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____ ANSWER FOR MY SIGNATURE
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BY _____ DATE _____

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

INTRADEPARTMENTAL CORRESPONDENCE

Memorandum

To: Christopher Knotts, P.E.
DOTD Chief Engineer Administrator

From: Dana Feng, Ph.D., P.E. DF
Assistant Bridge Design Engineer Administrator
(225) 379-1060

Subject: Request to revise EDSM I.1.1.15-Louisiana Bridge Load Rating Standards

Date: June 8, 2021

With this memorandum, we are requesting approval to revise EDSM I.1.1.15 to incorporate the latest bridge inspection and load rating manuals and policies. Following are the updates:

1. Added a new rating requirement for closed bridges;
2. Updated re-rating frequency requirements;
3. Published the "Bridge Structure Load Rating Request Form" to track all load rating requests;
4. Replaced the outdated manual with the following:
   - LADOTD Bridge Design and Evaluation Manual (BDEM);
   - LADOTD Bridge Inspection Manual (BIM); and,
5. Clarified load rating responsibilities of Bridge Design Section, Bridge Maintenance Section, District Bridge Engineers, and off-system bridge owners.

For your review and approval, I have attached the existing EDSM I.1.1.15 dated March 24, 2014, the revised EDSM I.1.1.15, and the comparison redline file.

The revised EDSM I.1.1.15 has been reviewed and concurred by Bridge Maintenance Section and FHWA. If you have any questions or require any additional information, please contact this office.

D.F./df
Attachment(s):
Current and Revised EDSM I.1.1.15

cc: David Miller – Chief Maintenance Engineer
Nick Fagerburg – Bridge Maintenance Administrator
Chad Winchester – Project Development Division Chief
Zhengzheng "Jenny" Fu – Bridge Design Engineer Administrator

RECOMMENDED FOR APPROVAL 6/10/21 DATE

RECOMMENDED FOR APPROVAL 6/10/21 DATE

RECOMMENDED FOR APPROVAL _____ DATE

APPROVED 6/14/2021 DATE

ENGINEERING DIRECTIVES AND STANDARDS

Volume	Chapter	Section	Directive Number	Effective Date
I	1	1	15	6/14/2021

SUBJECT: LOUISIANA BRIDGE LOAD RATING STANDARDS

1. **PURPOSE:** This directive establishes a policy for determining the live-load carrying capacity for all bridges.

2. **SCOPE:** This directive is applicable to all bridges located on public roads in the State of Louisiana.

3. **POLICY:** It is the policy of the Department that all public bridges carrying vehicular traffic in Louisiana be rated by an engineer at a frequency that will ensure an analysis that accurately reflects the current condition of the bridge. The frequency of rating/reviewing is dependent upon the National Bridge Inventory (NBI) structural condition ratings of the bridge as described in the latest bridge inspection reports or other conditions, as shown in Table 1.

4. **PROCEDURE:** Bridges will be structurally evaluated according to the AASHTO Manual for Bridge Evaluation, LADOTD Bridge Design and Evaluation Manual, FHWA Bridge Inspectors Reference Manual, LADOTD Engineering Directives and Standards Manual (EDSM) I.1.1.8, EDSM IV.4.1.2, and the LADOTD Bridge Inspection Manual (BIM).

   The "**Bridge Structure Load Rating Request Form**" is required for all on-system non-timber bridge ratings. The Form is posted on the LADOTD website under *Inside La DOTD >Divisions - Engineering > Bridge Design > DOTD Access Only > Bridge Structure Load Rating Request Form.*

   Load Rating shall consist of engineer review of the existing bridge rating and bridge inspection reports. If the rating report and analysis do not match the present conditions, a new analysis shall be performed. When it is determined that no significant structural load carrying capacity changes have occurred due to the bridge condition changes or repairs, an updated rating analysis is not required; however, review documentation is needed.

5. **RESPONSIBILITY:** The State Bridge Load Rating Engineer shall be responsible for the implementation of this policy to both the state-maintained (on-system) and non-state-maintained (off-system) public bridges.

   The Bridge Design Section bridge rating unit shall be responsible for managing and performing the on-system non-timber bridge ratings.

   The Bridge Maintenance Section shall be responsible for performing the timber bridge and timber-span ratings in accordance with this EDSM and the LADOTD BIM.

   For all bridges on public roads which are not located on the state-maintained highway system, the corresponding bridge owner is responsible for rating their bridges and complying with this EDSM, as well as the LADOTD BIM. Annual certification is required from the parish bridge owners (as stated in the LADOTD BIM Section 8.5: Off- System District Compliance) to satisfy the NBIS/FHWA/LADOTD policy. The Bridge Maintenance Section shall be responsible for managing off-system bridge load ratings.

Structural Conditions		Rating/Review Frequency
Lowest NBI Structural Condition Rating	Rating 0, 1	After corrective action is taken and before opening to traffic, and upon notification from Bridge Maintenance Section or District Bridge Engineers.
	Rating 2, 3, 4	1. Upon notification of structural condition rating drop from Bridge Maintenance Section or District Bridge Engineers, 2. Or every four (4) years
	Rating 5, 6	1. Upon notification of structural condition rating drop from Bridge Maintenance Section or District Bridge Engineers, 2. Or every eight (8) years
	Rating 7, 8, 9	Upon request from Bridge Maintenance Section or District Bridge Engineers
Other Conditions	No rating	Upon request from Bridge Maintenance Section or District Bridge Engineers
	Element Condition State (CS) 4	Upon notification of routine, in-depth, underwater, or fracture critical inspection type review from Bridge Maintenance Section or District Bridge Engineers
	As-Design Rating	As part of bridge design tasks
	As-Built Rating	Construction field changes (as reflected on as-built drawing) as part of a construction project and upon request from Project Managers or District Bridge Engineers
	Bridge Damage	Upon notification of structural damage from Bridge Maintenance Section or District Bridge Engineers
	overlay	As part of the design project and upon request from Project Managers and District Bridge Engineers
	Structural Rehabilitation Project	As part of the design project and upon request from Project Managers, Bridge Maintenance Section or District Bridge Engineers
	Structural Maintenance	As part of the work order and upon request from Bridge Maintenance Section or District Bridge Engineers. A new load rating analysis might be required when maintenance or improvement work, change in the strength of members, damaged primary member, or dead load has altered the condition or capacity of the structure.
	Timber Structure	1. Upon finding significant changes 2. Or every four (4) years

Table 1: Structural Conditions and Rating/Review Frequency

6. **OTHER ISSUANCES AFFECTED:** All directives, memoranda, or instructions issued heretofore in conflict with this directive are hereby rescinded.

7. **EFFECTIVE DATE:** This policy will become effective upon the signature of the Chief Engineer.

CHRISTOPHER P. KNOTTS, P.E.
CHIEF ENGINEER