



New Jersey Shore Protection



STEEL SHEET PILE DUNE RESTORATION PROJECT

Township of Brick & Borough of Mantoloking



New Jersey Dept. of Environmental Protection
Office of Engineering & Construction
Bureau of Coastal Engineering
Erick Doyle, Principal Environmental Engineer

Boroughs of Brick and Mantoloking
Ocean County, New Jersey



New Jersey's Shore Protection Program



State of New Jersey

Chris Christie, Governor

Kim Guadagno, Lt. Governor

Dept. of Environmental Protection

Bob Martin, Commissioner

Natural & Historic Resources

Richard Boornazian, Assistant Commissioner

Office of Engineering & Construction

David Rosenblatt, Administrator

Bureau of Coastal Engineering

Purpose...

To administer beach nourishment, shore protection and navigational dredging projects throughout the State to:

- **Provide for the protection of life and property along the coast**
- **Preserve our State's vital coastal resources**
- **Maintain safe and navigable waterways**



Shore Protection Fund

Dedicated for...

“To protect existing development and infrastructure from storm surges, sea-level rise and shoreline migration through dune creation and maintenance, beach nourishment projects, and construction and repair of shore protection structures.”

**\$25 million dedicated annually
Realty Transfer Tax (N.J.S.A. C.13:19-16.1)**



Shore Protection Funding

How It's Divided

Federal Projects - NJDEP - local sponsor in these projects

- Studies
- Storm Damage Reduction/Shore Protection
- Environmental Restoration

State Projects - Municipalities - local sponsor in these projects

- Storm Damage Reduction/Shore Protection

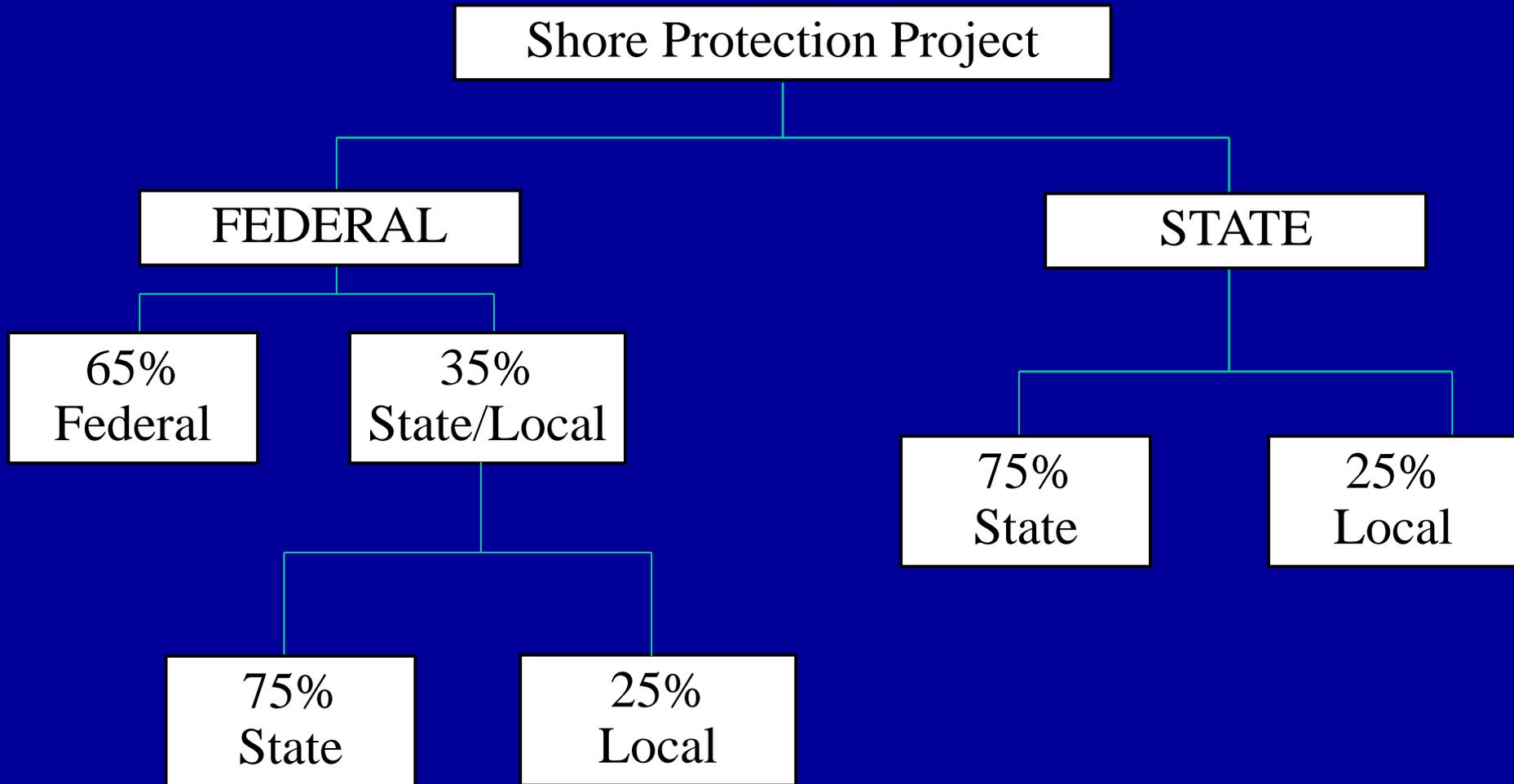
Professional and Technical Services

- Stevens Institute of Technology
- Richard Stockton College of New Jersey
- Division of Fish and Wildlife
- New Jersey Geological Survey



Shore Protection Construction

Cost Share Structure





Rt. 35 Sheet Pile Dune Restoration Federal Highway Administration



U.S. Department of Transportation
**Federal Highway
Administration**

Steward: Nation's Highways, Bridges, & Tunnels

Liaison - NJDOT Bureau of Local Aid

**80% Reimbursable Cost-Share
Eligible Items**

20% State Cost-Share



New Jersey Dept. Environmental Protection
Bureau of Coastal Engineering

Shore Protection Program



Rt. 35 Sheet Pile Dune Restoration New Jersey Department of Transportation



NJDOT: > \$120 Million



**Breach Closure
Roadway Reconstruction**



New Jersey Dept. Environmental Protection
Bureau of Coastal Engineering

Shore Protection Program



Rt. 35 Sheet Pile Dune Restoration Superstorm Sandy – Mantoloking





Rt. 35 Sheet Pile Dune Restoration Superstorm Sandy - Mantoloking





Rt. 35 Sheet Pile Dune Restoration Existing Conditions: Mantoloking



Hebert Street (Viewing South)





Rt. 35 Sheet Pile Dune Restoration Existing Conditions: Mantoloking



Pedestrian Access Point (View Towards Lyman Street)





Rt. 35 Sheet Pile Dune Restoration Borough of Mantoloking





Rt. 35 Sheet Pile Dune Restoration Project Specifications: Materials



Steel Sheets

**≈18,450 Linear Feet (LF) of Steel Sheet Pile
Driving to Elevation -30 NAVD88'
ASTM A 690 Marine Grade Steel
25' Steel Sheet Pile Return Wall (400' Intervals)**

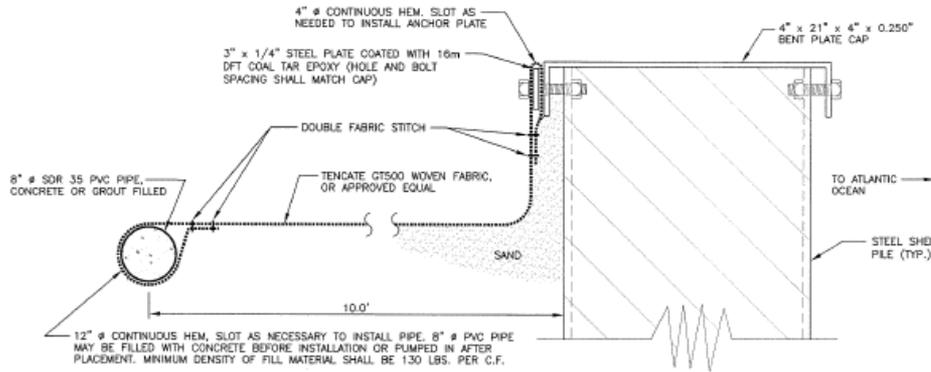
Cap, Anti-Scour Apron & Ladders

**≈18,450 LF of Bent Plate Cap (Epoxy Coated)
≈18,450 LF of Woven Polypropylene Geotextile
≈110 Steel Ladders (200' Intervals)**

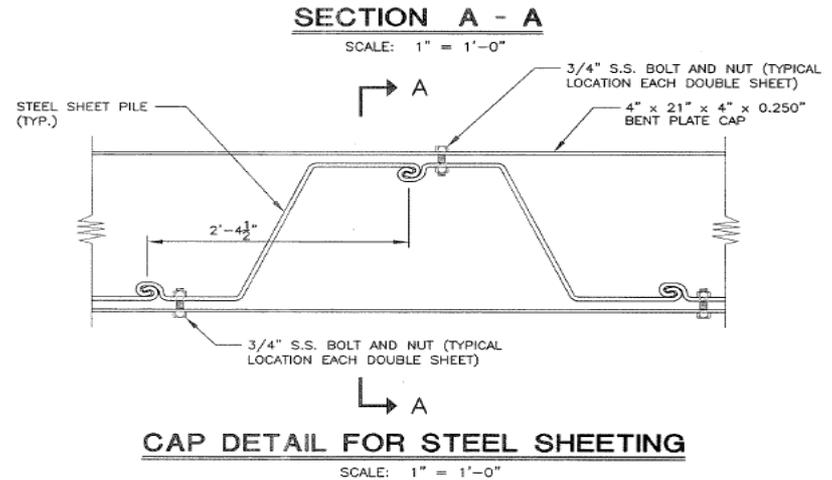




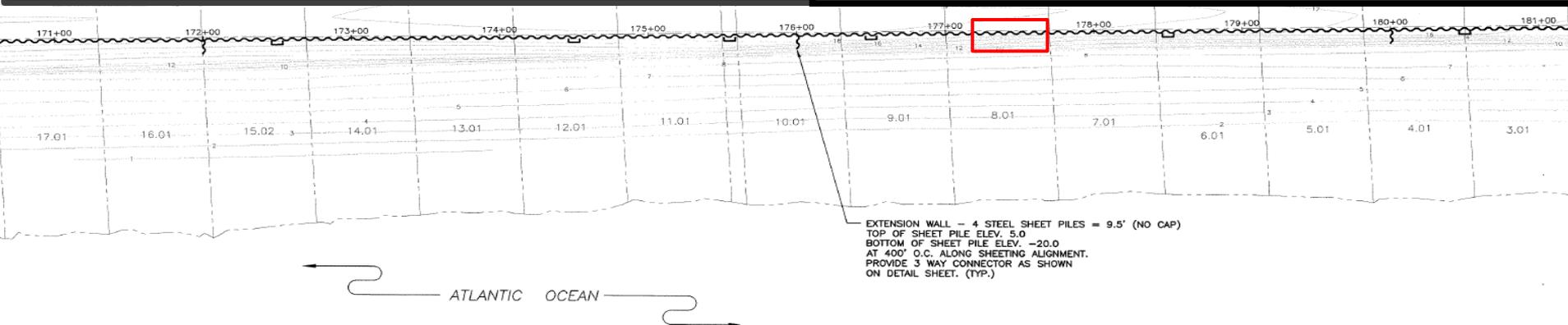
Rt. 35 Sheet Pile Dune Restoration Project Specifications: Plans



**GEOTEXTILE FABRIC ANTI-SCOUR
OVERWASH APRON WEST SIDE OF SHEET PILE WALL**
NOT TO SCALE



SECTION A - A
SCALE: 1" = 1'-0"
CAP DETAIL FOR STEEL SHEETING
SCALE: 1" = 1'-0"





Rt. 35 Sheet Pile Dune Restoration Environmental/Permitting



- **BCE – Initial CAFRA Application: 1/25/14**
 - Published in DEP Bulletin: 2/19/14
 - Public Notice – APP: 1/24/14, 2/12/14, & 3/27/14
 - Revised Compliance Statement: 4/7/14
 - Permit Issued by Land Use: 4/17/14
- **BCE - Biological Opinion w/ U.S. Fish & Wildlife: 3/26/14**
- **Gannett Fleming: Environmental Assessment & Notice for Construction w/in 100-year Floodplain: 4/3/14**
 - Document Deemed Acceptable: 6/2/14





Rt. 35 Sheet Pile Dune Restoration Project Facts



- **Bid Opening: March 6, 2014**
 - **Awarded Contractor: EIC Associates, Inc.**
 - **Amount: \$23,837,000.00**
- **Material Delivery: June 23, 2014**
- **Estimated Sheet Driving Operations Start: July 7, 2014**
- **Projected Construction Completion: Fall 2014**





Rt. 35 Sheet Pile Dune Restoration Contractor Contact Information



EIC Associates, Inc.

Owners – Andre Ameer & Joseph Branco

Project Manager – Derek Serpe

140 Mountain Ave. Suite 303

Springfield, NJ 07081

Phone: 973-315-0200

Fax: 973-315-0218

Email: dserpe@eicassociates.com





Rt. 35 Sheet Pile Dune Restoration What to Expect



- **Work Hours: 6:30 a.m. to 3:30 p.m. Monday-Friday**
- **Staging of Sheet Piles on Dune**
 - 15' wide corridor fenced off on dune top
 - Limited Access to Beach outside of Work Zone
- **Public Beach Access Points Accessible**





Rt. 35 Sheet Pile Dune Restoration

What to Expect



- **Construction**
 - Multiple crews working at a time
 - 500' work zone in construction areas
 - Work zone will be adjusted as work is completed
 - \approx 150' of sheeting to be installed daily
- **Vibrations**
 - Monitored by Protec Documentation Services



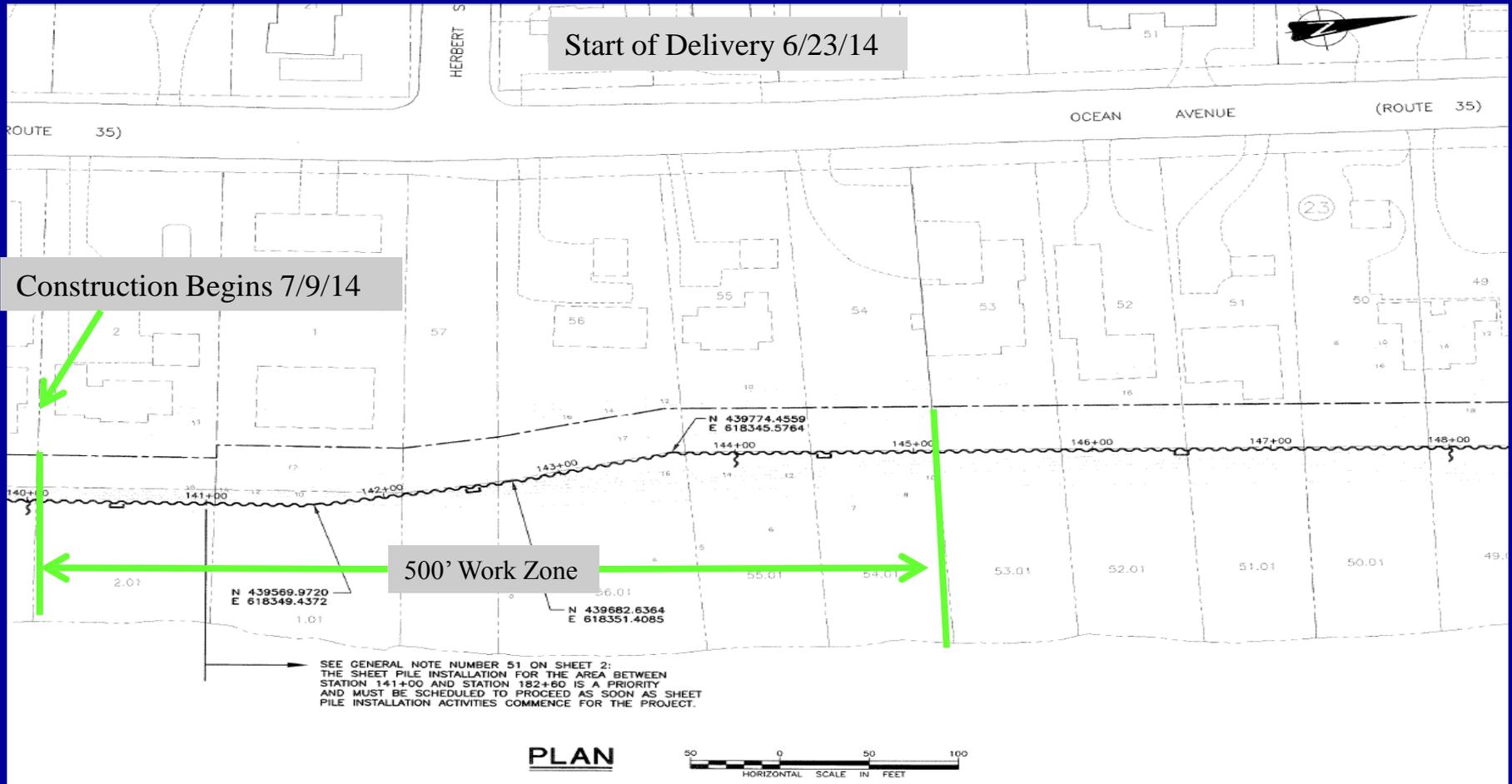


Rt. 35 Sheet Pile Dune Restoration Construction Equipment to Expect



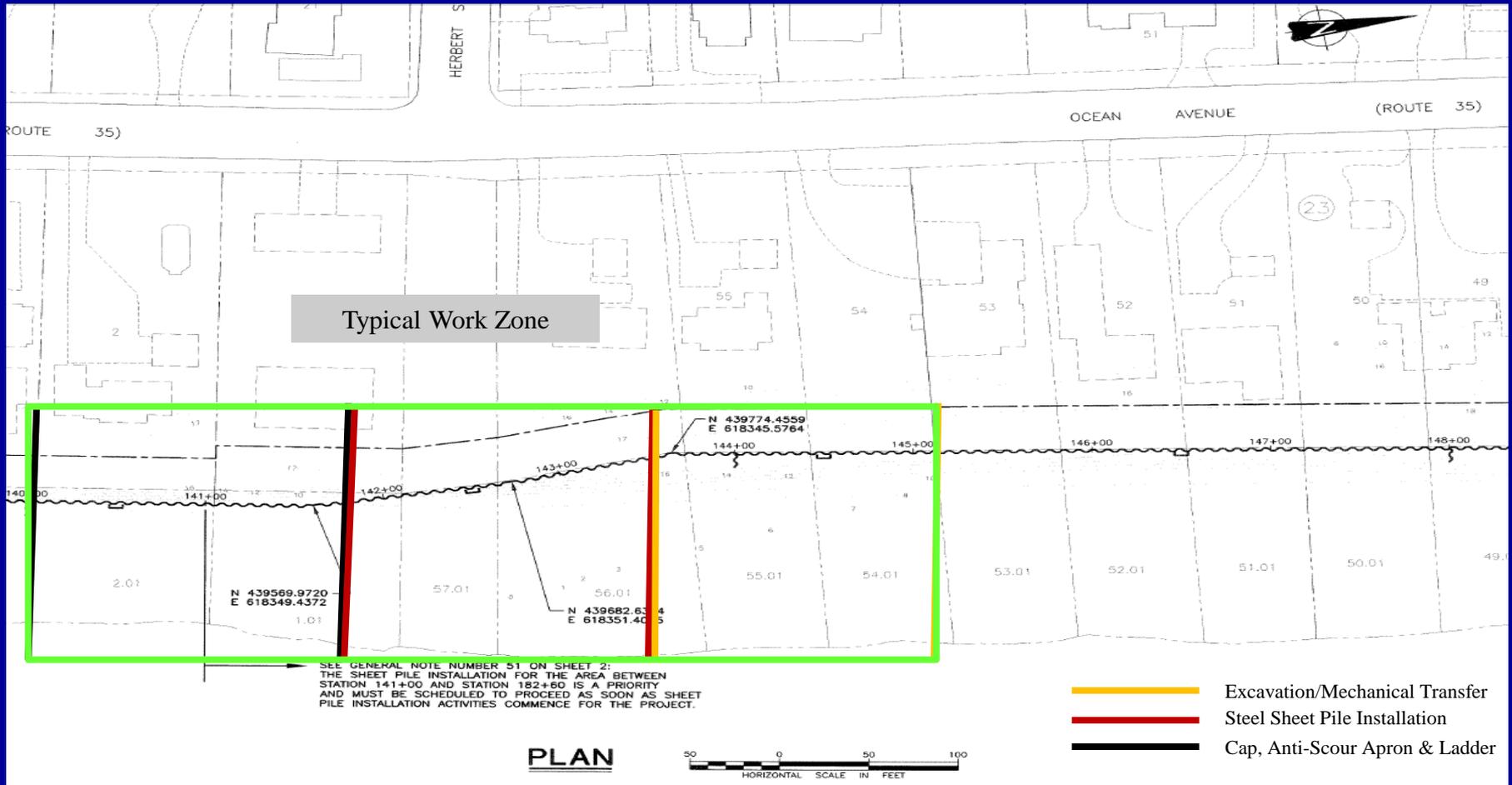


Rt. 35 Sheet Pile Dune Restoration Construction Process Overview



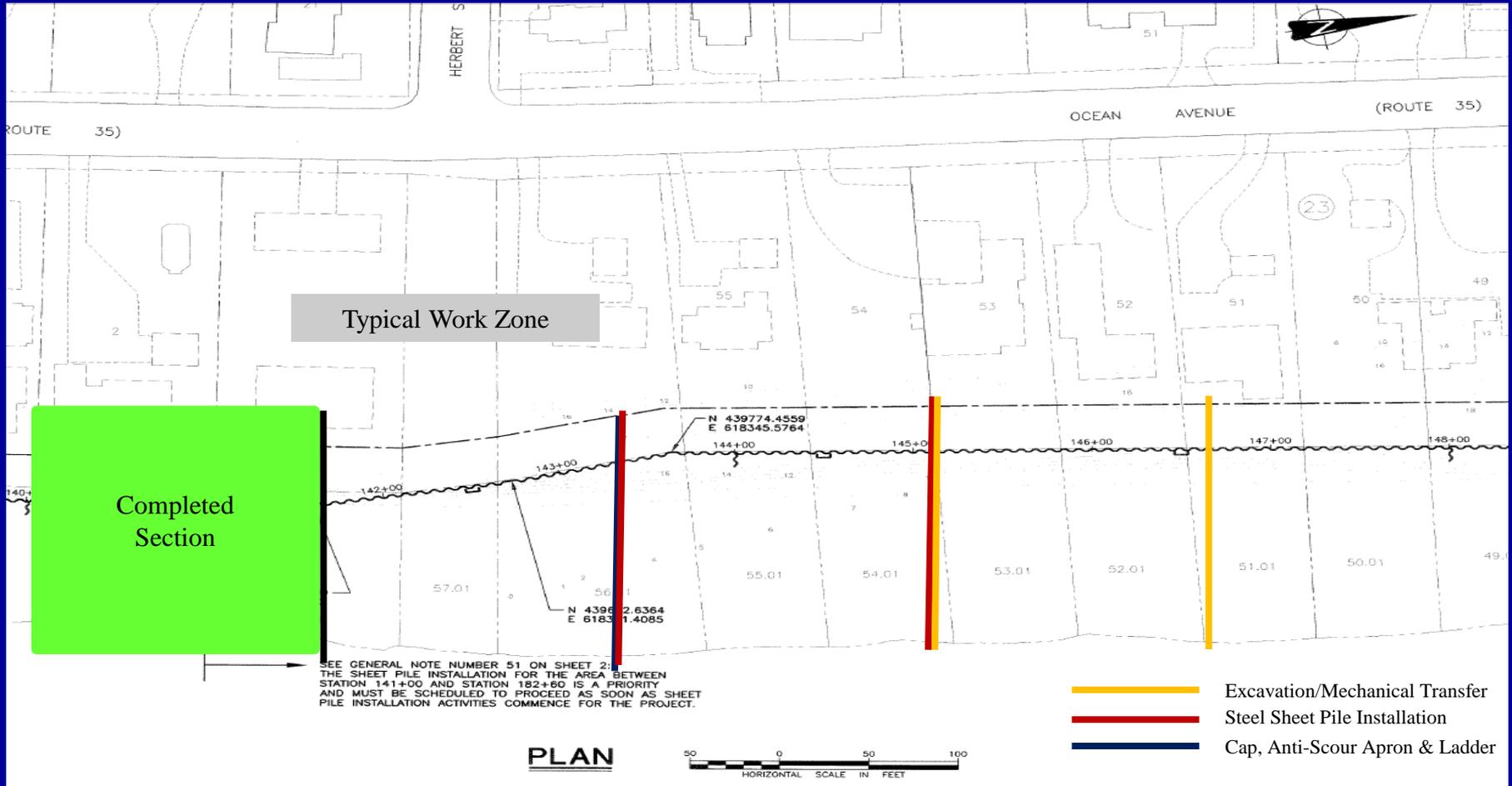


Rt. 35 Sheet Pile Dune Restoration Construction Process Overview



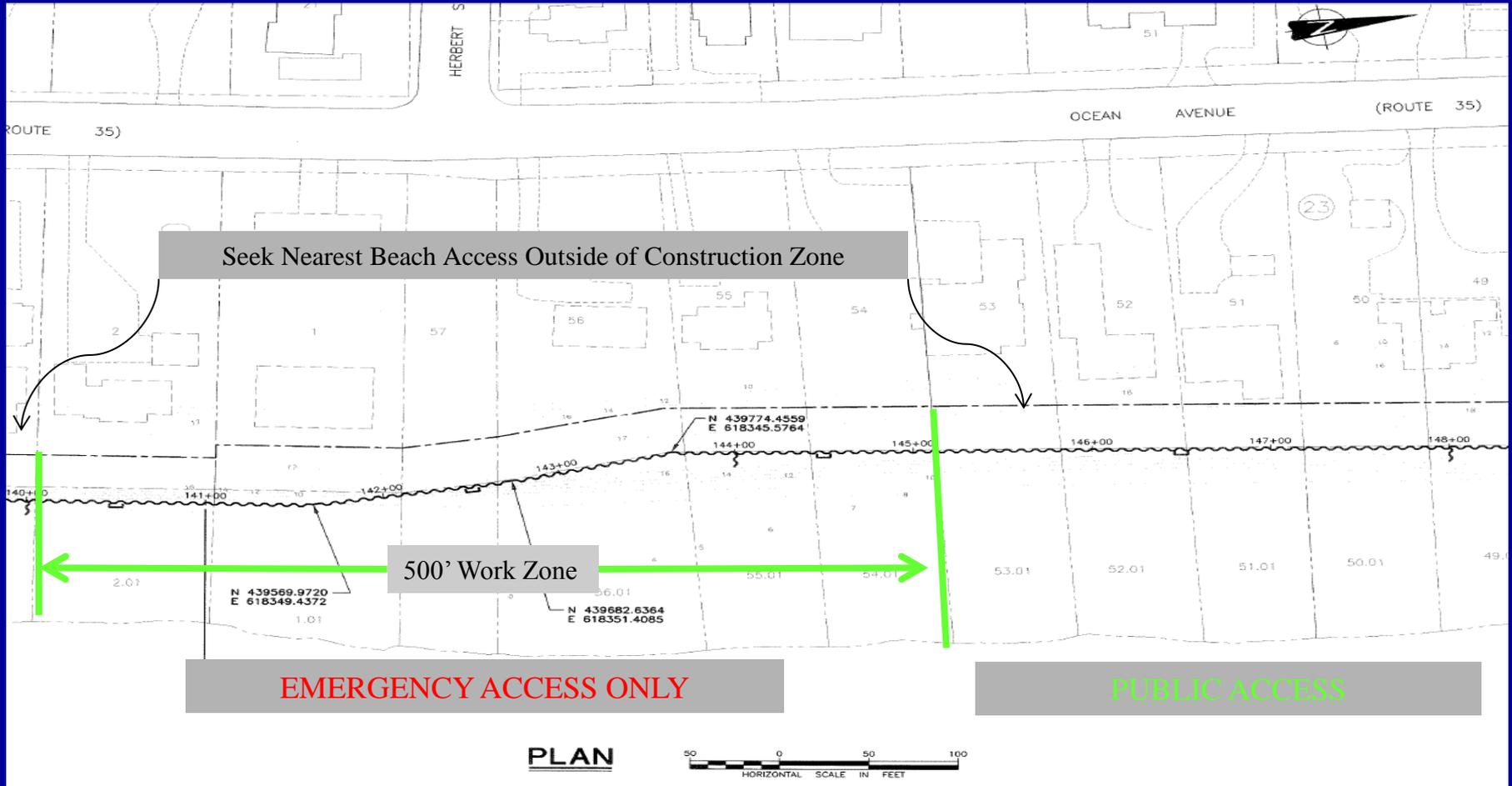


Rt. 35 Sheet Pile Dune Restoration Construction Process Overview





Rt. 35 Sheet Pile Dune Restoration Beach Access During Construction



New Jersey Department of Environmental Protection *Shore Protection Program*



www.nj.gov/dep/shoreprotection



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