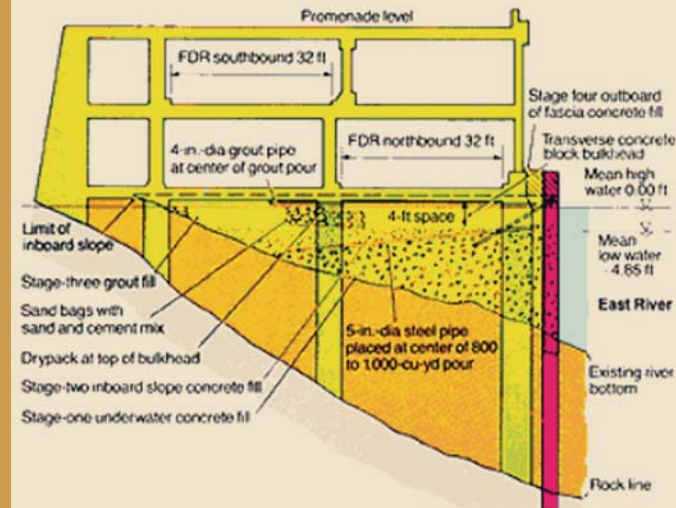


FDR gets a facelift; New York construction makes it fashionable to “accessorize”.

FDR Drive is a highly congested freeway that has been in operation since the late 1930’s. Parallel with the East River, the roadway has gone through some expansions over the years. Similar to a marine platform dock, the pile supported deck structure has been exposed to tidal changes and the elements have taken a toll on this historic transportation structure.



Sheet pile installation from marine barge on the East River



X-9800 cast steel sheet pile protector

► Problem

Land erosion and deterioration have exposed the foundation piles leaving them susceptible to corrosion. Loss of ground under the platform structure has caused potential foundation failures and warranted a remediation. The plan was to stop the erosion process through the existing failing retaining wall and to reinforce the foundation. NY DOT determined that a new steel sheet pile wall along the exposed marginal wharf line would be the most economical solution. The new wall will be six feet inward to land from the original deteriorating sheet pile wall. The steel piles will be driven to a depth of thirty five feet. The six foot marginal area between both walls will be cleaned out and the existing wall will be temporarily patched. Sulphate resistant concrete is tremied within the sheet pile walls to provide partial support for the

roadway structure, while protecting the newly installed sheet piles.

► The Driving Force

There were many questions regarding the geotechnical conditions for this project. Over 70 years of dumped debris and rip rap along the shoreline had to be contended with. Engineers and contractors both determined that pile point accessories were the right choice. The protectors would give the piles a cutting edge to break through difficult subsurface obstructions while providing additional reinforcement at the pile tip. Implementing the accessories into the material design resulted in a faster installation without damage to the pile tips.

► Project Details

Material:

Associated Pile & Fittings Corp. supplied approximately 300 X-9800 cast steel protector accessories, cut to shape and welded. Skyline Cold Form Manufacturing produced the CZ-141 steel sheet piles to specific project lengths. The piles were delivered to the jobsite in pairs for ease of handling and faster driving production.

Contractor:

Petracca & Sons, Inc. of Jamaica, NY

Owner:

New York City Department of Transportation