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**Recommended Instructions for Signal Protection for Movable Bridges**

Revised 2025 (3 Pages)

**A. Purpose**

This Manual Part recommends instructions which apply to the installation, maintenance and testing of signal protection for movable bridges. They set forth general requirements representing recommended practice.

**B. General**

1. The normal functioning of any device shall not be interfered with without first taking measures to provide for safety of train operation which depends on normal functioning of such device. Temporary work, repairs or adjustments, when required, shall be made in such manner that safety of train operation will not be impaired. When repair, adjustment, change or replacement is made, tests shall be made immediately to determine that the apparatus functions as intended. When making tests of apparatus, proper instruments shall be used and it shall be known that no unsafe conditions are set up by the application of testing equipment.
2. Bridge locks, when required, and rail locks or rail seating circuit controllers or position sensors shall be installed so that expansion and contraction is accounted for and maintained to ensure bridge is correctly positioned and supported and movable bridge rails are correctly aligned and seated as follows:
  - a. Bridge lock or bridge lock mechanism shall be checked so that the bridge locking mechanism cannot be locked, or indicated as locked, unless the movable members are within 1 in (25.4 mm) of fully-locked position.
  - b. Surfacing wedges, when required, shall be checked fully driven to within 1 in (25.4 mm) of the position providing full support to the bridge.
  - c. Rail locks or rail seating circuit controllers or position sensors shall be arranged to ensure that movable rails are within  $\frac{3}{8}$  in (9.5 mm) of correct surface and alignment with fixed rails on bridge abutment or fixed span.
  - d. Sequence checking circuits should be used to monitor rail-seating devices to ensure that they properly follow rail movement during bridge openings and closures.
3. Equipment for checking and controlling operation of the bridge shall be installed and maintained so that the operation of each device occurs in a predetermined sequence.

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4. Apparatus shall be installed and maintained to ensure that before a derail, if provided, may be lined for train movement, and before a signal governing train movements over the bridge can display an aspect to proceed:
    - a. The bridge shall be in proper alignment and fully seated or supported.
    - b. Bridge locks and surface wedges, if required, are properly driven per B.2.a. and B.2.b.
    - c. Movable rails are aligned and seated per B.2.c. and B.2.d.
    - d. All power to movable parts of a bridge that could affect train movement is effectively and positively disconnected.
    - e. Trolley couplers, if required, are in proper alignment for electric train movement.
  
  5. Where movable bridge is part of an interlocking, the following shall apply:
    - a. Signal devices shall be so interlocked with bridge devices that before a signal governing movement over the bridge can display an aspect to proceed, the bridge shall be locked and the track aligned as required in B.2., B.3., and B.4.
    - b. When used, machines for operating devices which check the surface and alignment of rails, check bridge locking mechanism, or operate bridge circuit controller shall indicate when movement is completed and unit is locked.
    - c. Signal devices shall be so interlocked with bridge devices so that no bridge device can be operated unless all signal devices have functioned as intended to release the bridge.
    - d. Signal devices shall be operated in sequence so that the bridge operating mechanism cannot be released until:
      - (1) Home signals are at Stop and signal indication (time or approach) locking is released.
      - (2) Derails, if required, are in derailing position.
    - e. Signal devices shall be operated in sequence so that home signals cannot be cleared until:
      - (1) Bridge operating mechanism is locked and power is removed.
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- (2) All requirements listed in B.4. are in correct position for train movement.
  - (3) Derails, if required, are in correct position for train movement.
- 6. At the time tests are being made, careful examination of the locks and parts effective in the locking shall be made to determine that they are lubricated and in good working order. When defective condition or improper operation in bridge or rail locking is found, measures shall be taken to protect train movements and the proper authority notified.
- 7. Each circuit controller or position sensor system for signal circuits shall be maintained so that it will not indicate closed unless the bridge, wedges (if any) and rails are in correct position for train operation.
- 8. Signal protection for movable bridges shall be maintained and tested in accordance with these instructions and also insofar as they apply:
  - a. Manual Part 2.4.3 Recommended Instructions for Automatic Block Signal Systems.
  - b. Manual Part 2.4.10 Recommended Instructions for Interlockings.
- 9. Results of inspections and tests required shall be recorded as instructed.