



TBTA Design Services for the Addition of an Emergency Generator on Governors Island

During Super Storm Sandy, power that supplies the pumps used to evacuate water from the Hugh L Cary Tunnel failed and the tunnel was flooded. It took more than a week to restore power which hampered efforts to remove the water, repair the tunnel and restore safe operations of the tunnel. In an effort to mitigate the issues during the recovery under similar circumstances, the TBTA would like to install an emergency generator at the GIVB. The generator's main function will be to supply power to the pumps used to evacuate water from the tunnel along with power for a limited number of ventilation fans to help evacuate exhaust from trucks parked in the tunnel during repairs.

AG is providing mechanical and structural design services for the proposed addition of an emergency generator on Governor's Island, New York as a subcontractant to Jacobs. AG's scope of work includes:

- **Structural Design for Structural Steel to Mount the Generator** Design of the primary support for the generator consisting of a braced steel frame of columns and beams fabricated from section W. Columns will be supported on a concrete spread footings. There will be a reinforced concrete slab on the support frame. The generator and its housing will be placed and anchored to the top of this slab. The top of the slab is approx. 8'-0" above the existing grade level. The plan dimensions of the concrete slab and the frame loadings are given by the manufacturer of the generator/enclosure.
- **Mechanical Design for a Fuel Delivery System** Design the fuel oil delivery system. The system will meet local and other applicable codes. If possible, the fuel oil piping will be pressurized pipe that utilized the supply truck pumps for lifting the fuel up to the generator storage tank. A spill tank will also be designed at the spill point near the foot bride to collect any oil spilled when attaching and disconnection the delivery truck hose from the fill pipe. A duplex transfer system will be designed for transferring the fuel oil to the generator storage tank.



A.G. CONSULTING ENGINEERING, PC

Location:

Governors Island, NY

Owner:

TBTA

Services Provided:

Structural

Mechanical

A.G. Consulting Engineering, PC

131W 33rd Street, 12B

New York, NY 10001

Phone: 212-268-0950

agceng@agceng.com