

PRECAST CASE STUDY

Oldcastle Precast Telford, PA supplied 11-foot by 11-foot precast concrete box culvert with a V-shaped channel for the \$12.5 million Laurel Street Combined Sewer Outfall improvement project. The precast concrete culverts replaced the existing 100 year-old, 16-foot diameter brick combined sewer outfall (CSO) in Philadelphia. The project is part of a US EPA order to reduce the number of CSO discharges to the Delaware River. The new state-of-the-art outflow with twice the capacity will reduce the risk of chronic flooding in Fishtown and Northern Liberties. As part of its original development plan and \$164 million expansion, Sugar House Casino agreed to upgrade the Laurel Street Combined Sewer Outfall.

Using prefabricated precast concrete box culverts was a first for the city of Philadelphia. The Philadelphia Water Department specifiers in the past thought cast in place concrete provided an advantage over precast systems. Oldcastle Precast was able to prove to the owner, the engineer, and the Philadelphia Water Department that a precast box culvert would be a feasible option and accelerate a very aggressive construction schedule. It was imperative to restore the operation of the Laurel Street CSO as soon as possible.

In all, Oldcastle Precast supplied 1,307 linear feet of V-shaped culvert for the project. The culvert was arranged as a triple run of 436-foot culvert each.

The special precast culvert presented many design challenges. It was essential to provide precast concrete boxes that met the Philadelphia Water Department's stringent design criteria and there were load considerations because the precast structure would be located beneath the main parking lot of the casino. Oldcastle worked with Urban Engineers to finalize the precast box culvert with V-shaped channel. Manufacturing took 4 months with time to spare for the project to be completed on schedule.

TAKE A NEW LOOK AT PRECAST

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PROJECT:
CITY OF PHILADELPHIA BOX
CULVERT PROJECT

LOCATION:
PHILADELPHIA, PA.

PRECAST MANUFACTURER
OLDCASTLE PRECAST
www.oldcastleprecast.com

