



YALE SCHOOL OF FORESTRY AND ENVIRONMENTAL STUDIES

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MASONRY SOLUTION:

Blending Past and Future, Sustainably

A classic campus honors its past while embracing a green future.



IT WAS A GIVEN that the new home for America's first professional forestry program, the Yale School of Forestry and Environmental Studies, would be sustainable. The bigger challenge for designers was to skillfully blend Kroon Hall into the venerable Yale campus, while embracing contemporary architecture to create a solid new presence.



The key to achieving all of those goals was a cast-in-place concrete frame, which provided a strong, rigid structure to support the floor loads and exterior wall system.

For the exterior masonry veneer, the designers chose artfully cut and placed sandstone to portray strength, durability and beauty.

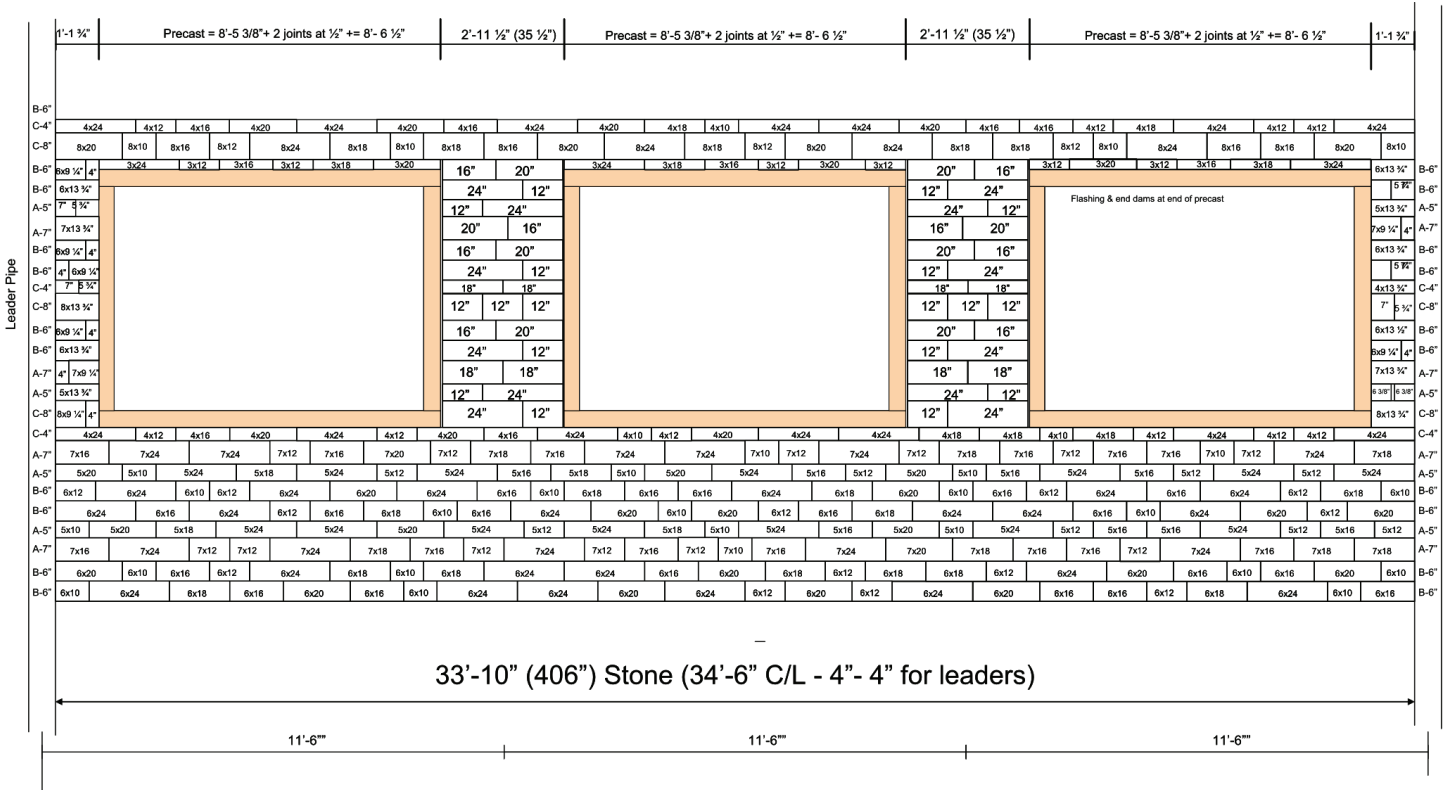
YALE UNIVERSITY - SCHOOL OF FORESTRY AND ENVIRONMENTAL SCIENCE

KROON HALL
NEW HAVEN, CONNECTICUT
<http://environment.yale.edu/kroon/>

Project Details

Architects: H A (USA) Ltd
 Centerbrook Architects and Planners
 Construction Managers: Turner Construction Company
 Engineer: ARUP
 Mason Contractor: Joe Capasso Mason Enterprises Inc.
 Craftworkers: BAC Local 1 CT
 LEED Rating: Platinum





Taking their cues from the stone façade of an adjacent building, they created a random pattern with courses in 12-inch increments, using 6-inch-wide sandstone units, ranging in heights from four to eight inches and lengths of 10, 12, 16, 18 and 24 inches, with some smaller lengths between windows.

The only non-random requirement was a minimum joint overlap of 3 inches.

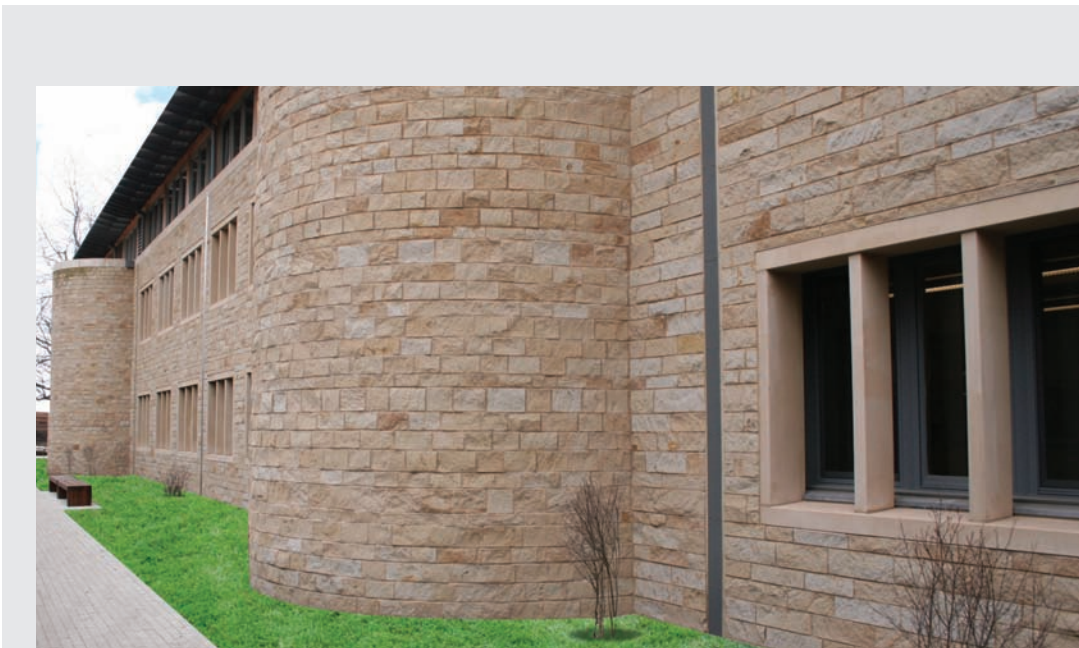
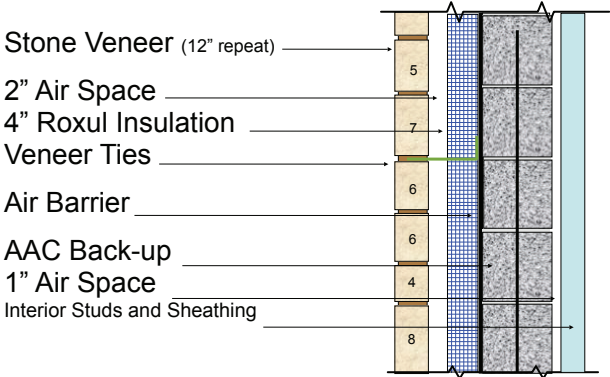


The exterior veneer also includes precast accent lintels, sills and ornamental corner stone repeated on the piers and lower level façade.

Not surprisingly, the layout required careful planning and execution. Stone masons from BAC Local 1 CT and Joe Capasso Enterprises Inc. worked with IMI and the architects to establish a representative layout.



Yale Forestry Building



The exterior wall system included a 2-inch air and drainage space, 4 inches of rockwool insulation, an air and moisture barrier, and eight inches of autoclaved aerated concrete (AAC) masonry units.

Another tactic was using special 4-inch wide stone in lengths of 8-, 12-, and 16-inch at the radius walls.



High-strength AAC 6 was chosen for the reinforced AAC back-up to support the transferred wind load from the veneer as well as the windows, precast sills and lintels. Other custom touches included special cored units and vertical bond beam units at the window jamb. Masonry veneer ties were screwed into the AAC backup 16” horizontally and 24” vertically.



YALE'S GREENEST BUILDING



The wall system played a key role in the project's ambition to earn a "Platinum" LEED rating from the U.S. Green Building Council. The AAC units carry an R value around 8, while the rockwool insulation made of 100% recycled material has an R value of 16.8. Exterior stone quarried within 500 miles of the campus, and the "thermally inactive" concrete also helped, as did recycling of construction waste.

School officials are now hailing it as "Yale's greenest building" that will be the cornerstone for the campus' ambitious sustainable building efforts. As the school's website poetically proclaims:

"It will be a symbol of the School's ideals and values in built form."

team INTERNATIONAL MASONRY INSTITUTE



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