

5.5.4.3 STABILITY

General

In recent years the use of high strength concrete, 0.6" diameter prestressing strand, and the construction industry's ability to haul and erect increasingly heavy loads, it is practical and economical to construct very long precast prestressed concrete girders. With this capability to design, produce, and ship long girders the analysis of lateral girder stability during the design process has become essential. In the past this analysis has often been left to the responsibility of the girder fabricator and hauler. While it is still ITD policy to require the girder hauler to analyze the girder in transit, the designer shall check the girder stability while lifting them out of the forms and handling them in the yard.

DESIGN PROCEDURE

Lateral stability of the girder should be checked using the *PCI Recommended Practice for Lateral Stability of Precast, Prestressed Concrete Bridge Girders*.

The girder should be checked when the girder is lifted from the forms assuming a hanging girder, vertical cables, and no wind. This condition is shown in Example calculation 6.1.1 in the PCI Manual.

The location of the pick points used in the analysis shall be shown on the plans.

Revisions:

Nov 2019

Revised article to reference the *PCI Recommended Practice for Lateral Stability of Precast, Prestressed Concrete Bridge Girders* design procedure.