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STRUCTURE & SITE

Updates & Information from Klepper, Hahn & Hyatt

KHH Has A New Address . . .

The principals and staff of Klepper, Hahn & Hyatt are excited about the move to their new office building, which was completed on May 31. KHH Properties, LLC, owns the building, and principal Gordon P. Hyatt, R.L.A., is managing the property. Hayner Hoyt Corporation expedited the initial renovations to the building, which is being completed in three phases.



Klepper, Hahn & Hyatt principals Gordon P. Hyatt, R.L.A., James A. D'Aloisio, P.E., SECB, LEED-AP, and Richard L. Applebaum, P.E., SECB, admire the new sign at the entrance to 5710 Commons Park Drive.

The new office is located at 5710 Commons Park Drive, just off Towpath Road, in East Syracuse. It is approximately 14,500 square feet, and comfortably accommodates the firm's growing staff. Expanded conference space, contiguous parking and a park-like setting are additional features. Offices have ample natural light from exterior windows; some interior

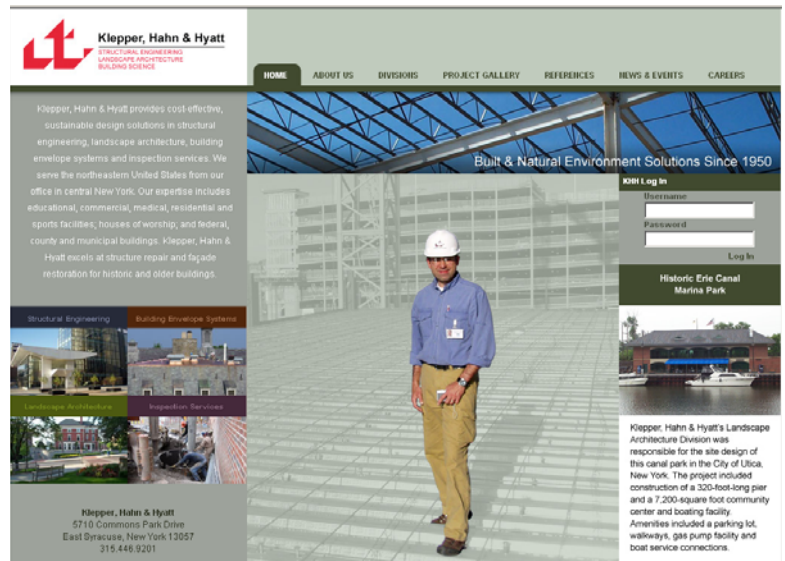
spaces have solar tubes. The remodeling is incorporating a number of sustainable features.

. . . and A New Web Site

Also at the end of May, KHH launched a completely renovated "virtual home" at www.khhpc.com. The firm partnered with The WDBurdick Company of Skaneateles and ITX Corporation to design an enhanced and expansive website to reflect its increasing capabilities.

Deb LaMont. The site was designed to be updated and augmented in-house, with real-time changes as desired.

The site was envisioned and guided by Robyn A. Larwood, Director of Marketing & Development. She is the web manager, assisted by Cathy Savage, the Human Resources Manager, and administrator



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Two Projects Highlight Sustainable Structural Systems

Klepper, Hahn & Hyatt has recently completed the design of two building projects which have each employed energy efficient structural systems which are not mainstream - at least not yet. Structural Insulated Panels were used for the exterior walls and the roof decking on the SUNY Oswego Townhouse Complex, while the Boys and Girls Club of Binghamton was designed with Insulated Concrete Form (ICF) exterior bearing walls.

SIPs in the Townhouses

The SUNY Oswego Townhouse Complex is a 150,000-square-foot project designed to house 350 students. It consists of a total of 12 three-story residential buildings and ancillary structures with steeply sloped and articulated roofs, creating a “village square” appearance. The framed second and third floor structures are precast concrete hollow-core planks which bear on precast concrete walls. All of the exterior walls, including the nonbearing walls, the walls above the upper floor level, and the outer skin of the exterior precast bearing walls, are Structural Insulated Panels, or SIPs. The structural roof decking, which bears on engineered lumber and wood trusses, is SIPs, as well.

Structural Insulated Panels consist of a sandwich with rigid insulation in the middle and Oriented Strand Board (OSB) adhered to both faces. Structurally, the OSB works compositely with the insulation to allow the factory-fabricated wall and roof panels to span between supports for gravity and wind loads as well as accommodate axial and diaphragm planar loads. High insulation values, air barrier properties, and material economy are some of their advantages.

Another feature is the use of continuous exterior perimeter insulation at the foundations.

This not only provides thermal resistance at the perimeter of the slab on grade in excess of the requirements of the Energy Conservation Construction Code, but it also accommodates shallow frost protected foundation design. Combined with the use of fly ash in all concrete, the result is a 50 percent reduction in the amount of Portland cement used for the cast-in-place concrete in the buildings, compared to a more conventionally designed project. The project is thus eligible for a LEED Innovation Credit.

As with all new Dormitory Authority of the State of New York (DASNY) projects, the Townhouse Complex is designed to LEED Silver standard. Collaboration of the design team is critical for the success of a LEED project. The Townhouse Complex’s architectural services were provided jointly by Ashley-McGraw Architects of Syracuse, NY and Burt, Hill of Philadelphia, PA. Natalya Medvedev is the Project Engineer for KHH.

ICFs as Superstructure Walls

After considering different structural systems for the new home of the Boys and Girls Club of Binghamton, KHH and the project architect, Keystone Associates of Binghamton, settled on Insulated Concrete Forms for the exterior bearing walls. This was based mainly on the desire to have an energy-efficient building envelope. ICFs are concrete walls which are poured into proprietary rigid insulation forms that remain in place to serve as building insulation. With the building set into a hillside so that a portion of the exterior walls would have been concrete anyway, the ICFs were a logical choice.

As with the Townhouses, the use of ICFs in this project allowed the foundations to be

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designed as a shallow frost protected system, rather than extending four to five feet below grade at all locations. This saved money and concrete on this 35,000-square-foot facility. In addition, ICFs accommodate a higher percentage of fly ash in the concrete than conventionally formed walls. The Boys and Girls Club structure was designed by Jim

D’Aloisio, P.E., SECB, LEED-AP and Muris Latifagic.

The successful design of the Townhouse Complex and the Boys and Girls Club prove that a building’s structural system can, in fact, play a significant role in advancing a project’s sustainability goals.

- James A. D’Aloisio, P.E., SECB, LEED-AP

Clay Tile Roofs: An Old Design Made New Again

One of the unique aspects of restoring the Onondaga County Court House building envelope in downtown Syracuse, New York, is the rehabilitation of the two clay tile roofed-domes. The domes together equal approximately 5,000 square feet, and the roofs were original to the 1907 building.



In their attempt to be faithful to the original construction, KHH discovered several of the earliest tiles on site. They came from the Ludowici-Celadon Company, which manufactures tiles today under the name of Ludowici Roof Tile in New Lexington, Ohio. The company evolved in part from two firms, the Alfred Clay Company and the Celadon Terra Cotta Company, founded in the late 1800s in Alfred, New York.

An upper view of one of the Onondaga County Court House domes, with the tile in place on one side and the wood lath visible on the adjoining plane. Below left, workmen proceed on the tile work, with the modified bitumen protective covering of the main dome visible in the background.



Ludowici created new tile molds from the old tiles, hand-molding them using centuries-old methods. The particular style is known as Conosera tile.

Each dome required coverage of four curved single-plane arches. Self-adhering modified bitumen sheets were placed as the underlayment, over which wood laths were fastened as a framework for the tiles. The lath structure, while unique to this building, is another old European method.

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The modified bitumen sheets will protect the structures, while the lath-and-tile design will facilitate drainage of minor normal wind-driven moisture which will occur with exposure to the elements.

This type of work is a “marriage of the

building and the function and the skills of the contractors,” according to Toby Nadel, AIA, manager of Building Envelope Systems for Klepper, Hahn & Hyatt. The life span of a terra-cotta tile roof is estimated to be about 100 years, although the tiles can last for centuries.



NEW AND NOTEWORTHY

New Staff Members and Interns Add Their Skills

Klepper, Hahn & Hyatt welcomed four new staff members and four interns working in various areas this year.



Craig L. Arnold, P.E.

Craig L. Arnold, P.E., has joined the firm as a Project Engineer. He and his family have relocated from Colorado Springs, Colorado, where he retired this spring from the U.S. Air Force with the rank of Lieutenant Colonel. He most recently taught courses in engineering and construction management at the U.S. Air Force Academy. Craig has a Bachelor of Science in Civil Engineering from the University of Nebraska and a Master of Science in Structural Engineering from the University of Central Florida. He lives in Kirkville.

Cynthia Ascanio has been hired as a Building Restoration Designer. A native of Venezuela, Cynthia earned her Bachelor’s degree in Architecture from the Universidad Central de Venezuela in Caracas, and her Master’s degree in the Conservation of Historic Monuments from

that same institution.



Cynthia Ascanio

She has 10 years of experience, including eight years working for the Instituto del Patrimonio Cultural, where she was responsible for the evaluation of national preservation projects, as well as supervision and inspection of restoration works on historic buildings. She and her husband reside in Binghamton.

Patrick Fallon, E.I.T., has been hired as a structural engineer. Patrick graduated in May from Rensselaer Polytechnic Institute with a Bachelor of Science in Civil Engineering. He lives in Syracuse.



Patrick Fallon, E.I.T.

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Muris Latifagic

Muris Latifagic joined KHH as a structural engineer. A native of Bosnia, he received his Diploma of Structural Engineer at Novi Sad University in Yugoslavia. He is currently studying for his Civil Engineering degree at Syracuse University. Muris has 13 years of structural design experience, and lives in Liverpool.

Janice J. Medina has been working as an intern facade architect at KHH for the past year, and is departing for Biloxie, Mississippi, where her husband, a physician with the U.S. Air Force, is posted for a four-year commitment. Janice earned her Bachelor of Fine Arts and Master of Science in Building Conservation at Syracuse University. She played a significant role in planning the firm's move to its new location.



Janice J. Medina

Brian Miller is a structural engineering intern working toward his Bachelor of Science in Civil Engineering Technology at Rochester Institute of Technology. A resident of Scotia, New York, Brian will continue to work for KHH while finishing his undergraduate courses.



Brian Miller

Krishna Tanuku is also a structural engineering intern who has just completed his Master of Science in Civil Engineering at Syracuse University. He earned a B.E. in Civil Engineering at

Visvesvaraya Technological University in India. He lives in Syracuse.



Krishna C. Tanuku

Michael Volpe, a landscape architecture intern, is entering his fifth year at SUNY College of Environmental Science and Forestry. He has been assisting the landscape architects with a variety of projects. A resident of Webster, New York, he is embarking for a semester abroad in Barcelona, Spain.



Michael V. Volpe

ICC Certification Earned

Jack Nesbitt, a Special Inspector in the KHH Inspection Services Division, has earned his Structural Masonry Special Inspector Certification from the International Code Council.



Jack Nesbitt



Klepper, Hahn & Hyatt

STRUCTURAL ENGINEERING • LANDSCAPE ARCHITECTURE • BUILDING SCIENCE