

ULMA Form Works, Inc (USA) receives the 2011 CIB Merit Award

ULMA Formworks of Hawthorne, NJ was selected by Skanska-Tully JV to supply formwork for one of the largest single construction projects ever undertaken in New York City – The plant is a 290 million gallons-per-day drinking water treatment plant with its main structure lying entirely underground at Mosholu Golf Course.

An 18" thick concrete slab covered by green roof design that will incorporate a golf driving range above the structure. The three level structure consist primarily of 260,000 cubic yards of reinforced concrete and 30,000 tons of reinforced steel, a; ; packaged within a 700 x 600 ft footprint, 95 ft below ground.



At its peak, The Labor force, placed more than 14,000 cubic yards of concrete per month, with some days reaching 2,000 cubic yards. More than 1.6 million sqft of wall was formed and placed to create the perimeter shell and interior treatment process tanks.

To achieve this aggressive schedule, the contractor selected ULMA's Megaform system, modular imperial gang form system, rated 1650p.s.f. with panel sizes ranging from 1' x 2' to 8' x 10'. This massive complicated project required creative engineering design and the team of ULMA NJ, did not disappoint.

The perimeter shell of the structure consisted of three lifts of one-sided walls with a 10'-0" buttress spaced from about 16'-0" to 24'-0" on center. The innovative solution was to utilize the buttress for support and design horizontal A-Frames secured to the buttress, supporting the Megaform panels forming the one sided walls.

This solution compared to the standard vertical A-Frame design, which was also used in some locations, eliminated the casting of heavy anchors in the slab and most important, the reshoring of the slab, as the floors below were already being fitted with piping and process equipment.

Although the Megaform was the forming workhorse, additional innovative forming ideas were used throughout the project utilizing Bira, Megalite, Aluprop, T-60 and Custom. ULMA also provided excellent service and field support as required for the duration of the job. Construction started in October of 2007 and by the spring of 2010 the Skanska-Tully team reached the substantial completion of the project's structural concrete, five months ahead of schedule.

ULMA Form Works Systems in use include:

- MegaForm
- Megalite
- ULMA A-Frames
- Bira panels
- Aluprop
- T-60
- Custom