HOUSE OF SWEDEN

Georgetown, Washington, D.C.

Kimberlee McKitish — **Structures Option**

Building Statistics

- Construted from August 4, 2004 to May 12, 2006
- Delivered in a Design - Bid - Build method
- **North Building:**
  $22.1 Million Overall Building Cost
  7 Building Levels Above Grade
  170,000 SF of Office and Residential Space
- **South Building:**
  $19.7 Million Overall Building Cost
  6 Building Levels Above Grade

Architecture

- Built on a single foundation with two separate towers rising out of the site
- The glass façade of the south building is backlit to create the illusion of a floating jewel rising above the Potomac River on a light colored stone podium
- The north building is clad in glass and metal paneling with a light stone base
- The roofing is rigid insulation topped with ballast over monolithic EDPM waterproofing membrane

Mechanical and Electrical Systems

- A central plant located in the penthouse of the north building runs the mechanical system for both buildings except in the embassy, which has its own ventilation system
- The electrical system is a 277/480 V, 3 phase, 4 wire system for public space lighting and steps down to 120/208 V for receptacles and incandescent lighting

Project Team

- **Owner:** LANO Armada Harborside, LLC
- **General Contractor:** Armada Hoffler
- **Tenant-South Building:** SFV National Property Board
- **Architect of Record:** VOA Associates, Inc.
- **Architect-South Building:** Wingardh Arkitektkontor AB
- **Structural Engineer:** Tadjer - Cohen - Edelson
- **MEP Engineer:** Tolk, Inc.
- **Civil Engineer:** Wiles Mensch Corp

Structural System

- Post-tensioned, two-way concrete slab system with drop panels and piles supporting a mat foundation
- North building typical bay sizing is 30’ x 30’, slab thickness is 7”-8”, and concrete strength is 6 or 8 ksi
- South building typical bay sizing is 32’ x 22’, slab thickness is 10”-12”, and concrete strength is 6 or 8 ksi
- North building lateral system is shear walls to the fourth floor then concrete moment frame, north building is all concrete moment frame

Special Systems

- Due to the sensitive nature of the building, intrusion detection was a necessary part of the design
- Interior protected areas were outfitted with redundant state-of-the-art intruder detection systems
- Also includled is surge protection and tamper protection on system components

http://www.engr.psu.edu/ae/thesis/portfolios/2009/kam5001