Four Structurally Stabilized Resort & Public Beaches in the Caribbean

Kevin Bodge, Ph.D. P.E.
Olsen Associates, Inc.
Jacksonville, Florida
- New Providence Island, Bahamas
- Grenada
Montagu Foreshore
Nassau, Bahamas
Montagu Foreshore

Nassau Harbour

Pre-Project

350 ft

1200 ft

Project Area

The Sea
Early 1990's . . . to . . . 2011
Pre-Project Conditions

- **existing high water shoreline**
- **seawall**
Proposed Beach Improvements

- Rock Groins
- Beach Fill
- Existing high water shoreline
- Seawall
Section B

- Seawall
- Project beach
- High Tide
- Low Tide
- Existing beach
- Backshore sand fencing & planting
The nearshore water volume flushing requirement is reduced by about 45% and the seawall replaced by sloping beach.
Pro-Bono Public Beach Improvement - 2011

Kerzner International
Olsen Associates, Inc
Bahamas Marine Construction
EDSA
and others

Construction:
Sept 2011 – February 2012

1st load of sand
~ 4 Years Post-Construction

GAPS = 195’

O/S = 105’

γ = 0.55

(0.48 to 0.65)

OCT 2015
Sandals La Source, Grenada
Sandals La Source, Grenada
Relocate 2,680 tons of rock
Import 6,075 tons of rock
Import 15,000 cu.yds. sand
Construction Plans: May 2013
Construction Completed: Dec. 2013
Pre-Project (Nov 2012)

Post-Project (Dec 2013)
Habitat protection along leeward side of existing breakwater
2015 – Plan to relocate boat activities within eastern beach cell, to improve reliability and safety.
GAP = 67’  
O/S = 135’  
γ = 2.0

GAP = 75’  
O/S = 128’  
γ = 1.7

Noting that cells are underfilled, per plan.
Sandals La Source, Grenada
Saunders Beach, New Providence Island, Bahamas: 2nd public beach improvement project (2011-12)
Saunders Beach, New Providence Island, Bahamas
Palm Cay, New Providence Island, Bahamas (Feb 2012)
Palm Cay, New Providence Island, Bahamas (Feb 2012)
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