



Design Specifications for Bridge Temporary Works in the United States

John Duntemann, P.E., S.E.

Senior Principal

Wiss, Janney, Elstner Associates, Inc., Northbrook, IL, USA

Contact: jduntemann@wje.com

Abstract

Following the collapse of the Route 198 Bridge over the Baltimore-Washington Parkway, the Federal Highway Administration (FHWA) initiated a study to identify the current state of practice in the United States and abroad for designing, constructing, and inspecting the temporary works used to construct highway bridge structures. One of the documents produced from this study was the *Guide Design Specifications for Bridge Temporary Works*, which was subsequently adopted by the American Association of State Highway and Transportation Officials (AASHTO). This paper serves as a brief summary and selected details of the *AASHTO Guide Design Specifications*.

Keywords: design specifications, bridge temporary works, falsework, formwork, temporary retaining structure.

1 Introduction

In 1991, a study was initiated by the Federal Highway Administration (FHWA) to identify the current state of practice in the United States and abroad for designing, constructing, and inspecting the temporary works used to construct highway bridge structures. [1] This study was known as the FHWA Bridge Temporary Works Research Program. One of the documents produced from this study was FHWA Publication No. FHWA-RD-93-032, *Guide Design Specification for Bridge Temporary Works*, which was subsequently adopted by the American Association of State Highway and Transportation Officials (AASHTO) in 1995. ([2],[3]) The *AASHTO Guide Design Specifications for Bridge Temporary Works* (*AASHTO Specifications*) provides unified design and construction criteria that reflected the best practices at the time the specifications were developed.

There have been several initiatives since original publication of the *AASHTO Guide Design*

Specifications for Bridge Temporary Works that have advanced the design and construction of the temporary works used in bridge construction in the United States. AASHTO subsequently published provisions for temporary works in their *Interim Specifications* and incorporated these provisions in the *AASHTO LRFD Bridge Construction Specifications*. [4] The Structural Engineering Institute of the American Society of Civil Engineers (ASCE/SEI) has also developed ASCE/SEI 37-02, a standard for design loads on structures during construction. [5] The second edition, ASCE/SEI 37-14, was just recently published in 2015. [6] Based upon the period of time that has lapsed since the development of the original *Guide Design Specifications*, and the development of other related standards within this period of time, the reassessment and updating of the *AASHTO Specifications* seemed appropriate and necessary.