

Prime Hook National Wildlife Refuge Restoration Project (FWS)

WEDA Eastern Chapter
Annual Meeting

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US Army Corps of Engineers
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Presentation Overview

- Site Background
- Changes to the Refuge over Time
- Resulting Conditions
- Design Solution
- Current Status
- Future Conditions



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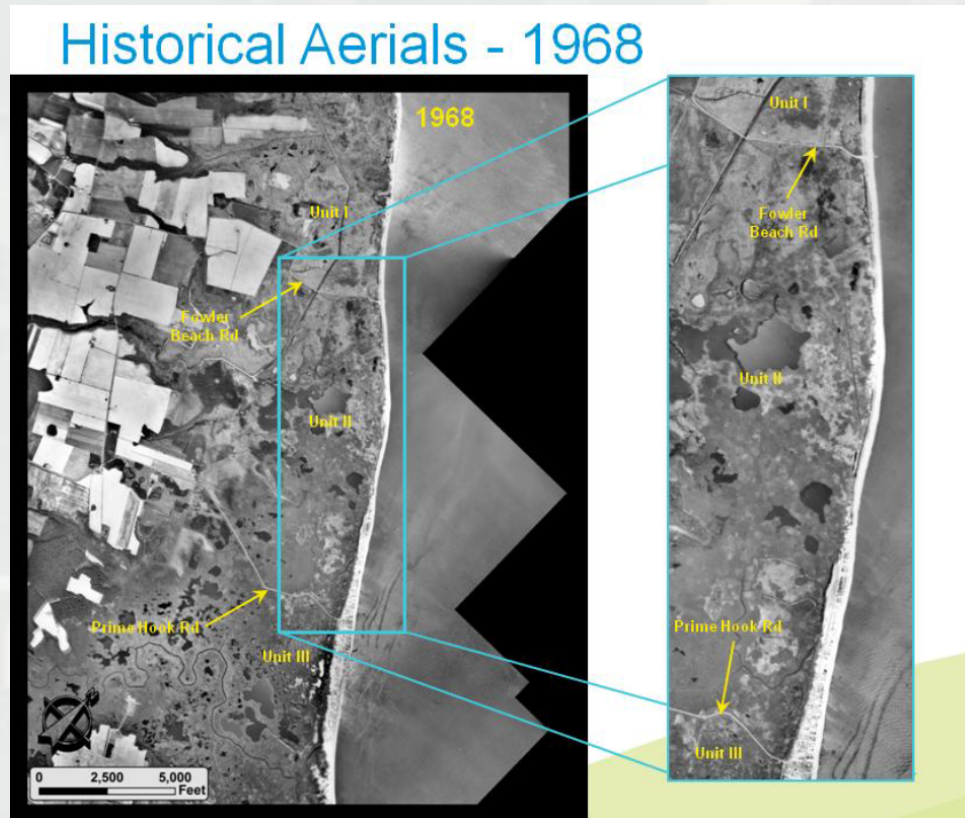
Site Background

- Covering 10,144 acres, established 1963
- Historical Migratory Bird Stopover Site
- Designated a Western Hemisphere Shorebird Reserve Network site (1986), a RAMSAR Wetland of International Significance Site (1999), and an American Bird Conservancy-Important Bird Area (2000)



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Changes to the Refuge over Time

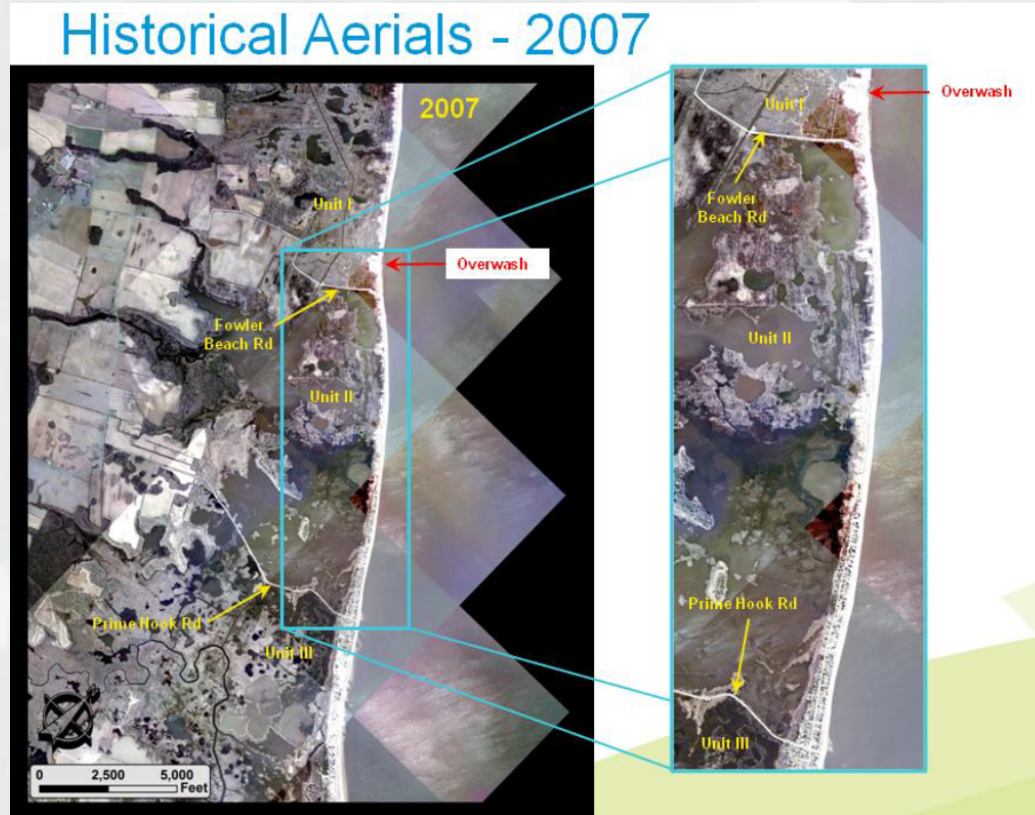


Historical aerial photo in the breach vicinity



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Changes to the Refuge over Time

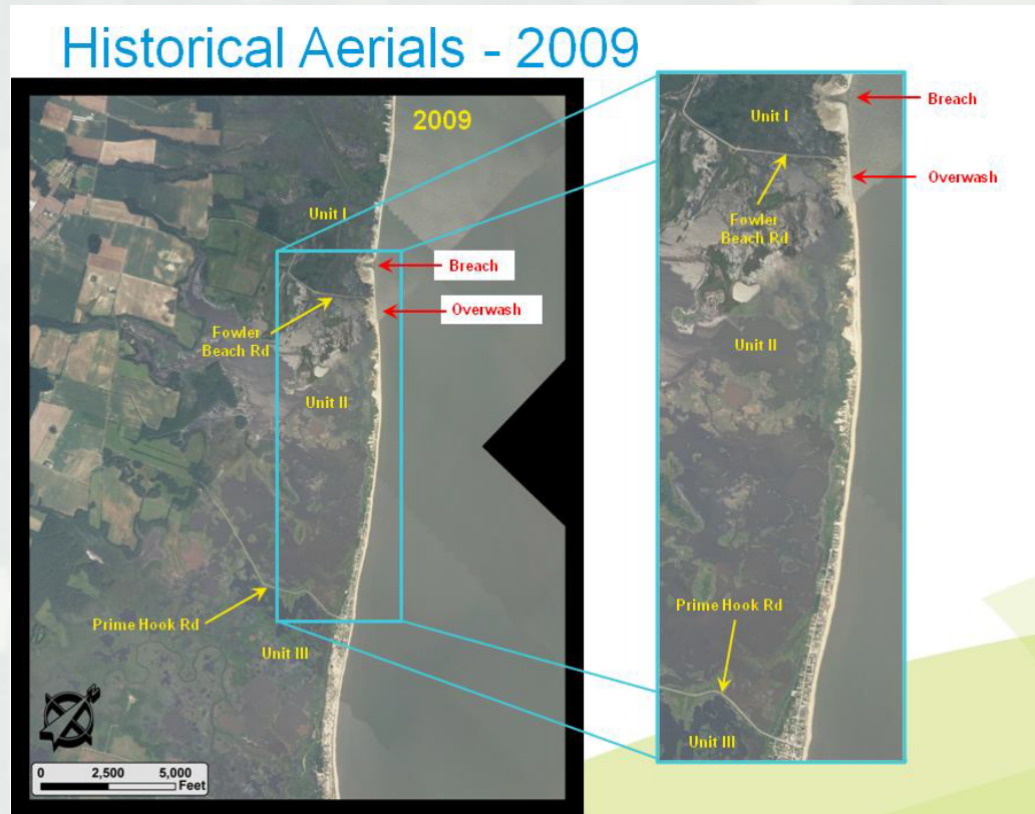


Historical aerial photo in the breach vicinity



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Changes to the Refuge over Time

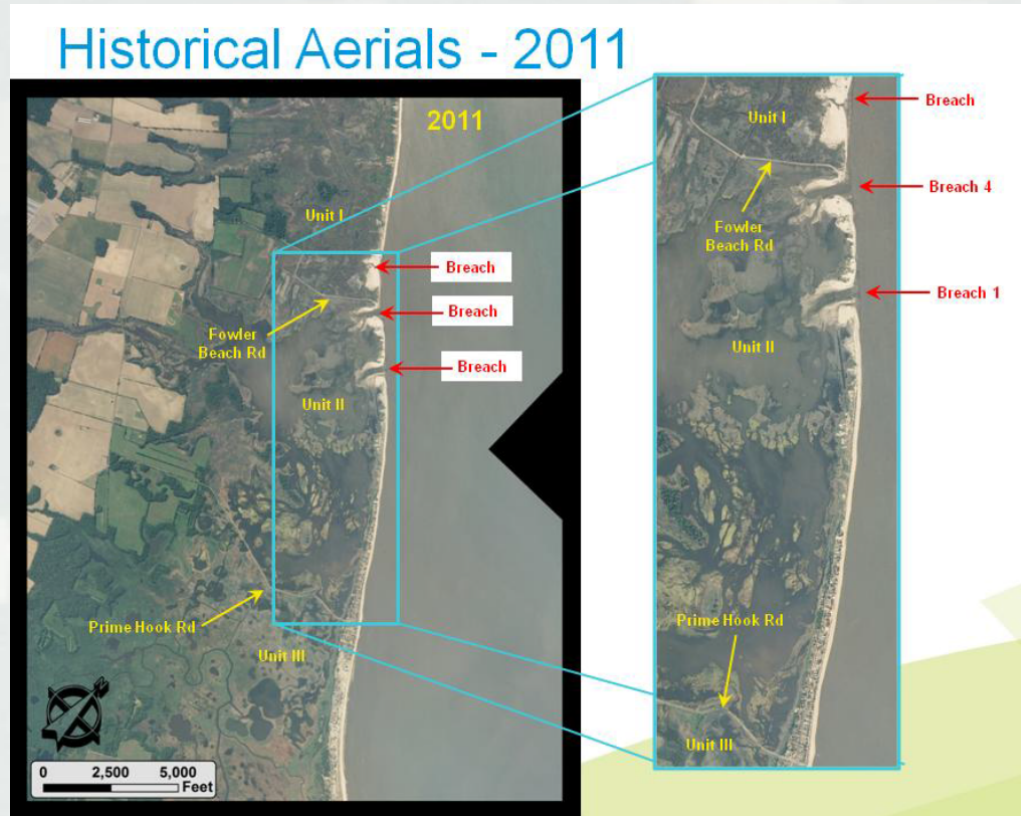


Historical aerial photo in the breach vicinity



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Changes to the Refuge over Time: Hurricane Irene



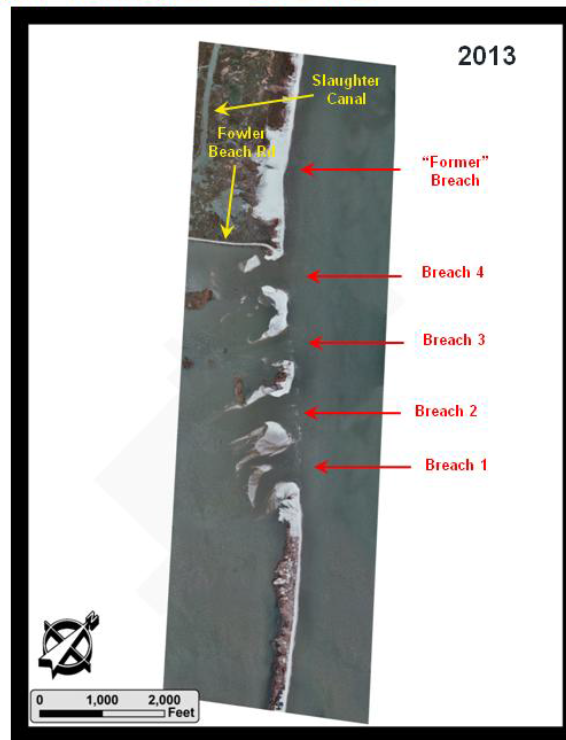
Historical aerial photo in the breach vicinity



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Changes to the Refuge over Time: Hurricane Sandy

Historical Aerials - 2013



Historical aerial photo in the breach vicinity



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Resulting Conditions

- Saltwater intrusion into existing freshwater marsh
- Vegetation die off, reduced stabilization of sediments and increased oxidation of freshwater organics resulted in overall organic loss from the system
- Dramatic reduction in marsh habitat



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Design Solution

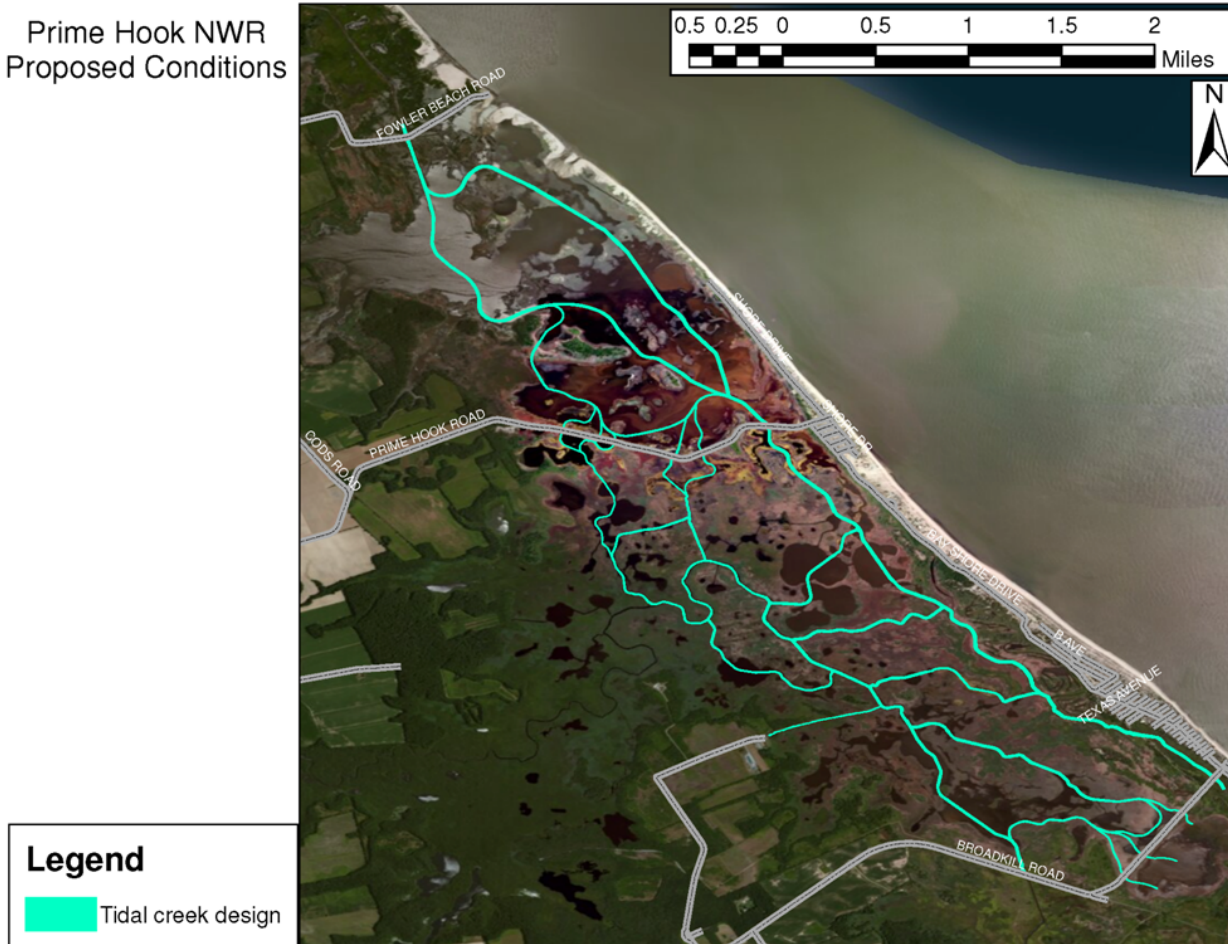
- Marsh Restoration
 - ▶ Creation of tidal channels
 - ▶ Restoration of beach and dune system



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Planned Fix: Design

Prime Hook NWR
Proposed Conditions

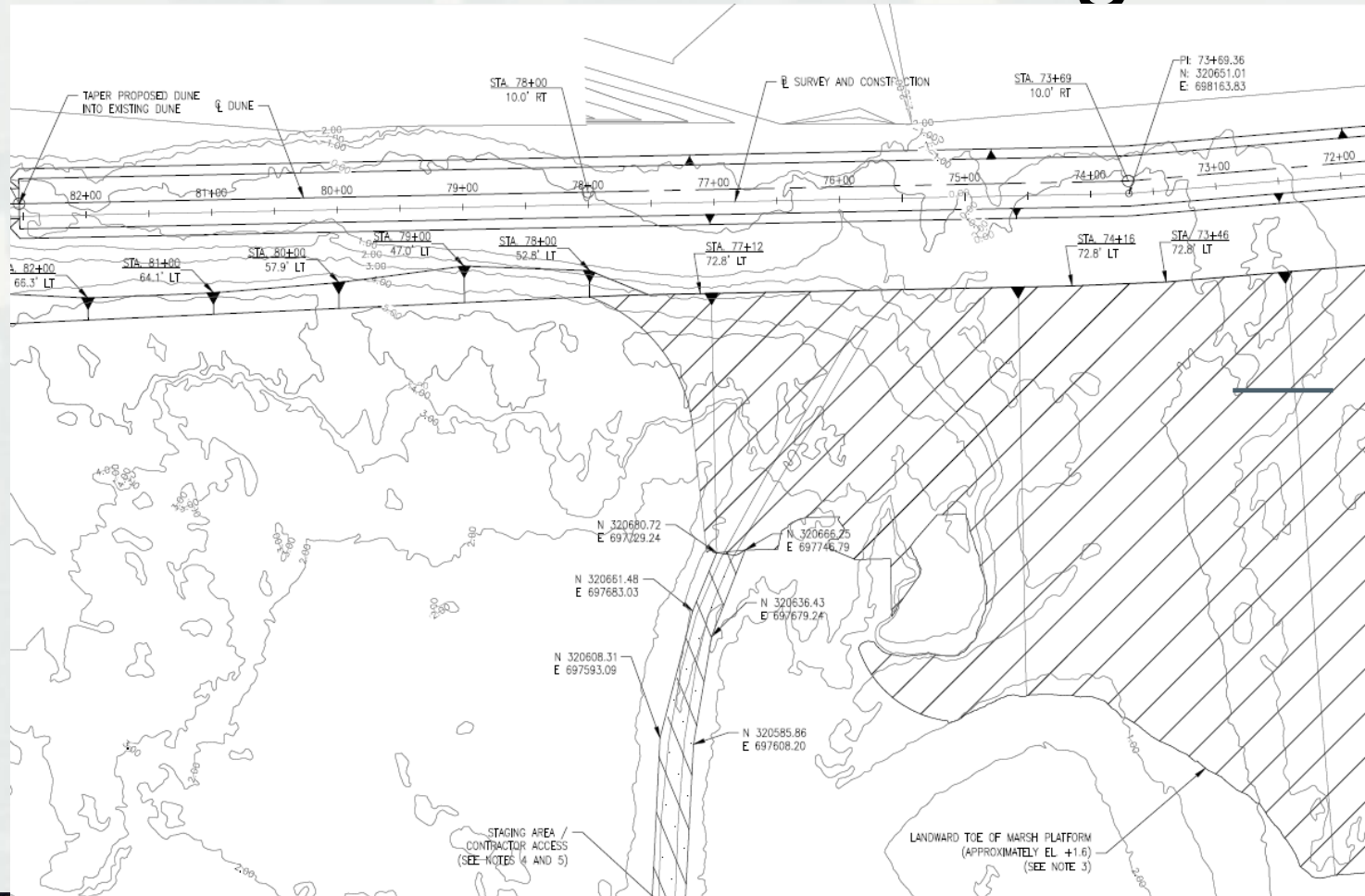


Proposed Tidal Creeks



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Planned Fix: Design

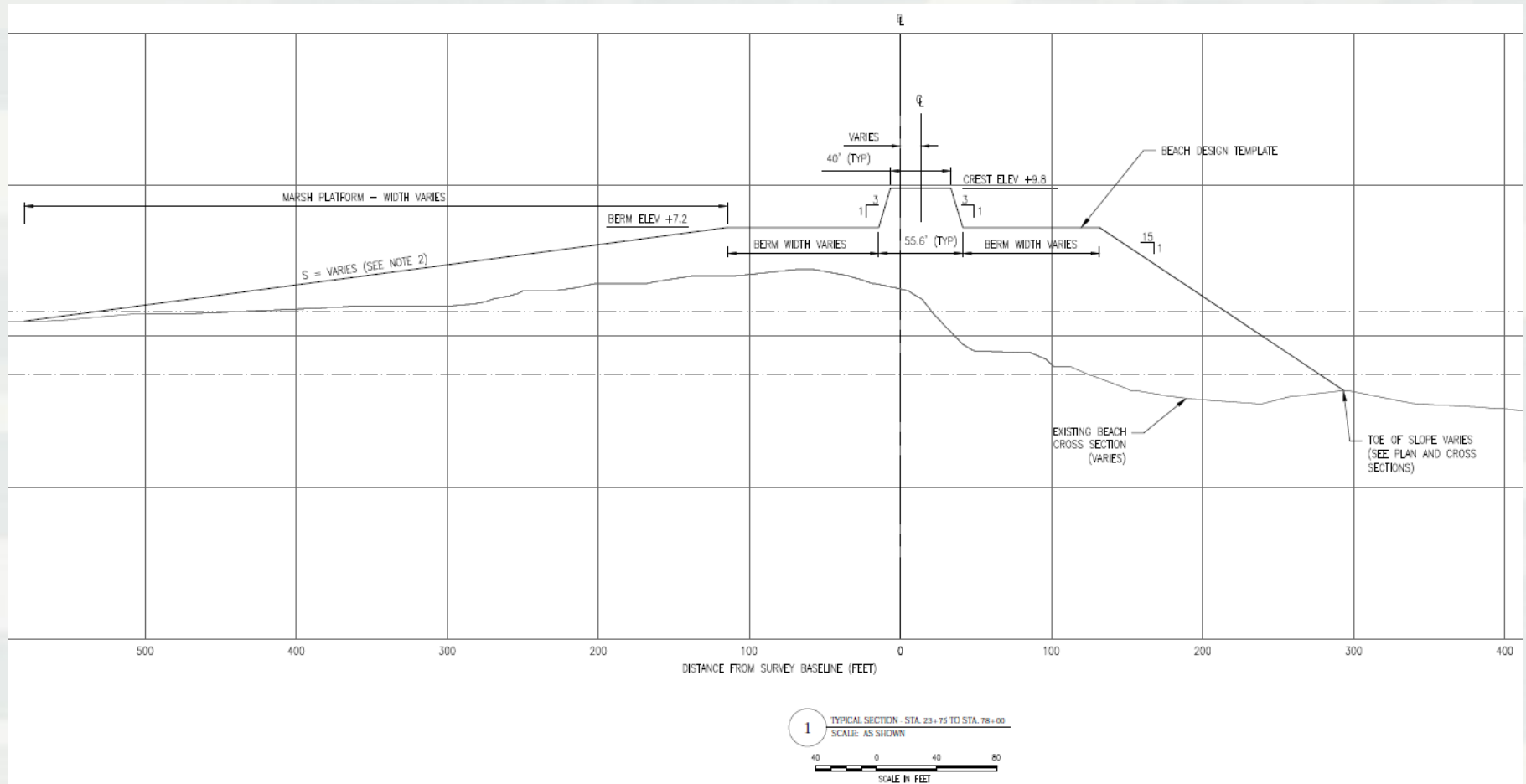


Platform, Berm and Dune System



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Planned Fix: Design



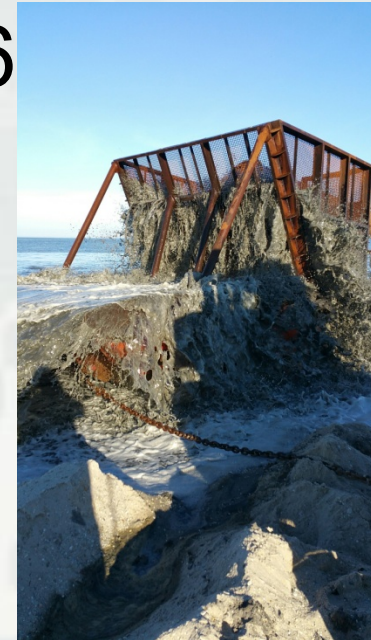
Platform, Berm and Dune System



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Current Status

- Mobilization and all Preparatory work completed
- Dredging started Wed., 21 Oct and scheduled to end in Mar 2016



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Future Goals

- “Realistic” Design life of 10-years for Dune and Berm
- Sustainable Saltwater Marsh System



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Q & A



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