



**Photo 6-29. SR-228 at Adams Street Prestressed Concrete Bridge (No. 720496)**



**Photo 6-30. SR-228 at US-90 Steel Girder Bridge (No. 720113)**



**Photo 6-31. SR-228 (Leg G) Bridge (No. 720490)**



**Photo 6-32. SR-228 at Ryar Road Prestressed Concrete Girder Bridge Pair (Nos. 720112/720283)**

### ***Overseas Highway Bridges, Monroe County***

The Overseas Highway is a system of 23 bridges (**Table 6-10**) in Monroe County connecting the islands of the Florida Keys to the Florida mainland. The group includes one steel through truss bridge (Bahia Honda, No. 900016/900045) and 22 concrete arch deck bridges. The **Bahia Honda Bridge** (Nos. 90016/900045), **Long Key Viaduct** (No. 900094), and **Seven Mile Bridge/Knight's Key Bridge** (No. 900101) were listed in the NRHP in 1979; the other 20 concrete arch deck structures were listed in 2004. The Overseas Highway bridges are eligible under Criterion A in the areas of Transportation and Community Planning and Development.

**Table 6-10. Overseas Highway Bridges.**

FDOT No.	FMSF	Date	Route Carried / Feature Intersected
900016 (SB)/ 900045 (NB)	8MO01231	1972	SR-5/US-1 / Bahia Honda
900080	8MO01490	1979	SR-5/US-1 / Rockland Channel
900081	8MO01489	1979	SR-5/US-1 / Shark Channel
900090	8MO03953	1980	SR-5/US-1 / Saddlebunch #5
900091	8MO03954	1980	SR-5/US-1 / Saddlebunch #4
900092	8MO03955	1981	SR-5/US-1 / Saddlebunch #3
900093	8MO03956	1981	SR-5/US-1 / Saddlebunch #2
900094	8MO01229	1981	SR-5/US-1 / Long Key Channel
900097	8MO03476	1981	SR-5/US-1 / Channel #2
900098	8MO03968	1982	SR-5/US-1 / Channel #5
900099	8MO03967	1980	SR-5/US-1 / Tom's Harbor Cut
900100	8MO03966	1980	SR-5/US-1 / Tom's Harbor Channel
900101	8MO01230	1982	SR-5/US-1 / Moser Channel (Knight Key Bridge; Seven Mile Bridge)
900102	8MO03957	1981	SR-5/US-1 / Lower Sugarloaf Channel
900103	8MO03965	1981	SR-5/US-1 / Missouri -Little Duck Channel
900104	8MO03964	1981	SR-5/US-1 / Ohio-Missouri Channel
900105	8MO03963	1981	SR-5/US-1 / Ohio-Bahia Honda
900106	8MO01484	1982	SR-5/US-1 / Spanish Harbor Channel
900111	8MO03962	1982	SR-5/US-1 / South Pine Channel
900112	8MO03958	1982	SR-5/US-1 / Park Channel
900115	8MO03959	1982	SR-5/US-1 / Bow Channel
900116	8MO03960	1982	SR-5/US-1 / Kemp Channel
900117	8MO03961	1983	SR-5/US-1 / Niles Channel

Most of the structures built for the FEC Railway at the beginning of the 20th century continued in service until the 1980s, when the FDOT undertook the construction of a new Overseas Highway. The state removed much of the old Overseas Highway at that time, and left 23 structures in place. Several of these were converted into fishing piers. The historical importance of these structures arises from many sources, both technological and historical. They are associated with the historical development of southeast Florida and the Florida Keys. In addition, they are associated with the Florida Land Boom of the 1920s, a horrific Labor Day hurricane that struck Florida in 1935, and the Great Depression of the 1930s. Finally, they stand as representatives of two massive engineering efforts, the construction of the Overseas Railway and its Depression-era conversion into the Overseas Highway. All of these factors combine to make this entire linear resource one of Florida's most important resources in terms of technological history. The continuing importance of the Overseas Highway is reflected in the present effort aimed at bringing these structures back into service as part of a historic and recreational trail.

Railroad magnate Henry Flagler sponsored the construction of the Overseas Railway in 1904, as an extension of his FEC Railway. In 1912, the extension was completed, thereby providing a rail link from Key West to Miami and, from there, to the rest of the United States. The railroad continued to function despite periodic interruptions due to hurricanes and other storms until a tremendous 1935 hurricane, spawning winds of 200 miles per hour, irrevocably damaged it. Following this storm, the FEC Railway could no longer afford to maintain the Overseas Railway. In an effort to keep a transportation link between the mainland and the Keys, the rail line was converted into a roadway facility by the Overseas Highway and Bridge Authority and integrated into the state highway system. To do this, a massive engineering effort, second only to the original construction of the railroad bridges, was initiated. As the majority of the structures inherited from the railroad were arch structures, the Overseas Highway and Bridge Authority added decking to the top of the rail bed in order to widen the structures from 11 to 22 feet.

Four of the replacement bridges were designed with a precast, segmental, concrete box girder alternate.<sup>154</sup> The Niles Channel, Long Key, and Channel #5 bridges were built by the Michaels Construction Company using precast segments; the fourth segmental bridge, the Seven Mile Bridge, was built by Misener Marine and designed by Figg & Muller, Inc.

The **Bahia Honda Bridge**, which opened in 1972, connects Bahia Honda Key with Spanish Harbor Key. It replaced the original Bahia Honda Rail Bridge, which was converted to automobile use in 1938. The old bridge remains the most distinctive and impressive span of the Overseas Highway. Since a through truss provided the support system for this bridge, the Overseas Highway and Bridge Authority could not widen this bridge without removing or widening the truss. As a result, the Authority chose to construct the highway deck on the top of the truss, thereby converting the railroads' through truss into a deck truss for the highway. After the new bridge opened in 1972, two of the truss span sections were moved to facilitate boat traffic. The former bridge is now used as a fishing pier.

The **Seven Mile Bridge** (No. 900101), also known as the Knight's Key Bridge, links Marathon in the Middle Keys to Little Duck Key in the Lower Keys. The original bridge, known as the Knights Key-Pigeon Key-Moser Channel-Pacet Channel Bridge, was constructed between 1909 and 1912 as part of the FEC Railway. This bridge featured a swing span over the Moser Channel of the ICWW; it has been permanently removed. The replacement bridge parallels the still extant original bridge, which is used as a fishing pier. Construction of the new \$45 million bridge began in 1979 and opened on May 24, 1982. At this time, it was the longest segmental bridge in the world. The Seven Mile Bridge extends 6.765 miles long by 38 feet wide, and has a vertical clearance of 65 feet. The longest span measures 135 feet. It is one of four segmental bridges built to withstand winds of up to 200 miles per hour.

The **Spanish Harbor Channel Bridge** connects Big Pine Key to Spanish Harbor Key. This 0.6 mile bridge is in deteriorated condition and is no longer open to traffic. Small portions of the original railings, consisting of the old rails taken from the railroad bed, still exist on the eastern approach.

The concrete arch deck bridges tend to be primarily functional, with little ornamentation. The **Long Key Viaduct**, which joins Long and Conch Keys, is an 11,950-foot-long concrete arch deck viaduct with a 20-foot-wide roadway. It features concrete abutments, a concrete slab deck, and a concrete railing.

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<sup>154</sup> "US Route 1 Restrings Florida Keys," *SPANS* (October 2008, Volume 6), 1.