards. Covered in gray-gold limestone with an illuminated Light Box (Fig. 1), at night The Barnes glows like a lantern. The interior Light Court is made up of the same limestone as the exterior; this entrance space extends out of the west end of the facility to create an exterior courtyard covered by the cantilevered Light Box. The galleries within the building were designed to the exact dimensions of Dr. Barnes’ old house in Merion, PA, where the art was first displayed.

STRUCTURAL

A steel beam system is used in the majority of the building; however the East end of the building uses 24” concrete void slabs on the first and second floors. The cantilevered end of the Light Box uses steel cross bracing as support.

LIGHTING/ELECTRICAL

Primarily fluorescent, halogen, and metal halide fixtures make up the lighting design of the facility. Cove lighting was included in the gallery spaces to allow for less direct light on the paintings; the same style of cove lighting is repeated through the building. The primary utility transformer is a 13.2 kV 3 PH, 3 wire primary and a 277Y/480 3 PH, 4 wire secondary. Photovoltaic panels supply some of the power to the building. There is also a 400 kW diesel generator to provide emergency power.

MECHANICAL

There is one dedicated outdoor air AHU’s supplying a total of 48,120 CFMs and nine more AHU’s supplying a total of 92,500 CFMs. A Variable Air Volume control system is in place throughout the facility. Three chillers are used to cool the building, two are centrifugal and one is scroll. The DOAS uses steam for heating and also has a heat recovery system. The remaining AHUs use converter to heat hot water using steam.

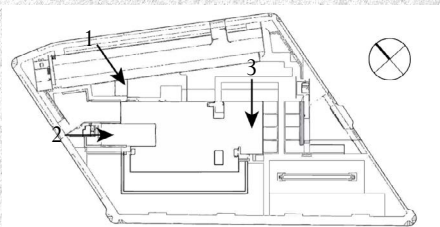


Fig. 2 | West Exterior Courtyard

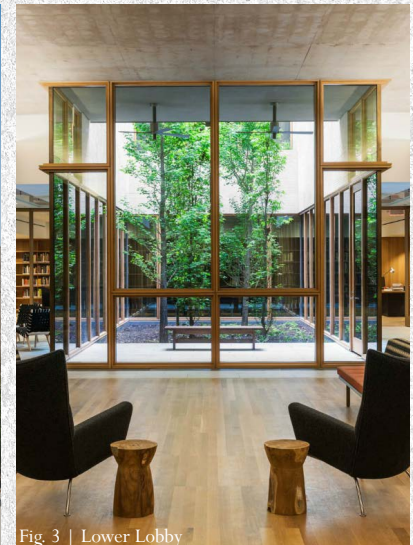


Fig. 3 | Lower Lobby

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