
Office of Inspector General
Audit Report

Inspection of Federally Owned Bridges

Federal Highway Administration

Report Number: TR-1998-079

Date Issued: February 11, 1998





U.S. Department of
Transportation

Office of the Secretary
of Transportation

Office of Inspector General

Memorandum

Subject: INFORMATION: Report on Audit
of Inspection of Federally Owned Bridges
Report No. TR-1998-079

Date: February 11, 1998

From: 
Lawrence H. Weinrob
Assistant Inspector General for Auditing

Reply to: JA-1
Attn of:

To: Federal Highway Administrator

We are providing this report for your information and use. Your December 11, 1997 comments on our November 7, 1997 revised draft report were considered in preparing this report. A synopsis of the report follows this memorandum.

In your comments to the draft report, you concurred with or provided alternative actions for all three recommendations. We consider your comments and planned actions to be responsive to all recommendations. Therefore, the recommendations are resolved subject to the followup provisions of Department of Transportation Order 8000.1C.

We appreciate the cooperation and assistance provided by your staff during the audit. If I can answer any questions or be of further assistance, please contact me on x61992 or Alexis M. Stefani, Deputy Assistant Inspector General for Aviation on x60500.

Attachment

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Inspection of Federally Owned Bridges

Federal Highway Administration

Report No. TR-1998-079

February 11, 1998

Objectives

The objectives of the audit were to determine whether (1) the Federal Highway Administration (FHWA) has reasonable assurance that federally owned bridges on public roads are properly inventoried, reported, and inspected, and (2) quality inspections are being performed in accordance with the National Bridge Inspection Standards (NBIS). This is the third in a series of Office of Inspector General (OIG) audits conducted in response to recommendations by the National Transportation Safety Board that the OIG review FHWA's Bridge Inspection Program. The prior two OIG audits addressed non-Federal bridges.

Results-in-Brief

The United States has approximately 580,000 bridges that are open to the public. Of these bridges, approximately 10,000 are owned and maintained by 14 Federal agencies. The Department of Agriculture, for example, owns approximately 6,000 bridges, which are mostly on lands operated by the Forest Service. Federally owned bridges open to the public typically are small two-lane bridges. The one significant exception to the typical federally owned bridge is the Woodrow Wilson Bridge which spans the Potomac River and connects Interstate 495 between Maryland and Virginia. The remaining 570,000 bridges are the responsibility of state and local governments.

FHWA is responsible for maintaining the National Bridge Inventory (NBI) and publishing a biennial report to Congress on the number and condition of all the Nation's bridges. Although FHWA has the authority to ensure the state and local governments properly report NBI data and comply with the NBIS, FHWA does not have similar statutory authority over the Federal agencies. FHWA has taken positive oversight actions to improve Federal agency bridge data. For example, FHWA has provided training and technical assistance to the Federal agencies on their NBI reporting activities. While these actions have been successful, further improvements can be made.

Our audit disclosed that FHWA does not have reasonable assurance that federally owned bridges are properly inventoried, reported, or inspected. Consequently, the safety of these federally owned bridges cannot be assured. We found that the NBI did not include over 47 percent (about 4,770) of the total number of federally owned bridges. The Forest Service only reported 2,915 of its approximate 6,000 bridges open to the public, while the Corps of Engineers had 84 bridges less than reported in the NBI. We also found that the NBI did not properly reflect the conditions of federally owned bridges open to the public. We visited 34 bridges that were in the NBI and found that the NBI data for 16 bridges differed from our observations. For example, at four of the bridges the NBI data indicated they should be closed, yet the agency's onsite engineer found them to be in good condition and open to the public. Six bridges were reported as being load posted as to the maximum vehicle weight permitted, but there were no signs by the bridges to reflect weight limitations. If the reported data are accurate, these conditions pose safety issues for vehicles which exceed the bridges' weight limitations. In addition, we found that the NBI did not accurately reflect the results of inspections. FHWA did not have adequate edit checks to ensure the accuracy of this information before incorporating it into the NBI.

Our review of 21 bridge inspection reports disclosed that those inspections generally followed the NBIS. However, we found that 25 percent (about 1,290) of the bridges in the NBI were not inspected within the NBIS's 2-year timeframe. Further, Army officials told us that they had not required bridge inspections to meet the NBIS but are currently updating the Army's bridge inspection program to conform with the NBIS.

Currently, FHWA's oversight of federal bridge data is limited to collecting, editing, and reporting of inspection results. FHWA's oversight does not include performing detailed reviews to ensure the bridge data are accurate, bridges are properly posted or closed, and inspections are conducted in accordance with the NBIS.

As required under the Government Performance and Results Act (GPRA), FHWA has identified specific performance measures for its federally owned bridge program. FHWA's criteria for these performance measures are based on the structural adequacy of bridges owned by other Federal agencies. However, these other agencies and not FHWA have authority and control over the structural adequacy of these bridges. Therefore, FHWA's performance measures for its federally owned bridge program are not appropriate measures of the outcomes of FHWA's performance. Further, by improving the data on federally owned bridges, FHWA would be better able to measure its performance and the safety of federally owned bridges.

Recommendations

To improve the integrity of federally owned bridge data, we recommended that FHWA increase its oversight of the data, including better analysis of NBI data and incorporation of improved data edit checks. We also recommended that FHWA should seek authority through rulemaking or legislative action to oversee the other Federal agencies to ensure that federally owned bridges on public roads are properly inventoried, reported, and inspected in accordance with the NBIS. Until FHWA obtains oversight authority and improves the federally owned bridge data, we recommended FHWA qualify the biennial report to Congress by clearly disclosing that the information on federally owned bridges was not verified for completeness and accuracy.

Management Comments

FHWA concurred with our recommendation to increase its oversight efforts to improve federally owned bridge data and proposed alternate actions to our other recommendations. Rather than request statutory authority, FHWA proposed to work in active cooperation with the Federal agencies to continue improving NBIS compliance. For example, FHWA will enter into interagency memorandums of understanding with each Federal agency by September 30, 1998. These memorandums will include requirements for these agencies to maintain an effective and comprehensive bridge inspection program. Although FHWA does not consider it appropriate to disclaim its biennial report to Congress, it proposed adding explanatory information in future reports that will provide an accurate picture of federally owned bridges. With respect to our comments on GPRA reporting, FHWA stated that it is incorporating outcome-related measures in its performance plan which will be submitted with its Fiscal Year 1999 budget. Additionally, FHWA is working to improve the data needed to assess its performance.

Office of Inspector General Response

OIG considers FHWA's proposed actions responsive to our recommendations. Therefore, the recommendations are resolved subject to the followup provisions of Department of Transportation Order 8000.1C.

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I. INTRODUCTION

Background

This is the third in a series of Office of Inspector General (OIG) audits conducted in response to recommendations by the National Transportation Safety Board (NTSB) that the Inspector General review the Federal Highway Administration (FHWA) Bridge Inspection Program for sufficiency in establishing compliance with the National Bridge Inspection Standards. The prior two audits addressed non-Federal bridges. This review addresses bridges owned and maintained by Federal agencies.

The United States has more than 580,000 bridges that are open to the public. The vast majority of these bridges are the responsibility of the state and local governments. However, approximately 10,000 bridges open to the public are owned and maintained by 14 Federal agencies. The Department of Agriculture, for example, owns approximately 6,000 bridges throughout the country. These are mostly on lands operated by the Forest Service.

The Federal-Aid Highway Act of 1968 established the National Bridge Inspection Program. In the 1970 Federal-Aid Highway Act, Congress directed the Secretary of Transportation to inventory all bridges on the Federal-aid highway systems over waterways and other topographical barriers; classify them according to their serviceability, safety, and essentiality for public use; and assign each a priority for replacement. The 1970 Act also required the Secretary of Transportation to biennially report findings and the status of the Nation's highway bridges to the Senate and the House of Representatives and recommend necessary improvements to the program. In 1978, the Surface Transportation Assistance Act expanded FHWA's bridge program to include bridges on all public roads, including those owned by Federal agencies.

In 1971, to satisfy the mandate of Congress, FHWA issued the National Bridge Inspection Standards (NBIS). The primary purpose of the NBIS is to locate, inspect, evaluate, and act on the existing bridge deficiencies to assure that the bridges are safe for the traveling public. Evaluation of each bridge's load carrying capacity is an essential part of the NBIS. If problems are found in an inspection, bridges are to be either (1) repaired to correct noted deficiencies, (2) "posted" as to their load capacity with respect to size and weight, or (3) closed to vehicular traffic. While the bridge inspector recommends required action, the bridge owner is responsible for repairing, posting restrictions, or closing the bridge. Prompt, appropriate action by bridge owners to fix, post, or close bridges is essential and necessary to protect motorists from potential bridge hazards.

The NBIS applies to all bridges on roads open to public travel. Title 23, United States Code, defines "public road" as ". . . any road or street under the jurisdiction

of and maintained by a public authority and open to public travel.” This includes federally owned bridges on roads open to the public. Bridge owners are responsible for carrying out the inspection and inventory of their bridges and reporting inventory and inspection data to FHWA. The NBIS does not apply to federally owned bridges on roads where a Federal agency restricts public access.

The National Bridge Inventory (NBI) is FHWA’s computerized database of all relevant information on the Nation’s bridges open to the public. The NBI is used by FHWA to produce the biennial report to Congress.

Objectives, Scope and Methodology

The objectives of this audit were to determine whether (1) FHWA has reasonable assurance that federally owned bridges on public roads are properly inventoried, reported, and inspected and (2) quality inspections are being performed in accordance with the NBIS. The audit was conducted from August 1995 through December 1996. We utilized NBI data as of June 30, 1995. This data was current at the time of our audit and was used by FHWA to prepare its June 1995 biennial report to Congress. On June 30, 1995, the NBI contained 5,194 federally owned bridges. The bridges were owned, operated, and maintained by 14 Federal agencies.

To determine the extent of FHWA’s oversight of federally owned bridges, we met with officials at FHWA Headquarters in Washington, D.C., FHWA Federal Lands Highway Division Office in Sterling, Virginia, and FHWA Division and State Highway Offices in Baltimore, Maryland, and Richmond, Virginia. We visited or contacted eight Federal agencies (see exhibit A) to determine their policies and procedures over the inventory, reporting, and inspection of their federally owned bridges. The 8 agencies were judgmentally selected based on the number of bridges owned from the 14 agencies with federally owned bridges.

We assessed the quality and completeness of the NBI data on federally owned bridges maintained by the FHWA Bridge Division and reported to Congress by comparing NBI data with data from Federal agencies and state highway administrations. We visited 34 bridges that were included in the NBI to determine whether their physical status agreed with the reported status in the NBI. We also visited 38 non-NBI bridges to determine whether they should have been reported in the NBI. These 72 bridges were owned by the Department of Agriculture’s Forest Service in Pennsylvania and Virginia; the Department of Interior’s National Park Service in Pennsylvania, New Jersey, Maryland, Virginia, and Washington, D.C.; the U.S. Army Corps of Engineers in Pennsylvania and Maryland; and the U.S. Army at Fort Belvoir, Virginia.

To determine the management controls over federally owned bridge data included in the NBI, we reviewed FHWA's policies and procedures for the submission of such data from Federal agencies. We reviewed FHWA's controls to ensure that (1) all federally owned bridges were included in the NBI and (2) the NBI data reflected the actual status of the bridges. We did not test or review the integrity of FHWA's computerized Edit/Update Program. FHWA electronically processes received bridge data through its Edit/Update Program for the purposes of ensuring that the data are complete and accurate. The program generates error and reasonableness lists; checks the calculations of certain data fields; and produces summary reports. Although we reviewed examples of the program's outputs, we did not test the integrity of the program nor did we examine the program's computer documentation. As we discuss in this report, our audit did identify omissions and errors in the Federal bridge data indicating that the program has deficiencies and can not be relied on as an adequate management control.

We assessed the quality of inspections and the controls over these inspections through discussions with agency officials, analyses of 21 bridge inspection reports, and our physical visits to the bridges. The 21 inspection reports (15 on NBI bridges and 6 on non-NBI bridges) were reviewed by the OIG engineer to determine the completeness and compliance with NBIS.

This audit was conducted in accordance with Government Auditing Standards prescribed by the Comptroller General of the United States and included such tests of the procedures and records considered necessary in the circumstances. Audit steps were designed to provide reasonable assurance of detecting abuse or illegal acts. We also obtained information on FHWA's performance measures on federally owned bridges.

Part II of this report describes our finding and recommendations and includes the management control weaknesses that we identified. The "Other Matters" section of Part II discusses our concerns with (1) the manner of presentation of federally owned bridge data in FHWA's biennial report to Congress and (2) the FHWA's performance measures associated with its federally owned bridge program.

Prior Audit Coverage

The OIG has not performed a prior audit of federally owned bridges. However, in response to the NTSB recommendations, the OIG has completed two audits of state and local bridges. The Audit of the National Bridge Inspection Program, Report Number AS-FH-8-007, dated January 15, 1988, addressed bridges on the Federal-aid system. The audit generally showed that states had not performed underwater inspections, established internal controls, or conducted thorough inspections. The Audit of Inspection of Off-System Bridges, Report Number AS-FH-2-014, dated

March 9, 1992, concluded that, while FHWA had taken action to strengthen controls over states, additional improvements to state statutes, FHWA orders, and the American Association of State Highway Transportation Officials (AASHTO) Manual for Maintenance and Inspection of Bridges were needed to insure full states' compliance with the NBIS for "off-system" bridges (i.e., bridges located on public roads which are not part of the Federal-aid system). In response to the above reports, FHWA took appropriate corrective actions which resolved all our recommendations.

II. FINDING AND RECOMMENDATIONS

Finding. Data on Federally Owned Bridges Should be Improved

FHWA does not have reasonable assurance that federally owned bridges on public roads are properly inventoried, reported, or inspected. We found that the NBI did not include all federally owned bridges and did not have accurate information on bridge conditions or the results of inspections. In addition, while the bridge inspections that we reviewed generally followed the NBIS, approximately 25 percent of the federally owned bridges in the NBI were not inspected every 2 years as required. Furthermore, one agency (the Army--excluding the Corps of Engineers) did not report any information to the FHWA and did not require its bridge inspections to meet the NBIS. The above data weaknesses occurred in part because FHWA (1) performed limited oversight to ensure the federally owned bridge information in the NBI was complete and accurate and (2) does not have statutory authority to review and assess compliance with NBIS at other Federal agencies. As a result, the NBI and FHWA's biennial report to Congress in regard to federally owned bridges are inaccurate and incomplete.

Inspection and Reporting Requirements

Title 23, Code of Federal Regulations (CFR), Chapter 1, Subpart C of Part 650 prescribes that bridge owners follow the requirements of the NBIS. The NBIS defines the bridges to be covered by the requirements, frequency of inspections, qualifications of inspection personnel, and data to be collected. The following are inspection requirements of the NBIS:

1. Each agency is required to have a bridge inspection organization capable of performing inspections, preparing reports, and determining ratings in accordance with the provisions of the AASHTO manual and the CFR.
2. Most bridges are to be inspected at a regular interval not to exceed 2 years. However, certain bridges, because of structural deficiencies, require inspection at less than 2-year intervals. Additionally, under certain circumstances, the interval can be extended up to 4 years but only upon request and with explicit FHWA approval.
3. Each bridge shall be rated as to its safe load carrying capacity. If a bridge's calculated load rating is less than the maximum legal load under state law, then the bridge must be posted as to the permitted load or closed.

4. The findings and results of bridge inspections, including the safe load ratings, shall be recorded on Structure Inventory and Appraisal (SIA) sheets which are submitted to the NBI.

Additionally, the Highway Bridge Replacement and Rehabilitation Program (23 CFR, Chapter 1, Subpart D, Part 650) requires FHWA to assign a sufficiency rating to each bridge in the NBI in accordance with the approved AASHTO formula. The sufficiency ratings are used as a basis for establishing eligibility and priority for replacement and rehabilitation of bridges.

FHWA's Office of Engineering collects NBI data from states and Federal agencies, updates the NBI, and prepares the report to Congress. FHWA performs an annual review of each state's bridge program, including an assessment of its bridge inspections. However, FHWA does not have authority to provide similar reviews and assessments of Federal agencies' bridge programs.

Although FHWA does not have authority to conduct assessments over other Federal agencies, it has the responsibility to collect and report on the condition of all bridges, including federally owned bridges. Prior to Fiscal Year (FY) 1995, the Federal agencies reported the results of inspections of their bridges to the individual state departments of transportation where the bridges were located. The states, in turn, included the federally owned bridge inspections with their data submitted annually to FHWA for inclusion into the NBI. In December 1994, FHWA changed reporting procedures for Federal agencies. The new procedures require the Federal agencies to submit the inspection results directly to FHWA Headquarters for inclusion into the NBI. FHWA then submits the data to the states for their bridge inventories.

In an effort to improve reporting activities, FHWA has conducted periodic meetings and provided training, bridge inspection reference materials, and technical assistance to other Federal agencies to improve their NBI reporting. One positive result of these actions is that the inventory of federally owned bridges improved from 2,700 in 1993 to 5,194 in 1995. Despite FHWA's actions to improve NBI reporting, the federally owned bridge inventory is incomplete, bridge conditions and inspection results are not properly reflected in the NBI, and bridge inspections are not performed within NBIS timeframes.

NBI Information on Federally Owned Bridges Was Incomplete

The NBI information on federally owned bridges was incomplete. FHWA's biennial report dated June 1995 was based on NBI data and included only 5,194 federally owned bridges. However, discussions with Federal agencies indicated approximately 4,770 federally owned bridges were not reported to FHWA for

inclusion in the NBI but should have been included. Our review identified 14 Federal agencies owning approximately 10,000 bridges that were open to public use and met the NBI criteria for reporting. Four agencies did not report any of their 1,689 bridges, and the other 10 agencies did not report about 3,083 of their 8,277 bridges. Details of the inventory are provided in the following chart.

Inventory of Federally Owned Bridges

Federal Agency	Bridges in Agency Records	Bridges in NBI	Differences
Agriculture/ Forest Service	6,000	2,915	3,085
Interior/ National Park Service	1,219	1,238	(19)
Interior/ Bureau of Indian Affairs	745	688	57
Interior/ Bureau of Land Management	484	0	484
Defense/ Army	987	0	987
Defense/ Corps of Engineers	250	334	(84)
Defense/ Navy	150	0	150
Defense/ Marine Corps	68	0	68
Other Federal agencies (6 agencies)	63	19	44
Totals	9,966	5,194	4,772

The Forest Service only reported 2,915 of its estimated 6,000 bridges.¹ According to the Forest Service, two of its divisions did not submit any NBI data for the 1995 biennial report. The Forest Service subsequently submitted data for these two divisions. The data was included in the May 1997 biennial report and in the NBI. However, submitting this data did not resolve the problem. While the NBI now contains 3,382 Forest Service bridges, approximately 45 percent of its bridges remain unreported.

¹The Forest Service also owns 4,000 additional bridges which do not meet NBI criteria, such as those bridges less than 20 feet long or restricted for special use.

The Bureau of Land Management, Army, Navy, and Marine Corps did not report any of their 1,689 bridges that met NBI criteria. Officials from these agencies acknowledged that they did not forward an inventory of their bridges to FHWA but indicated that bridge reporting systems were being developed to correct this oversight.

Although FHWA requested complete inventory information from all agencies, it did not have an effective system to ensure the inventory was complete and accurate before filing its biennial report to Congress. We recognize that FHWA does not have the authority to enforce reporting requirements. However, FHWA should establish better controls over submissions by Federal agencies and continue to assist all agencies in complying with their reporting requirements.

Bridge Condition Improperly Reflected in the NBI

For the 5,194 federally owned bridges that were reported in the NBI, the conditions and postings of the federally owned bridges as reflected in the NBI did not always agree with the OIG's observed bridge conditions. We conducted a physical verification of 34 federally owned bridges in the NBI and found that 16 bridges had postings or closing notices that were different than the status reported in the NBI. The discrepancies we found were as follows:

- Four bridges that were open and in good condition had been reported in the NBI as "should be closed." The agency onsite engineer told us that the "should be closed" classifications in the NBI were incorrect.
- Six bridges that were not posted had been reported as "load posted." We could not determine whether the status in the NBI for these bridges was correct. If the NBI information is correct, this condition poses a safety hazard for vehicles which exceed the bridges' load limitations.
- Four bridges that were posted had been reported as "unposted."
- One bridge that was closed had been reported as "posted."
- One bridge had been reported twice.

The above reporting errors reduced the integrity of the NBI.

Inspection Results Not Accurately Reported in the NBI

The results of bridge inspections by Federal agencies were not always reported accurately to the NBI. An independent assessment by the OIG engineer of 21 bridge inspection reports identified incomplete Structure Inventory and Appraisal (SIA) sheets and inconsistencies between load ratings and bridge inspection/appraisal items. The data on the SIA sheets are used to rate, appraise, and determine the need to post bridges and perform required maintenance actions. Additionally, the SIA sheets are the support for the bridge data FHWA uses to compile the NBI. The agencies reviewed did not have adequate controls over the inspection results to ensure that the appraisal and rating information on the SIA sheets provide a correct assessment of bridge conditions. As a result, the NBI contains incorrect bridge inspection/appraisal data.

SIA sheets prepared by the Park Service were incomplete and inaccurate and resulted in inaccurate bridge assessments. The SIA sheets prepared by the Park Service did not contain functional classification data items that identified the types of vehicle loads using the bridge routinely. Engineers that inspected the Park Service bridges stated that, although not documented in the bridge inspection reports, these bridges are considered to be located on "local roads and streets." This type of bridge must be able to carry school buses and emergency vehicles which may weigh up to 15 tons--the lowest weight limit allowed by the Park Service for the types of vehicles routinely using the bridges on its local roads or streets.

One SIA sheet submitted by the Park Service provides an example of an inaccurate bridge assessment. This particular SIA sheet contained inconsistencies between the data items for bridge posting, and the corresponding reported load rating. On this SIA, the Park Service showed the operating rate to be 4 tons. This rate equates to 73 percent below the assumed legal load of 15 tons. However, the Park Service incorrectly coded the bridge posting data item on this sheet and incorrectly indicated that the operating rating was only 30-40 percent below the assumed legal load.

Another inaccuracy found on the Park Service SIA sheet was the data item for structural evaluation of "equal to present minimum criteria" was inconsistent with the low load ratings and the posting codes reported on the SIA. The 1995 inspection report noted that the deficient bridge deck was replaced because it controlled the low load carrying capacity ratings previously reported. However, replacing the deck did not result in increasing the load ratings or eliminating the need for posting.

Before accepting data for inclusion into the NBI, FHWA performs edit checks to test for proper formatting of the data and to identify inconsistencies among data elements. When the edit checks identify data errors that need correcting, the FHWA Federal Lands Highway Office is suppose to contact the responsible agency and

request that it submit corrected NBI data. However, as noted above, the existing edit checks and FHWA oversight did not provide an adequate control to ensure data accuracy and consistency between the data elements.

Bridge Inspections Not Performed in Accordance With NBIS

An analysis of bridge data indicated Federal agencies were not performing bridge inspections within NBIS timeframes. The NBI data indicated 1,289 of the 5,194 federally owned bridges (25 percent) were not inspected within 2 years, as required in the NBIS. There was no record of any Federal agency requesting FHWA to waive the 2-year requirement. Further, Federal agencies indicated that their systems did not ensure timely inspections were performed. For example, while the Forest Service had regulations in place requiring inspections every 2 years, it did not have a system to collect and analyze bridge data and to ensure the inspection requirements were met. FHWA is working with the Forest Service to improve overall control over its bridge inspection program, including the timeliness of inspections.

In addition, agencies that did not report NBI data had weaknesses in their bridge inspection programs. For example, the Army (excluding the Corps of Engineers) did not require bridge inspections every 2 years; it only recommended inspections within a 3-year period. Further, the Army did not require inspections to meet the NBIS or to be reported on appropriate summary sheets. The Army did not have an inventory system that identified posted, structurally deficient, and functionally obsolete. With FHWA assistance, the Army is updating its bridge program to conform with NBIS inspection and reporting requirements. Additionally, the Navy and the Marine Corps are working with FHWA engineers to improve the timeliness and quality of their bridge inspections. FHWA should increase oversight to ensure inspections are performed timely and continue to work with Federal agencies to improve their bridge programs.

Furthermore, we looked at SIA sheets for six Forest Service bridges that are not in the NBI. The SIA sheets prepared by a Forest Service office for bridges in the George Washington National Forest omitted many data items needed for accurate appraisals. In our assessment of these SIA sheets, we noted the Forest Service omitted SIA items such as average daily traffic, width of approach, roadway functional classification, and posting information. These omitted data items were required for inventory and appraisal. Because of the omissions, we have no assurance that the inspections were properly performed.

Conclusion

In the past 2 years, FHWA increased its efforts to improve the accuracy and completeness of the NBI data provided by Federal agencies. The NBI data used to prepare the May 1997 biennial report reflects an inventory of 6,121 federally owned bridges, an increase of approximately 900 bridges from the 1995 report. While the number of federally owned bridges in the NBI increased, the federally owned bridge inventory is still understated, bridge data submitted to FHWA continues to be incomplete and inaccurate, and limited controls are in place to ensure the accuracy and completeness of the data reported.

We recognize that FHWA has no explicit authority to oversee other Federal agencies' bridge programs. However, FHWA can do more to improve oversight controls to ensure that Federal agencies' reports contain complete and accurate data on all federally owned bridges, the condition of federally owned bridges are accurately reflected in the NBI, and bridge inspections are performed in accordance with NBIS. For example, FHWA should analyze bridge data to determine whether agencies are submitting complete inventories. FHWA should continue to work with Federal agencies to address the weaknesses concerning the integrity of bridge data and their bridge inspection programs. Additionally, FHWA should improve edit checks to ensure inspection results are accurately reported in the NBI.

In our opinion, FHWA should obtain authority through the rulemaking process or, if necessary, through legislative action, to provide oversight of other Federal agencies' reporting, inspecting, and posting of bridges on public roads. Without this authority, the federally owned bridge data in the NBI may continue to be incomplete and inaccurate. Until FHWA obtains oversight authority and improves data quality, it should qualify the biennial report to Congress by disclosing its lack of assurance regarding the completeness and quality of federally owned bridge data.

Recommendations

We recommend that FHWA:

1. Take action to improve federally owned bridge data collection by:
 - a. Increasing oversight to ensure that agencies' reports contain complete and accurate data on all federally owned bridges, postings and closings are in accordance with inspection results, and inspections are performed in accordance with NBIS. This oversight should include more analysis of NBI data and more contacts with Federal agencies, and

- b. Improving edit checks on agency bridge inspection data to ensure inspection results are accurately reported in the NBI.
2. Seek authority, through rulemaking or legislative action, to oversee the reporting, inspecting, and posting of federally owned bridges on public roads.
3. Include a disclaimer in the biennial report to Congress regarding the completeness and accuracy of federally owned bridge data until FHWA obtains oversight authority and data integrity is improved.

Management Response and OIG Comments

FHWA provided written comments to the November 7, 1997 draft of this report. (See the Appendix for a copy of FHWA's comments.) FHWA concurred with Recommendation 1 but did not concur with Recommendations 2 and 3. For these two recommendations, FHWA proposed alternative corrective actions to address the issues. FHWA's corrective actions taken and planned are responsive to the recommendations, and OIG considers all recommendations resolved. FHWA also provided several other comments on the draft report.

Recommendations. FHWA concurred with our recommendation to improve federally owned bridge data (Recommendation 1). FHWA stated it is currently taking actions to aggressively address this recommendation. FHWA said it will monitor the Federal bridge data and take appropriate action to ensure the integrity of the NBI data through direct contacts with the Federal agencies. For example, in July 1997, FHWA increased its monitoring efforts by hiring a Bridge Inspection Coordinator in the Federal Lands Highway Office. FHWA will continue to provide Federal agencies with NBIS-related technical assistance. FHWA's concurrence and proposed actions resolve Recommendation 1.

Regarding Recommendation 2, FHWA did not concur but proposed an alternative action. Rather than requesting additional statutory authority, FHWA proposed to work actively with Federal agencies to continue to improve NBIS compliance. Specifically, FHWA stated it is finalizing interagency memorandums of understanding with each Federal agency that will include requirements for these agencies to maintain an effective and comprehensive bridge inspection program. Subsequent to FHWA's comments, OIG reviewed a draft of the memorandum of understanding and verified that it included the appropriate items and terms. FHWA plans to finalize these agreements by September 30, 1998. OIG accepts FHWA's alternative action and, therefore, Recommendation 2 is resolved.

Concerning Recommendation 3, FHWA did not concur but proposed an alternative action. Instead of adding a "disclaimer" to the biennial report to Congress, FHWA

proposed adding explanatory information that will provide Congress an accurate picture of the inventory of federally owned bridges. This will be included in the June 1999 biennial report. (The May 1997 biennial report to Congress did not include the explanatory language/information.) FHWA's statement that it will add such explanatory language is sufficient to resolve Recommendation 3.

Other Comments. In addition to commenting on our recommendations, FHWA provided several comments on other sections and statements in our draft report. We made adjustments to the report where appropriate.

FHWA questioned our inventory numbers of federally owned bridges. Specifically, FHWA questioned that the Forest Service's 6,000 bridges met NBI standards, namely that the bridges were open to the public. FHWA further commented that the Federal agencies with jurisdiction over the bridges are responsible for making the determination whether the bridges are open to the public. In arriving at our bridge numbers, OIG did rely on the determinations of the bridge owners as to whether a bridge is open to public travel.

Further, FHWA said that some of the bridges in our inventory numbers were not greater than 20 feet long and therefore were not subject to NBI reporting. To assist FHWA in updating the NBI, we had provided FHWA a partial listing of the bridges that the Forest Service should have reported to the NBI. This partial listing included 1,438 of the 3,085 bridges that should have been in the NBI. FHWA commented that some of the bridges in this listing were not 20 feet long and other bridges did not have any length information. FHWA thus questioned, not only our number of Forest Service bridges, but also our total of all Federal bridges. We acknowledge that 17 of the bridges in the listing were not 20 feet long and that 63 bridges did not contain length information. However, the remaining 1,358 bridges on the partial listing were over 20 feet long and were designated as subject to the NBIS. The partial listing provided examples of Forest Service bridges that should be in the NBI. Again, the Forest Service's best estimate of its total bridges was 6,000. Our point is that a large number--approximately 3,000 (or 50 percent)--of Forest Service bridges have not been captured in the NBI. We stand by our position that a large number of Forest Service bridges are not in the NBI.

In commenting on our finding that inspection results in the NBI were not accurate, FHWA questioned whether the SIA sheets included in the bridge owners' inspection reports were "official" documents and appropriate for review. We used the source documents--i.e., the bridge inspection reports and the corresponding SIA sheets developed and generated by the bridge owners. The NBI data and any data that the FHWA generates (including any other "official" SIA sheets) should be consistent with the SIA sheets we reviewed. While FHWA does perform edit checks on the submitted data, it does not have a system in place designed to verify the data. Such

a system should clarify and rectify any problems or inconsistencies. FHWA promises to increase oversight over agencies' reports and to improve edit checks on agencies' bridge inspection data to ensure inspection results are accurately reported in the NBI. We note that FHWA's Bridge Inspector's Training Manual states, "A bridge inspection report is a legal document . . ." We stand by our statements and finding in this regard. The bridge inspection reports are the source documents for the SIA sheets that we reviewed.

FHWA made several technical comments regarding our finding of inconsistencies and errors in a Park Service SIA sheet. While some of these comments were relevant, they did not negate our finding. For example, FHWA is correct that using a 15-ton legal load weight limit is not a requirement; however, regulations do require the selection of a weight limit which conforms with local policy. The 15-ton standard that we used in our calculations was correctly established by the Park Service in conformance with local policy.

FHWA stated that its Edit/Update Program is more thorough than our report gives it credit; that the Edit/Update Program makes numerous data checks for accuracy and produces error and other summary reports. FHWA also provided us with an example of a Park Service SIA data sheet that FHWA said had been revised as a result of its Edit/Update Program. However, OIG's engineer reviewed this revised sheet and found data items within the sheet were still inconsistent. Therefore, we reiterate our finding that the bridge inspection results in the NBI were not accurate.

Other Matters

During the audit, two additional areas surfaced which warrant the attention of FHWA management. These two areas are discussed below.

The Biennial Report to Congress. In our opinion, the biennial report to Congress does not clearly present the status of federally owned bridges. Data on federally owned bridges are commingled and reported with the data of the states where the bridges are located, rather than identified and reported separately. By commingling the relatively small number of federally owned bridges (approximately 10,000) with the 570,000 state and local bridges, the report to Congress did not clearly present the status of this segment of the bridge population. FHWA did not analyze and present a table to show the number of federally owned bridges, the agencies owning bridges, or the status of the bridges. A separate analysis of the NBI data currently reported could demonstrate the status of each agency's federally owned bridges more accurately, depict safety issues, and would allow for more informed funding decisions.

The 1970 Act required the Secretary to biennially report findings and the status of the Nation's highway bridges to the Senate and the House of Representatives and recommend necessary improvements to the program. While the construction, repair and replacement of federally owned bridges are generally funded differently than state-owned bridges, they are considered a part of the bridge inventory.

FHWA collects NBI data that identify safety conditions associated with federally owned bridges. These conditions include structurally deficient bridges, bridges that are load posted, bridges that should be load posted, and bridges closed to traffic. However, FHWA's report to Congress reflects the conditions of all the bridges by state, without any delineation between Federal and non-Federal bridges. Our analysis of FY 1995 NBI data noted problem areas with respect to federally owned bridges that were not evident in the report to Congress because federally owned bridges are commingled with the state bridge data. For example, the NBI indicates that 58 percent of federally owned bridges (247 of 424) were not posted as required, as compared to 11 percent nationally (13,669 of 122,325). Additionally, 200 of 253 (79 percent) of federally owned bridges that should have been closed were reported open. The lack of detailed reporting limits the clear presentation of the safety status of federally owned bridges.

During the exit conference, FHWA officials did not agree with our conclusion to separate federally owned bridge data from state data, because they believed this would inappropriately impact FHWA's apportionment process. However, we found that separating the data does not materially affect FHWA's apportionment process for funding state bridge programs. The federally owned bridge data included with

the state bridge data were less than four tenths of one percent of the Nation's bridges, and did not have a material impact in determining the apportionment of FHWA Highway Bridge Replacement and Rehabilitation Funds. Under the Intermodal Surface Transportation Efficiency Act of 1991, six states which accounted for 25 percent of the federally owned bridges received the minimum apportionment. For example, Alaska, with 54 percent (462 of 849) of its bridges owned by Federal agencies, received the minimum. Additionally, federally owned bridges constitute less than 1 percent of the square footage of 41 states' bridges inventories. Therefore, the inclusion of federally owned bridges has little impact on their formula apportionment.

Most Federal bridge programs receive funding for bridge repair and replacement through their agency budgets rather than through state apportionments. While the 1970 Federal-Aid Highway Act does not require FHWA to report separately on federally owned bridges, the lack of a separate report on federally owned bridge program weaknesses could affect congressional funding decisions. For example, since 1994 Congress has provided limited funds to maintain bridges at the Park Service and the Army. The Park Service Repair and Rehabilitation expense was \$78.8 million in FY 1994 and \$54 million in FY 1995. However, the Park Service estimates a backlog of \$400 million for repair and rehabilitation projects. Additionally, Army Military Construction funding was reduced from \$981 million in FY 1994 to \$711 million in FY 1995 and \$561 million in FY 1996. Although funding decisions are not necessarily made on the basis of the biennial report, better bridge data collected by the agencies and separate reporting of federally owned bridge data by FHWA could provide for more informed funding decisions. We encourage FHWA to consider revising the biennial report to Congress to contain a separate section on the status of federally owned bridges.

Performance Measures. Under the Government Performance and Results Act (GPRA), Federal agencies are required to develop and track performance measures. FHWA is to be commended for identifying specific performance measures on its federally owned bridge program. However, we have concerns with the measures selected by FHWA and the quality of FHWA's data.

The performance measures selected by FHWA are not appropriate measures of the outcomes of FHWA's performance. FHWA's criteria for its performance measures are based on the structural adequacy of bridges owned by the Forest Service, National Park Service, and Bureau of Indian Affairs. However, FHWA does not have authority or control over the structural adequacy of these bridges. The particular Federal agencies that own these bridges are responsible for, and have control over, the bridges' structural adequacy, not FHWA. Therefore, FHWA should reassess its performance measures for this program. As part of this

reassessment, FHWA should consider developing and designing outcome oriented performance measures that fall within the scope of FHWA's authority and control.

Further, FHWA must improve the completeness and quality of its data on federally owned bridges if it is to fully implement GPRA. As discussed earlier in this report, the current data available on federally owned bridges are incomplete and inaccurate, and implementing our recommendations would increase the completeness and accuracy of the data on federally owned bridges. By ensuring the collection and inclusion of accurate data, FHWA would be in a better position to measure its own program performance as well as the safety conditions of federally owned bridges used by the traveling public.

FHWA Comments

Regarding the biennial report, FHWA told us that, in the June 1999 biennial report, it would report separately on the status on federally owned bridges. The biennial report will also provide explanatory language that will give Congress an accurate picture of federally owned bridges throughout the Nation.

FHWA took issue with our discussion of its Federal bridge performance measures. FHWA stated that its Federal bridge performance goals were developed in cooperation with the respective Federal agencies; that the resultant shared performance measures were accepted by DOT and the Office of Management and Budget; and that FHWA's current performance measures were approved. We note that, to date, the Department's Performance Plan (which includes the performance measures) has not been finalized and submitted to Congress for approval. OIG stands by its position that FHWA (1) must improve the quality of the Federal bridge data if it is to accurately and completely implement GPRA and (2) should reassess the appropriateness of its performance measures.

Activities Visited or Contacted

Army Corps of Engineers (Department of Defense)

Bureau of Indian Affairs (Department of the Interior)

Bureau of Land Management (Department of the Interior)

National Park Service (Department of the Interior)

United States Army (Department of Defense)

United States Forest Service (Department of Agriculture)

United States Marine Corps (Department of Defense)

United States Navy (Department of Defense)

Major Contributors

The following is a listing of the major contributors to the Audit of Inspection of Federally Owned Bridges.

Robert Kerr	Program Director
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James Bess	Auditor
Richard Hatcher	Auditor
LaKarla Lindsay	Auditor
Rodolfo Pérez	Engineer



U.S. Department
of Transportation

**Federal Highway
Administration**

Memorandum

Subject INFORMATION: FHWA Response to Office of
Inspector General (OIG) *Revised Draft Report on*
Inspection of Federally Owned Bridges Date December 11, 1997


From Associate Administrator for Administration Reply to
Attn. of HMS-14

To Mr. Lawrence H. Weintrob
Assistant Inspector General for Auditing (JA-1)

Attached are FHWA's comments on the OIG's revised draft report on the Inspection of Federally Owned Bridges. As a result of an October 28 and subsequent meetings between FHWA and OIG staff, several revisions were made to the draft report, most recently on November 7. In response to the revised draft dated November 7, we offer the attached comments in lieu of our original response dated September 29. While we continue to differ with the OIG on several issues and feel it is important that these differences be highlighted in our response, we believe the OIG will be satisfied with the actions FHWA is proposing to take in response to the formal recommendations.

For the specific recommendations, which we address beginning on page 6 of the attachment, where we "nonconcur," we have provided proposed alternative actions. We believe these actions will adequately satisfy the OIG's concerns.

We appreciate the opportunity to comment on the revised draft report.


George S. Moore, Jr.

Attachment



**Federal Highway Administration's
Response to the OIG's Revised Draft Report on the Audit
of Inspection of Federally Owned Bridges**

These detailed comments are given in response to the OIG's November 7 version of the draft report and follow the same order as the draft report. The specific recommendations are addressed beginning on page 6 of this attachment.

Page 2, INTRODUCTION: Objectives, Scope and Methodology

Paragraph 1 under this section indicates that 9,966 federally owned bridges were identified, but that not all of these bridges are contained in the National Bridge Inventory (NBI). In addition, it is stated that these bridges were owned, operated, and maintained by 14 Federal agencies. The report does not indicate that it was conclusively determined that these bridges met the National Bridge Inspection Standards' (NBIS) definition of a bridge and that they are definitely located on roads open to public travel. Many bridges under the control of Federal agencies are not considered to be on roads open to public travel. The Federal agencies having jurisdiction over the roads are responsible for making the determination regarding whether the road is open to public travel. We therefore question the report finding concerning the total number of federally owned bridges that are covered by the NBIS and that are not included in the NBI.

In paragraph 3, it is indicated that as part of the audit NBI information was compared with data from Federal agencies and State highway administrations to determine whether the bridges' physical status agreed with the reported status in the NBI. Based on discussions with the OIG's staff, it is the FHWA's understanding that official NBI Structure Inventory and Appraisal (S.I.&A.) records, which are maintained by the FHWA's Headquarters, were not used during this phase of the audit. It is the FHWA's understanding that during the audit, the OIG used S.I.&A. Sheets provided by the various Federal agencies for the comparison. It should be pointed out that S.I.&A. Sheets maintained and used by the Federal agencies may be different than the official S.I.&A. Sheets included in the NBI. Since official NBI S.I.&A. records were not used, the finding regarding the accuracy and completeness of the NBI data is questionable.

Pages 7/8, FINDING AND RECOMMENDATIONS: NBI Information On Federally Owned Bridges Was Incomplete

Through a recent discussion between our Federal Lands Highway Office personnel and U. S. Forest Service officials, it is the FHWA's understanding that the bridge figure of 6,000 Forest Service structures that are covered by the NBIS is inaccurate. Based on this discussion, it is our understanding that the figure includes bridges located on Forest Service roads that are not open to public travel, and are therefore not covered by the Standards. This makes the overall figures reported for the various Federal agencies questionable. This is significant since the Forest Service bridge figure accounts for over 3,000 of the bridges reported as being covered by the NBIS and that are not included in the NBI.

Also, the items in the Appraisal Section of the S.I.&A. Sheet do not utilize the functional classification of the inventory route, except for Items 68 (Deck Geometry) and 71 (Waterway Adequacy), which do not relate to the load carrying capacity of the bridge. The appraisal of a structure is influenced by many more items than the functional classification of the inventory route. In any case, Park Service and Forest Service bridges included in the NBI in the States visited do have the functional classification given on the official NBI S.I.&A. Sheets. Apparently the official NBI S.I.&A. Sheets were not used in making the assessment and arriving at a finding.

Paragraphs 3 and 4, also under this section, contain statements regarding an S.I.&A. Sheet for a Park Service bridge. Clarifying comments concerning these paragraphs follow:

- A. Items 64 (Operating) and 66 (Inventory Rating) that are included in the NBI are based on an "HS" loading as required by the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges (Coding Guide) and not an "H" loading. The appropriate "HS" loading for the example Park Service bridge at the operating rating level is 6 tons as shown on the official NBI S.I.&A. Sheet for the structure.
- B. The legal load used in determining the posting requirement of a bridge should be the actual legal load of the State in which the bridge is located and not an assumed legal load.
- C. Item 70 (Bridge Posting) is to be coded as "posting required" only if the legal load of the State exceeds the load permitted at the operating rating. If a bridge cannot carry the legal load at the operating rating, then the Coding Guide requires that a code of 4 or less be used to indicate that posting is required. If a bridge owner elects, a code of 4 may be used for all bridges requiring posting regardless of the relationship of the operating rating stress to the legal load stress. The uses of codes "0" through "3" are optional as indicated in the Coding Guide and are provided only as a guide for those bridge owners that may wish to show variance in coding Item 70. Therefore, for NBI reporting purposes the use codes of "0" through "3" is not relevant. Federal agencies and other bridge owners can use these codes for their own purposes.
- D. NBI S.I.&A. Sheet Item 67 (Structural Evaluation) is calculated by the FHWA's Edit/Update Program. This item need not be coded by the bridge inspector and can be left blank on the official S.I.&A. Sheet or a code can be provided, but it is ultimately not used. Even if the bridge inspector codes the item, the Program recalculates the rating based on nationwide uniform criteria. The official S.I.&A. Sheet appropriately indicates a code of " 3" (basically intolerable requiring high priority of corrective action) for the example Park Service bridge.

In the fifth paragraph it is indicated that S.I.&A. Sheets prepared by the Forest Service omitted many data items needed for accurate appraisals. The specific data items being

omitted from S.I.&A. Sheets for five Forest Service bridges were Items 26 (Functional Classification of Inventory Route), 29 (Average Daily Traffic), 32 (Approach Roadway Width), 41 (Structure Open, Posted, or Closed to Traffic), 51 (Bridge Roadway Width, Curb-to-Curb), and 70 (Bridge Posting). In light of the statements made in this paragraph, we have evaluated the data in the NBI for the Forest Service and verified that the NBI does include these items for Forest Service bridges. Apparently, the records evaluated as part of the assessment were not official NBI S.I.&A. Sheets.

Page 10. FINDING AND RECOMMENDATIONS: Inspection Results Not Accurately Reported in the NBI

Over the years, the FHWA has implemented NBI data checks to ensure that the records included in the NBI are accurate, complete, and reliable. While the NBI monitoring program implemented by the FHWA is acknowledged in the last paragraph under this section of the draft report, the report indicates the data checks are not adequate. The FHWA believes that the OIG has not given sufficient consideration to the data checks that are actually routinely made on a continuing basis.

Prior to submitting the NBI data to the FHWA, bridge owners are required to edit the data through the Edit/Update Program and to correct any data errors or inconsistencies discovered. FHWA Headquarters further processes the submitted data through another Edit/Update check before accepting the information for inclusion in the NBI. The report states that "FHWA performs edit checks to test for proper formatting of the data and to identify inconsistencies among data elements," when, in fact, the FHWA actually performs a more thorough review and evaluation of the submitted data. Submissions that contain errors that cannot be accepted are returned for correction and resubmission. States that submit data with inconsistencies that do not require immediate correction because they are insignificant are provided with a list of errors and inconsistencies based on the Edit/Update Program evaluation for data errors omissions, and reasonableness of the data. The States are requested to make the needed corrections by the next NBI update or prior to that time if considered appropriate. This same process is being implemented for Federal agencies.

In addition, the Edit/Update Program does more than simply test data for proper formatting. The Program makes numerous data checks for accuracy and completeness; produces error/reasonableness lists; identifies structure number changes; calculates Items 67, 68, and 69; and produces summary lists. This information is used by the FHWA to continuously monitor the reliability of the NBI data.

The FHWA has and continues to aggressively implement procedures to monitor the accuracy, completeness, and reliability of NBI data submitted by bridges owners, including Federal agencies. This is an on-going activity that has and continues to be effective at all levels of the organization. Headquarters and the FHWA field offices are continuously working with bridge owners to maintain the accuracy of the data provided and to made necessary corrections when appropriate.

In addition, our Federal Lands Highway Office has taken and is taking steps to assist in ensuring NBI information submitted by Federal agencies is accurate, complete, and reliable. These steps include:

- currently performing bridge inspections for some Federal agencies,
- establishing a process for the collection of NBI data from Federal agencies,
- establishing a Bridge Inspection Coordinator position for monitoring and improving bridge inspection activities,
- working with the Bridge Division to coordinate bridge inspection and NBI activities,
- holding workshops with Federal agencies that address bridge inspection issues, and
- providing technical assistance and training through meetings and workshops with Federal agencies.

The FHWA is also actively involved in providing bridge inspection training to the various Federal agencies' personnel through National Highway Institute (NHI) training courses. For example, during the period of fiscal years 1993 through 1996 personnel from the various Federal agencies received bridge inspection and related training through the attendance at NHI training courses. Over 321 employees from various Federal agencies were trained through NHI training courses sponsored by agencies such as the Corps of Engineers and the Forest Service. These courses included NHI Course No. 13055 "Safety Inspection of In-Service Bridges."

Pages 10/11, FINDING AND RECOMMENDATIONS: Bridge Inspections Not Performed in Accordance with NBIS

In paragraph 2 of this section it is stated that the Army did not have an inventory system that identified posted, structurally deficient, and functionally obsolete bridges. It should be noted that it is not a specific NBIS requirement that this Federal agency or any of the other Federal agencies have such an inventory system to identify these structures.

Pages 11, FINDING AND RECOMMENDATIONS: Conclusion

The FHWA believes that the statement regarding the number of federally owned bridges is not substantiated by the report, is an understatement of the FHWA's accomplishments in working with the Federal agencies to improve their bridge data reporting and in making overall improvements in their bridge programs, and is an overstatement of the significance of the OIG's finding. Through FHWA's NBIS monitoring activities and the efforts of the various Federal agencies, the number of federally owned bridges in the NBI has increased significantly from 2,700 in 1993 to 5,194 in 1995. This is an increase of 92 percent, which the FHWA considers to be a significant accomplishment and a positive reflection on the NBIS program efforts of the Federal agencies as well as the FHWA. As of December 1996, the number of NBI documented federally owned bridges had increased to 6,121 bridges. This is an actual documented and positive program accomplishment. At this time, the FHWA does not consider the number of federally owned bridges included in the NBI to be an understatement of the bridges actually owned by Federal agencies and that are covered by the Standards.

As stated earlier in this response, the FHWA disagrees that bridge data submitted to the FHWA continues to be incomplete and inaccurate, and limited controls are in place to ensure the accuracy and completeness of the data. The FHWA has continuously encouraged Federal agencies to adopt bridge inspection programs to assure the safety of their bridges and the accuracy of the NBI data provided since the inception of the NBIS. To assist the Federal agencies in their program efforts, FHWA has provided them with bridge inspection reference materials, has trained their inspectors, and has provided bridge inspection technical assistance. In addition, our Federal Lands offices have and continue to perform NBIS bridge inspections for the U.S. Park Service, the Bureau of Land Management, and other Federal land management agencies. We will continue to work with the Federal agencies in their NBIS program efforts.

Page 12. FINDING AND RECOMMENDATIONS: Recommendations

The recommendations included in the draft report are discussed below:

Recommendation 1. Take action to improve federally owned bridge data collection by: (a) increasing oversight to ensure that agencies' reports contain complete and accurate data on all federally owned bridges, postings, and closings in accordance with inspection results, and inspections are performed in accordance with NBIS. This oversight should include more analysis of NBI data and more contacts with Federal agencies, and (b) improving edit checks on agency bridge inspection data to ensure inspection results are accurately reported in the NBI.

FHWA Response. *Concur.* The FHWA has taken and/or is currently taking actions to aggressively address this recommendation. Response comments given previously discuss the continuing and proposed NBIS activities by FHWA to ensure continuous improvements in the accuracy, completeness, and reliability of NBI data submitted by Federal agencies. We will continue to provide to the Federal agencies NBIS related technical assistance, NHI training courses, and bridge inspection information and guidance through our Federal Lands offices and the Bridge Division. The FHWA will continue to monitor and appropriately take actions to ensure the integrity of the NBI data provided by Federal agencies through direct contacts with the agencies and by other appropriate means. We have already established a Bridge Inspection Coordinator position in our Federal Lands Highway Office. The individual in this position is currently working with our Federal Lands field offices and directly with Federal agencies to make NBIS improvements. The NBIS improvements program, as we see it, is an ongoing activity that we continuously pursue. We will continue to make program changes as needed. We have therefore not specified any target dates for completion or implementation for this continuing program.

Recommendation 2. Seek authority, through rulemaking or legislative action, to oversee the reporting, inspecting, and posting of federally owned bridges on public roads.

FHWA Response. *Nonconcur—alternative action proposed.* The FHWA has a good working relationship with Federal agencies which own bridges. It would be inappropriate and inconsistent with the spirit of the FHWA's historical working

relationship with the Federal agencies to seek authority to accomplish what is currently being done informally, with a formal process, and cooperatively in the NBIS program area. However, FHWA will continue to actively work in cooperation with the Federal agencies to continue to improve NBIS compliance. This cooperation has resulted in the accomplishment of significant NBIS improvements as indicated in the response comments given previously.

To sustain the progress already made, actions are underway to finalize an interagency memorandum of agreement with each Federal land management agency. These agreements will contain provisions for the further development of detailed bridge inventory, inspection, and reporting processes and systems to ensure each respective agency will have an effective, comprehensive, and overall quality bridge inspection program. The agreements will delineate the requirements for quality control of the process and assurance systems, and will provide stewardship responsibilities for the respective Federal land management agency and the Federal Lands Highway Office.

Recommendation 3. Include a disclaimer in the biennial report to Congress regarding the completeness and accuracy of federally owned bridge data until FHWA obtains oversight authority and data integrity is improved.

FHWA Response. *Nonconcur--alternative action proposed.* Title 23 reporting requirements related to the Highway Bridge Replacement and Rehabilitation Program (HBRRP) and/or the NBIS are currently being met. The FHWA does not consider it appropriate to include a disclaimer regarding federally owned bridges. The biennial report to Congress adequately reflects the status and condition of the Nation's bridges in the various States. The FHWA, however, will add explanatory information in future reports to Congress about federally owned bridges that will give Congress an accurate picture of federally owned bridges throughout the Nation.

Page 12, Other Matters of Interest, The Biennial Report to Congress

The Biennial Report to Congress. This section of the draft report presents the OIG's opinion regarding the Report to Congress as it relates to federally owned bridges. As stated in the response to Recommendation 3, the Title 23 reporting requirements related to the HBRRP and/or the NBIS are currently being met. The biennial report to Congress adequately reflects the status and condition of the Nation's bridges in the various States.

There is a statement in this section regarding the exit conference and FHWA's comments related to the separating of federally owned bridge data and the impact on the apportionment process. However, the FHWA agreed that the inclusion of federally owned bridges had little impact on HBRRP apportionments.

Performance Measures. In this section it is stated that "The performance measures selected by FHWA are not appropriate measures of the outcome of FHWA's performance." The FHWA believes that the performance measures selected are appropriate outcome measures of FHWA's

performance. The Federal Lands Highway Office is a direct funding source for a significant number of the bridges whose conditions are being measured. The Federal Lands Highway Office is responsible for the stewardship of the Federal Lands Highway Program. Therefore, the FHWA's oversight initiatives, procedures, and policies significantly influence the use of Federal bridge funding and the performance outcomes. In addition to policy and guidance, the FHWA through the Federal Lands Highway Office provides services, technical assistance, and recommendations to the Federal land managing agencies that significantly influence the prioritization of bridge rehabilitation and reconstruction projects.

Starting in 1994, the Federal Lands Highway Office and its programs were approved as a pilot agency under the Government Performance and Results Act (GPRA). The performance goals were developed in cooperation with the respective Federal lands highway managing agencies. The processes used to develop mutually acceptable performance goals were established through outreach and collaborative involvement of key managers and program officials. Following the development and agreement of the shared performance measures at the agency level, the measures were reviewed, some were adjusted, and all were accepted by Department of Transportation and Office of Management and Budget officials during the first two cycles of the pilot GPRA process. The current performance measures are approved as appropriate outcome measures for the FHWA's Performance Plan. Concurrently, the shared performance goals and measures are incorporated into the Federal land managing agencies' own performance plans at the appropriate levels.

The July 1997 Personnel Management Guideposts For Federal Supervisors, Volume 8 Number 10, states "...recognize and deal with the fact that you will be held accountable for meeting goals if you share responsibility for meeting that goal with others. The temptation is to only measure those parts of the goal that are fully under your control, but this may lead to your measuring processes, rather than outputs or outcomes. If your program relies on someone else's work in order to reach specific goals, you're going to need to spend far more effort in finding ways to measure success."

In light of the above, the FHWA does not consider it necessary to reassess its existing performance measures.

