

## **PCI eLearning – Transportation System Courses**

January 22, 2021

26 bridge-related PCI eLearning courses are currently listed on the PCI site: <https://oasis.pci.org/>

### ***Precast, Prestressed Concrete Bridge Girder Series***

- T110: Preliminary Precast, Prestressed Concrete Design
- T115: Materials and Manufacturing of Precast, Prestressed Concrete
- T120: Design Loads and Load Distribution
- T125: Flexural Design of Precast, Prestressed Concrete—Service Limit States
- T130: Flexural Design of Precast, Prestressed Concrete—Strength Limit States
- T135: Refined and Approximate Estimates of Prestress Losses
- T145: Shear Design—Development and Use of Modified Compression Field Theory
- T160: Design of Beam End Zones
- T310: Extending Spans
- T450: Bridge Bearings — Theory and Fundamentals
- T455: Bridge Bearings — Bearing Design
- T710: Load Rating—Overview and Methods

### ***Full-Depth Precast Concrete Deck Panels Series***

- T210: Introduction on Full-Depth Panel Precast Concrete Deck System and its Advantages
- T215: Design and Detailing of Full-Depth Precast Concrete Deck Panels
- T220: Production and Construction Details of Full-Depth Precast Concrete Deck Panels
- T225: Case Studies and Emerging Developments of Full-Depth Precast Concrete Deck Panels

### ***Curved Spliced U-Beam Bridges Series***

- T350: Introduction, Implementation and Delivery
- T353: Modeling, Analysis, and Design

### ***Bridge Geometry Series***

- T505: Fundamentals of Roadway Geometry
- T510: Working with Horizontal Alignments
- T515: Geometry of Straight Bridges
- T517: Curved Bridge Geometry

### ***Lateral Stability of Precast, Prestressed Concrete Bridge Girder Series***

- T520: Introductory Material and Hanging Girders
- T523: Stability During Transport
- T525: Stability of Girders in the Field
- T527: Calculations and Sensitivity Analysis

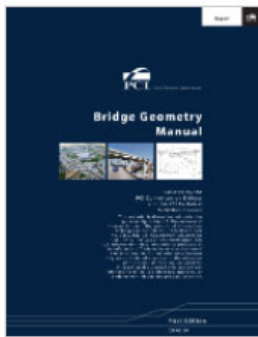
## CB-02 Lateral Stability Precast Concrete Bridge Girders



### **Recommended Practice for Lateral Stability of Precast, Prestressed Concrete Bridge Girders (CB-02-16)**

This is a new comprehensive methodology to analyze the lateral stability of long slender bridge girders. Technology has enabled the manufacture of increasingly longer girders. Slender girders present a lateral stability concern. Each stage of a girder's transition from the casting bed to its final location in the bridge is considered. These conditions include when... [Details](#)

## Bridge Geometry Manual



### **Bridge Geometry Manual (CB-02-20H)**

A Bridge Geometry Manual has been developed as a resource for bridge engineers and CAD technicians. In nine chapters, the manual presents the basics of roadway geometry and many of the calculations required to define the geometry and associated dimensions of bridges. This manual and course materials are not linked to any software tool. The first five chapters are dedicated to the fundamental... [Details](#)

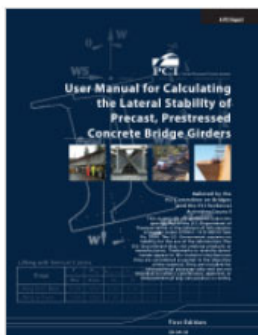
## Guide for Curved, Spliced Precast U-Beam Bridges



### **Guide Document for the Design of Curved, Spliced Precast Concrete U-Beam Bridges (CB-03-20H)**

The Guide Document for the Design of Curved, Spliced Precast Concrete U-Beam Bridges has been developed as a resource for bridge engineers. In nine chapters, the guide documents the advancement of this bridge technology. This technology, which originated and progressed initially in Colorado over approximately 20 years, has evolved... [Details](#)

## User Manual for Calculating the Lateral Stability



### **User Manual for Calculating the Lateral Stability of Precast, Prestressed Concrete Bridge Girders (CB-04-20H)**

This document, User Manual for Calculating the Lateral Stability of Precast, Prestressed Concrete Bridge Girders, PCI Publication CB-04-20, provides context and instructions for the use of the 2019 version of the Microsoft Excel workbook to analyze lateral stability of precast, prestressed concrete bridge products.... [Details](#)