PROPOSED BRIDGE MODIFICATIONS
The bridge at SW 109 Street would need to be modified in order to add a new sidewalk along the east side of the SW 109th Avenue bridge to cross pedestrians from the Sweetwater area over the Tamiami Canal to the FIU Modesto A. Maidique Campus on the south side of the intersection. We have preliminarily analyzed the existing bridge conditions and have determined that the existing bridge can accommodate the additional sidewalk without widening. This can be achieved by reconfiguring the lane widths and other bridge features. Below are the existing and proposed bridge typical sections:

Existing Bridge Typical Section

Proposed Bridge Typical Section
PROPOSED INTERSECTION ALTERNATIVES

Alternative A

This alternative consists of constructing a new sidewalk along the east side of the SW 109th Avenue bridge and a new crosswalk along the east side of the intersection. During preliminary coordination efforts with the Traffic Signals & Signs Division of the County we were informed that the signal at this intersection operates as a split phase. There is no availability for refuge islands within this intersection and pedestrians need to cross SW 8th Street in a single attempt. The existing west side crossing requires 37 seconds each time a pedestrian pushes the crossing button. Due to this phasing and the dual left turn from SW 109th Avenue onto SW 8th Street, adding another crossing on the east side will require an additional 37 seconds. The County’s concern is that traffic along SW 8th Street would have to be stopped for a total of 74 seconds if pedestrians cross at both the east and west leg of the intersection within a cycle.
Alternative B

A second alternative has been preliminarily analyzed which may minimize the County’s concerns to the traffic impacts. This alternative consists of proposing an east-west crosswalk at the south end of SW 109th Avenue Bridge. The greatest benefit to this alternative is the elimination of the proposed crosswalk (see Alternative 1) along the east side of SW 8th Street and thus not requiring additional timing that can impact traffic. This alternative requires analysis with actual pedestrian counts to further conclude safety and traffic impacts.
Alternative C

A third alternative has also been preliminarily analyzed that may also minimize the County’s concerns to the traffic impacts. This alternative consists of proposing an east-west crosswalk at the south end of SW 109th Bridge as in the prior alternative, but crossing SW 8th Street on a newly created crosswalk on the east side. The existing west side crosswalk could then be eliminated. The greatest benefit to this alternative, as in the prior alternative, is the elimination of a second crosswalk along SW 8th Street and thus not requiring additional timing that can impact traffic. This alternative requires analysis with actual pedestrian counts to further conclude safety and traffic impacts.
Alternative D - HISTORIC BRIDGE OPTION

The existing bridge to the east of SW 109th Avenue bridge crossing the Tamiami Canal is considered historic. Currently, this bridge is closed for pedestrian traffic. The structural integrity of this bridge needs to be analyzed. Coordination with the State Historic Preservation Office (SHPO) is required to know if any changes that may be needed can actually be performed. Elements to be considered are: pedestrian railings, cross slopes for ADA compliance, deck conditions, etc. If after structural analysis of the bridge this option is feasible, close coordination with SHPO and FHWA will be required since the bridge is a historic bridge. Coordination with the Traffic Signals & Signs Division of the County will be needed. FDOT would only provide the crosswalk and pedestrian ramp at SW 8th Street along the east side of the intersection. The City would need to coordinate all historic bridge aspects and address sidewalk construction and connection to the existing bridge.
Alternative E

This alternative does not require any modifications to the existing bridge geometry. It would provide a crosswalk along SW 7th Terrace connecting to the existing sidewalk along the bridge and a crosswalk along the east side of SW 8th Street and SW 109th Avenue. The City of Sweetwater could use the historic bridge to connect to a proposed sidewalk along the north side of SW 8th Street, east of the SW 109th Avenue bridge. However, the schedule of the historical bridge being opened for pedestrian use by the City may not coincide with the current Department’s construction schedule of the intersection.