

SPAN LOCKS SCOPE OF SERVICES

Background Statement:

Span locks on bascule bridges are devices designed to keep the spans from opening under live load and minimize the range of vertical movement at the tip of the span. There are several different types of span locks; however, lock bars are the only type represented on trunnion bascule bridges in District 4. The role and effectiveness of lock bars is debatable; maintenance requirements are many and not always timely executed. Consequently, more involved and challenging repairs are often required on structural components and open grid decking. A more effective span lock with fewer maintenance requirements is needed.

Objectives:

1. Compare existing span lock systems compatible with trunnion bascule spans; determine the effectiveness and maintenance requirements of each.
2. Develop a positive grip locking system (i.e., a device having little or no play when engaged) that holds the spans with a clamping force rather than a set clearance to reduce the need for routine shimming. Ascertain effectiveness, maintenance requirements, and emergency disengagement procedures.
3. Prepare detailed drawings for installation of positive grip span lock system at the Las Olas Bridge over the Intracoastal Waterway in Broward County. Provide pertinent design calculations and installation / maintenance cost analysis.
4. Prepare presentation for distribution and discussion among movable bridge consultants. FDOT District IV will coordinate/arrange a time for this event.