



*Delivering innovative trenchless technology solutions to rehabilitate the world's diverse infrastructure*

► **MULTIPLE OUTFALL REHABILITATION**

**Project:**

City of Detroit Outfall Rehabilitation Project

**Location:**

Detroit, MI

**Profile:**

The City of Detroit awarded Lanzo Trenchless Technologies (then Lanzo Lining Services) a multiple outfall project that included fourteen large bore outfalls. Lanzo structurally rehabilitated nearly 20,000 linear feet of concrete, brick, box culvert, and tile sewers between Jefferson Avenue and the Detroit River using either over-the-hole or conventional ASTM F 1216 direct inversion methodologies. The project served to structurally stabilize and renew the existing pipelines without excavating large swaths of the Detroit's prized developed riverfront shoreline.

Pipes ranged in size from 51" to 110" inch diameter while the wall thicknesses utilized for constructing fully stand alone pipes within the existing pipes went to 54 mm (in excess of 2" thick).

One of the outfalls (Joseph Campeau) was, at the time of this project, the largest singular utilization of cured-in-place pipe (CIPP) technology in the world. The 3600 linear feet of 84" equivalent round box culvert consumed over 1,000,000 pounds of resin and took approximately one week per barrel to invert.

The outfalls rehabilitated in this project included:

Fisher	1800 lf	110" diameter
Joe Campeau	3600 lf	84" diameter equivalent round box culvert
Dubois	4020 lf	51" brick
Orleans	1000 lf	42" concrete
Orleans	910 lf	72" segmented tile
Riopelle	1990 lf	42" concrete
Rivard	700 lf	66" brick
McKinstry	1488 lf	54" clay tile
Campbell	3525 lf	74" concrete

