Focus of this Issue: Parking Structures

INTERPRETIVE COLLEGIATE GOTHIC FOR FORDHAM UNIVERSITY’S NEW GARAGE

The Fordham University Parking Facility is a five level structure (plus roof) of approximately 477,000 square feet for 1,548 cars. The structure is situated in the southeast corner of Fordham’s 79 acre Rose Hill Campus in the Bronx, and will accommodate Fordham’s current and future parking needs. In addition to the facility’s 1,374 long term parking spaces for students, staff and visitors, it will have 172 short-term parking spaces available to the public via a separate entrance/exit.

The contractor, Jeffrey M. Brown Associates Inc. teamed up with Unistress Corporation early on in the process to secure the project. Working as a team they addressed all the design requirements, providing many unique precast solutions and value engineering. The garage is designed by Desman Associates, and the façade by Einhorn Yaffee & Prescott.

Building a parking structure of this size in an urban setting such as the Bronx, NY requires a lot of planning and coordination. There are 1280 pieces to ship and erect, a very tight site and college students looking to park anywhere possible. Erection started on 11-25-05 and will be completed by April 1, 2006.

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**FORDHAM UNIVERSITY’S NEW GARAGE (cont.)**

The entire Parking Structure will be capped with a roof structure that is currently planned to be utilized for passive recreation. This roof will cover the garage ensuring that all parking spaces will be protected from the elements and eliminate the need for the plowing of snow from the parking levels.

The parking structure will be connected to the main campus pedestrian circulation via a proposed foot bridge tying into the existing O’Hare Hall plaza.

The parking structure will be structural precast concrete construction with stone, aluminum and glass curtain wall and stainless steel metal screening facades to blend into the existing campus vernacular. The signature stone piers and metal fencing will be carried around Southern Boulevard and East Fordham Road, completing the perimeter of the campus. The precast parking garage will be wrapped in an interpretive Collegiate Gothic skin of ashlar stone, precast appointments, slate gray metal tracery, grillage, and fabric mesh. Glazed stair towers and stone vertical piers accentuate the vertical while echoing the strength and elegance of the Gothic vocabulary which is so much a part of the Fordham University campus. The vehicular entrances are articulated with flat arched openings of Architectural precast to emulate the portal of the recently completed adjacent Millennium Hall. The parking garage will be connected to the Residence Hall plaza by a flat arched precast bridge skinned with ashlar stone.

This article and photos submitted by Mark J. DiPietro, NY/NJ Sales Manager, Unistress Corporation; Tom Basile, Desman Associates, supplied the architectural information.

**PRIVATE PARKING FOR OFFICE OF GENERAL SERVICES**

The New York State Office of General Services currently operates over 5,100 parking spaces in two Empire Plaza garages, plus 12 more remote outdoor permit parking lots with shuttle bus service available to State employees working in the downtown Albany area, and almost all have waiting lists. There is little doubt that the 1380 additional spaces becoming available in OGS’s newest parking structure, running between Elk Street and Sheridan Avenue in downtown Albany, will also be fully utilized.

The design team for this project, architect Desman Associates, engineer Clough Harbour & Associates, Turner Construction Company, and precaster William E. Dailey, LLC, had a significant garage traffic flow and structural shape problem to overcome because of the steeply sloping site with an old functioning utility tunnel running almost directly down the middle. This called for some 40’ high cast-in-place retaining walls to hold the hillside, and resulted in a structure that is two framed levels at the high side and 8 levels at the opposite end.

The structure was typically framed with 12 foot wide pre-topped double tees, except for a small section on the second level, which received a membrane waterproofing layer and field cast topping over an office and maintenance area. There was no waterproofing material applications, but the flat surfaces (DT, IT, stair risers and landings) have a corrosion in-
PRIVATE PARKING FOR OFFICE OF GENERAL SERVICES (cont.)

hibitor integral with the design mix, and all double tees get a CIP wash for directing water. The 12’ tee width led to a natural 36’ column spacing. Columns are two piece, varying in length from 32’ to 45’, with about 42’ typical. They are spliced with NMB connectors.

The exposed load supporting spandrel beams feature detailed areas of 1” deep ribbed concrete, formed with machined steel reveal bars bonded to the casting bed. The spandrels had a dual sandblast texture – light overall with a heavy (almost exposed aggregate) sandblast to a recessed area above the reveals. A mockup panel was fabricated to work with the architect to achieve the desired panel look and texture. Spandrels were positioned end-to-end in the precast yard during sandblasting to assure a uniform texture from panel to panel.

The garage is 4 bays wide with outside bays ramping up from north to south while the two inside bays ramp up from south to north (the garage spirals between the inner and outer bays). Entry/exit points at opposite ends of the garage occur at the seventh level and the ground level because of the sloping site, actually enhancing interior traffic flow patterns.

Another interesting feature is at level 7 at the east side “high end”. There will be a glass enclosed walkway running from the south entrance at street level to the elevator tower several bays away. The walkway is formed by cantilevering the floor tees at that level 7 feet beyond the building. In this area, the spandrels are also supported by the double tees, which in turn are supported by beams at the column lines.

Wm. E. Dailey cast and delivered 1229 pieces (tees, spandrels, columns, lite walls, cross beams, shaft walls, slabs, and stair units) for this 1380 car parking structure; multiple installation phases ran from mid-October through March. It is noteworthy that Desman Associates were the designers of both parking structures featured in this newsletter; it is even more rewarding to add that Frank Coletti of Desman Associates, a firm specializing in parking structures, said that probably 99% of their work involves precast concrete structures. Thanks also to Jim Altland, Wm. E. Dailey, for supplying the basic facts and photos for this article.

PCANY Septic Tank Group Meeting of March 21

A large group of county and state health officials, guests, precasters, engineers and suppliers met in Newburgh, NY for lunch plus a meeting with a busy agenda. Candace Balmer gave a presentation on the OTN’s goal and mission, and reminded us of future scheduled training courses. Ed Van Nostrand and Mike DeRuzzio, Columbia County Health Dept, Robert D. Smith Jr. and Mark Anderson, NYS DOS Codes Div, and Marie Brule, Dutchess County Health Dept, all gave brief comments on their responsibilities and activities. Andy Reid, Euclid Chemical Company and Dan Biddle, Forta Corporation, both gave informative presentations on the use of new structural fibers in precast products. Complete notes of the meeting are available in the Members Section of the PCANY Website.
Calendar of Coming Events

ABCD 2005 Bridge Design Award, for outstanding new or rehabilitated single or multi-span structure opened to traffic in calendar year 2005 – submittal deadline is Friday, April 14 to Stan Blas, SJB Services

2006 Concrete Bridge Conference – HPC: Build Fast, Build to Last, May 7 -10, The Nugget, Reno, NV

ACI Certification Program, May 11 & 12, Hudson Valley Community College, Troy

PCANY Website

All PCANY members now have access to the Members Only Page, where varied reports, communications, meeting notes, etc will be posted. There is also a new category listing, Complimentary One Year Membership, which will be given to every attendee at a PCANY seminar or workshop; or it may be requested simply by visiting www.pcany.org.