

Watertight Mandated For New York City

The New York City DDC wanted a watertight joint for a 12' 6" x 4' box culvert for the Somerville area in the Borough of Queens, a run of 1700 feet total. CAC Industries of Long Island City was awarded the job. Since the work ran down the center of a busy street, they were looking for the quickest, most trouble-free way to build this watertight utility tunnel.

They chose AFCO/Oldcastle Precast of Middle Island, New York to furnish precast boxes to the job. In the words of now retired AFCO General Manager Wesley VanKuren Sr., "we have enough experience with "Rubberman-BW" joint gasket on pre-

vious box culvert jobs to be confident we would produce a quality watertight box for this job."

To insure that the overall product quality met specifications, gaskets were installed on the boxes and hydrostatically tested to NYCDDC requirements. And with timely delivery to the job site, all aspects of the job were successfully completed. CDC was quite happy with the product quality and the ease of installation, thus assuring water tightness of the final product. Since silt will not be drawn into the joints of the boxes, there will be no unexpected shortening of the life of the busy street above.



Rubber gasket pre-applied to the box culvert tongue



Precast aids speedy completion in a tight site

Photos by
Hail Mary Rubber Co.

Fast, Economical, Standardized, Quality ... Lapp Road Bridge

This project went extremely well for the first time the Erie County DOH used a Segmental Precast Bridge Abutment System, and they will use it again in the future. Kistner Concrete, the manufacturer, keeps these units in stock to meet demand for wing walls on box culvert jobs, retaining walls, and other similar applications.

To further decrease field installation time and minimize site water issues, precast footers have been used in place of field cast footers on other projects. Credits go to Project Engineer Urban Associates, Contractor CATCO Contracting, and Kistner's "Kast-Block" System.

Those who attended the May 19 Bridge Design Workshop also saw examples of stone-faced wall blocks on Kistner's display trailer (see photo).



Precast block element abutment support prestressed box beam bridge units

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Lapp Road Bridge *(continued from page 1)*



Blocks cast with stone facing



Blocks form wingwall; note CIP closure pour

Green Sound Barrier Walls

While this project was not conceived to comply with the LEED program, it still does, doesn't it? It uses non-toxic, natural, local materials, and is basically environmentally friendly. It will stand the rigors of time and the elements, rot and fungi, even forest fire. (No wonder representatives of the timber and plastics industries generally oppose LEED.)

But the main function of this sound wall on the Hutchinson River Parkway, Rye Brook, NY was to minimize traffic noise reaching abutting properties. (And mass is the most significant sound stopper.) The one meter high wall panels specified by designer and owner NYSDOT Region 8 made erection easier and more efficient with smaller equipment. The traffic side is cast with a stone wall texture to closely match the locally quarried granite used on nearby structures along the Parkway.

The residential side was made with a brown exposed aggregate finish. Panel and post caps add a finishing touch to the wall. The Fort Miller Company, Schuylerville, NY manufactured the wall under contract to ECC III Enterprises; the project engineer was HNTB.

Why green sound barrier walls? Just a relatively short period has gone by, and the walls are either covered with green natural growth or hidden behind lush green foliage, as these pictures show. There is a preponderance of green growth visible everywhere, making the wall almost disappear in places. Nevertheless, it continues to stop the traffic noise, as intended. (*Vivid full color photos can be emailed, upon request.*)





Hutchinson River Parkway, Rye Brook, NY



Sound walls produced by The Fort Miller Company

Mixing Aesthetics With Concrete Noise Barriers

The I-490 Gateway Project, from the Erie Canal to the Genesee River in Rochester, NY travels through several residential areas of the city. The New York State Department of Transportation recognized the opportunity to improve the visual environment along the I-490 corridor as part of the project. Therefore, an Aesthetics Committee was formed and charged with developing general aesthetic goals for the project. The committee was comprised of private local artisans and municipal representatives. In addition, the NYSDOT engaged the services of an Architectural/Aesthetic sub-consultant to develop specific design concepts consistent with the identified goals. Local input was also obtained through other general public involvement programs during project development.

Specific aesthetic recommendations made by the committee included:

- Noise barriers should be of appropriate scale for the residential neighborhoods
- Where possible, vary noise barrier alignment to break up long flat expanses
- Use color and texture to create visual interest

- Consider thematic designs or other treatments where the barrier is close to the shoulder of the road and its appearance can not be softened by vegetation. Consider viewing angle and speed of drivers with thematic design.
- When barrier is not close to the roadway shoulder, use plantings to soften barrier appearance.

Howard Ressel, Project Design Engineer, NYSDOT Region 4, proudly summarizes "our design was a bit unique as it utilized precast panels mounted on precast posts so the posts were hidden from view (unlike the slotted post and panel system normally used). The panels varied in height and texture. Every other panel has a 6" cant or slope."

This phase of the project used 6500 m² of precast concrete noise barriers. Some have a rough textured face, some are grooved; others were made with artistic decorations cast in, with additional coloring added at the plant. The project successfully resulted in a pleasing, colorful, and neighborly sound barrier wall, as the accompanying photos illustrate.

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I-490 Gateway Sound Barrier Installation

Photos by NYSDOT



Grooved or rough textured panels are light brown colored

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Mixing Aesthetics

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Various Artists Related Concepts are cast into some panels for visual change



A finished sound barrier separates the local homes from the busy express lanes beyond

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