

Case Study 19: Establishing Alternative Transportation to Fort Pickens to Supplement Vulnerable Road Access, *Gulf Islands National Seashore, Florida*

Contributing Author: Dan Brown (Gulf Islands National Seashore)



Storms regularly damage the Fort Pickens Road, resulting in extended road closures and high repair costs. Image credit: Federal Highway Administration.

Goals

In Florida, the Fort Pickens Road within Gulf Islands National Seashore is regularly destroyed by storms, and repairs are expensive and time consuming. The park continues to reevaluate the local conditions and implement cost-effective, sustainable modes of visitor access to Fort Pickens beaches and the historic fort.

Challenges and Needs

The Fort Pickens Road extends for 11 km (7 mi) along a very narrow, low-lying portion of the park on Santa Rosa Island, a Florida barrier island. It dead-ends at the historic Fort Pickens, and provides access to popular beaches and other park facilities that receive more than 700,000 annual visitors.

The local community has strong emotional ties to Fort Pickens, and considers vehicular access a mainstay for the local tourism economy. However, the road is regularly damaged by storm events; major hurricanes have destroyed the road three times since 1995, and the 2004–2005 storm season caused the road to be closed until 2009. Road maintenance and repairs are increasingly unsustainable and costly, and sea level rise and increased storm frequency and intensity increase the urgency of developing a sustainable alternative.

When storms cause significant road damage, the ensuing debate over whether or not to rebuild the road is highly political, and road design (e.g., whether to invest in a hardened structure designed to withstand storms) is controversial. After each event over the past two decades, the Federal Highway Administration has rebuilt this repeatedly damaged road, each time requiring development of road design scenarios and National Environmental Policy Act compliance. In the future, a decision not to rebuild likely would be tied to a lack of available funding for repeated road-building activity; to concerns about the cost and environmental impact of asphalt and road base removal from the beach environment; and to geomorphological changes, such as island narrowing or breaching, that reduce the land base available for construction.

Responsive Actions

The park's new general management plan, finalized in July 2014, establishes that Fort Pickens Road will be rebuilt only if feasible, as determined on a case-by-case basis. In late 2015, following an environmental assessment that was also finalized in July 2014, 4.5 km (2.8 mi) of the road will be repaved, and an additional 2.5 km (1.55 mi) of the road will be realigned and moved to a higher-elevation inland route, out of sea turtle nesting habitat to an area where it is less likely to be impacted by routine overwash. This 2.5-km (1.55-mi) section is within 15 m (50 ft) of the Gulf and is buried by sand and water during routine weather events between 6 and 12 times each year. The project is expected to cost \$1,275,000 for the asphalt overlay and \$2,425,000 for the realignment, and will be paid by the Federal Highways Administration. A proposed but currently unfunded addition of an entrance lane would cost an additional \$1,000,000.

The park is working with local government (the City of Pensacola and Escambia County) to establish an alternative transportation system. The park's alternative transportation study was released in February 2009, and the final Pensacola Bay Ferry service feasibility study was completed in July 2014 and is awaiting Director Approval. The proposed passenger ferry service would connect Fort Pickens with Pensacola Beach and downtown Pensacola, providing an alternative means of accessing the park and maintaining island access when the road is rendered impassable by storm events or other unfavorable conditions. Ultimately, the ferry service could provide the only public access to Fort Pickens if the road is destroyed and not rebuilt. Two ferries will be purchased using \$4,020,000 in Deepwater Horizon Oil Spill Phase III early restoration Natural Resource Damage Assessment funding.

In September 2014, the park began the environmental assessment process for the development of visitor facilities and shuttle service to support passenger ferry activities. The park is proposing to repurpose historic buildings and existing structures and pavement for ferry support services and to implement a landside shuttle service to the beaches, campground, and historic sites. Federal Highways Administration would pay \$1.6 million for the visitor facilities and \$513,000 for the five 27-passenger solar/electric trams, upgrades to Battery Langdon, which would house the shuttles when not in use, and a recharging station that would also be powered by a solar array with an inverter tied to the grid so that the park would earn financial credit when it is generating more power than it is using.

This case study is an example of the following adaptation strategies:

- Coordinating planning and management across institutional boundaries
- Increasing/improving public awareness, education, and outreach efforts
- Making infrastructure resistant or resilient to climate change
- Managed retreat of built infrastructure
- Developing/implementing an adaptation plan

For more information:

Dan Brown, Superintendent
Gulf Islands National Seashore
(850) 934-2613
(228) 230-4103
Daniel_R_Brown@nps.gov