



PROJECT BRIEF

Salem Flood Protection Stormwater Improvement

PROJECT PROFILE

CLIENT:

Woodard & Curran

LOCATION:

Salem, MA

VALUE:

- Provided value engineering of storage tank foundation, resulting in significant cost savings
- Reduced risk associated with excavation and dewatering for construction of pump house and storage tank through optimization of proposed construction sequence

SERVICES PROVIDED:

- Performed risk assessment for construction of storage tank foundation
- Laboratory testing of soil samples
- Design of levee and earthen embankment

“Our team performed preliminary design of support of excavation requirements and the design of a geotechnical monitoring plan to reduce the risk of construction impacts on adjacent structures.”



DESIGN & COORDINATION OF SUBSURFACE INVESTIGATION AND GEOTECHNICAL TESTING

Geocomp is the geotechnical engineer of record for the city of Salem proposed stormwater improvements. The roles performed by Geocomp on this project included design of the levee and earthen embankment, coordination and supervision of an extensive subsurface investigation program, in addition to geotechnical recommendations for subsurface storage tank, pump house, and associate drainage structures. Our team performed preliminary design of support of excavation requirements and the design of a geotechnical monitoring plan to reduce the risk of construction impacts on adjacent structures. GeoTesting Express also played a role in this project providing geotechnical laboratory testing of collected soil samples.



BACKGROUND

The city of Salem, MA is making significant improvement to its stormwater protection system. The system upgrades include the construction of a 4,000,000-gallon underground stormwater storage tank, a below-grade pump house, associated drainage utility lines, and earthen, sheet pile levees. The project involves significant geotechnical challenges including large areas of soft, compressible soils, potential construction impacts on adjacent structures, and the need for ground improvement under the proposed stormwater storage tank.