The structure is unusual within Florida for its combination of a Warren through truss span (202-foot) with a polygonal top chord and pony truss secondary spans. Another distinctive feature is the camelback design used on the pony trusses. The camelback derives from the curvature found in the top chord resulting from changing the inclination of the chord in each panel. The bridge used a channel bar for the chords, beams for the vertical posts, and angle bar in the struts, sway braces and diagonals. The center-bearing pivot mechanism is manually operated, but rarely, if ever, used. A solid concrete railing, with rectangular panels cast in for detail, runs along the approaches.

A significant structure for both engineering and historical reasons, the St. Mary's River Bridge played a crucial part in opening Florida to tourists and settlers from northern areas and enabled Jacksonville to become a gateway to Florida's Atlantic Coast. Furthermore, it is one of only two bridges remaining that the Virginia Bridge and Iron Company constructed, both of which are manually operated structures (the other one being the Belle Glade Swing Bridge in Palm Beach County). The distinctive technical features of the bridge and its combination of truss styles make it an interesting example of truss building and swing span design from the 1920s.

The St. Mary's swing bring retains a high level of historic physical integrity. This bridge was determined NRHP-eligible during the 2000 survey under Criterion A in the areas of Community Planning and Development and Transportation and under Criterion C in the area of Engineering as a rare example of a center-bearing pivot swing bridge with unique camelback pony trusses and with historical associations to the Virginia Bridge and Iron Company.

Photo 5-58. Belle Glade Swing Bridge, Palm Beach County (No. 930072)

Belle Glade Swing Bridge
Palm Beach County
FDOT #930072, 8PB0212

The Belle Glade Swing Bridge crosses the Okeechobee Rim Canal at Point Chosen. It provides access from Belle Glade on the mainland to Torry Island, located on the southeastern edge of Lake Okeechobee. Constructed in 1916, this bridge is one of only two structures remaining in the state built by the Virginia Bridge and Iron Company. The project was completed by the W. S. Lockman Company. The bridge originally stood over the St. Lucie River at Stuart and was reconstructed at its present site in 1935. At that time, a new concrete pivot pier and timber approach spans were added.

The 446-foot Belle Glade Bridge consists of 9 approach spans and a 154-foot-long, center-bearing main swing span. What appears to be essentially a Pratt truss has been set at approximately three-quarter level with the roadway, leaving the top chord about 3 feet above the deck. Channel bars are used in the top and bottom chords and in the parallel end posts, and angles compose the diagonals and counterbraces. In a technique rarely found, lacing bars on the exterior sides of the members reinforce the verticals. Such reinforcement is typically located on the interior. The single lane bridge still has a timber plank deck and

remains manually operated. It is the last functioning example of a hand swivel in the state. Rehabilitation of the Belle Glade Swing Bridge in 1983 and 1998 resulted in the replacement of the wood pilings and beams with concrete and steel ones. The swing span and gear system also were refurbished. None of the rehabilitation significantly affected the historical integrity of the bridge.

Despite its alterations, this bridge retains its historic character and "embodies the distinctive character of a type, period, and method of construction."[123] It was determined "potentially eligible" for NRHP listing by the Florida SHPO in October 2002. This bridge is significant under Criterion A in the area of Community Planning and Development for its importance in providing the first land access to Torry Island. It is also eligible under Criterion C in the area of Engineering as a rare example of a center-bearing pivot swing bridge with historical associations to the Virginia Bridge and Iron Company. It is the earliest example of a swing deck truss bridge in Florida and one of two surviving Virginia Bridge and Iron Company bridges.[124]

Photo 5-59. Snow-Reed Swing Bridge/Southwest 11th Street Swing Bridge, Broward County (No. 865748)

Snow-Reed Swing Bridge/ Southwest 11th Street Swing Bridge
Broward County
FDOT #865748, 8BD3171

This swing bridge, a Warren pony truss with verticals, was constructed in 1925 by the Champion Bridge Company of Ohio to carry Southwest 11th Street across the North Fork of the New River in a growing residential area of Fort Lauderdale. The 148-foot structure exhibits the standard construction technology of Champion in its swing bridges. The truss is constructed of steel beams for the chords and end posts, angles in the vertical posts and diagonals, stay plates in the columns, and gussets at the joints. It is rigidly connected. A rim-bearing assembly sits on the concrete pivot pier in mid-channel. Initially hand-operated, a Ford gasoline engine was installed in the 1930s and an electric motor in the 1950s. Renovations that took place during 1983-1984 left the structure's original appearance intact.

The Snow-Reed Swing Bridge was determined NRHP-eligible during the 2000 survey under Criterion A in the areas of Community Planning and Development as well as Transportation, and under Criterion C in the area of Engineering. It is significant for its historical associations with the development of Fort Lauderdale during the 1920s boom era, and for its association with the Champion Bridge Company, a major bridge builder. It is also noteworthy for its age and type, and is a rare example of a metal truss swing bridge surviving in South Florida.

[123] Estabrook, Richard W., An Addendum to the Cultural Resource Reconnaissance of the Florida National Scenic Trail, Lake Okeechobee Segment Project, Palm Beach County, Florida, 2002.
[124] Estabrook, 2002.