

After Months of Team Effort Hammock Dunes is Ready to Partially Restore Our 2.3 Miles of Dune

- Taylor LiDAR Survey Complete for Sand Loss
- Taylor Engineering Dune Design Complete
- Lehigh Sand Permitted and Contracted
- Florida DEP Permit Obtained for Phase 1
- Dune Access Agreement with County
- Halifax Paving Signed as Contractor

Project Team formed one week after Matthew

- David Eckert (Project Manager)
- Mike Gill (Legal and FEMA filing)
- Marge Rooyakkers (Government Interface)
- Bruce Aiello (Financing & Budgeting)
- David Yoder (Engineering and Walkovers)

Despite Continued Headwinds, HDOA will be the First Major post-Matthew Project in Flagler County

- Beach Scraping was not allowed by FL-DEP
- Dredging Option undoable after Permitted Underwater Sand Source unavailable and no Dredge Contractor is found
- Geo-tube Option very difficult to implement without dredging and FL-DEP Permit takes more time
- 16 Cubic Yards per linear foot of sand lost, but FEMA emergency funding only available up to 6 Cubic Yards per linear foot for Phase 1
- Trucking requires permitted upland sources and none were available until we assisted several sandpits to collect and report sand testing to FL-DEP
- FL-DEP Permit Application rejected use of Coquina Shell as part of Fill, making the job of restoration more difficult



LEHIGH SAND SOURCE where Hammock Dunes has secured rights to 80,000 cubic yards

Diagram 1 Varn

Property Line

Temporary Ramp area;
16 ft elevation at south,
beach elevation at north,
20 ft wide top and 3 to 1
slope on ocean side of
ramp; maintenance daily
to repair weak areas;
sand to be used as dune
fill material at end of
restoration projects

Movable Closure Sign &
Barracade; Open during
work, Closed until park
re-opened; 8 x 30 ft

Temporary truck inspection
and photo scaffolding; used
when trucks enter record load

Truck crossing area; fill added between
13 ft elevation pavement and 16 ft
elevation of dune top; vegetation and
profile to be restored after projects

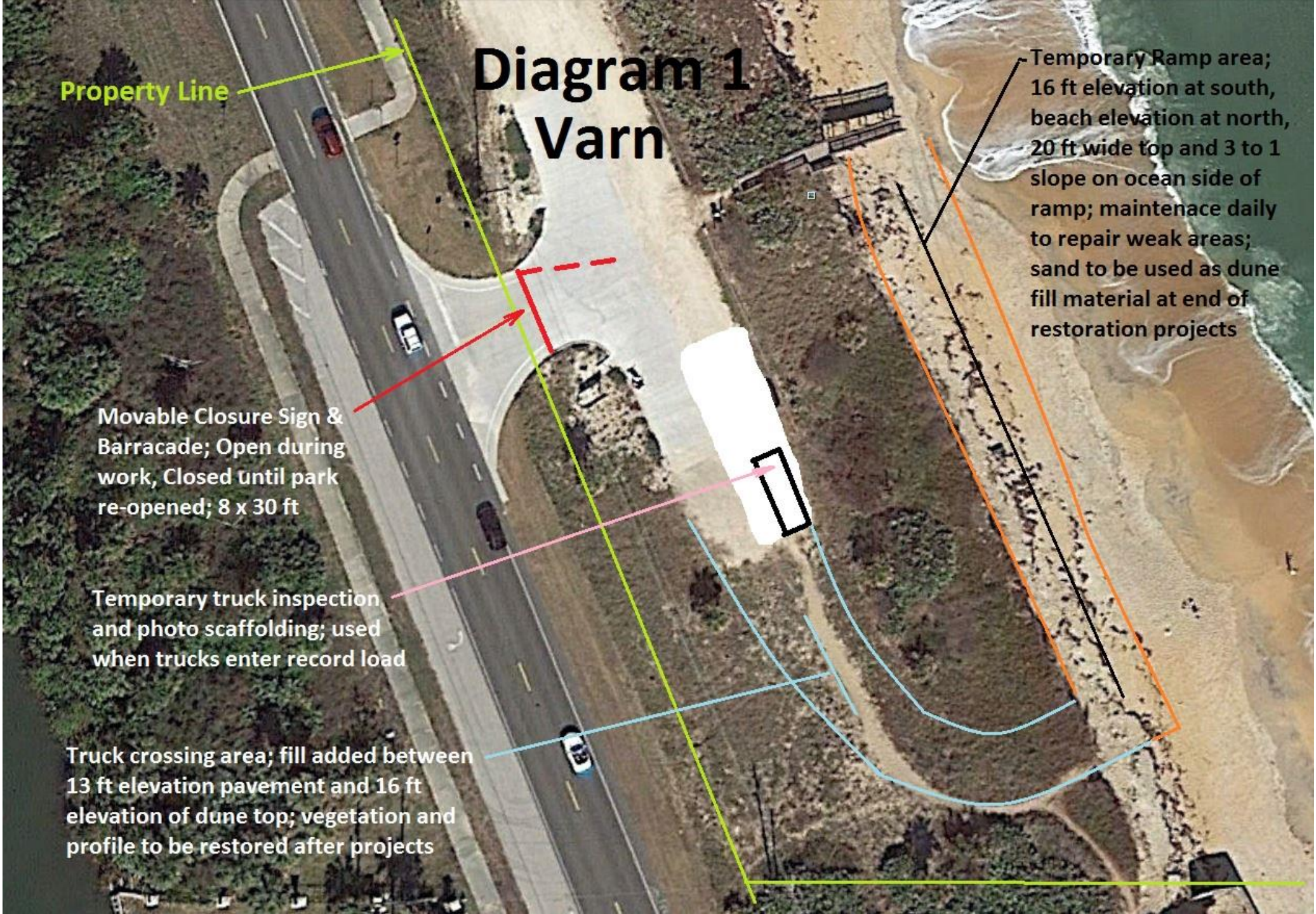
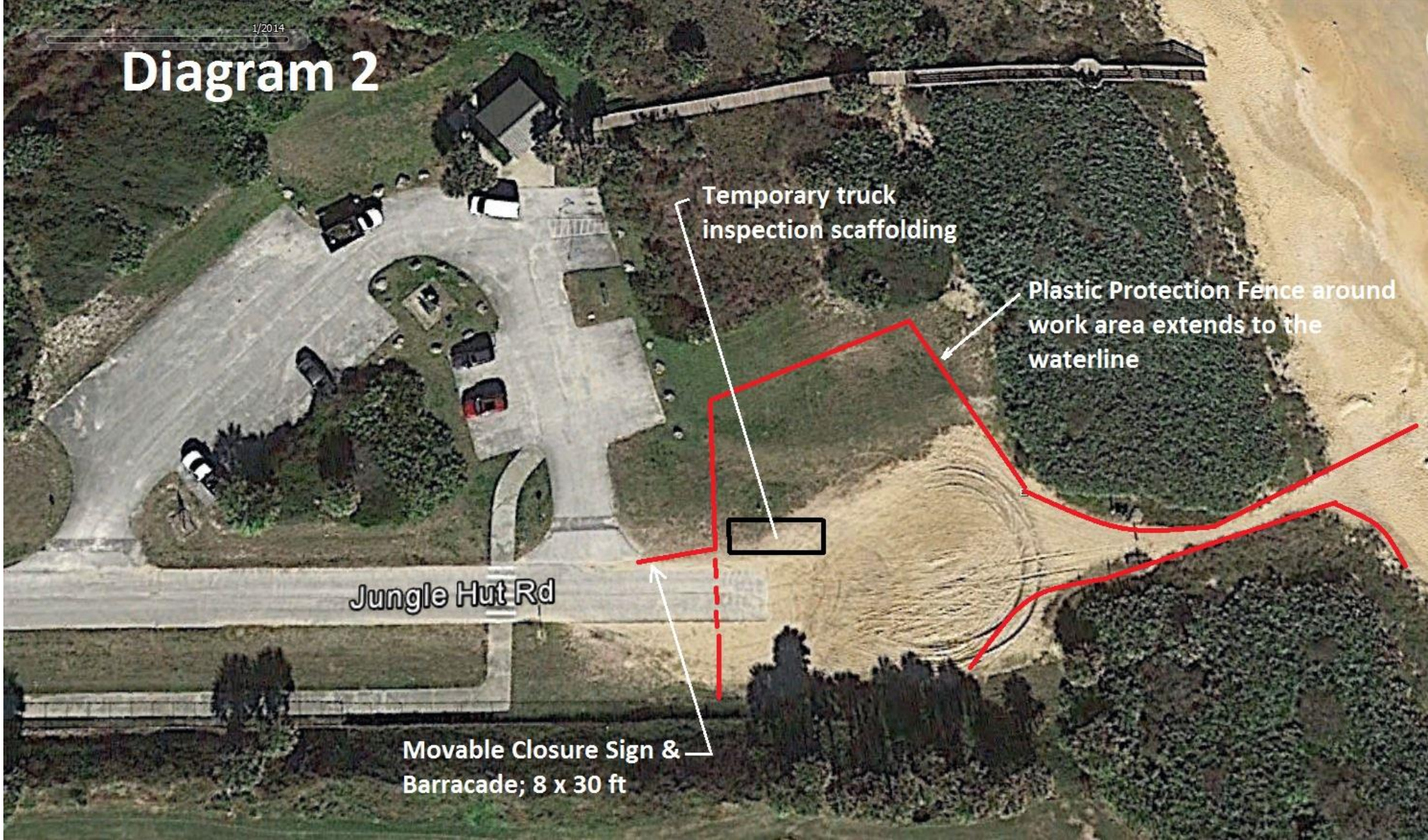


Diagram 2



Temporary truck inspection scaffolding

Plastic Protection Fence around work area extends to the waterline

Jungle Hut Rd

Movable Closure Sign & Barricade; 8 x 30 ft



Truck Test Failed with this Empty Vehicle Sinking more than One Foot in Sand



Up to 15 Crawler Dumpers are being secured by Halifax to Transport Sand

Legend

— Poststorm MHW

— Prestorm MHW

- - - CCCL

▲ Range Monuments

+Erosion/-Accretion (ft)

5 - 20

3 - 5

2 - 3

1 - 2

-1 - 1

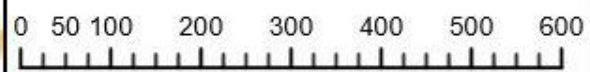
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-3 - -2

-5 - -3

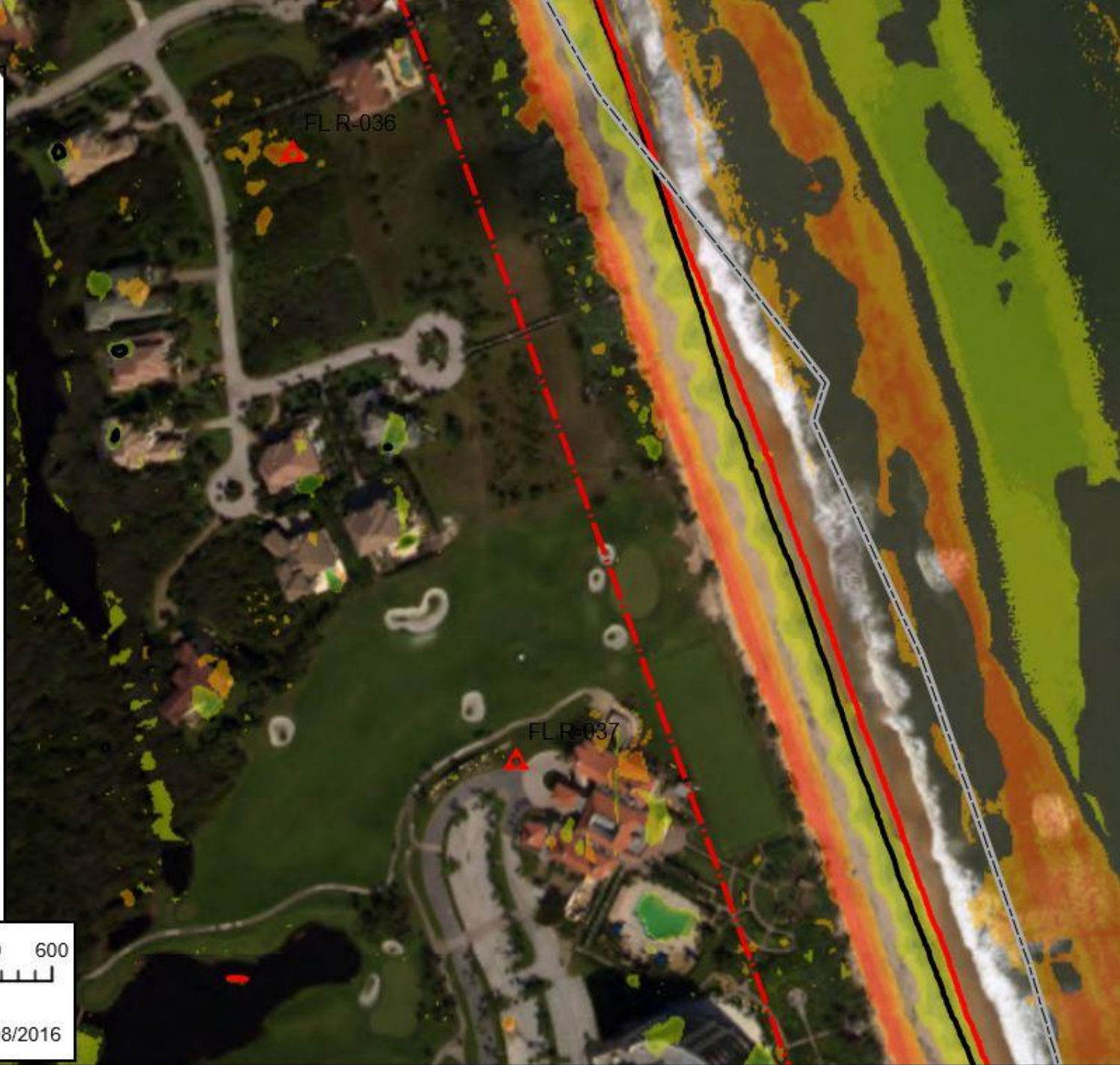
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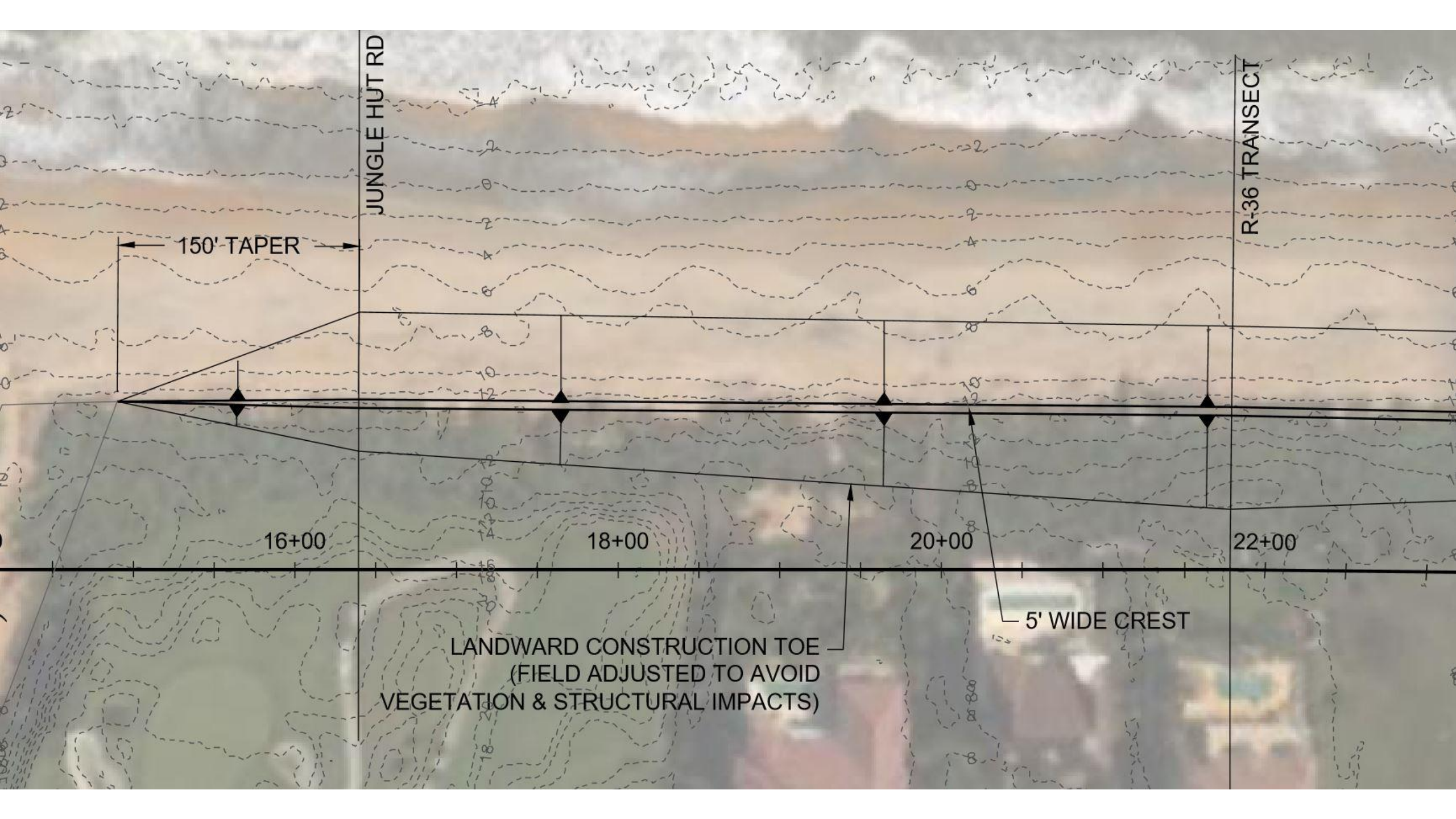
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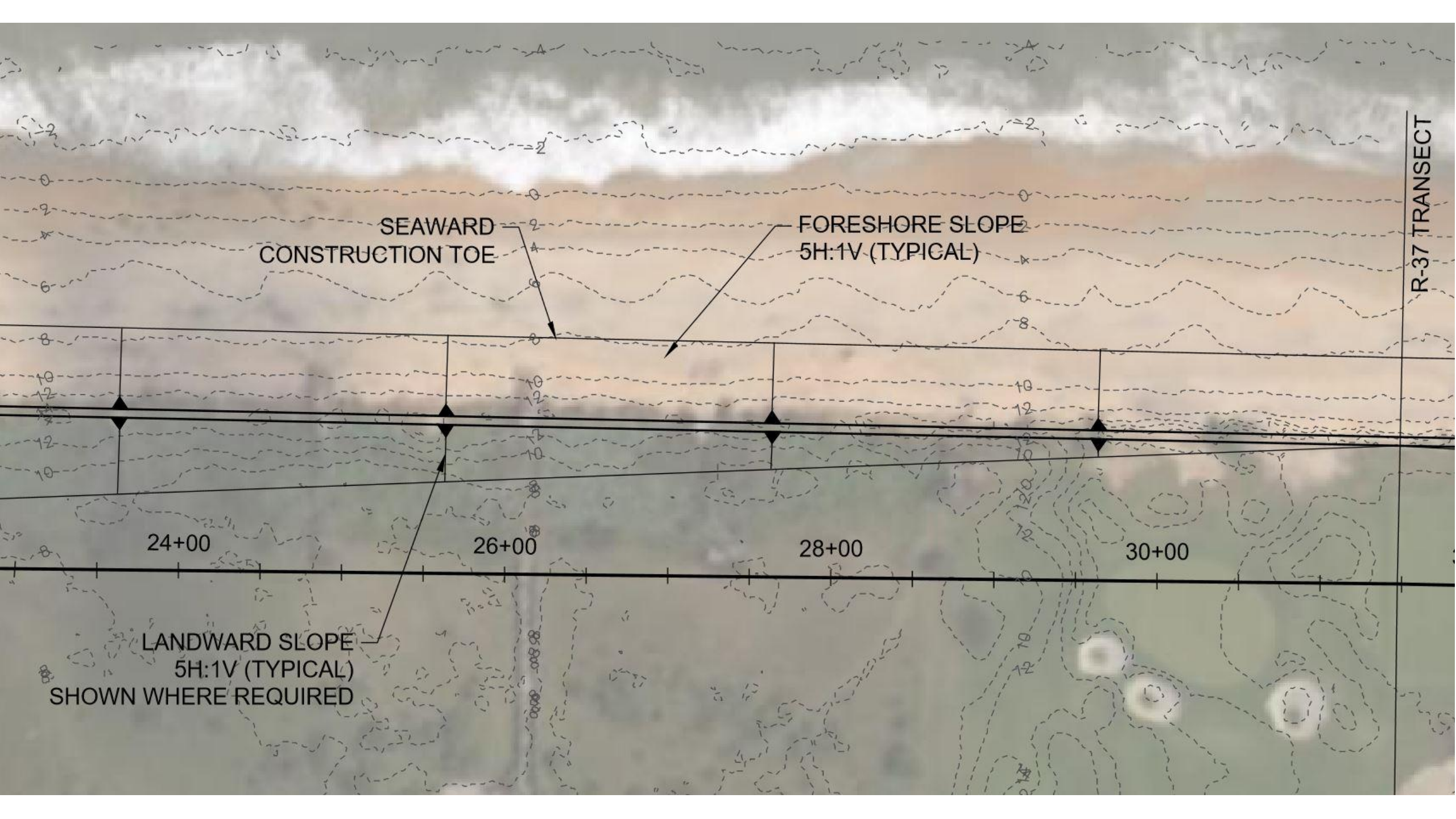


One Inch = 300 Feet

IMAGE SOURCE: NOAA/NOS/NGS 10/08/2016







SEAWARD
CONSTRUCTION TOE

FORESHORE SLOPE
5H:1V (TYPICAL)

R-37 TRANSECT

24+00

26+00

28+00

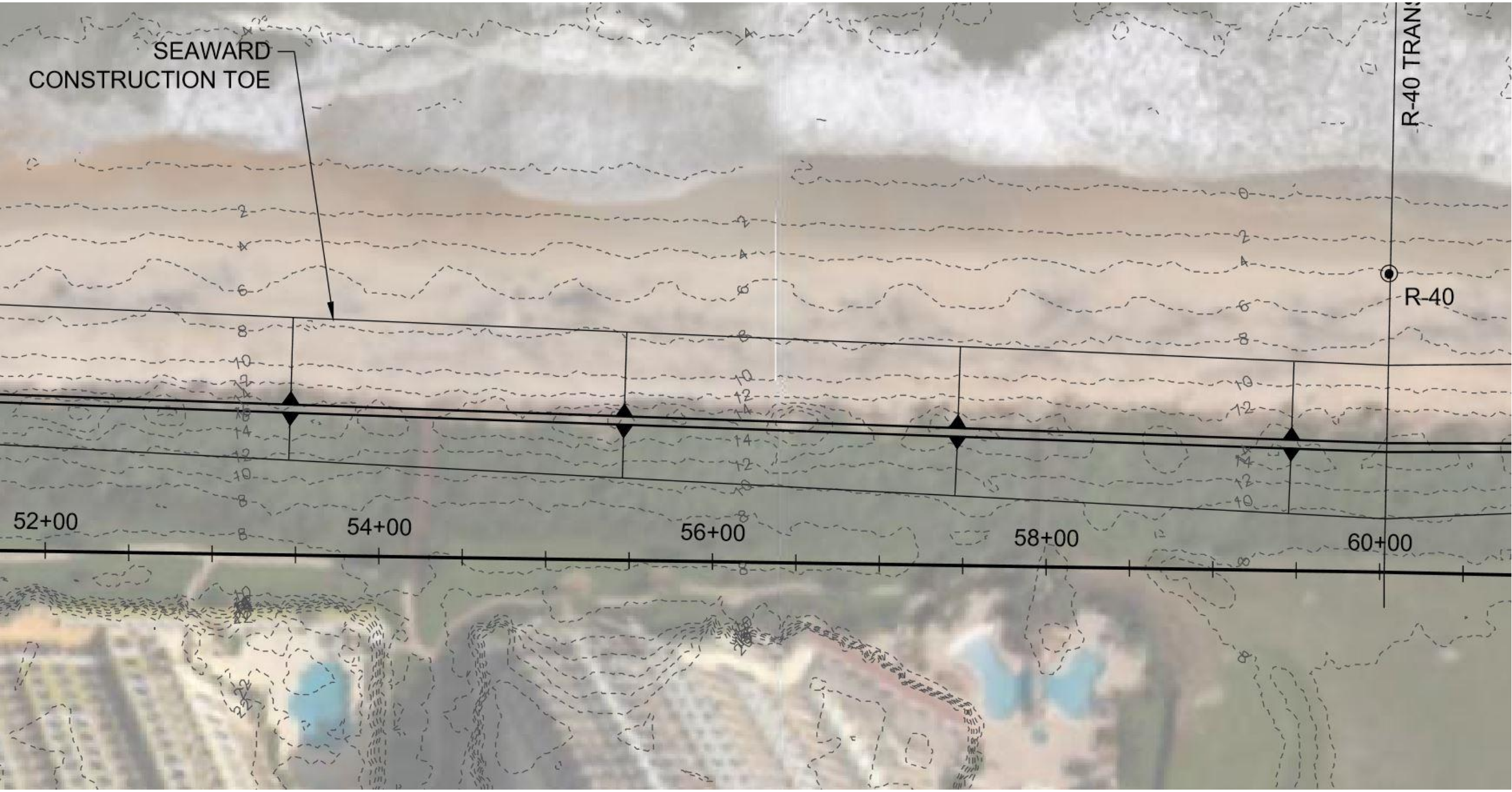
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LANDWARD SLOPE
5H:1V (TYPICAL)
SHOWN WHERE REQUIRED

SEAWARD
CONSTRUCTION TOE

R-40 TRANI

R-40



52+00

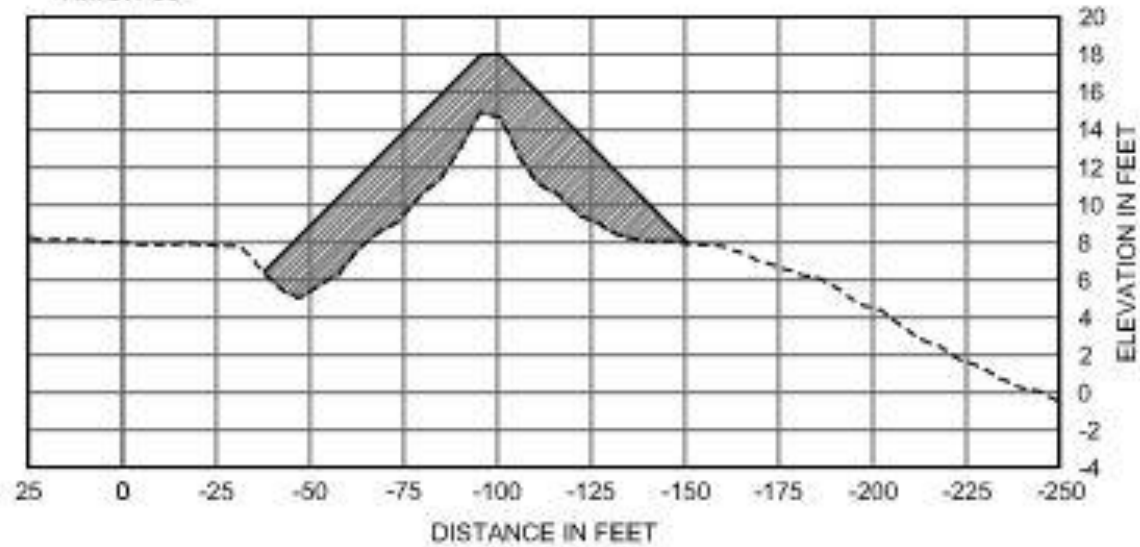
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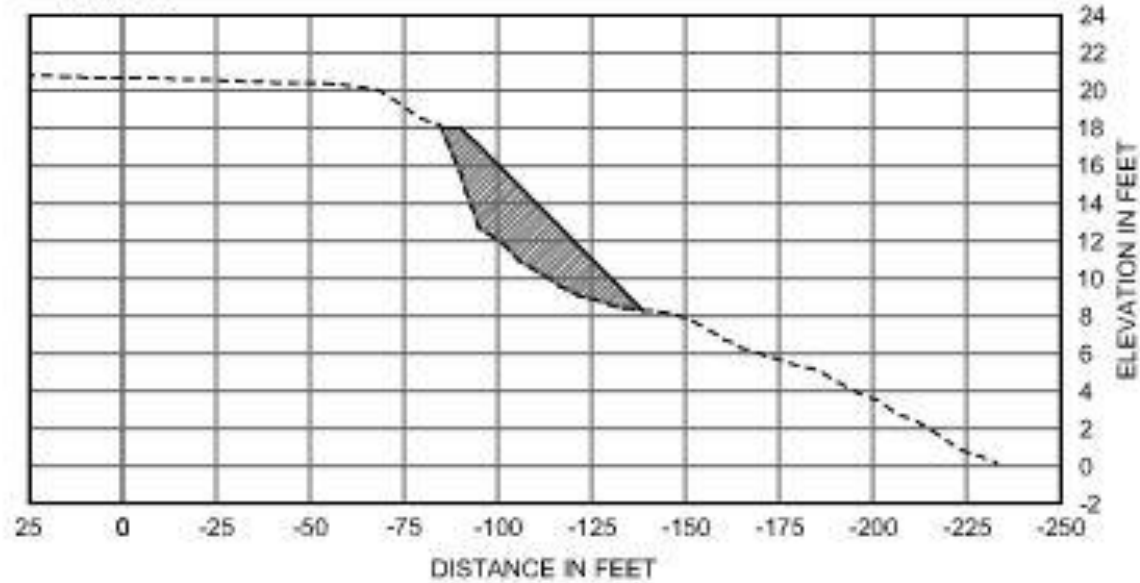
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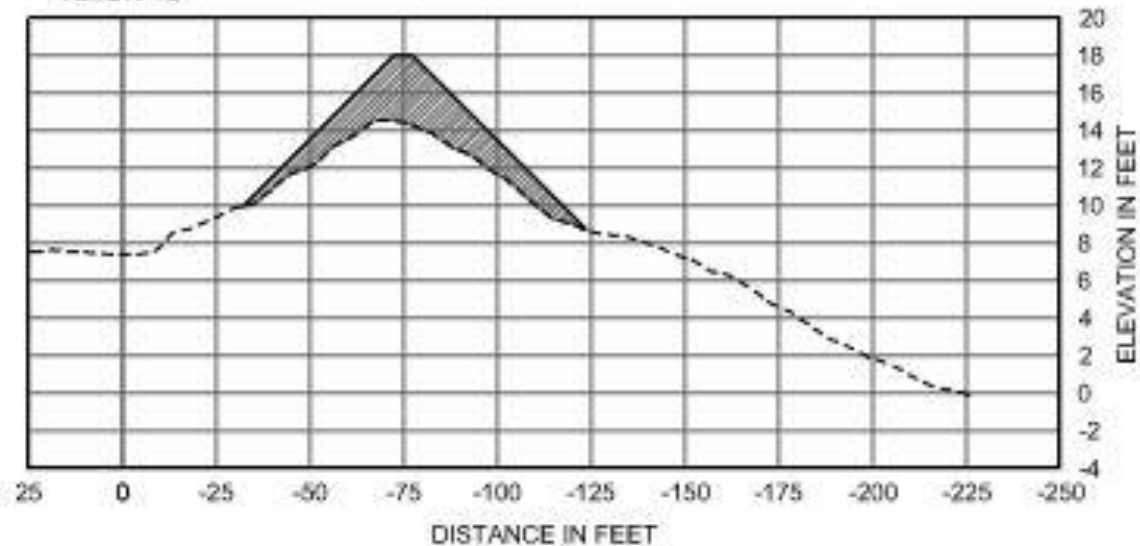
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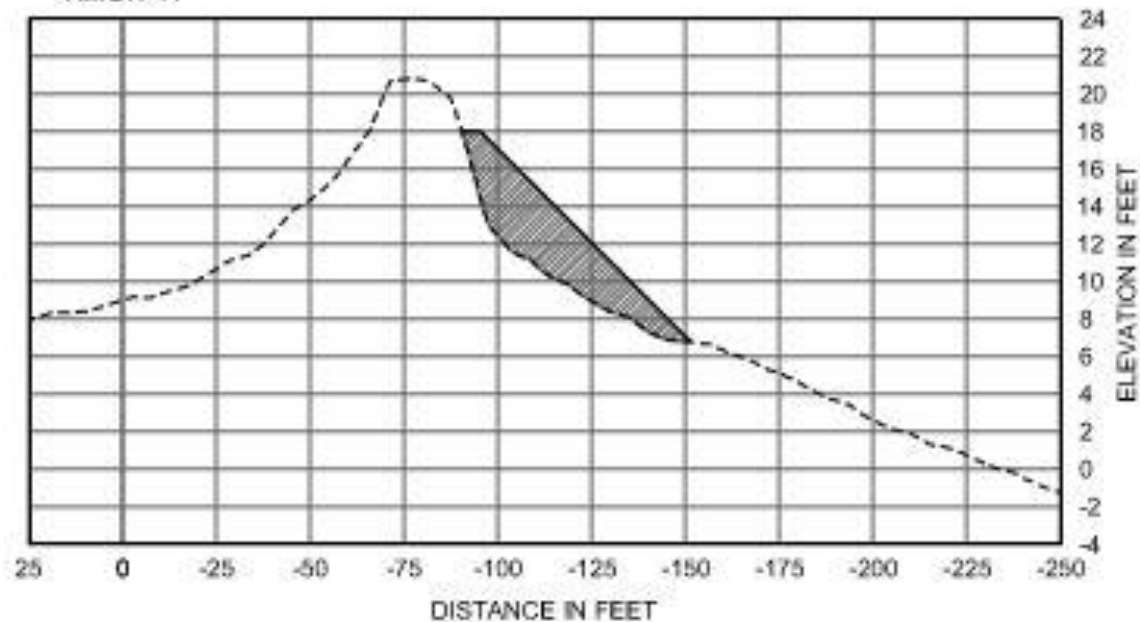
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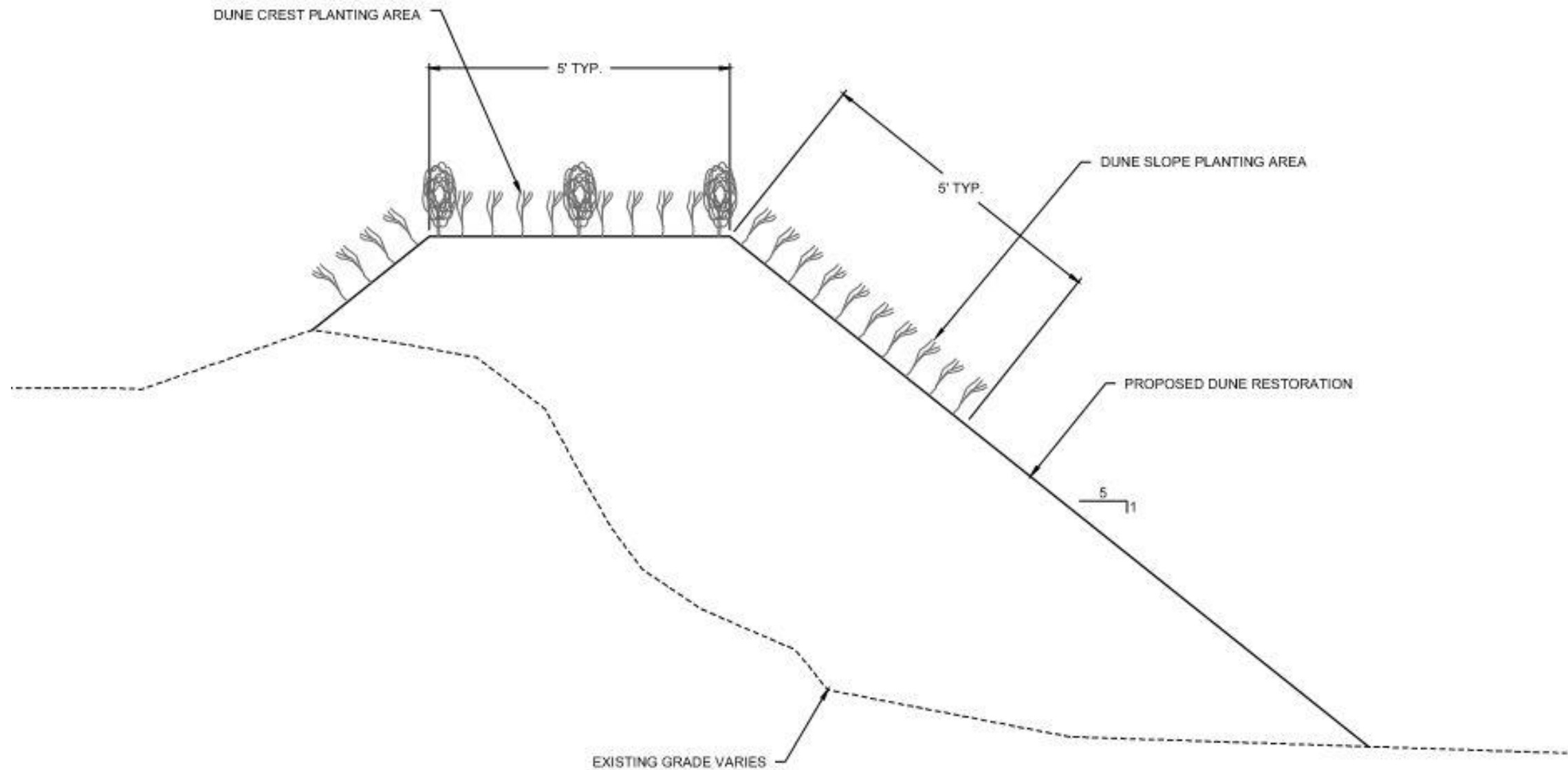


RMON-40



RMON-41





TYPICAL PLANTING SECTION

NOT TO SCALE

HDOA Plans to restore 73,000 to 80,000 cubic yards of sand

- There will be 4,056 Road Trucks Dumping at Jungle Hut and Varn Park
- There will be 8,112+ Crawler Carrier trips up and down the beach
- 8,112 Crawler trips divided by 57 workdays is 144 Crawler trips per day
- Starting from either Varn or Jungle Hut, the average roundtrip will be 1.3 miles for each Crawler
- Workday from 7:00 am to Sunset is 11 hours during the 57 day work period; 10 hours work time

WE STILL HAVE TIME TO COMPLETE THE 73,000 CUBIC YARD JOB

Funding Assistance

- Our Dunes and Beaches are Public and the Dune is man-constructed; They are “Facilities” in FEMA terminology
- Jungle Hut, 16th Street and Varn Parks were built and funded as part of the DRI for the full Hammock Project in 1984
- We have Met all criteria for FEMA filing (Individual and Public Assistance)
- We have Retained Legal help for FEMA appeals, if necessary
- Attended meetings with State Senators Jack Latvala & Travis Hudson for State Funding
- Supported County for full-length project funded: Locally, State, and Federal
- Helped Secure Support of Governor Scott for Announced State Assistance