

Town of Longboat Key, FL 2016 Phased Beach Nourishment Project

9 February 2017

FSBPA National Conference on
Beach Preservation Technology
Stuart, FL

Dr. Albert E. Browder, P.E., D.CE. - olsen associates, inc.
Mr. Juan Florensa - Town of Longboat Key, FL
Mrs. Krista J. Egan, E.I. - olsen associates, inc.

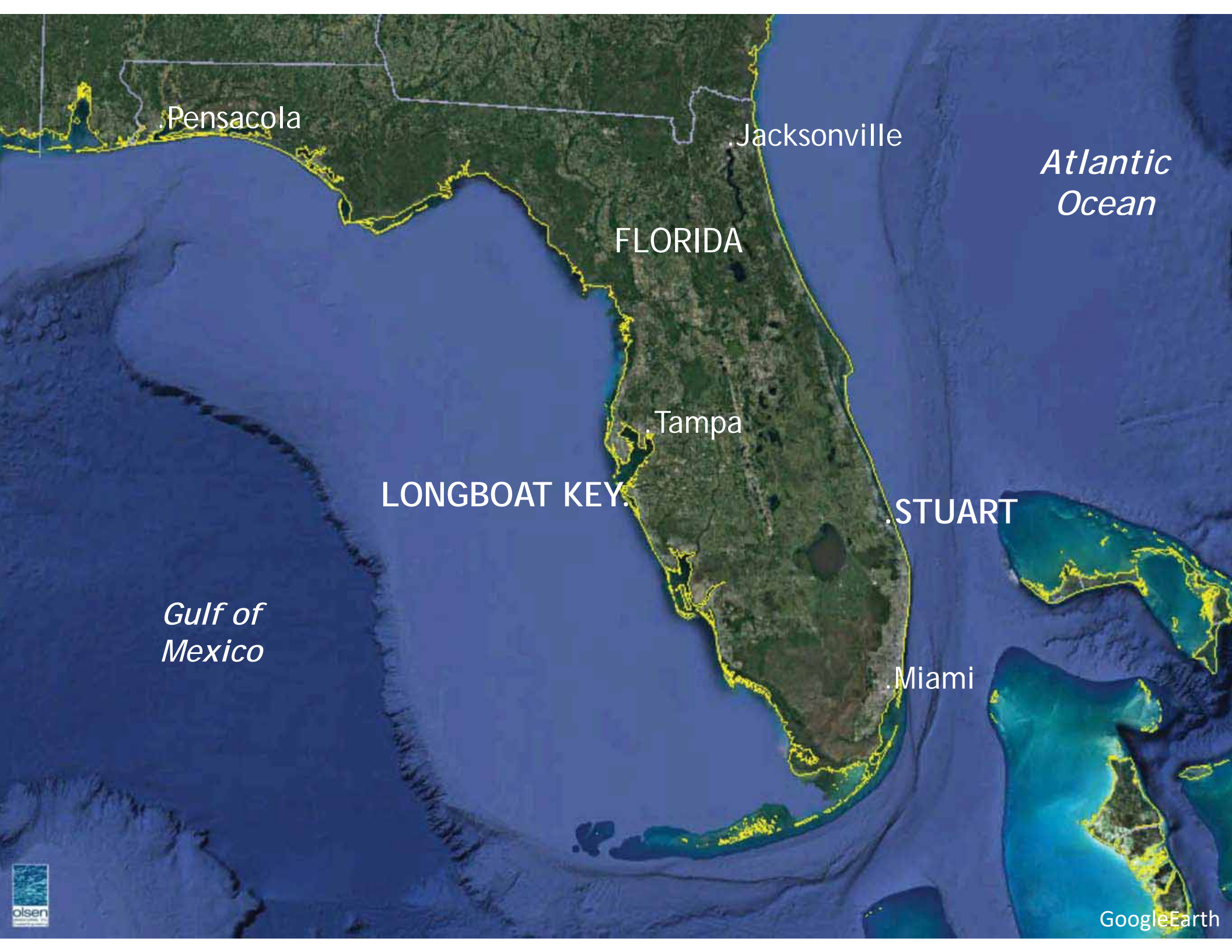


24 August 2016

Discussion Items

- 2016 Project Phases & Development
- Construction Details
- Timeline and Challenges
 - Permitting
 - Traffic
 - Turtles, turtles, turtles





Pensacola

Jacksonville

*Atlantic
Ocean*

FLORIDA

Tampa

LONGBOAT KEY.

STUART

*Gulf of
Mexico*

Miami





Tampa Bay

Anna Maria I.

Bradenton

LONGBOAT KEY

Sarasota

Gulf of Mexico

Lido Key



Project Phases

LONGBOAT PASS
DREDGING &
BEACH FILL

* permeable groins

Sarasota Bay

CENTRAL KEY
TRUCK HAUL

LONGBOAT KEY

* permeable groins

Sarasota Bay

Gulf of Mexico

NEW PASS
DREDGING &
BEACH FILL

SOUTH END
SUPPLEMENTAL TRUCK HAUL

GoogleEarth



Project Development

- Sand Sources
- Costs
 - Post-Debby Hopper Dredge Project
 - Offshore borrow areas
 - Project bidding in 2013 was unsuccessful
 - Sand from both inlets became available
 - Least costly sand of all options
 - Smaller, fixed quantities available
 - Central Key - long distances, small volumes
 - Inefficiencies for hopper dredge construction

Project Permitting

- 3 sets of FDEP & USACE permits
- Truck haul elements
 - Longboat Key Master Beach Nourishment Permits ①
 - Existing permits - modifications were required
- Channel dredging permits
 - New Pass - shared with City of Sarasota for Lido Key ②
 - Longboat Pass - shared with Manatee County for AMI ③

Permit Issues

- Access updates
- Red Knot listing
- Loggerhead sea turtle Critical Habitat designations
- SCHEDULE COMPRESSION!

Gulf of Mexico

LOGG-N-30

LOGG-T-FL-17

Sarasota Bay

LONGBOAT KEY

Sarasota Bay

Pre-project Conditions

South End: Feb 2016 (R-27)



Central Key: Sep 2015 (R-2)



South End: Apr 2016 (R-28/29)



North End/Gulfside: Aug 2016 (R-49/50)



olsen
associates, inc.
Coastal Engineering

Project Phases

LONGBOAT PASS
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CENTRAL KEY
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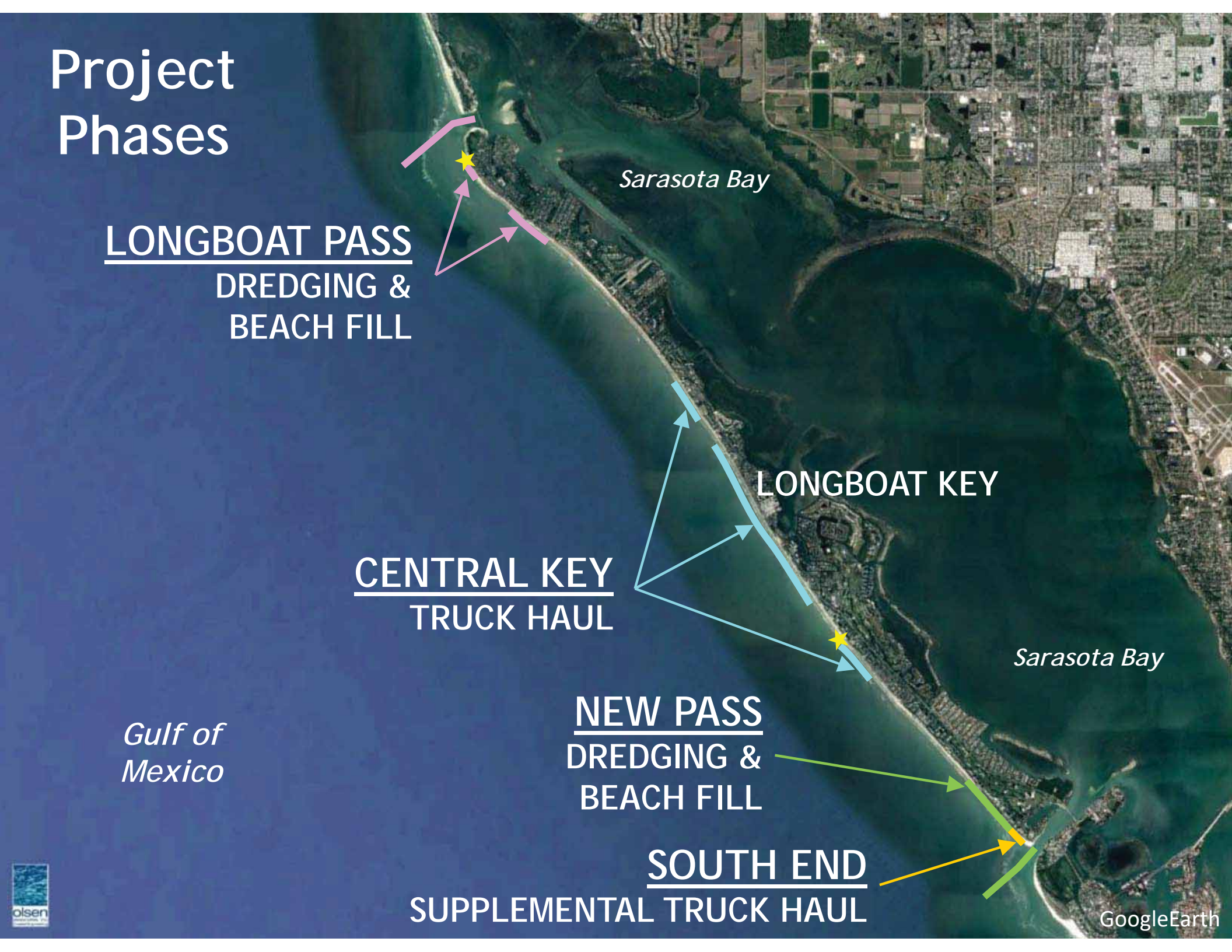
SOUTH END
SUPPLEMENTAL TRUCK HAUL

Sarasota Bay

LONGBOAT KEY

Sarasota Bay

Gulf of Mexico



Central Key Truck Haul



- Earth Tech Enterprises, Inc.
 - Contract Total: \$11M
 - Mobilization/Demob: \$393,000
 - \$34.05/ton (~\$51.07/cy)
- 307,503 tons
 - ~205,000 cubic yards
 - 2,500 ft - fill segment 1
 - 10,400 ft - fill segment 2
 - 2,100 ft - fill segment 3
 - 10 cy/ft up to 30 cy/ft
 - Average: ~15 cy/ft

Central Key Truck Haul

- 100 days
 - 13,768 trucks
 - ~200 trucks/day (324 max)
 - April 4 -July 13, 2016
- Sand: Immokalee, FL
 - Stewart Materials mine



South End Truck Haul



- Earth Tech Enterprises
 - Change Order Cost: \$1.8M
- 49,993 tons
 - ~33,300 cubic yards
 - 1,400 ft
 - 12 days
 - Sept 26 - Oct 7, 2016



Traffic & Access

- Designated haul route
- On-island Pre-Staging Area
 - 4 access/loading points
 - 16,018 trucks



Project Phases

LONGBOAT PASS
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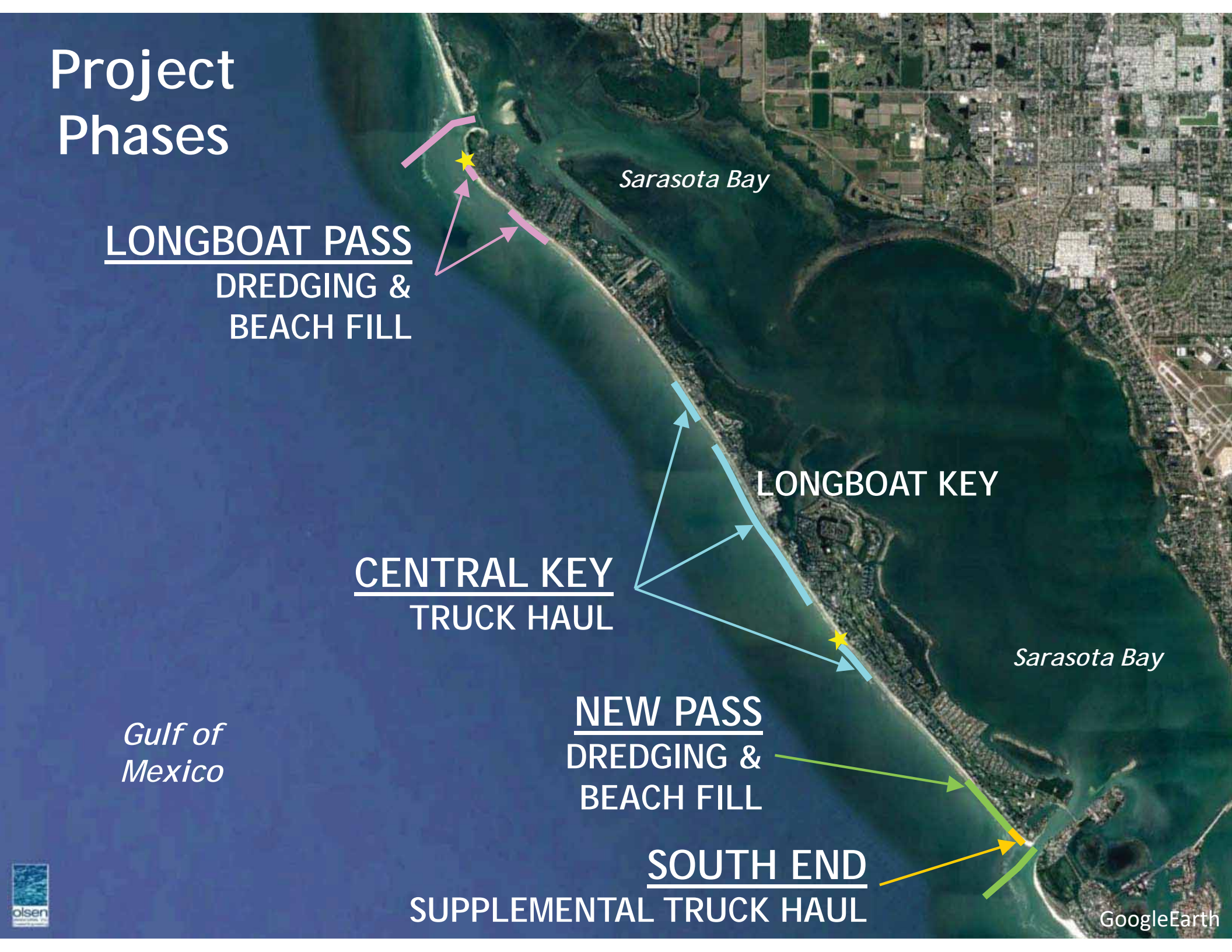
SOUTH END
SUPPLEMENTAL TRUCK HAUL

Sarasota Bay

LONGBOAT KEY

Sarasota Bay

Gulf of Mexico



Norfolk Dredging Company

- One contract – both channels
 - Contract Total: \$5,045,450
 - Mobilization / Demobilization: \$1,290,000
 - Sand unit price: \$9.09/cy
- *Pullen*
 - 24" cutterhead / pipeline dredge – 6,500hp

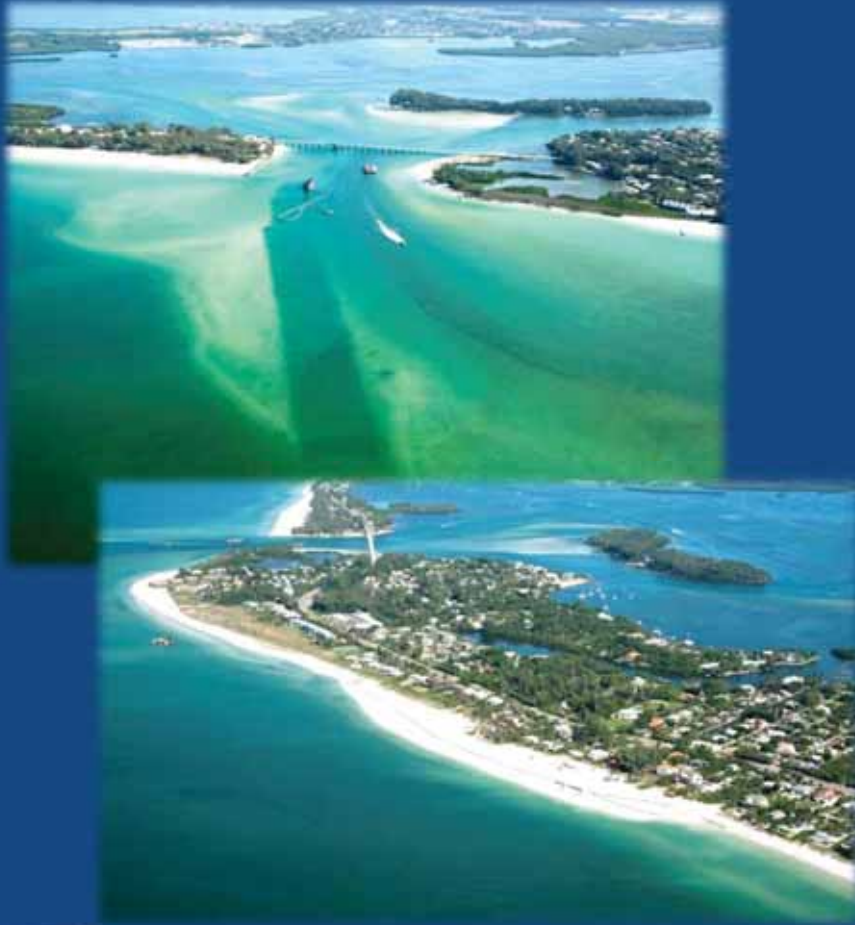


New Pass Dredging & Beach Fill



- 234,000 cubic yards placed
 - 4,000 ft - fill segment
 - 7,200 ft max pump distance
- 33 days
 - 26 pumping days
 - 10,100 cy/day (avg. day)
 - 16,600 cy max
 - August 18 - September 19, 2016
- Post-Hurricane repairs
 - Redredged portions of channel
 - Rebuilt initial construction area
 - 18,962 cubic yards replaced

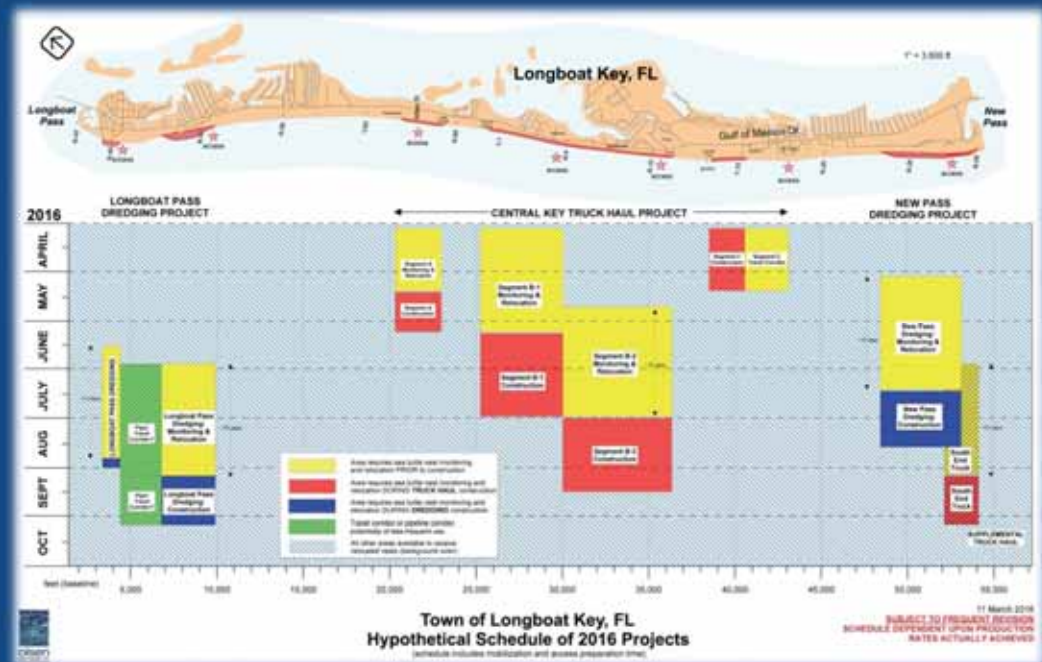
Longboat Pass Dredging & Beach Fill



- 215,400 cubic yards placed
 - 1,000 ft - fill segment #1
 - 3,100 ft - fill segment #2
 - 10,200 ft max pump distance
 -
- 29 days
 - 22 pumping days
 - 11,100 cy/day (avg. day)
 - 24,600 cy max
 - September 27 - October 21, 2016
- Hurricane Matthew delays

Sea Turtles...everywhere.

- Record Year for Sea Turtle Nesting: 1,184 nests islandwide
- Mote Marine Laboratory
- 201 nests relocated
- Phased monitoring & relocation



Public Information

- Press days
- Website coordination
- Print Media
 - Posters for Town Hall
 - Hotel/condo rack cards
 - Handouts

NEW SAND IS COMING TO Longboat Key's Beaches

Here's what you need to know about the 2016 beach nourishment project.

Several eroded stretches of Gulf of Mexico beaches on Longboat Key will receive new sand in 2016. The beach nourishment project will enhance storm protection and recreation, while creating more beach habitat for nesting sea turtles and shorebirds.

Sand for some portions of the beach will be delivered by truck, while other areas will receive sand dredged from Longboat Pass and New Pass. Turtle nests will be relocated from areas that will be affected by beach construction activities to unaffected areas, while nesting shorebirds will be protected.

Beach access will be limited along various portions of the beach as work progresses from April through mid-October. Beach construction activities for the truck haul may take place Monday through Saturday, 6:30 a.m. to 7:30 p.m. During the dredging phases, sand will be pumped onto the beach around the clock, seven days per week.

We ask your patience as we work to restore Longboat Key's world-class beaches.

Learn More
To learn more about the beach nourishment project, review the schedule and status, and register for email updates, please visit www.longboatkey.org

Contact the Project Team
EMAIL sand@longboatkey.org
PHONE 941-316-6868

www.longboatkey.org

Section	Activity	Start Date	End Date
7	Central Key Truck Haul	Completed	Completed
2	Truck Haul	Completed	Completed
3	Truck Haul	Completed	Completed
4	Truck Haul	Completed	Completed
1	Truck Haul	September	October
5	Truck Haul	September	October
6	Truck Haul	September	October

Longboat Key FLORIDA

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Status Update

Longboat Key 2016 Beach Nourishment: Status Update

The Beach Nourishment project is currently in progress. The project involves truck hauling sand to various sections of the beach and dredging sand from Longboat Pass and New Pass. The project is expected to be completed by mid-October.

STATUS UPDATE

All the beachfront of the Key (Longboat Key, North Beach, Central Beach, South Beach, and New Pass) will be nourished. The nourishment is currently in progress. The project involves truck hauling sand to various sections of the beach and dredging sand from Longboat Pass and New Pass. The project is expected to be completed by mid-October.

CONTACT

941-316-6868

www.longboatkey.org

Central Key Truck Haul



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New Pass Dredging & Beach Fill



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Longboat Pass Dredging & Beach Fill



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2016 Summary

- 687,700 cubic yards placed
- Two construction contracts
- Seven beach segments
- Construction Cost: \$18M
 - \$26.17/cy (avg.)





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THANK YOU