GIS Use in Fill Material Tracking and Logistics

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The Team

- **Owner**: SIMD/ 380 Development
- **Engineer of Record**: KE Engineering Services PC
- **Geotechnical**: SESI
- **Contractor**: Staten Island Marine Construction
- **Civil Development**: – Langan Engineering
- **Independent Environmental Monitor**: – Melick-Tully & Associates
Overview

- 675 Acres - Total
- 440 Acres - Developable
- 235 Acres – Deed Restricted
Overview - Brownfield

Proposed Marine Terminal & Logistics Center
At the former GATX Site on the Arthur Kill Channel, Staten Island, NY (2010 Aerial)
Brownfield Redevelopment

MEMORIAL HILL
20.88± acres

WETLANDS & ADJACENT AREAS
Reserved Forever By Deed
245.657± acres

LOGISTICS CAMPUS
194.24± acres

MARINE ORIENTED DEVELOPMENT
Facility Site & Access Corridors
= 132.81± acres

Proposed Marine Terminal & Logistics Center
At the former GATX Site on the Arthur Kill Channel, Staten Island, NY
Regulatory Framework

- Modified Order on Consent - September 2013
- Engineering Work Plan
- FARs and BUDs – Material Acquisition
Material Acquisition

- Identify Source
- Due Diligence
- Develop BUD/FAR
Material Tracking

- Source BUD/FAR ID
- Bill of Lading
- Transportation Logistics
- Quantity Estimation
- QA/QC
- Placement
Material Tracking

**Sources**
- BUD/FARs
- Origin Info

**Destination**
- Scalehouse
- Dock

**Shippers**
- Trucking
- Barges

**Suppliers**
- Processor Info
- Supplier Info

**Transfer**
- Trucking
- Barges
- Dispatcher

**Inspection**
- Scalehouse
- Dock
- Placement

**Placement**
- X-Coordinate and Cell
- Y-Coordinate and Cell
- Z-Layer and Lift ID

**BARCODE Cross-Reference**
Tracking Steps

- Initial Screening
- Delivered Tonnage/Yardage Estimation

Scalehouse

Barges at Dock
• **Inspection of Material**
• Delivery, Placement and Compaction
Tracking Steps

**Software/Hardware**

- **ArcGIS Collector**
- **Collector Application**
- **iPad**
- **XGPS**
- **Barcode Scanner**
Tracking Steps

2 Million Features
Tracking Steps

- QC of entered data
- QA of QC’d data
- Reporting