With the introduction of the new AASHTO LRFR of highway bridges, there is a need to assess the impact of implementing the new manual on Alabama Department of Transportation’s (ALDOT)’s current bridge rating practices. The proposed package will include a discussion about the (1) load rating basics (such as need for rating, when to do rating, codes to be used, who can do rating, etc.); (2) load rating methods (ASR, LFR, LRFR, load testing) in brief with more emphasis on LRFR; (3) load models for LRFR (truck load, lane load, new AASHTO legal load); (4) load rating process; (5) LRFR limit states (strength, service, fatigue) and load factors; and (6) a step-by-step illustrative examples to calculate LRFR for different types of bridges. A comparison between LFR and LRFR will be presented in brief wherever necessary for better understanding and easy transition from LFR to new LRFR method. This project will assist bridge engineers to comprehend and implement state-of-the-art design methodologies for concrete bridge design and rating. It will highlight key design steps for concrete superstructure including decks and girders. It will focus on the unified method of design for reinforced and prestressed concrete. The LRFR package will include an overview of the latest AASHTO LRFR load rating procedures and practices as they relate to concrete bridges in Alabama.

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Subjects
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