



DOE Bridge Program Overview

Agenda

Introduction

Inspections

Evaluations

Reporting

Bridge File

Summary

All DOE Bridges are to be inspected and evaluated in accordance with DOE O 437.1

DOE O 437.1 Attachment 2, page 2-1, paragraph 1. Inspections.

The type and frequency of inspections performed may vary over the life of a bridge or tunnel to reflect the level of effort needed to document its condition.

DOE O 437.1 Attachment 2, paragraph 1.a.(6)

Determine and document types of inspections required for each bridge, culvert and tunnel

Initial Inspection

- Required within 60 days of the bridge being placed into service, acquired, change in configuration, or construction due to repair or retrofit

Routine

- Regularly scheduled inspections to determine the physical and functional condition of the bridge, to identify any changes from initial inspection or previously recorded conditions, and to ensure that the structure continues to satisfy present safety requirements
- Established interval not to exceed 24 months

In-Depth

- A close-up, detailed inspection of one or more bridge components located above or below water to identify any deficiencies that are not readily detectable using routine inspection procedures
- Inspection interval established by the Responsible Engineer

Fracture Critical Member (FCM)

- A type of In-Depth Inspection to specifically inspect Fracture Critical Member(s)
- Established interval not to exceed 24 months

Underwater

- An inspection of the underwater portion of a bridge substructure and surrounding channel which cannot be inspected visually at low water by wading or probing, generally requiring diving or other appropriate techniques
- Established interval not to exceed 60 months

Damage

- An unscheduled inspection to assess structural damage resulting from environmental events (such as earthquake or flooding) or human actions (such as truck impacts)
- As soon as practicable after damage occurs; before it is re-opened to traffic; or per the site's emergency plan after a seismic trigger event

Special

- An inspection scheduled at the discretion of the Bridge Owner. It is used to monitor a particular known or suspected deficiency, such as cracks in steel, settlement, or scour. It may also be used to monitor special details or unusual characteristics of a bridge that do not necessarily have defects, such as ultrasonic testing of pins

Load Rating

- The intent of load rating and posting is to ensure that bridges are appropriately evaluated to determine their safe live load carrying capacity and any load restrictions are appropriately posted

Scour Evaluation

- Identifies the susceptibility of a bridge to scour and accurately records the condition of the bridge foundations and stream stability

Seismic Vulnerability Evaluation

- Determination of a bridge's vulnerability to seismic events and the need for seismic retrofitting

Vehicle Traffic Volume Data Collection

- Determination of average/annual daily traffic and percent of truck traffic



Inspection reports

- Submit within 30 days of the inspection

Load rating and scour evaluation reports

- Submit within 30 days of completing the evaluation

Traffic volume studies and seismic vulnerability evaluations

- Submit within 60 days of their completion

Other engineering studies and evaluations

- Submit within 60 days of their completion

Delay of Inspection

- Notification no less than 30 days in advance of the anticipated delay that an inspection will not occur within the established interval.

DOE O 437.1 Attachment 2, 8.f. Prepare and maintain a Bridge File or Tunnel File for each bridge, vehicular tunnel, and culvert *in local records and in the Facilities Information Management System*

All Bridge Inspection reports, and Evaluation reports are to be filed in the local bridge file and in FIMS

Bridge File

A full history of the structure, including all design, construction, maintenance, repair, rehabilitation, use, and damage records. The Bridge File contains inventory data, inspection, testing, and evaluation records, load rating and evaluation data and reports

Determine and document types of inspections required for each bridge

All bridge inspections and evaluations shall be performed in a timely manner – during the baseline month

Reports for inspections and evaluations are to be submitted in accordance with the DOE O 437.1 and placed in the bridge file and in FIMS

Each Bridge should have a Bridge File in local files and in FIMS

- All bridge inspection and evaluation reports should be in the bridge file and FIMS
- The bridge file should document the entire history of the bridge