The American Swedish Institute

Minneapolis, MN

Project Information

Size:	75,000 square feet
Cost:	$13.5 million
Stories:	3 above grade
Construction:	January 2011 - May 2012
Delivery:	Design - Bid - Build
Occupancy:	Cultural Center

Project Team

Owner:	The American Swedish Institute
Architect:	HGA Architects and Engineers
Construction Manager:	Adolfson & Peterson Construction
Mechanical Engineer:	HGA Architects and Engineers
Structural Engineer:	HGA Architects and Engineers
Electrical Engineer:	HGA Architects and Engineers

Construction & Architecture

The American Swedish Institute, Turnblad Mansion, finished construction in 1910 in Minneapolis, MN. The Turnblad Mansion was originally designed to give the Swedish community a place to gather and share their heritage throughout the public. Over the years, the American Swedish Institute felt that the original facilities were not sufficient to where they saw the Institute going. They decided to add an addition to the building, the Nelson Cultural Center, to showcase Swedish architecture and sustainability.

Structural Systems

- The main lateral force resisting system, in the cultural center is a combination of steel bracing and reinforced CMU shear walls.
- Foundation system is typically 5", 4000 psi un-reinforced slab on grade with 6", 4000 psi reinforced slab on grade and 2" topping in the northern middle portion of the foundation.
- The structural framing of the mansion is steel frame construction with exterior load bearing walls.

Electrical and Lighting Systems

- (1) 1000 KVA pad-mounted transformer.
- Secondary transformer is a 277/480 V, three phase, with four-wire power to a 1600A Main Panel Board.
- A 277/480V, 600A, three-phase, four-wire panel shall provide electrical power to the new panels.
- Recessed, pendant, & track lighting are used throughout with the majority of areas utilizing T6 and T8 fluorescent lamps.

Mechanical Systems

- Geothermal source closed loop heat pump system. Loop field size is ~ 1 ton per well hole with a nominal well depth of 250 feet for the (96) well holes.
- (48) heat pumps.
- (2) B & G base-mounted series 1510 pumps for the condenser water system ~ 525 gpm each, 100' head, 20 horsepower.
- (1) Makeup Air Unit at 8,000 CFM.

Krysta Skinner | Mechanical

http://www.engr.psu.edu/ae/thesis/portfolios/2012/KLS5301/index.html