



SCHEDULE

- Completed in 2007

SERVICES

- Engineer of Record
- Foundation Design
- Lateral Load Analysis & Design
- Tilt-Up Panel Shop Drawings
- Tilt-Up Panel Reinforcing Design
- Supported Concrete Slab Design
- Panel to Panel Connection Design
- Panel to Structure Connections
- Tilt-Up Panel Bracing Design
- Tilt-Up Panel Lifting Engineering

OBJECTIVE:

Design and build a four story parking garage capable of parking 543 vehicles that would complement the adjacent 4 story tilt-up office building.

DESCRIPTION:

This project involved design and construction of a four story parking garage constructed using tilt-up concrete bearing walls, precast concrete columns, precast-prestressed floor beams and cast in place supported concrete floor slabs.

INNOVATION:

This parking garage is unique in that all of the concrete members were cast on site. This included the precast beams and columns which are typically plant cast. The exterior walls of the garage were constructed using tilt-up concrete wall panels which combined the columns and spandrels into a single panel, thereby eliminating steel connections that are normally required to connect these items. Lateral loads were resisted by large tilt-up shearwall panels that were tied monolithically to large foundations through the use of wet cast concrete joints between the foundation and wall panels. In some cases multiple adjacent panels were connected together to act monolithically, also through the construction of a wet cast concrete joint between the panels. Architectural interest was achieved by recessing some panels behind adjacent walls to create shadow lines and depth to the outside of the building.