

6. Existing Conditions

6.1 Site Plan of Existing Conditions

A site plan of existing conditions was created. On the first diagram the limits of the property, garage, and proposed building are drawn. All adjacent buildings are labeled as well as all local roads running around the site. The covered walkway that will be up through the duration of construction is shown along with the temporary office trailers and other temporary facilities. The second diagram shows all existing utilities and how they will be routed into the new building.

6.2 Local Conditions

In the Washington D.C. Metropolitan area, post-tension concrete is most utilized due to the height restriction inside the District of Columbia. Although this height restriction is not enforced in Arlington, Virginia, the use of the post-tension concrete allows for larger bays between columns and a thinner floor slab which is a huge advantage in a condominium building. Combine these advantages to the efficiency the crews already have with using P-T concrete, it was deemed appropriate to use this system on this project.

Weather in the Washington D.C. area is quite extreme. Because of the location of swamp lands, the weather can change dramatically from day to day. In the winter months, very cold temperatures can be expected which can impact schedules with concrete pours and on this job with hanging exterior stone work. Parts of the exterior building and floors will have to be tented in and heated to allow for concrete and mortar to set.

The summer months for this project were also tough on the project and the workers. The summer of 2007 was especially hot with many days of 100% humidity. This is tough on workers to get the work done that is necessary to keep up with the schedule. Summer of 2008 proved not to be any easier. Along with many hot and humid days, there were many large thunderstorms that provided the area with much precipitation and knocked out power to the area for hours and even days. This weather also led to the area's public transportation system to be shut down and disabled for large amounts of time. Large construction the Metro's Orange Line led to an increase in traffic on all major roads and highways in the area. This traffic would lead to an increase in time for all deliveries and pickups from the site.

The site located at 1881 North Nash Street has some height restrictions because of the approach path of aircrafts landing at Reagan National Airport. The tower cranes are restricted to their height which makes it hard for critical picks for the heavy roof top machinery onto the building.

This site causes problems with traffic flow and patterns because of the adjacencies to a county "major roadway." Fort Myer Drive is designated as a main route as it allows the passage of cars through

Arlington County from both Interstate-66 and Georgetown. This restricts the site deliveries because they can't occur during rush hour traffic in the morning and afternoon.

The soils in the area are a combination of sand and clay for about 30' down for excavation and then disintegrated rock for the next 30'. This is typical in the Rosslyn section of Arlington County.

6.3 Demolition of Existing Building

Previously on this site was the Rosslyn Best Western which was 11 stories in height with an in-ground pool on the south of the site. The geotechnical engineer provided a Phase I and Phase II site assessment. In their findings there was no evidence of "recognized environmental conditions" as defined by ASTM were observed. The limited asbestos survey revealed the presence of Regulated Asbestos Containing Materials in the form of surface applied ceiling materials in the parking garage. Category I non-friable asbestos containing floor tiles were also detected in storage and linen rooms in the hotel structure. None of the asbestos found was harmful and out of regulatory limits so special precautions were not needed to remove it from the building.

In order to achieve a LEED certification, certain criteria needed to be met during demolition to achieve the required amount of LEED points. All the furniture and contents from the hotel were taken out of the building and sold off to private parties. The materials that made up the building including the structural steel and aluminum were recycled and sold off to be reused in another project. The concrete was also recycled where it was going to be made into new concrete.