

# FLAGLER COUNTY COASTAL STORM RISK MANAGEMENT (CSRSM) PROJECT

U.S. ARMY

POSTER DEPICTS INITIAL NOURISHMENT ONLY | COORDINATION OF A NON-FEDERAL COMPONENT WITH THE FEDERAL PROJECT MAY NOT BE INDICATIVE OF FUTURE NOURISHMENTS



## PROJECT OVERVIEW

The Flagler County, Florida Coastal Storm Risk Management (CSRSM) project is a federally-authorized 50-year project designed to provide sustainable coastal storm risk management for property; infrastructure such as evacuation route SR A1A; environmental habitat; and provide for recreation opportunities.

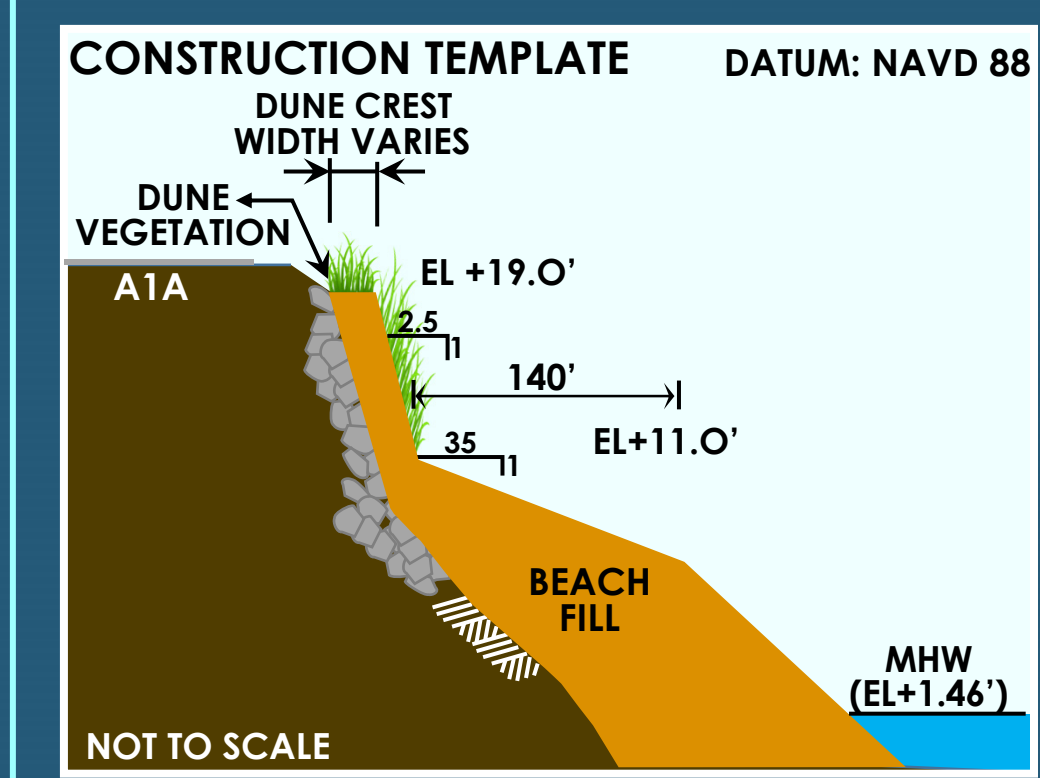
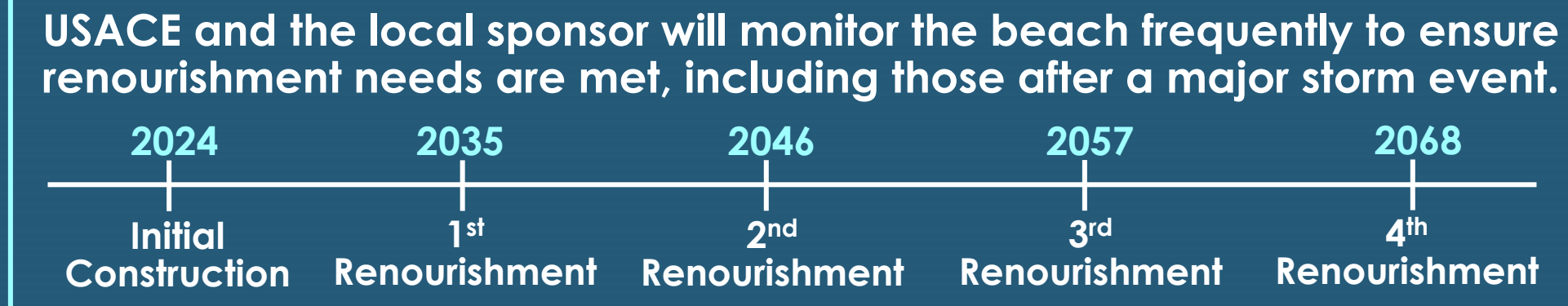


Once constructed, the project will provide a holistic, environmentally-friendly defense against future storms, beach erosion, and sea level rise. Anticipated to significantly reduce potential storm impacts than without a project, the project fosters a more resilient coastal environment and community, and in the event of a storm, a faster and less costly post-storm recovery. In addition, after initial construction, the project becomes eligible for emergency beach nourishment following significant storm events.

## PROJECT CONSTRUCTION

- Federal Participation: 50-year project life (after initial construction)
- Initial Sand Volume: ~ 1,310,000 cubic yards
- Borrow Source: ~11.75 miles offshore
- Renourishment Interval: ~ 11 years
- Estimated Construction Duration: 9 months (June 2024 – March 2025)

## ESTIMATED RENOURISHMENT SCHEDULE

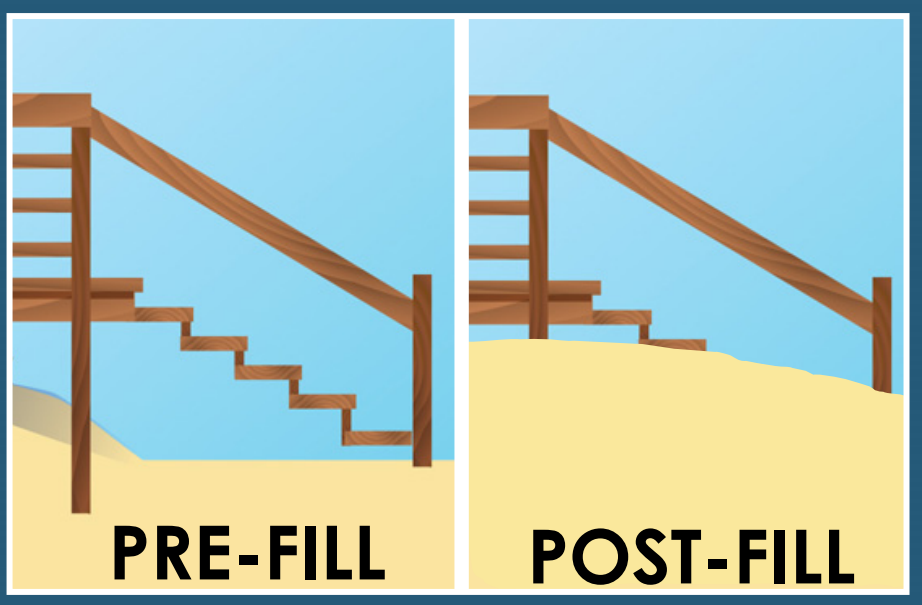


**TYPICAL CONSTRUCTION PROFILE**  
The project includes construction and extension of the dune (pre-Hurricane Matthew):

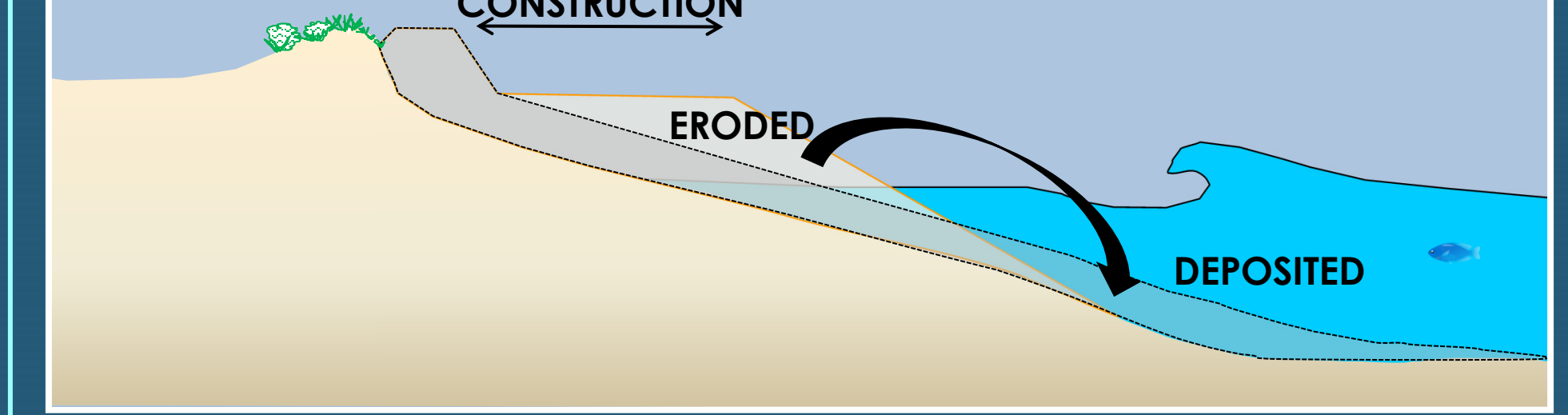
- Existing elevation of dune: ~19 feet NAVD88.
- Construction of the dune will result in additional "towel space" – a wider beach berm after initial construction.
- Native beach slopes/grades will be maintained.

## PUBLIC AND PRIVATE DUNE WALKOVERS

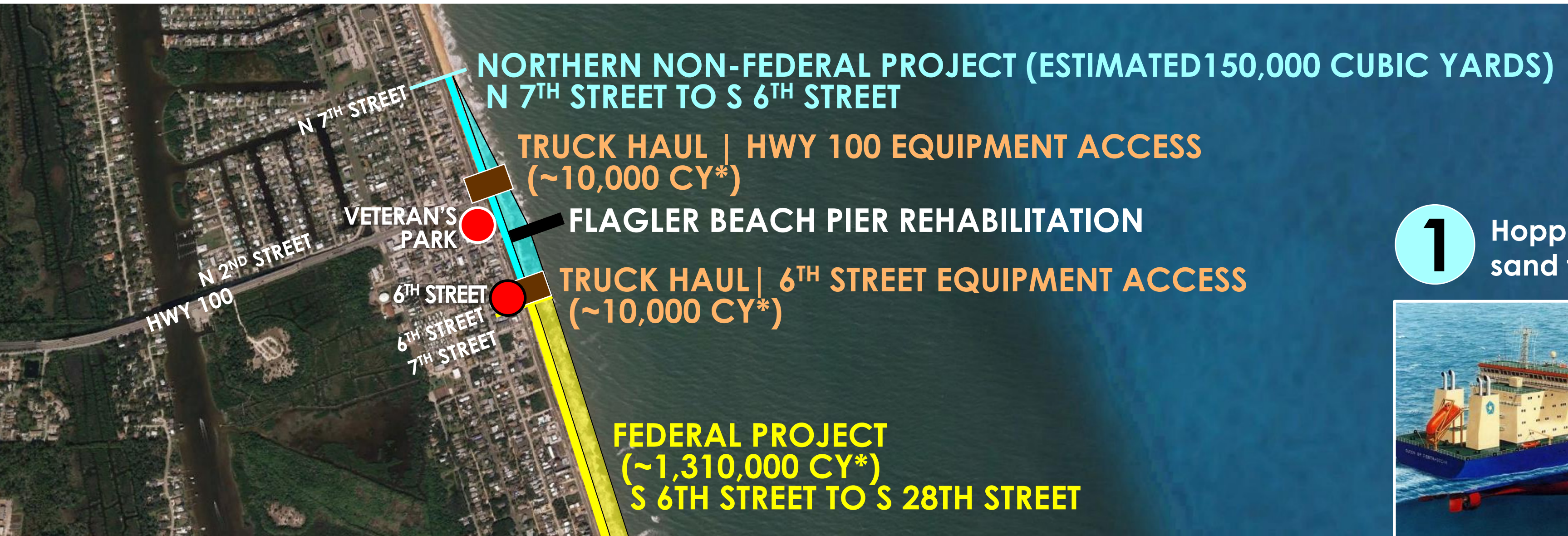
- The contractor will place sand on, around and underneath each walkover to maintain a continuous protective dune.
- Sand will naturally equilibrate and expose walkover steps over time.



## BEACH FILL AND EQUILIBRATION



Waves and currents will reshape the constructed beach fill over time to a more natural "equilibrated" shape by transporting sand from the dry beach and depositing it offshore within the active beach profile to help dissipate wave energy and provide the intended coastal storm risk management benefits. This process begins immediately after construction, with full adjustment of the beach shape typically requiring many months or multiple significant wave events. The initial equilibration process may appear to dramatically decrease the width of the dry beach, but the beach is operating as designed. Once the beach has reached an equilibrium condition, the beach is expected to recede at a slower rate.



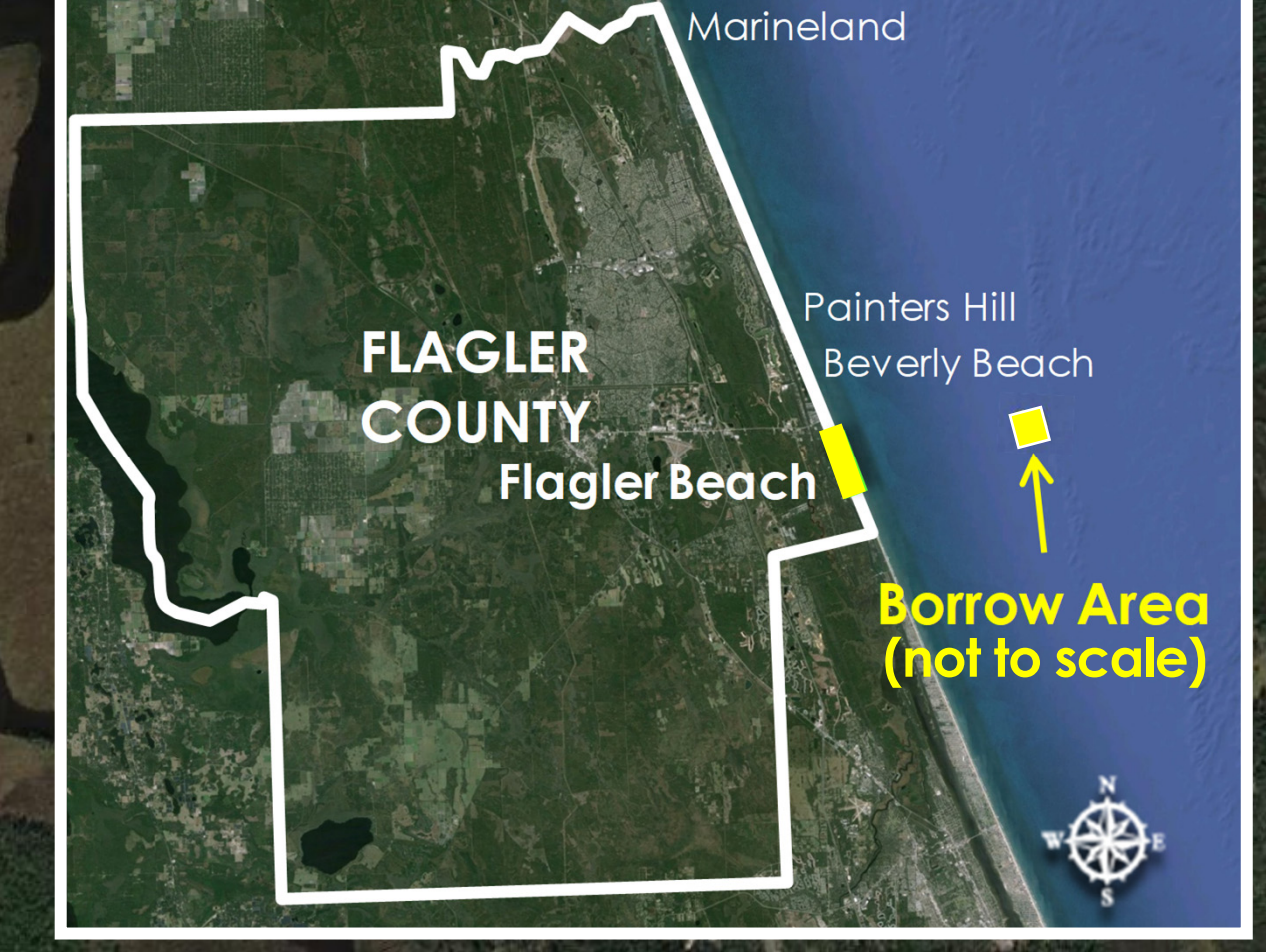
## LEGEND (NOT TO SCALE)

- CONSTRUCTION ACCESS
- CONSTRUCTION STAGING AREAS
- NON-FEDERAL PROJECT
- FEDERAL PROJECT
- FDOT PROJECT
- PIER REHABILITATION
- \* ESTIMATED CUBIC YARDS (CY)

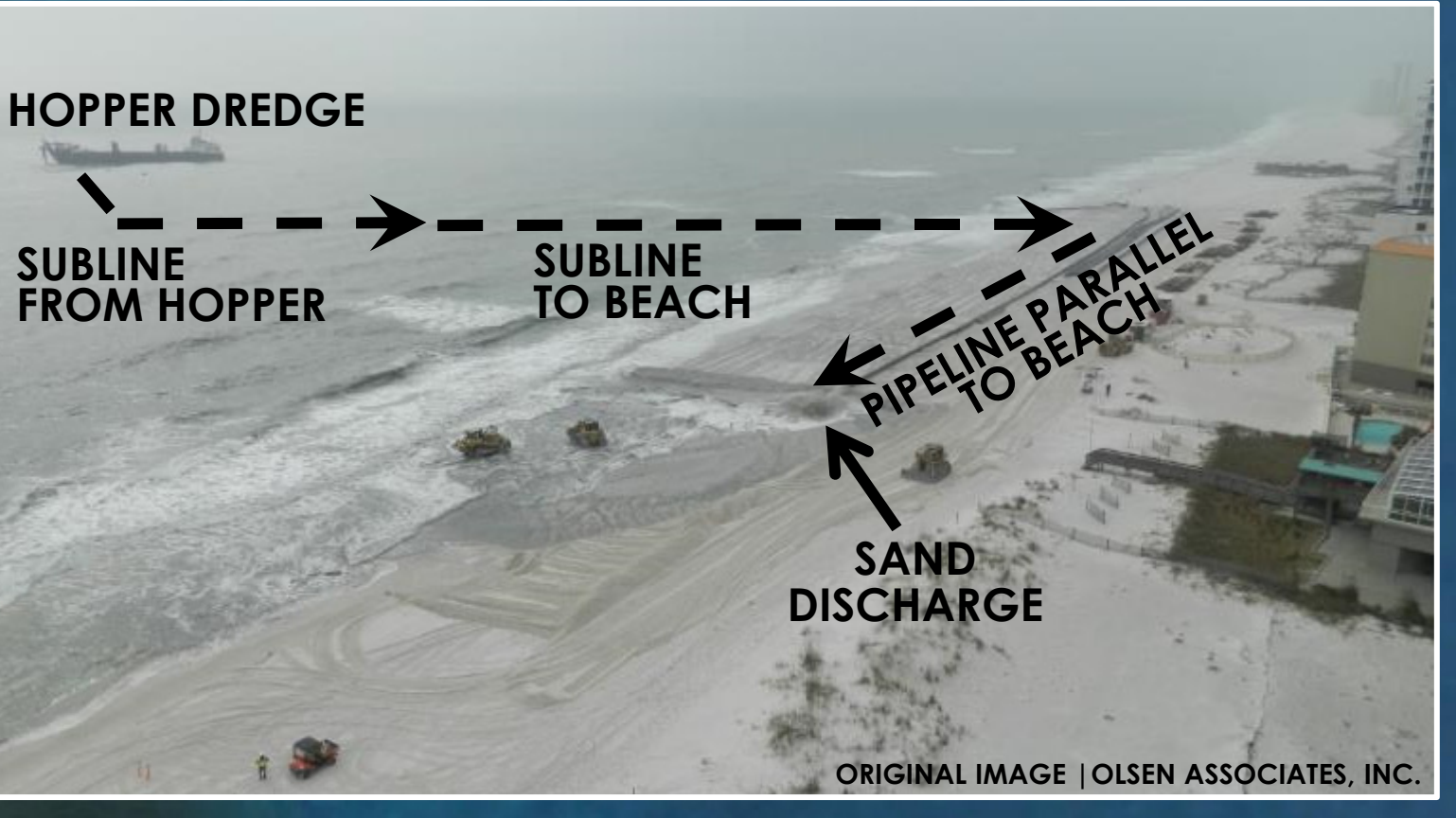
## PUBLIC ACCESS DURING CONSTRUCTION

- For safety purposes, beach access is prohibited in the active construction zone.
- Outside the active construction zone, sand ramps for public access will be constructed over pipelines every 200-300 feet.

## BORROW AREA 3A



## 2 Hopper dredge pumps sand to beach via a pipeline



## 3 Bulldozers distribute the sand to achieve the project design.

- Bulldozers operate on a 24-hour basis
- For safety purposes, back-up alarms are activated to run continuously during construction
- Safety personnel will be onsite to direct the general public away from potential hazards

## ENVIRONMENTAL AND CULTURAL CONSIDERATIONS

### ENVIRONMENTAL AND CULTURAL BENEFITS

- Reduced damages to Scenic and Historic Coastal Byway
- Dune extension to be vegetated with native plants to stabilize the dune and promote wildlife usage:
  - ▶ Nesting habitat
    - Threatened Species: Loggerhead Turtles
    - Endangered Species: Leatherback Turtles, Green Turtles, Piping Plover
  - ▶ Shelter (protection from predators)
  - ▶ Food source (for various wildlife)
  - ▶ Biodiversity (increased plant species variety)
  - ▶ If any dune vegetation is disturbed during construction, it will be replaced with native vegetation



### PLANTING RATIOS



- Biodiversity (increased plant species)
- ~ 3 acres of continuous nesting habitat (sea turtles and shore birds) over 50 years compared to zero habitat in the future without project construction



## ENVIRONMENTAL MONITORING DURING CONSTRUCTION

- Turbidity is monitored at the placement location.
- Equipment operating in the project area is routinely monitored.
- Standard manatee and marine animal monitoring and protective measures are employed during project construction.
- Beach filling will occur after construction and any escarpments will be removed.
- The project will be monitored and surveyed after construction to check sand volume and the condition of the beach.

Google Earth

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