

Section 12 - Footprint Program

12.1 Policy

1. Under the Highway Bridge Replacement and Rehabilitation Program (HBRRP), bridges with a sufficiency rating of less than 50.0 are eligible for Federal Bridge Replacement (BR) funding for replacement or rehabilitation while those with a sufficiency rating of 80.0 or less are eligible for Federal Bridge Rehabilitation (BH) funding for rehabilitation.
2. The following Parameters and Guidelines are intended to facilitate the replacement or rehabilitation of structurally deficient and/or functionally obsolete structures by utilizing a "Footprint Program" that will limit the scope of these projects. The intent is to limit the right-of-way and environmental impacts that normally occur when upgrading both the bridge and the approach roadways to desirable geometric standards and to classify these projects as a categorical exclusion.
3. The Parameters and Guidelines apply to both National Highway System (NHS) bridges as well Non-NHS bridges. All bridge projects must be designed to the *AASHTO LRFD Bridge Design Specifications* and to the stipulations that are stated within this Manual.

12.2 Design Parameters

1. A bridge may be replaced on the same line and grade or be relocated offline approximately one bridge width to the side if this better facilitates stage construction. The profile may also be changed as necessary to improve vertical underclearances. However, the shallowest superstructure feasible should be designed for the bridge in order to minimize changes to the roadway profile.
2. The profile and horizontal alignment shall transition back into the existing roadway as quickly as possible without creating substandard conditions or degrading existing substandard conditions. Design Exceptions for transition areas are to be in compliance with the current Design Exception Manual. In addition, provided that the historical crash data does not warrant the upgrade, it is not necessary to correct existing substandard profiles or horizontal sight distance conditions adjacent to or within the limits of the bridge.

If feasible, a bridge may also be lengthened or widened as needed to meet standards.

3. A Tier II environmental screening shall be performed. A determination shall be made during the Tier II process whether or not the project can be classified as a categorical exclusion and be delivered under the Footprint Program.

12.3 Guidelines

1. Prior to the beginning of Design, a report discussing the following guidelines, the recommended bridge improvement and the construction document conditions shall be submitted for concurrence with developing the project under the Footprint Program. This report should also state the design ADT, the design speed, the posted speed, and the geometric standards (controlling design elements information).
2. For bridges that are classified as structurally deficient and/or functionally obsolete the following conditions and remedies will apply:

- a. If the bridge is structurally deficient only, the proposed improvements must remove it from the structurally deficient category.
- b. If the bridge is both structurally deficient and functionally obsolete, the proposed improvements must remove it from the structurally deficient category and, ideally, remove it from the functionally obsolete category. However, if this cannot be achieved without major environmental, right-of-way or utility impacts, the project may still be considered for the Footprint program.
- c. If the bridge is functionally obsolete only, the proposed improvements will remove the bridge from the functionally obsolete category. OR, the proposed improvements must significantly reduce deficiencies in elements such as vertical and horizontal clearances.

Notes:

The current and projected traffic volumes should be considered to avoid designing a structure that is or will be inadequate due to capacity.

If the proposed bridge work involves a major rehabilitation or replacement, it will not be eligible for any Federal funds for 10 years after construction is completed. The decision to rehabilitate the structure must be based on the cost-effectiveness of rehabilitation versus new construction and consideration of this funding stipulation.

3. It shall be determined if the existing bridge is either on or eligible for the National Register of Historic Places or a contributing element of an historic district. If this is the case, the method of preservation is to be evaluated and a corresponding rehabilitation scheme must be considered. Also, if the bridge is on the National Register then Sections 106 and 4(f) requirements are to be considered in the project development.
4. Vehicular crash records at and near the existing bridge site are to be reviewed to determine whether geometric design improvements on the approach roadway may be necessary. If geometric improvements are warranted, the design speed shall be in accordance with the appropriate AASHTO/NJDOT standards.

If such improvements require major Right of Way, environmental or utility impacts, then the project should be removed from the Footprint Program. However, if minor safety features such as improved warning signs, permanent pavement markings, guide rail and new highway lighting satisfy the safety concerns, a project will still be eligible for the Footprint Program.

Note: Under this Program, major right of way, will be considered to be total acquisition, relocations and significant revisions to internal traffic circulation of a roadway.

5. The Footprint Program may include a structure that requires only minor right-of-way, environmental and utility impacts.
6. The minimum roadway width shall conform to the appropriate AASHTO/NJDOT standards or meet the approach roadway width, whichever is greater (provided the approach roadways are not excessively wide).
7. Context Sensitive Design elements may be considered (such as pedestrian and bicycle accommodations or lighting).

If warranted, sidewalks and/or wider lanes may be provided. Aesthetic enhancements may be considered on all projects consistent with the comments obtained from the meetings.

8. Rapid bridge construction techniques and /or prefabricated bridge elements and systems should be utilized wherever possible to reduce construction duration. In addition, innovative structural designs should be considered when conventional methods create one or more of the following:
 - excessive ROW impact
 - undesirable sight distance condition
 - other undesirable design element or costly mitigation effort