Photo 5-41. Plaza beneath Bridge No. 720087, Duval County

specifically designed to counteract the undesirable views and physical and psychological barriers that plagued similar urban bridges.[113] Incorporating a pleasant pedestrian experience and a multi-purpose space beneath this bridge creates an aesthetic experience which not only deters unwanted activity beneath it, it positively affects the value of adjacent properties and the psychological demeanor of its passersby.

This bridge is newly recommended NRHP-eligible under Criterion A in the areas of Community Planning and Development and Transportation for its significant associations with the urban development of Jacksonville. It is also eligible under Criterion C in the area of Architecture for its high-integrity embodiment of modern architecture in bridge design.

SR-A1A over Sebastian Inlet
James H. Pruitt Memorial Bridge
Indian River County
FDOT #880005, 8IR1493

The 1964 prestressed concrete girder James H. Pruitt Memorial Bridge carries SR-A1A over the Sebastian Inlet near Vero Beach in Indian River County. It was built by the Clearly Brothers Construction Co. The 19-span bridge extends 1548 feet in length, and features lightweight concrete prestressed side spans of 100 feet and a main span of 180 feet.

Photo 5-42. SR-A1A over Sebastian Inlet, Indian River County (No. 880005)

The superstructure of the three-span main unit is made of variable depth I-girders. Each line of the I-girders is made of five precise beam elements whose end beams reach from the side piers to splice locations 35 feet from the main piers. The 65-foot long cantilever beams located over the channel piers vary from six- to nine-feet in depth and are spliced with the end beams and cantilever 30 feet into the main span. The fifth beam is a 120-foot

[113] Irizarry, Ramón. *Restructuring the Spaces under Elevated Expressways: A Case Study of the Spaces Below the Interstate-10 Overpass at Perkins Road in Baton Rouge, Louisiana*. Accessed at: http://etd.lsu.edu/docs/available/etd-0530103-085516/unrestricted/Irizarry_thesis.pdf.

pretensioned drop-in beam supported by cantilever beams resting on the main piers. The end beams of the side spans and the drop-in span were designed to be entirely pretensioned with ½-inch diameter straight and deflected strands. The variable depth portion that cantilevers over each pier was designed to be post-tensioned using 15 tendons. The tendons draped over the top at the pier and anchor at the ends of the variable depth cantilever portion. Two of these tendons were to be post-tensioned after casting for shipping and erection, and the rest were post-tensioned in phases as the construction of the deck proceeded. During construction, the contractor made use of special provisions that permitted changing the prestressing of the variable depth members from post-tensioned to pretensioned.[114]

According to the *New Direction for Florida Post-Tensioned Bridges* published for the FDOT in 2002, the Sebastian Inlet Bridge represents a significant early post-tensioned bridge design in Florida although it was eventually built as a pre-tensioned bridge. Therefore, the Sebastian Inlet Bridge is newly recommended NRHP-eligible under Criterion C in the area of Engineering for its high-integrity embodiment of a prestressed concrete bridge in Florida.

CR-316 over Proposed Cross Florida Canal
Marion County
FDOT #364040, 8MR3585

This 1969 continuous steel girder bridge carries CR-316 over the proposed Cross Florida Canal near Fort McCoy in Marion County. It was designed and built by the U.S. Army Corps of Engineers. The bridge incorporates 52 concrete approach spans and three main spans with a cast-in-place concrete deck; it measures 4,449 feet in length. The bridge features a vertical clearance of nearly 150 feet, which allows the structure to have a low environmental impact on the natural resource below and around it, the Ocala National Forest.

Photo 5-43. CR-316 over Proposed Cross Florida Canal, Marion County (No. 364040)

This structure is a remarkable example of an ordinary bridge elevated to a higher status for the design of its "common" components within its natural setting. Most bridges of this type span large bodies of water like the St. Johns or Hillsborough Rivers whereas this one spans a forest. Nestled in the southwest corner of the Ocala National Forest, experiencing the approach with its apparent vanishing point and suspended feeling above the forest canopy at its crest is memorable. The selection of this bridge design not only respects its natural surroundings but was also done in anticipation of the proposed Cross Florida Barge Canal. Although never completed, the Cross Florida Barge Canal was intended to cross northern Florida, connecting the Gulf Intracoastal Waterway with the Atlantic Intracoastal Waterway. Authorized by

[114] Corven Engineering, Inc., *New Directions for Florida Post-Tensioned Bridges – Volume 1 of 10: Post-Tensioning in Florida Bridges.* Tallahassee, FL: Corven Engineering, Inc., 2002. pp.7-8.