

Saving America's Beaches

and

Coastal Transportation Engineering Research

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**Western
Hydraulic
Engineers
Conference**

Saving America's Beaches



Review by ASCE

Video

University of South Alabama
Center on
**Coastal Transportation
Engineering Research**



Alabama Hwy. 193 - after TS Isadore, 2002

A need for research on coastal highways

...demand is increasing



**Coastal area populations are increasing
(3,500/day)**

**Tourism is America's largest industry
(beaches are #1 tourist destination)**

A need for research on coastal highways

...unique design environment

- water levels
- waves
- sand transport
- tidal currents
- winds
- soils



A need for research on coastal highways

...in environmentally sensitive places

- bays
- wetlands
- dunes
- beaches



Mobile Bay "Causeway" – US 98

Mobile Register photo

Coastal Highways



U.S. Highway 101 revetment
Curry County, OR

Coastal Highways



California Hwy.1
Pacific Palisades

Coastal Highways



Louisiana Hwy. 82
Holly Beach (1973)

Coastal Highways



Beach nourishment and stepped seawall
US Highway 90, Biloxi, Mississippi

Coastal Highways



Relocated portion of Florida Hwy. 399
Gulf Islands Nat. Seashore

Coastal Highways



Florida Highway A1A revetment
Flagler Beach

Coastal Highways



North Carolina Highway 12
relocated section north of Buxton

Coastal Highways



Dare County, North Carolina
(beach nourishment to protect road!)

Coastal Highways



Geotextile tube inside sand dune

**Ocean Dr. (Cape May CR 619)
Whale Beach, New Jersey**

Coastal Highways



Wave overtopping

Roughan's Point, Massachusetts

Lake coasts



"Yield or else"

Painesville, Ohio

?

survey of highways exposed to coastal surge and waves



?

runoff from elevated highways

I - 10:
Mobile Bay



?

sizing rip-rap for waves



**Coden,
Alabama**