



***massDOT***  
Massachusetts Department of Transportation  
Leading the Nation in Transportation Excellence

Bridge Inspection  
Handbook  
2015 Edition



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The Commonwealth of Massachusetts

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## BRIDGE INSPECTION HANDBOOK

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## INTRODUCTION AND PURPOSE OF THIS HANDBOOK

### i. PURPOSE

The purpose of this Bridge Inspection Handbook is to present MassDOT's Bridge Inspection Business Practices that have been developed to meet the requirements of the National Bridge Inspection Standards (NBIS). It is a collection of policies, practices and procedures for the safety inspection of bridges and preparation and maintenance of the statewide bridge inventory. The document is intended to supplement other FHWA publications pertaining to the inspection and inventory of bridges. Use and understanding of this Handbook will improve the quality, uniformity and consistency of the Massachusetts Bridge Inspection Program. The Handbook also establishes the responsibilities and requirements of all individuals involved with the inspection of bridge structures.

### ii. USE OF THIS HANDBOOK

This Handbook is divided into chapters and sections that represent distinct phases of the MassDOT Bridge Inspection Program.

Chapter 1 contains introductory and background information about the NBIS program and Chapter 2 contains general safety requirements. Chapters 3 through 5 cover the general steps taken in completing a bridge inspection in somewhat of a chronological sequence. Inspection planning and scheduling is covered in Chapter 3 and guidance for the actual field inspection processes is provided in Chapter 4. Quality Assurance and Quality Control policies, procedures developed to maintain accuracy and consistency of bridge inspection reporting, is presented in Chapter 5. Chapter 6 covers the protocols for initiating Load Ratings and procedures for posting and closing structures as a result of load rating or field inspection findings. MassDOT is fortunate to have its own In-house Underwater Operations unit to provide dive inspections of structures statewide. Chapter 7 contains the policies and procedures established for that special unit.

The MassDOT Bridge Inspection Unit is occasionally called on to perform bridge safety tasks that are not specifically mandated by the NBIS. Examples include inspection of bridges that do not meet the federal definition of a bridge, emergency inspections in response to acts of nature, damage inspections and inspection for loose concrete from freeze thaw action. Policies and procedures for these situations and more are covered in Chapter 8. Chapter 9 consists of the MassDOT Supplemental Coding Guide, which presents MassDOT's conventions for coding certain items in the FHWA's *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges*. It also introduces and defines certain specific data items that are collected specially for MassDOT. Lastly, Chapter 10 is a listing of, and repository for, supplemental information that have been issued by Bridge Inspection Management to supplement this Handbook. Supplemental documents that are distributed in the future will be added to this Chapter. Bridge inspection personnel should insert hard copies of such correspondence into the Handbook as they are issued.