

**ATTACHMENT 7 – FHWA’S APPORTIONMENT PROCESS FOR HIGHWAY  
BRIDGE PROGRAM (HBP) FUNDS**

(9 pages)

## **THE APPORTIONMENT PROCESS FOR HIGHWAY BRIDGE PROGRAM (HBP) FUNDS**

---

The apportionment process for the Highway Bridge Program (HBP) funds involves the following steps: (1) gather National Bridge Inventory (NBI) and bridge construction unit cost (BCUC) information from States and federal agencies; (2) identify eligible bridges (Selection List); (3) compute State apportionment factors; and (4) compute the amount of HBP funds to be apportioned to each State. These steps and the intermediate steps in the process are discussed below.

### **Step 1 Gather NBI and BCUC information.**

NBI data updates are requested from the States and federal agencies once per year and these updates are required to be sent to the FHWA Office of Bridge Technology (HIBT) by April 1 of each year. The criteria for submitting the data are identified in an annual memorandum to field offices. States and federal agencies may elect to submit NBI data more frequently than once per year.

BCUC updates are also requested from the States once per year and these updates are required to be sent to HIBT by April 1 of each year. The criteria for submitting the data are identified in an annual memorandum to the field offices. BCUC are furnished in cost per square meter or cost per square foot of deck area and for on and off system bridges.

### **Step 2 Identify the eligible deficient bridges from the NBI data. [See Attachment 1 for the NBI Items which affect HBP apportionment and Sufficiency Rating (SR) calculations.]**

The bridges are currently identified as deficient according to NS 23 CFR 650D, <http://www.fhwa.dot.gov/legsregs/directives/fapg/0650dsup.htm> (Attachment 2). Bridges with a sufficiency rating of less than 50 will be eligible for replacement while bridges with a sufficiency rating of 80 or less will be eligible for rehabilitation.

### **Step 3 Compute State Apportionment Factors.**

The deck area is computed using the structure length (NBI Item 49) and deck width (NBI Item 52) for all eligible deficient bridge's in each State. The deck area divided up into bridges needing replacement and bridges needing rehabilitation. Each of these system) areas resulting in 4 categories. The deck area in each category is multiplied by the corresponding replacement or rehabilitation BCUC. The three year average of the BCUC is used as the replacement cost. The rehabilitation cost is 68% of the replacement cost.

**THE APPORTIONMENT PROCESS FOR  
HIGHWAY BRIDGE PROGRAM (HBP) FUNDS**

---

The sum of the four categories is the Abridge investment requirement" at the State level. If a State transfers money out of the HBP that amount is deducted from their bridge investment requirement the following fiscal year. The bridge investment requirement at the National level is the total of the State levels. By dividing the State level by the National level, a States apportionment factor is computed. The final factors then have the minimum 0.25 % minimum criteria and 10% maximum criteria applied. The final factors are given to FHWA’s Office of the Chief Financial Officer for the computation of funds.

Example of Step 3 Compute State Apportionment Factors

Compute Dollar Federal-aid Replacement Needs	Compute Dollar Federal-aid Rehabilitation Needs	Compute Dollar Non Federal-aid Replacement Needs	Compute Dollar Non Federal-aid Rehabilitation Needs
Total All System Needs			
Minus Amount Transferred			
Adjusted Total All System Needs			
Compute Factor by dividing each State dollar amount into National Total			
Adjust to ¼% Min and 10% Max for Final Factor for Budget Office			

Step 4 Compute the funds to go to each State. Step 4 is done by the Office of Budget and Finance

Step 4.1 Determine Bridge Program authorization level [PL 109-59 ' 1101(a)(3)]

Step 4.2 Determine metropolitan planning takedown percentage [shall set aside 1.25% as stated in 23 U.S.C. ' 104(f)(1)]

Step 4.3 Determine discretionary set-asides [23 U.S.C. ' 144(g)(1)]

**THE APPORTIONMENT PROCESS FOR  
HIGHWAY BRIDGE PROGRAM (HBP) FUNDS**

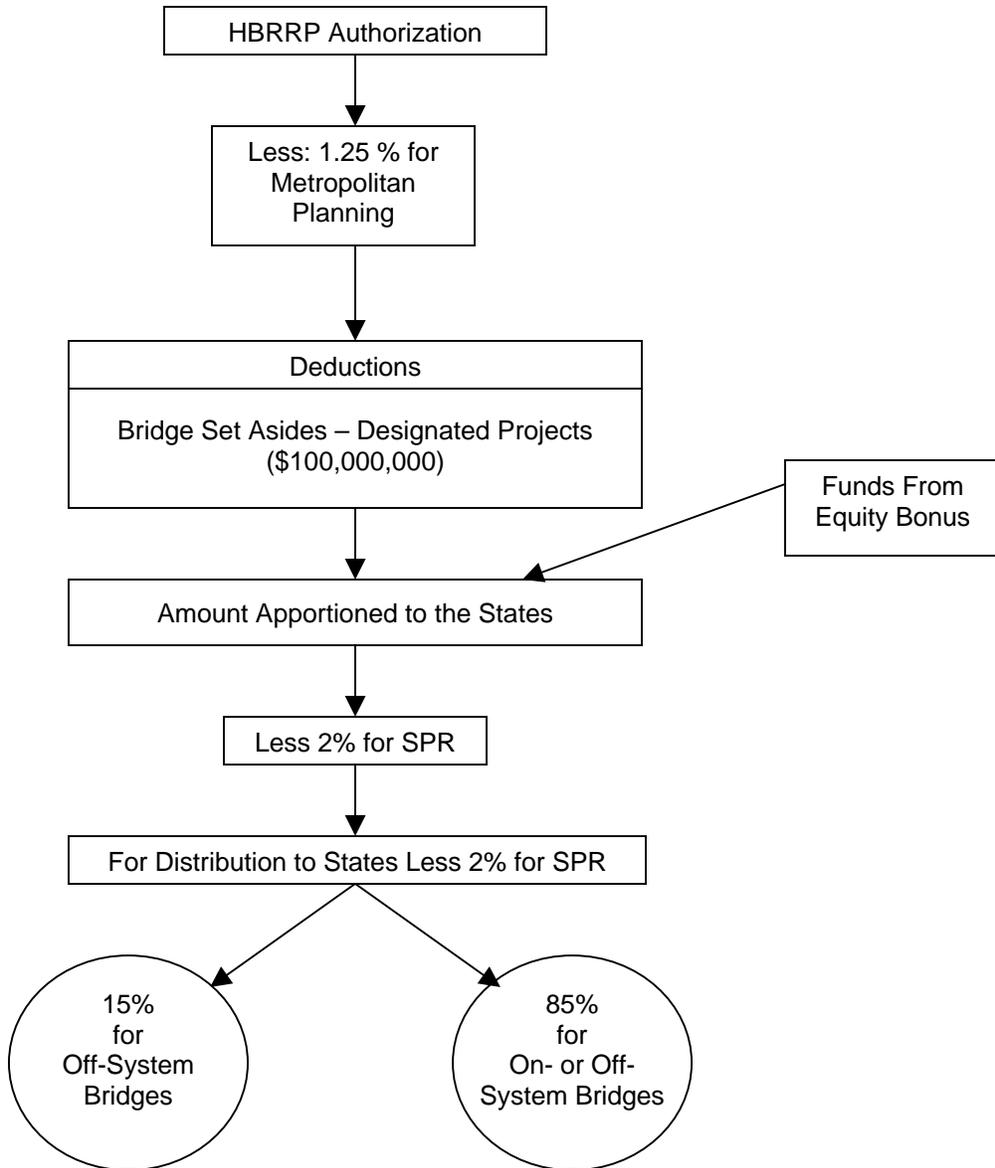
---

- Step 4.4 Determine amount of funds available for apportionment under 23 U.S.C. ' 144 (See diagram on Page 3)
- Authorization (1)
  - Authorization (1) minus Metropolitan Planning takedown percentage
  - Net Authorization (2)
  - Net Authorization (2) minus Discretionary Set-asides
- Amount of funds available for apportionment under 23 U.S.C. ' 144
- Step 4.5 Amount of funds available for apportionment under 23 U.S.C. ' 144 is multiplied by the bridge factors provided by HIBT. The bridge factors have already been adjusted to ¼% minimum and 10% maximum (by HIBT) prior to having been forwarded to the FHWA's Office of the Chief Financial Officer.
- Step 4.6 Compute Equity Bonus, 23 U.S.C. ' 105, and add to each States apportioned funds.
- Step 4.7 Compute ½% of 1% of funds apportioned to each State as a limiting amount pursuant to 23 U.S.C. ' 140(b) for skills training. Limiting amount is split between the 2 bridge classifications:
- 15% for off-system bridges
  - 85% for either on- or off-system bridges
- Step 4.8 Compute 2% of funds apportioned to each State as a set-aside for Statewide Planning and Research pursuant to 23 U.S.C. ' 505 and deduct from funds apportioned to each State yielding a net apportionment.
- Step 4.9 Split net apportionment between the 2 bridge classifications:
- 15% for off-system bridges
  - 85% for either on- or off-system bridges

**THE APPORTIONMENT PROCESS FOR  
HIGHWAY BRIDGE PROGRAM (HBP) FUNDS**

---

Example of Step 4 (Sub-Steps 1 through 9):



**THE APPORTIONMENT PROCESS FOR  
HIGHWAY BRIDGE PROGRAM (HBP) FUNDS**

---

ATTACHMENT 1

The following table lists NBI Items that directly and indirectly affect HBRRP eligibility and apportionments. Items in **bold** may have multiple effects or are particularly important. Please note that the list may not be completely inclusive.

<b>NBI ITEMS THAT AFFECT</b>	<b>ITEMS</b>	<b>DESCRIPTION</b>
STRUCTURALLY DEFICIENT OR FUNCTIONALLY OBSOLETE (SD/FO) See FHWA FAPG NS 23 CFR 650D (excerpt follows) for complete SD/FO criteria.	<b>58</b>	<b>Deck</b>
	<b>59</b>	<b>Superstructure</b>
	<b>60</b>	<b>Substructure</b>
	<b>62</b>	<b>Culverts</b>
	<b>67</b>	<b>Structural Evaluation</b>
	<b>68</b>	<b>Deck Geometry</b>
	<b>69</b>	<b>Underclear, Vertical &amp; Horizontal</b>
	<b>71</b>	<b>Waterway Adequacy</b>
	<b>72</b>	<b>Approach Roadway Alignment</b>
SUFFICIENCY RATING (SR) See FHWA Coding Guide, Appendix B, for SR formula and example.	<b>19</b>	<b>Bypass/Detour Length</b>
	28	Lanes On/Under Structure
	<b>29</b>	<b>Average Daily Traffic</b>
	32	Approach Roadway Width
	36	Traffic Safety Features
	<b>43</b>	<b>Structure Type, Main</b>
	51	Bridge Roadway Width Curb-To-Curb
	53	Min Vert Clear Over Bridge Roadway
	<b>58</b>	<b>Deck</b>
	<b>59</b>	<b>Superstructure</b>
	<b>60</b>	<b>Substructure</b>
	<b>62</b>	<b>Culverts</b>
	<b>66</b>	<b>Inventory Rating</b>
	<b>67</b>	<b>Structural Evaluation</b>
	<b>68</b>	<b>Deck Geometry</b>
	<b>69</b>	<b>Underclear, Vertical &amp; Horizontal</b>
	<b>71</b>	<b>Waterway Adequacy</b>
<b>72</b>	<b>Approach Roadway Alignment</b>	
<b>100</b>	<b>STRAHNET Highway Designation</b>	
INDIRECT ITEMS These are Items that affect the above Items used for: < determining if a bridge is	5	Inventory Route
	<b>26</b>	<b>Functional Classification</b>
	<b>27</b>	<b>Year Built</b>
	<b>42</b>	<b>Type of Service</b>

**THE APPORTIONMENT PROCESS FOR  
HIGHWAY BRIDGE PROGRAM (HBP) FUNDS**

---

<b>NBI ITEMS THAT AFFECT</b>	<b>ITEMS</b>	<b>DESCRIPTION</b>
< structurally deficient or < functionally obsolete (SD/FO); < sufficiency rating (SR) < calculations; and < deck area calculations.	<b>49</b>	<b>Structure Length</b>
	<b>52</b>	<b>Deck Width, Out-to-Out</b>
	54	Min Vertical Underclearance
	55	Min Lateral Underclearance on Right
	56	Min Lateral Underclearance on Left
	<b>75</b>	<b>Type of Work</b>
	<b>106</b>	<b>Year Reconstructed</b>

**THE APPORTIONMENT PROCESS FOR  
HIGHWAY BRIDGE PROGRAM (HBP) FUNDS**

---

FEDERAL-AID POLICY GUIDE  
September 30, 1992, Transmittal 5

NS 23 CFR 650D

ATTACHMENT 2  
NON-REGULATORY SUPPLEMENT (Excerpt)

OPI: HNG-33

9. HIGHWAY BRIDGE REPLACEMENT AND REHABILITATION PROGRAM (23 CFR 650.409). The National Bridge Inventory will be used for preparing the selection list of bridges both on and off of Federal-aid highways. Highway bridges considered structurally deficient or functionally obsolete and with a sufficiency rating of 80 or less will be used for the selection list. Those bridges appearing on the list with a sufficiency rating of less than 50.0 will be eligible for replacement or rehabilitation while those with a sufficiency rating of 80.0 or less will be eligible for rehabilitation. To be considered for the classification of deficient bridge, a structure must be of bridge length, and had not been constructed or had major reconstruction within the past 10 years.

- a. General Qualifications: In order to be considered for either the structurally deficient or functionally obsolete classification a highway bridge must meet the following:

Structurally Deficient -

1. A condition rating of 4 or less for  
Item 58 - Deck; or  
Item 59 - Superstructures; or  
Item 60 - Substructures; or  
Item 62 - Culvert and Retaining Walls.<sup>1</sup> or
2. An appraisal rating of 2 or less for  
Item 67 - Structural Condition; or  
Item 71 - Waterway Adequacy.<sup>2</sup>

Functionally Obsolete -

1. An appraisal rating of 3 or less for  
Item 68 - Deck Geometry; or  
Item 69 - Underclearances;<sup>3</sup> or  
Item 72 - Approach Roadway Alignment. or

---

<sup>1</sup> Item 62 applies only if the last digit of Item 43 is coded 19.

<sup>2</sup> Item 71 applies only if the last digit of Item 42 is coded 0, 5, 6, 7, 8 or 9.

<sup>3</sup> Item 69 applies only if the last digit of Item 42 is coded 0, 1, 2, 4, 6, 7 or 8.

**THE APPORTIONMENT PROCESS FOR  
HIGHWAY BRIDGE PROGRAM (HBP) FUNDS**

---

2. An appraisal rating of 3 for  
    Item 67 - Structural Condition; or  
    Item 71 - Waterway Adequacy.<sup>2</sup>
- b. Any bridge classified as structurally deficient is excluded from the functionally obsolete category.