



# STATEN ISLAND SIGNAL MODERNIZATION

Service: General Contracting

Value: \$72 Million | Present Day Value: \$82 Million | Awarded Date: December 2003 | Completion Date: 2007

Contract No | S-80220-R

Work performed for this contract by Halmar staff as Granite Halmar employees

## PROJECT DETAILS

The modernization program for the Staten Island Rapid Transit system replaced the 14-mile signal system, from St. George to Tottenville, with an FRA-compliant 100Hz, track circuit based, Automatic Train Control (ATC) signal system. 40 - R44 subway cars and 4 locomotives were modified with on-board cab signaling equipment for ATC bi-directional movement. A new rail control center and back-up control center was constructed as part of this contract. 14 miles of fiber and copper cable, 17 signal/communication instrument houses, new switches, snow melters and hundreds of foundations for various wayside equipment were installed along the 2 track heavy rail system. 14 miles of Civil, track, signal and electrical work. From St. George to Tottenville. Extensive engineering for largest cutover on the east coast was performed, as well as significant training, system integration, testing and commissioning.

### The project included the installation of:

- FRA compliant 100HZ steady energy track circuit based signal system
- Wayside signals @ interlockings
- Carborne & Locomotive cab signal system
- SCADA system at CB houses and DC substations
- 2 single mode 36 strand fiber optic cables between St. George & Tottenville
- OC-3 SONET based fiber optic transmission system with nodes at passenger stations and substations
- Control Center building, Backup Control Center & systems
- Systems Integration and Commissioning
- 2 motor-alternator substations
- Installation of communication electrical and signal work trackside and in CILs and electrical rooms
- Wayside Signal equipment manufactured by Safetran
- Carborne system and additional wayside equipment manufactured by Alstom (Switches & Stops) Carborne (manufactured and installed)
- Installed Sonet, scada and telephone systems purchased / manufactured and installed by HSQ
- Steel Erection in St. George and Atlantic buildings by American steel
- Track work performed by North star
- Cable and wire supplied by EDS
- trenched for plastibatton, formed and poured concrete

## ACCOMPLISHMENTS

Largest Signal Cutover on East Coast.

Subway Car and Locomotive On-board Equipment

New Control Center, and Backup Control Center

Training, Testing and Commissioning.