Opportunities Exist To Improve FRA and Volpe’s Acquisition and Use of Oversight Contractors
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Self-initiated
Federal Railroad Administration | John A. Volpe National Transportation Systems Center | ZA2019056 | July 10, 2019

What We Looked At
In 2009, Congress appropriated $10.5 billion for the Federal Railroad Administration’s (FRA) High-Speed Intercity Passenger Rail (HSIPR) Program. To implement the program and fund the HSIPR projects, FRA took on new oversight responsibilities and entered into cooperative agreements with State departments of transportation and other entities. FRA also established an intra-agency agreement (IAA) with the John A. Volpe National Transportation Systems Center (Volpe). The IAA allowed FRA to implement its Monitoring and Technical Assistance Program with Volpe’s assistance and acquire Monitoring and Technical Assistance Contractors (MTAC) to provide oversight support. In November 2013, Volpe competitively awarded 11 master contracts, with an estimated value of $75 million, for MTAC services. Given the significant funds involved and FRA’s expanded oversight responsibilities, we initiated this audit to assess (1) FRA’s acquisition of MTACs through the Volpe Center and (2) FRA’s management and use of MTAC oversight services for HSIPR projects.

What We Found
Volpe’s acquisition and management of the MTACs did not always follow Federal requirements or guidance. For example, Volpe prepared independent government cost estimates without adequate support, and awarded an MTAC master contract and three task orders valued at $7.6 million to a contractor that lacked a current audit of its accounting system. Also, adding steps to its invoice review process could help Volpe ensure that it pays allowable and reasonable costs for MTAC work. In addition, FRA lacked both the necessary oversight tools and a consistent reporting and recommendation tracking process to ensure effective use of MTAC services when it launched the HSIPR program. As result, the MTACs did not consistently document oversight reviews and much of their work was not formally reported. This in turn impeded FRA and Volpe’s ability to realize the full benefit of the MTACs’ oversight.

Our Recommendations
We made 11 recommendations to improve FRA and Volpe’s acquisition and use of MTACs, and the Department concurred with all of them. We consider these recommendations resolved but open pending completion of the Department’s actions.

All OIG audit reports are available on our website at www.oig.dot.gov.
For inquiries about this report, please contact our Office of Congressional and External Affairs at (202) 366-8751.
# Contents

- Memorandum .......................... 1
- Results in Brief ...................... 4
- Background ......................... 5
- Volpe’s Acquisition and Management of the MTACs Did Not Always Follow Federal Requirements or Guidance .................. 7
- FRA Has an Opportunity To Strengthen Its Management and Use of MTAC Oversight Services .................. 15
- Conclusion .......................... 23
- Recommendations .................. 23
- Agency Comments and OIG Response .......................... 24
- Actions Required .................. 24
- **Exhibit A.** Scope and Methodology .................. 25
- **Exhibit B.** Organizations Visited or Contacted .................. 28
- **Exhibit C.** List of Acronyms .................. 29
- **Exhibit D.** HSIPR Reporting Relationships .................. 30
- **Exhibit E.** FRA, Volpe, and MTAC Acquisition Relationship .................. 31
- **Exhibit F.** HSIPR Shared-Use Corridor Stakeholders .................. 32
- **Exhibit G.** Key Events, Risks and Challenges in FRA’s and Volpe’s HSIPR Program Oversight .................. 33
- **Exhibit H.** Issues Identified in MTAC Reviews and Reports in Three HSIPR Regions .................. 34
- **Exhibit I.** Major Contributors to This Report .................. 36
- **Appendix.** Agency Comments .................. 37
In 2009, Congress appropriated $10.5 billion for the Federal Railroad Administration’s (FRA) High-Speed Intercity Passenger Rail (HSIPR) Program. Of that $10.5 billion, $8 billion was appropriated under the American Recovery and Reinvestment Act (ARRA) with specific direction that the funds had to be disbursed by September 30, 2017.¹ The remaining $2.5 billion was appropriated via the fiscal year 2010 Department of Transportation (DOT) Appropriations Act.

Before 2008, FRA was primarily a safety regulatory agency. However, on October 16, 2008, the Passenger Railroad Investment and Improvement Act (PRIIA)² significantly expanded FRA’s mission by authorizing it to issue intercity passenger rail capital grants under the HSIPR program. On February 17, 2009, the ARRA HSIPR appropriation gave FRA a significant amount of grant funds for the HSIPR program, which created challenges for the Agency. For example, strict obligation deadlines for the ARRA HSIPR appropriation complicated FRA’s grant program.

In 2012, to help fulfill its new oversight responsibilities, FRA entered into a $50 million intra-agency agreement (IAA)³ with DOT’s John A. Volpe National Transportation Systems Center (Volpe). The IAA allowed FRA to implement its

² P.L. No. 110–432 Div. B, section 103. Cooperation between private and the public entities is key to implementing the HSIPR program, as the improvements needed are primarily built on property owned by private railroads.
³ An IAA is a bilateral agreement between components within a Federal agency; it requisitions services in exchange for reimbursement, obligates funds, and describes the work that is to be performed.
Monitoring and Technical Assistance Program with Volpe’s assistance and oversight support using Monitoring and Technical Assistance Contractors (MTAC). While future funding for the HSIPR program remains uncertain, FRA plans to use the Monitoring and Technical Assistance Program to oversee other activities.

Given the significant HSIPR funds involved and FRA’s expanded oversight responsibilities, we initiated this audit to assess (1) FRA’s acquisition of MTACs through the Volpe Center and (2) FRA’s management and use of MTAC oversight services for HSIPR projects.

We conducted this audit in accordance with generally accepted Government auditing standards. To address our objectives, we reviewed HSIPR contracts, task orders, technical memoranda, invoices, and other documents. We analyzed three projects—two were identified in an Office of Inspector General (OIG) Hotline complaint (Chicago-St. Louis Corridor Improvement Program, and Pacific Northwest Rail Corridor Program), and one had substantial preliminary engineering and/or construction phases underway (North Carolina Piedmont Improvement Program). We selected a statistical sample of invoices representing $2.8 million of the $8.4 million (33.5 percent) in our universe, which allowed us to project the amount that had issues. To obtain technical expertise, we contracted with Maser Consulting, P.A., a rail engineering consulting firm experienced with the challenges associated with a shared-use high-speed rail corridor. Our full scope and methodology are further explained in exhibit A. See exhibit B for a list of the organizations we contacted and visited, and exhibit C for a list of acronyms used in this report. Exhibits D through H include supplementary information on the HSIPR program, MTAC reviews, and stakeholder relationships.

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4 FRA’s Monitoring and Technical Assistance Program (MTAP) performs oversight of the HSIPR program and FRA’s other capital rail projects and provides technical assistance to project stakeholders. FRA has three goals for the program: (1) proactively identify and mitigate risks, foster solutions to challenges and issues, and ensure projects move successfully into revenue operations; (2) develop an ongoing FRA oversight program with knowledge sharing and partnering; and (3) elevate the knowledge and level of practices in the U.S. rail industry.

5 While the name Monitoring and Technical Assistance Program encompasses FRA’s oversight activities for HSIPR and other rail projects, this report focuses specifically on the Monitoring and Technical Assistance Contractors, which we refer to throughout as MTACs.

6 We excluded the California high-speed rail project from our review because it did not have substantial ongoing construction work when we initiated the audit. Also, in April 2018, OIG initiated an audit of FRA’s High-Speed Rail Grant Risk Mitigation and Oversight of Expenditures, which focuses on California’s high-speed rail project.

7 Throughout this report, our references to invoices also include invoice line items, which correspond to specific tasks, goods, or services. See exhibit A for more details.

8 This report builds on our prior work on FRA’s HSIPR program in which we recommended that FRA strengthen its grant-monitoring policies and internal controls. For example, see the following OIG report and statement: FRA Improved Its Guidance on High Speed Rail Grant Agreements, but Policies and Procedures for Amending and Monitoring Grants Remain Incomplete (OIG Report Number ST2015038), April 1, 2015, and A Grants Management Framework and Stakeholder Agreements Are Key to Fully Implementing FRA’s High Speed Intercity Passenger Rail Program, Statement of Assistant Inspector General Mitchell Behm before the House of Representatives Committee on Transportation and Infrastructure, December 6, 2012. OIG publications are available on our website: https://www.oig.dot.gov/.
We appreciate the courtesies and cooperation of Department of Transportation representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-5225 or Anthony Wysocki, Program Director, at (202) 493-0223.

cc: The Secretary
DOT Audit Liaison, M-1
FRA Audit Liaison, FRA-ROA-2
Volpe Audit Liaison, VOLPE-V-140
Results in Brief

Volpe’s acquisition and management of MTACs did not always follow Federal requirements or guidance.

Specifically, while Volpe used Independent Government Cost Estimates (IGCEs) during acquisition planning for the contracts and task orders we reviewed, its IGCE practices should include more details. We statistically sampled and reviewed the IGCEs for 6 of the 11 cost-reimbursement contracts and 12 of the 23 cost-reimbursement task orders in our universe. Contrary to departmental policy, none of the IGCEs we reviewed described how the estimates were derived. Also, Volpe awarded an MTAC master contract and three task orders valued at $7.6 million to a contractor without a current audit and did not pursue other risk-mitigation techniques to support its decision that the contractor had an adequate accounting system. While most of the MTAC contract and task order files we reviewed were complete, certain acquisition documents were missing from some of the files. This occurred, in part, because Volpe staff did not always have a complete understanding of Federal requirements for contract files or did not implement the requirements consistently. Agency officials acknowledged the acquisition staff could benefit from refresher training in this area. Volpe also needs to improve its invoice reviews, which are required by DOT’s Transportation Acquisition Manual (TAM) and are particularly important for the high-risk, cost-reimbursement contracts awarded to the MTACs. We also found minimal evidence that contracting officials used provisional billing rates or periodic incurred cost audits to conduct invoice reviews, and Volpe does not require them to verify that the billed indirect rates are reasonable. Due to these gaps in its internal controls, Volpe risks paying unallowable, unallocable, and unreasonable costs for MTAC services.

FRA has an opportunity to strengthen its management and use of MTAC oversight services.

When FRA launched the HSIPR program in 2010, it did not have the policy framework, tools, or staff in place to fully develop the Monitoring and Technical Assistance Program and fully assess and oversee the HSIPR projects. Specifically, FRA did not have procedures for all phases of project-design oversight, guidance for non-safety field inspections, or the software to validate the feasibility and benefits of proposed projects. According to the Government Accountability Office (GAO), monitoring is a key internal control that an entity can use to obtain reasonable assurance of operating effectiveness. In 2014, FRA established its Monitoring Procedures, which it adapted from the Federal Transit Administration (FTA). However, some of the procedures are either unclear or are not tailored to

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GAO, Standards for Internal Control in the Federal Government (GAO-14-704G), September 2014.
the Monitoring and Technical Assistance Program’s oversight needs, and they do not align with FRA’s authority to oversee certain financial assistance programs. As a result, we found that FRA and Volpe do not ensure that MTACs consistently document oversight reviews, and much of the MTACs’ work is not formally reported. FRA and Volpe officials use the Monitoring Procedures as guidance rather than a requirement for the HSIPR program. FRA staff stated that this structure allows them to prescribe a level of oversight that matches the complexity and scale of the projects while ensuring Federal funds are used appropriately. While this approach gives the MTACs flexibility, it also results in inconsistent reporting of deliverables and tracking of recommendations. Overall, the lack of documentation relating to MTAC recommendations impedes FRA’s and Volpe’s ability to realize the full benefit of the MTACs’ oversight.

We are making recommendations to enhance Volpe’s and FRA’s policies and procedures to better leverage the benefits of the Monitoring Technical Assistance Program, achieve oversight goals, and realize opportunities for cost savings in the HSIPR and other grant programs.

Background

In 2010, FRA entered into cooperative agreements\(^{10}\) with multiple State departments of transportation and other entities (the grantees)\(^ {11}\) to fund HSIPR projects. Intercity passenger trains usually operate on tracks owned by private freight railroads; such shared-use rail corridors require cooperation between all stakeholders—grantees, host railroads,\(^ {12}\) and passenger operators. Since passenger and freight railroads have different goals—consistent, on-time performance for passenger rail compared to flexible delivery for freight—it is critical that they agree on improvements to the corridor and that freight railroads can maintain desired levels of service while improvements are implemented.

During program implementation, FRA facilitated negotiations to help HSIPR stakeholders agree on corridor improvements and develop project-specific service outcome agreements\(^ {13}\)—a prerequisite to a grantee’s receipt of a cooperative agreement. The grantees and host railroads also negotiated construction agreements, which assigned the host railroads responsibility for performing or subcontracting the necessary construction work to fulfill the terms of the

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\(^{10}\) FRA used cooperative agreements instead of grants to fund the HSIPR projects.

\(^{11}\) In its cooperative agreements, FRA refers to the recipients of HSIPR improvement funds as “grantees;” therefore, for consistency, we also refer to these HSIPR fund-recipients as “grantees” throughout our report. In addition to State departments of transportation, recipients also include State agencies, such as passenger rail authorities. There were 39 grantees by the time all the HSIPR funds were disbursed in 2017.

\(^{12}\) Host railroads own most of the right-of-way where the HSIPR improvements are made.

\(^{13}\) Service outcome agreements specify the frequency, trip time, and reliability of trains in a shared-use corridor.
cooperative agreement. Exhibit D illustrates the stakeholders, financial commitments, and reporting relationships in the HSIPR program.

We previously reported that FRA was obligating HSIPR funds to meet ARRA requirements, while simultaneously developing grant-management guidance. FRA officials stated that it was challenging to establish oversight practices, given the unique rail environment, the Agency’s lack of resources and experience with such complex projects at that time, and the September 30, 2012, ARRA obligation deadline. FRA had to develop new grant-management policies, which it began drafting in 2010 and issued in 2012—almost 3 years after assuming responsibility for HSIPR funds. According to FRA officials, faced with the above challenges, as well as staff constraints, the Agency decided to award and obligate HSIPR cooperative agreements before it finalized the policies.

From 2010 to 2014, FRA used existing Project Management Oversight Contractors (PMOC) to help it implement its expanded oversight responsibilities. The PMOCs were later replaced by the MTACs. Specifically, pursuant to FRA’s IAA with Volpe, in November 2013, Volpe competitively awarded 11 master contracts, with a total estimated value of $75 million, for MTAC services. By this point, FRA had awarded 147 of 155 total HSIPR cooperative agreements to its grantees, and most HSIPR projects were under construction. FRA acquired the MTACs to (a) strengthen FRA’s monitoring approach for higher risk HSIPR investments, (b) leverage Volpe’s acquisitions and project oversight expertise to implement the Monitoring and Technical Assistance Program, and (c) acquire training and technical assistance services to oversee its non-HSIPR investments.

While future funding for the HSIPR program remains uncertain, FRA does plan to use the Monitoring and Technical Assistance Program to oversee other activities. In June 2017, FRA and Volpe entered into a third IAA that directed Volpe to provide monitoring and oversight support for HSIPR projects funded by ARRA and fiscal year 2010 appropriations. Volpe also extended the period of performance on some of the existing MTAC task orders and is currently working on a follow-on contract for additional monitoring and technical assistance support beyond May 2019. For a timeline of key events in FRA’s HSIPR Program, see figure 1, and for detailed risk areas in FRA’s oversight of HSIPR, see exhibit G.

14 Completing a Grants Management Framework Can Enhance FRA’s Administration of the HSIPR Program (OIG Report Number CR2012178), September 11, 2012.

15 These were indefinite delivery/indefinite quantity contracts, which do not specify the quantity, other than minimum and maximum, of supplies or services to be delivered, with task orders to be issued as either cost-plus-fixed-fee (CPFF) or firm fixed price. All of the task orders we reviewed were CPFF. Under cost-type task orders, the Government pays the contractor’s allowable incurred costs to the extent prescribed in the task order, as well as a fixed fee, based on the terms of the contract.
Volpe’s Acquisition and Management of the MTACs Did Not Always Follow Federal Requirements or Guidance

While Volpe provided some documentation for its IGCEs when it acquired MTAC services to support FRA, it did not provide adequate information. According to the TAM and its own guidance, Volpe should develop more detailed IGCEs to support estimated prices and show how they were derived. Volpe also does not always use current information to determine whether MTAC contractors’ accounting systems are adequate before it makes cost-type task order awards, or follow Federal and departmental requirements to completely document the MTAC acquisition in its contract files. Finally, Volpe has updated its invoice review policy but still does not require staff to ensure that the appropriate contractor indirect rates are billed.
Volpe Did Not Always Follow DOT Requirements When Using IGCEs To Acquire the MTACs

An IGCE\(^\text{16}\) is an estimate of the expected cost of a contract or task order. It is an important tool for both program and contracting officials because it is considered the Government’s best estimate of a contract’s potential cost when planning and awarding contracts. The TAM\(^\text{17}\) states that IGCEs should reflect how the estimates were derived by delineating such costs as labor, materials, travel, consultants, and other items. Volpe’s own Acquisition Handbook also reiterates the TAM’s requirements. While Volpe used IGCEs during acquisition planning for the contracts we reviewed, none of the master MTAC contract and task order IGCEs included how the estimate was derived.

In addition, we reviewed 12 MTAC task orders from our sample, and all of them had IGCEs that were greater than the winning contractors’ proposals. Eight of the 12 were 20 percent greater, which could indicate problems with the IGCE or that there was a lack of understanding of the Government’s requirements. Without information on how the estimates were derived, as described in the TAM and Volpe’s own Acquisition Handbook, acquisition staff cannot use IGCEs to evaluate proposals or determine whether the IGCE is flawed.

Volpe Did Not Use a Timely DCAA Audit To Ensure the Adequacy of a Contractor’s Accounting System

The FAR requires agencies to assess a contractor’s accounting system before awarding a high-risk cost-reimbursement contract or task orders.\(^\text{18}\) This requirement is intended to mitigate risk and reduce the Government’s susceptibility to improper payments or other billing errors. As a recent GAO report stated, contractors’ accounting systems produce critical data that Government agencies can use to negotiate and manage contracts. These systems also act as one of the first lines of defense to help agencies protect Federal funds from waste, fraud, and abuse.\(^\text{19}\) However, in 2013 Volpe awarded a MTAC master contract and

\(^{16}\) The FAR identifies the IGCE as a tool to establish that the contractor’s cost or price is reasonable; FAR 15.404-1(b)(2)(v).
\(^{17}\) TAM 1215.404-70(b).
\(^{18}\) FAR 16.301-3(a)(3).
three task orders valued at $7.6 million without a current assessment of the contractor’s accounting system.

To validate contractor accounting systems, many Federal agencies use the Defense Contract Audit Agency (DCAA), whose practice is to rely on audits performed no more than 3 years before a contract award. DCAA’s 3-year timeframe also suggests that it is a best practice for agencies to review accounting systems on a regular basis. In this case, Volpe contracting officials relied on an audit that was 3 years and 1 month old to evaluate the MTAC contractor’s accounting system, although DCAA stated it could not make a determination regarding the system’s adequacy without a current audit.20 (See table 1 for a timeline of these reviews.)

Table 1. Volpe’s Review of One Contractor’s Accounting System

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2010</td>
<td>Based on an audit performed in September 2010, DCAA determined that the accounting system was adequate.</td>
</tr>
<tr>
<td>March 2013</td>
<td>Contractor reached an $18.5 million settlement with the Government related to improper billing and agreed to spend $500,000 to improve its accountability system.</td>
</tr>
<tr>
<td>June 2013</td>
<td>Volpe evaluated the contractor’s cost and technical proposals for monitoring and technical assistance services.</td>
</tr>
<tr>
<td>July 2013</td>
<td>DCAA told Volpe that due to the lack of a current audit, it could not verify the adequacy of the accounting system.</td>
</tr>
<tr>
<td>September 2013</td>
<td>Volpe concluded its evaluation of the contractor’s proposals.</td>
</tr>
<tr>
<td>November 2013</td>
<td>Volpe awarded the MTAC master contract to the contractor whose accounting system adequacy determination was 1 month past DCAA’s 3-year practice.</td>
</tr>
<tr>
<td>May 2014–December 2015</td>
<td>Volpe awarded three task orders, totaling $7.6 million, to the contractor—5 years after DCAA issued its opinion on the accounting system.</td>
</tr>
<tr>
<td>February 2016</td>
<td>DCAA determined that the contractor’s accounting system was adequate.</td>
</tr>
<tr>
<td>February 2017</td>
<td>Contractor reached a second $1.5 million settlement with the Government related to improper billing.</td>
</tr>
</tbody>
</table>

Source: OIG analysis

While the lack of a current DCAA opinion does not necessarily mean an accounting system is inadequate, Volpe accepted the higher risk of awarding a cost-type contract without one. The Contracting Officer (CO) stated that there was sufficient information from DCAA’s October 2010 determination of the contractor’s adequacy to assess the accounting system and that Volpe believed the contractor was responsible because it had not been suspended or debarred. Volpe officials also said that they sometimes rely on the best information available, rather than obtain an audit from a non-DCAA source or implement additional mitigation measures to monitor contractor costs. However, the FAR includes criteria to help

20 DCAA did not issue another determination that the contractor’s accounting system was adequate until February 2016.
determine contractor responsibility, such as directing agencies to obtain any information on the adequacy of accounting systems and their suitability for administering the proposed contract.  

Moreover, in the absence of a current audit, Volpe could have turned to other options to mitigate the risk of paying unallowable, unallocable, and unreasonable costs. For example, the FAR references Contract Pricing Reference Guides that offer several risk-mitigation techniques, such as directing COs to request field pricing assistance when audit information is not sufficient or when the Government’s interests may be at risk because of a contractor’s accounting practices. Volpe could have applied risk-based approaches, such as requesting a pre-award survey and an accounting system review until the DCAA office determined the adequacy of the contractor’s accounting system. We did not find evidence that Volpe availed itself of any of these risk-mitigation strategies.

By using the 2010 DCAA audit report, Volpe placed itself at higher risk for payment and billing issues on this particular contract. For example, in March 2013 and February 2017, this contractor reached settlements of $18.5 million and $1.5 million with other Federal agencies, due to timecard fraud and improperly billed overhead rates. Moreover, the March 2013 settlement—which occurred 8 months before Volpe awarded the MTAC master contracts—required the contractor to commit an additional $500,000 toward its accountability systems to detect and deter timecard fraud. Volpe officials stated they were unaware of these issues at the time of contract award.

Volpe Contract and Task Order Files Were Missing Some Documents

The FAR requires agencies to maintain contract files that provide the complete history of the contract from acquisition and award through contract administration. In addition, the TAM requires the CO to maintain procurement requests and IGCEs in contract files. Volpe’s Acquisition Handbook also requires procurement requests and IGCEs for all acquisitions. Since Federal agencies rely on contract files to guide future acquisitions or provide supporting documentation in the case of a congressional inquiry or litigation, a complete contract file is an important resource.

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21 FAR 9.105-1.
22 FAR 15.404-1(a)(7). Contract Pricing Reference Guides describe the Government’s application of policies for pre-award issues, including determining the adequacy of accounting systems.
23 The settlements did not result in a suspension or debarment action; therefore, the CO was unaware of the contractor’s history of billing issues.
24 FAR 4.801(a), 4.801(b), and 4.802.
25 Procurement requests (TAM 1232.702-70; Volpe’s Acquisition Handbook, chapter 5.1); IGCEs (TAM 1215.404-70; Acquisition Handbook, chapter 5.3, section 16).
Our review of Volpe’s MTAC contract and task order files found that in most cases, the documentation was in place. However, some acquisition documents were missing from the files (see table 2).

<table>
<thead>
<tr>
<th>Contract File Records</th>
<th>Base Contracts</th>
<th>Task Orders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># Files Reviewed</td>
<td># Documents Found in File Review</td>
</tr>
<tr>
<td>Independent government cost estimate—TAM 1215.404-70°; FAR 4.803(a)(7)**</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Documentation that the CO checked to see if vendor is on the System for Award Management (SAM) exclusion list—FAR 9.405*</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Signed task order that includes a statement of work—FAR 4.803*</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Procurement request—TAM 1232.702-70°*</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Technical memorandum—FAR 4.803(40)**</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* Document is required to be in contract file. ** Document is “normally contained” in contract file.

a During our review, Volpe officials said the missing IGCEs had been located on a staff member’s computer and subsequently provided them to us. Later, Volpe officials said the IGCEs were in its electronic contract file; however, the documents were not in the contract files provided at the time of our audit.

b TAM 1209.105-2(b)(1)(iii), which requires that COs verify a contractor is not on the SAM exclusion list before awarding a task order, was not effective until October 2015; Volpe awarded only one task order after that date.

Source: OIG analysis

Initially, when we asked Volpe contracting staff why some documents were missing, they stated they were either (1) unaware the documents were missing from the contract file or (2) did not think documentation of the contract or task order action was required. In particular, Volpe did not agree that it was required to verify the contractor was not on the System for Award Management (SAM) exclusion list before issuing a task order. However, DOT’s Office of the Senior Procurement Executive (OSPE) confirmed that checking SAM for both base contracts and task orders is a FAR requirement. After we conveyed this to Volpe, it revised its policy regarding the SAM exclusion list.

In 2015, we had recommended that Volpe develop, use, and maintain a central system for contract files, in accordance with the FAR, to help it manage its acquisition documents. In response, according to Volpe, it accelerated its plans to...
move from a hard copy contract file system to an electronic system and updated its Internal Office Procedures. However, during our current review, we found that contracting officials did not have a complete understanding of Federal requirements for contract files nor did they always implement departmental requirements, which contributed to the missing documentation. When we brought these issues to Volpe’s attention, Agency officials acknowledged that their acquisition staff could benefit from refresher training to ensure that the contract files are complete.

Volpe Updated Its Invoice Review Practices But More Actions Are Needed

According to GAO, invoice reviews are intended to help agencies ensure they receive all billed goods and services, are charged allowable amounts, and do not incur costs that are inadequately supported. DOT’s TAM requires an in-depth review of all contractor invoices to ensure they adhere to contract requirements, are proper as defined by the contract, and the billed costs are allocable and allowable. The TAM also allows the CO to delegate to a representative the authority to review invoices and establish a record of payment file for each contract. These practices are particularly important for the high-risk, cost-reimbursement MTAC contracts, where the Government bears the risk of paying cost overruns. However, we found several weaknesses in Volpe’s invoice review practices that warrant attention.

Prior to our audit, Volpe did not have a policy or well-documented procedures for reviewing MTAC invoices and relied on the task order contracting officer representatives’ (TOCOR) appointment letters, which provide guidance for the review and approval of MTAC billed costs. Volpe instructed its TOCORs to follow a “reasonableness” standard. Specifically, the TOCOR would determine if the billed costs were reasonable by comparing the invoice amount to the cost and progress reports that contractors submitted to Volpe. However, the guidance in the appointment letters lacks measurable criteria to determine “reasonableness,” does

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27 GAO, Department of Energy, Use of Leading Practices Could Help Manage the Risk of Fraud and Other Improper Payments (GAO-17-235), March 2017.
28 TAM 1232.7001 and TAM 1232.7002.
29 TAM 1232.7002 and TAM 1232.7003.
30 Such contracts require significantly more Government oversight than fixed-price contracts. As such, the FAR requires a written plan for cost-reimbursement contracts and documentation to support the selection of the contract type. A cost-reimbursement contract can only be selected when, prior to award, adequate resources are available to manage the contract and ensure effective cost controls are used. FAR 7.103.
31 MTACs develop cost and progress reports and submit them directly to Volpe each month. The reports contain cost-summary tables that list the month’s total billed hours, cost by labor category, overhead charges, and subcontractor charges. They also summarize the MTACs’ work during the performance period, the cooperative agreements the work supports, the MTACs’ planned activities for the next month, and any open issues.
not identify the specific items to be considered during the evaluation, and does not describe the review process itself.

After we raised these issues, Volpe officials told us that they do not rely solely on the TOCORs’ “reasonableness” reviews and that their COs check that overhead and labor rates are accurate by comparing them to the estimates in the master contract, task order cost proposals, and the forward pricing rate agreement.32 However, until final annual indirect cost rates are established for any period, the FAR requires the Government to reimburse the contractor at billing rates called provisional billing rates (PBR),33 which are adjusted annually. PBRs are established by the CO or an authorized representative,34 in this case, the Defense Contract Management Agency (DCMA). After we brought this to their attention, Volpe officials told us that they began using DCMA-established PBRs in 2017. They could not tell us whether DCMA-established rates were used prior to that date because the COs with that information had left the agency, and there was no documentation. In one of the contract files we reviewed, there was no evidence that the CO established or obtained PBRs from DCMA.35 As a result, we found no evidence that Volpe’s invoice reviews verified that the billed indirect rates were based on the PBRs established by the cognizant audit agency.

In addition, Volpe’s COs did not document their invoice reviews in the contract file. Accordingly, we could not determine if the COs had properly assessed whether billed costs were sufficiently supported for payment. For example, when we asked Volpe officials if they verified the accuracy of the contractors’ invoiced labor rates, they said that, for cost-type contracts, they relied on the contractors’ accounting systems to accurately bill the actual costs incurred. And while Volpe obtained contractor timesheets to support the hours billed, we found they did not adequately review the timesheets to identify discrepancies, such as overbilled labor hours. Volpe also did not compare invoiced labor rates for employees against payroll records or consistently obtain or review significant subcontractor invoices.

The lack of invoice review procedures, controls, and documentation increases the risk that Volpe will pay unallowable or unreasonable costs for MTAC work. For example, in a sample of invoices from one contractor with a history of improperly

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32 Per FAR 2.101, forward pricing rate agreements are negotiated between a contractor and the Government to establish rates in pricing contracts or modifications for a specified period. These rates represent reasonable projections of specific costs that are not easily estimated, identified with, or generated, such as rates for labor and indirect expenses that will be incurred in future months or years.

33 FAR 52.216-7(e).

34 FAR 42.704(a) states that the contracting officer (or cognizant Federal agency official) or auditor responsible for establishing the final indirect cost rates also shall be responsible for determining the billing rates.

35 The DCMA Administrative Contracting Officer had established PBRs for the contractor to use when billing the Federal Government.
billing the Federal Government, we identified a few issues that could result in unsupported costs or improper payments (see table 3).

Table 3. Issues Identified by OIG in One MTAC’s Invoices Submitted to Volpe

<table>
<thead>
<tr>
<th>Invoice Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two invoices included 10 hours of labor charges totaling $734.24 that were not included in 3 employees’ timecards.</td>
</tr>
<tr>
<td>Two invoices charged $40,000 and $6,000 for subcontractor work, but lacked support. When asked, Volpe provided a contractor-created report that listed the subcontractor expenses but did not include supporting documentation for those charges, such as receipts, timesheets, and invoices.</td>
</tr>
</tbody>
</table>

Source: OIG analysis

Based on the results of our sample invoice review for the contractor discussed in table 3, we estimate that $118,033 or 1.4 percent of the amount in the universe had issues, with $3,668 due to excess timecard hours and $114,366 due to unsupported documentation for billing. Volpe officials stated they plan to request support for these charges before they make the final payment during their contract close-out process. While this represents a small percent of the universe, it is an example of the types of billing issues that could be mitigated by improving invoice review procedures.

In addition to PBRs and invoice reviews, periodic incurred cost audits are another mechanism to assist the CO in ensuring the validity of direct and indirect costs billed under cost-reimbursement contracts. If the CO decides not to obtain audits, the TAM calls for the CO to document this decision to the file and include: (1) the reason an independent audit was not obtained; (2) the extent of the analysis that was performed in lieu of obtaining an audit; and (3) other factors mitigating the risk, such as the absence of significant audit issues. However, the MTAC contract files we reviewed did not contain documentation describing the reasons that periodic audits were not obtained.

While Volpe has taken steps to strengthen its invoice review and approval practices in response to our audit findings, more actions are needed. For example, Volpe

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36 This amount and other monetary values in this table do not include fringe, overhead, and general and administrative (G&A) costs.
37 The issues listed in table 3 all relate to one MTAC, which has a history of improperly billing the Federal Government. Based on this increased risk, we reviewed a statistical sample of this particular MTAC’s invoices for overseeing two HSIPR projects. The sample included 46 of 231 invoices (20 percent), totaling $2.8 million of the $8.4 million (33.5 percent) in our universe for this contractor.
38 Our $118,033 estimate has a 100-percent lower confidence limit of $46,521 and a 90-percent upper confidence limit of $228,778.
39 Our $3,668 estimate has a 100-percent lower confidence limit of $734 and a 90-percent upper confidence limit of $6,692.
40 Our $114,366 estimate has a 100-percent lower confidence limit of $45,787 and a 90-percent upper confidence limit of $225,353.
41 TAM 1242.7200.
updated the guidance in its TOCOR appointment memoranda requirements to include verification that the billed work was not included in previous invoices, the appropriate labor rates were charged, and all billed work was completed within the period of performance. However, Volpe did not insert this guidance in its TOCOR appointment memoranda until March 2018, after all the ARRA funds for the HSIPR MTAC contracts had been disbursed. Also, in April 2018, Volpe implemented a “Contractor Invoice Review/Approval and Payment Authorization Processes” policy, which directs the CO to maintain a record of payment and supporting documentation for each contract and verify the appropriate direct costs. However, it does not require the CO to ensure that the appropriate indirect rates are billed.

FRA Has an Opportunity To Strengthen Its Management and Use of MTAC Oversight Services

According to FRA, to meet the ARRA statutory obligation deadline, the Agency concurrently issued grants and established its Monitoring and Technical Assistance Program before it developed adequate tools and comprehensive procedures to implement HSIPR project design review and oversight. As a result, we found that the Agency had neither the necessary oversight tools nor a consistent reporting and recommendation tracking process to ensure effective use of MTAC services.

FRA Launched the Monitoring and Technical Assistance Program Before It Developed Adequate Oversight Tools

FRA was primarily a safety regulatory agency with limited grant authority until 2008–2009, when PRIIA and ARRA expanded the Agency’s grant program responsibilities and associated funding. FRA officials said it was challenging to establish oversight practices, given the unique rail environment, the short obligation deadline for the ARRA HSIPR appropriation, the significant funding amounts, and the Agency’s lack of experience at that time with such complex projects. Therefore, FRA did not initially have the policy framework, tools, or staff in place to fully develop the Monitoring and Technical Assistance Program or fully assess and oversee HSIPR projects. For example, FRA was not in a position to identify potentially unnecessary and, at times, costly upgrades before HSIPR projects were well underway or verify that improvements were necessary to meet HSIPR goals.

FRA also faced the challenge of obligating all the ARRA HSIPR funds by the statutory deadline of September 30, 2012. This led to an initial management focus
on issuing Notices of Funding Opportunities,\textsuperscript{42} evaluating and selecting grant applications, and awarding cooperative agreements, rather than developing a comprehensive oversight framework for the MTACs. As a result, FRA did not have adequate oversight tools in place to make the most effective use of the MTACs when the HSIPR program began.

**FRA Lacked Adequate Technical and Oversight Tools at the Outset of the HSIPR Program**

**Rail Traffic Controller (RTC) Modeling.** Railroads use the results of RTC modeling—which simulates current and projected freight and passenger train traffic—to validate the feasibility and benefits of the proposed projects. However, FRA did not have an RTC modeling software license when the HSIPR program began. The Agency also did not have any procedures on how or when to evaluate RTC modeling results. Thus, it was unable to independently evaluate the feasibility and benefits of HSIPR corridor improvements proposed by the grantees or to evaluate alternatives associated with proposed segment improvements.

By the time the MTACs were on board in 2014, most HSIPR projects were beyond the initial RTC modeling phase.\textsuperscript{43} FRA officials told us that the grantees updated the RTC modeling as the projects progressed, but the MTACs were not tasked to evaluate the RTC results. Additionally, the freight railroads use proprietary information that is included in the RTC modeling, and FRA and the MTACs could not access that information. As such, FRA may have missed opportunities to improve the efficiency and effectiveness of the HSIPR projects. Subsequently, as a result of our work, FRA purchased a RTC modeling license and trained several staff how to use the software program in July 2017. Provided the tool is properly implemented, this could help FRA, and potentially the MTACs, independently validate the proposals, costs, and benefits of grantees’ future project proposals.

**Project Design and Engineering Oversight Procedures.** When FRA launched its HSIPR program in 2010, it did not have standard operating procedures (SOP) for project-design oversight. Project design is based on the percentage or level of completion necessary before proceeding to the next phase: planning/conceptual design (15 percent), preliminary engineering (30 percent), final design (90 percent), and construction (100 percent).

\textsuperscript{42} A Notice of Funding Opportunity is a Federal entity’s formally issued announcement of the availability of Federal funding through one of its financial assistance programs. The announcement invites applications and provides such information as eligibility and evaluation criteria, funding preferences or priorities, how to obtain application kits, and the submission deadline.

\textsuperscript{43} The PMOCs that preceded the MTACs between 2010 and 2014 had limited involvement in the reviews of RTC modeling results.
According to GAO and the American Railway Engineering and Maintenance-of-Way Association (AREMA), risk can best be detected and mitigated during the preliminary engineering phase of major capital improvement programs. In April 2015, when many of the HSIPR projects were already underway, FRA developed one SOP—to cover design oversight of the preliminary engineering phase. To date, this SOP has not been finalized and does not address the use of MTACs in preliminary design oversight. Moreover, an FRA official told us that the Agency decided to develop SOPs for all design phases, but they have not yet been finalized. Without a complete framework for project design oversight, FRA may not be able to identify risks as a project moves through each design phase. A complete framework would also allow FRA to promote projects that fall within project scope and schedule, and save taxpayer money.

Non-Safety Field Inspection Guidance. FRA does not use a risk-based approach or have criteria to determine when grantees and oversight staff should conduct non-safety field inspections while scoping HSIPR construction or improvement projects. According to our independent expert, onsite inspections can help stakeholders determine the actual conditions of the track and the modifications needed to deliver high-speed rail benefits. Such assessments should take place after the planning/conceptual design phase and before the preliminary engineering phase. Our expert added that inspection findings are best considered when the grantee further defines the preliminary engineering scope and develops the first set of detailed cost estimates and project budgets.

However, FRA does not require HSIPR grantees to conduct and document non-safety field inspections during the preliminary engineering phase, and the MTACs do not oversee this activity. Furthermore, FRA’s Monitoring Procedures do not contain any guidance in this area, such as how to assess current track conditions or determine if there is a true need for repairs and materials, which may lead to cost savings.

For example, in the work plans for one 14-mile segment of the Chicago-St. Louis Corridor Improvement Program’s nearly 300-mile track line, we identified approximately $153,000 for upgrades that were eligible but not necessary to achieve HSIPR program goals. We use eligible to mean costs that were within the approved scope of the cooperative agreement. FRA was unable to demonstrate why a realigned industrial lead on this segment was rebuilt with new materials.

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44 AREMA is a professional engineering association whose mission is “the development and advancement of both technical and practical knowledge and recommended practices pertaining to the design, construction and maintenance of railway infrastructure.”

45 FRA performs field inspections to ensure that the track is safe for passenger operations.

46 Our independent expert reviewed the cost of materials used on this segment and identified potential cost savings if Illinois DOT had salvaged existing materials instead of replacing everything.

47 A track that leads from a primary railroad track line to industry spur rail tracks; it is required for providing full rail services to an industry.
instead of existing ones. FRA did not require Illinois DOT (the grantee) to conduct and document a field inspection during the planning/conceptual design phase to determine the need for such modifications. While this is a small segment of track within a much larger project, the example raises questions about whether similar cost savings could be achieved in other HSIPR projects nationwide.

**Monitoring Procedures.** FRA did not have its own oversight procedures when the HSIPR program began or when it established the Monitoring and Technical Assistance Program. Instead, FRA adapted 27 of FTA’s 32 Operating Procedures to create its Monitoring Procedures. Their purpose is to instruct the MTACs in various aspects of project oversight and technical assistance. However, these procedures are either unclear or are not tailored to the Monitoring and Technical Assistance Program’s oversight needs, and they do not align with FRA’s authority to oversee certain financial assistance programs.

For example, the Monitoring Procedures direct the MTACs to evaluate the grantees’ use of force account, i.e., when railroads use their own employees instead of competitively contracting construction work. However, by law, FRA has no basis to require a railroad to compete such work where it is not consistent with the terms of the railroad’s collective bargaining agreements. As such, FRA does not conduct oversight of a railroad’s use of force account.

In addition, many of the procedures that Volpe can assign to the MTACs for implementation do not distinguish between suggestions and requirements for MTAC reporting and oversight tasks (see exhibit H for more details). FRA and Volpe officials told us that they view the Monitoring Procedures as guidance rather than requirements for the HSIPR program. While this approach gives the MTACs flexibility, it also results in inconsistent reporting of deliverables—a key point for FRA if it plans to use MTACs to oversee future non-HSIPR grant programs.

We reviewed Monitoring Procedure reports for three project locations in our sample. We asked for all of the Monitoring Procedure deliverables tasked to the MTACs, but FRA and Volpe were unable to provide them due to the structure and condition of both agencies’ files. Our findings are based on the documents FRA and Volpe were able to provide.

As noted in table 4, we found several instances that demonstrate the limitations and ineffectiveness of the MTACs’ reviews. These included cases where the grantee

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48 FRA awarded the Chicago–St. Louis Corridor Improvement Project a cooperative agreement valued at approximately $1.2 billion.

49 The HSIPR program requires a host railroad to make a written assurance “that collective bargaining agreements with the railroad’s employees (including terms regulating the contracting of work) will remain in full force and effect according to their terms for work performed by the railroad on the railroad transportation corridor.” Title 49, U.S. Code (U.S.C.) § 22905(c)(1)(C), formerly codified as 49 U.S.C. § 24405(c)(1)(C) (2015–2019).

50 For the purposes of this report, we are using deliverables to describe the various formats the MTACs use to submit their oversight reports. These included emails, stand-alone reports, or combined reports addressing multiple Monitoring Procedures.
either did not provide all of the required documents or the documents were incomplete. In addition, the procedures direct the MTACs to identify problems and report them to FRA timely; however, evidence of FRA’s consideration and resolution of the issues was not documented in the reports or elsewhere. See exhibit H for more detailed descriptions of the issues the MTACs identified in the Monitoring Procedure reports.

Table 4. Status of Monitoring Procedure Reviews in Three HSIPR Regions

<table>
<thead>
<tr>
<th>Monitoring Procedure</th>
<th>Project: Chicago-St. Louis Corridor Improvement Program</th>
<th>Project: Pacific Northwest Rail Corridor Program</th>
<th>Project: North Carolina Piedmont Improvement Program</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grantee: Illinois Department of Transportation (IDOT)</td>
<td>Grantee: Washington State Department of Transportation (WSDOT)</td>
<td>Grantee: North Carolina Department of Transportation (NCDOT)</td>
</tr>
</tbody>
</table>

**Note:** Blank boxes indicate that either the agency could not identify if a procedure had been assigned or was not necessary based on documentation provided.

- **Recurring Oversight & Related Reports:**
  - Unclear. Report did not state whether MTAC completed review.
  - Partially reviewed. Report indicated MTAC partially completed the required review.
  - Partially reviewed. FRA did not task MTAC to review all documents.

- **Project Schedule Review:**
  - Not reviewed. Grantee did not provide information.
  - Not reviewed. Grantee did not provide information.

- **Preliminary Engineering, Final Design, Readiness To Procure Construction:**
  - Partially reviewed. Report indicated MTAC partially completed the required review.
  - Partially reviewed. MTAC performed a limited review due to project phase.

- **Management and Technical Capacity/Capability:**
  - Not reviewed. Grantee did not provide required information.

- **Real Estate Acquisition and Management Plan:**
  - Partially reviewed. Grantee did not provide all required information.

- **Quality Assurance/Quality Control Review:**
  - Partially reviewed. Grantee did not provide all required information.

- **Annual Review & Close Out of Grant:**
  - Unclear. Report did not state if MTAC completed review.

- **Capital Cost Estimate Review:**
  - Partially reviewed. Grantee did not provide required information.

- **Buy America Review:**
  - Partially reviewed. Grantee did not provide all required information.

- **Finance Plan:**
  - Partially reviewed. Grantee did not provide all required information.

See exhibit H for more detailed information.

Source: OIG analysis
As a result of our audit work, FRA and Volpe officials told us they plan to update the Monitoring Procedures to better fit FRA’s future needs. Since FRA and Volpe viewed the Monitoring Procedures as guidance, they did not hold grantees accountable for providing all the documentation the MTACs needed for their oversight reviews, even when the MTACs indicated the information was incomplete or inadequate. In the absence of such documents, FRA cannot be sure the Monitoring Procedures were fully performed or provided the intended oversight benefits.

Updating the technical tools and procedures based on lessons learned from the HSIPR program will enhance the effectiveness of future MTAC oversight and ensure that FRA does not miss opportunities for more effective oversight and potential cost savings.

**FRA Needs To Improve Its Process for Tracking MTAC Reports and Recommendations**

FRA and Volpe do not ensure that the MTACs consistently document oversight reviews. In addition, FRA does not ensure that MTAC recommendations are tracked or MTAC oversight reports are archived consistently in FRA’s database.

**FRA and Volpe Do Not Ensure Consistent Documentation of MTAC Oversight Reviews**

FRA and Volpe do not require the MTACs to follow a consistent process for conducting and documenting their oversight reviews and deliverables. FRA staff stated that this structure allows them to prescribe a level of oversight that matches the complexity and scale of projects while ensuring Federal funds are used appropriately. Officials at both agencies noted that the Monitoring Procedures give regional managers the flexibility to determine the specifics for each review and its associated deliverables. As a result, the MTACs submit oversight reports in a variety of formats, including emails, stand-alone reports, or combined reports addressing multiple procedures. However, the need for flexibility does not preclude establishing standards for reporting and documenting the results of requested reviews that are appropriately scaled to the project’s size, scope, and complexity.

During our audit, FRA stated that it plans to implement a more consistent process for documenting MTAC oversight reviews and deliverables. This will give FRA and Volpe greater assurance that the MTACs’ analysis and oversight strategies mitigated risks on the HSIPR improvement projects and will also benefit future FRA grant oversight efforts.
FRA’s Process for Tracking and Resolving MTAC Recommendations Is Not Effective

The Monitoring Procedures direct the MTACs to discuss their recommendations with FRA and the grantees. However, FRA has not clarified how the Agency and its grantees should address MTAC recommendations. In addition, the MTACs sometimes communicate informally with grantees, which makes it difficult to track recommendations and may limit their usefulness. We found several recommendations in the Monitoring Procedure reports, but we could not determine if they had been tracked and resolved by the project stakeholders—FRA and its grantees (see table 5).

Table 5. Status of MTAC Recommendations in Three HSIPR Locations

<table>
<thead>
<tr>
<th>Monitoring Procedure</th>
<th>Project: Chicago-St. Louis Corridor Improvement Program</th>
<th>Project: Pacific Northwest Rail Corridor Program</th>
<th>Project: North Carolina Piedmont Improvement Program</th>
</tr>
</thead>
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<td></td>
<td>Grantee: Illinois Department of Transportation (IDOT)</td>
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<td>Grantee: North Carolina Department of Transportation (NCDOT)</td>
</tr>
</tbody>
</table>

Note: Blank boxes indicate that either the agency could not identify if a procedure had been assigned or was not necessary based on documentation provided.

- **Recurring Oversight and Related Reports**: MTAC recommended updating the project risk register in two consecutive quarterly reports. However, it is unclear if IDOT followed up. WSDOT did not act on a recommendation on project management for 7 months or complete the action for over a year. It did not address another recommendation on track signal requirements for over 15 months.

- **Project Schedule Review**: We could not determine if IDOT resolved the MTAC’s 6 recommendations, which included increasing the level of detail when monitoring project risk. WSDOT did not implement 4 of 7 MTAC recommendations and could not track the other 3 because they were not added to the weekly task tracker.

- **Buy America Review**: We did not see any evidence that FRA had tracked the MTAC’s recommendations to ensure WSDOT’s compliance with Buy America procurement requirements.

- **Preliminary Engineering, Final Design, Readiness To Procure Construction**: MTAC did not provide timeframes for completing the recommended work and addressing discrepancies. MTAC made 3 recommendations but did not provide timeframes for implementation or other actions.

Source: OIG analysis
According to FRA and Volpe officials, their staff and the MTACs collaborate to identify project issues and potential solutions through weekly meetings. FRA and Volpe also use a weekly task tracker for each MTAC, which is intended to document work assignments and status, oversight reviews, and recommendations. However, the MTACs frequently do not highlight or clearly identify their recommendations in their task trackers, making it difficult for FRA to track significant issues and ensure they are addressed. Further complicating this issue is that FRA views MTAC recommendations as suggestions. Therefore, they do not always document critical issues or resolve them promptly.

For example, Volpe documented only 1 of the MTAC’s 34 recommendations to the Washington State (WS) DOT in the task tracker. Moreover, the MTAC identified two significant concerns related to this project—regarding WSDOT’s technical capability and the safety design of planned upgrades. While we confirmed that the grantee took corrective action for the safety issue, we did not find documentation to show that the grantee resolved the other issue. Due to these limitations, FRA cannot be certain that it has and will make full use of the MTACs’ rail expertise, which may limit its ability to achieve effective oversight of the HSIPR program.

**FRA Does Not Consistently Maintain Its Program Management Tracker Database**

FRA does not ensure that MTAC oversight reports and recommendations are consistently uploaded to the Program Management Tracker (PMT) database that it developed for the HSIPR program. According to FRA’s Grant Management Manual, the Agency intended the PMT to serve as a central repository for grantee deliverables and other key grant documentation. The PMT includes a folder within each project for MTAC reports, which contain information related to project schedule, budget, and design. According to FRA and Volpe officials, Volpe’s TOCORs or FRA regional managers (depending on each team’s preference) are supposed to upload MTAC and grantee deliverables to the central PMT database for FRA’s review. In particular, the TOCORs use the MTAC reports to monitor the grantees’ work progress.

While the PMT is intended to be the central repository, we found that multiple locations were used for storing project materials, which has created gaps relating to MTAC recommendations and deliverables in the PMT database. For example, an FRA official told us that regional managers store some HSIPR documents on FRA’s shared network drive rather than in the PMT. In addition, the Volpe TOCORs store some reports in separate SharePoint project folders. This makes it difficult for FRA and Volpe to realize the full benefit of the MTACs’ oversight.
Conclusion

By entering into the intra-agency agreement with Volpe to acquire the MTACs and implement the Monitoring and Technical Assistance Program, FRA took significant action to support oversight of HSIPR projects. Due to the benefits gained from the MTACs’ work, FRA now anticipates using the Monitoring and Technical Assistance Program to oversee other areas as well. FRA’s first step in this effort should be to develop or update the policies and procedures it uses to manage the MTACs’ oversight work. Volpe also must strengthen its contract administration practices to promote compliance with requirements and guidance. Such enhancements can help FRA ensure that it obtains the full benefit of the MTACs’ expertise to help it achieve program oversight goals and realize opportunities for cost savings in the HSIPR and other programs.

Recommendations

We recommend that the Office of the Assistant Secretary of Transportation for Research and Technology, in coordination with the Office of the Senior Procurement Executive, require the Director of the John A. Volpe National Transportation Systems Center (Volpe) to take the following actions:

1. Update and implement procedures to ensure Volpe’s staff follow Volpe and departmental requirements and guidance when preparing and documenting independent government cost estimates.

2. Update Volpe’s procedures to require the use of risk-mitigation controls if the contractor’s accounting system cannot be evaluated with current audit information prior to award of a cost-reimbursement contract, and document the contract file.

3. Develop and provide refresher training for Volpe’s contracting personnel on the Federal Acquisition Regulation, Transportation Acquisition Manual, and Volpe’s requirements and guidance for establishing contract and task order files that provide complete and accurate records of all actions.

4. Obtain incurred cost audits for its Monitoring and Technical Assistance Contractor (MTAC) cost-reimbursable contracts or document the rationale for not obtaining these audits in the contract file.

5. Update the Volpe April 2018 invoice review policy to require contracting officials to verify that the appropriate indirect rates have been charged.
We recommend that the Federal Railroad Administrator take the following actions:

6. Develop, finalize, and implement procedures for FRA and the MTACs to use for all phases of project design oversight reviews and Rail Traffic Controller modeling simulation results.

7. Develop and implement a risk-based oversight process for non-safety field inspections to include criteria to determine which prospective projects could benefit at key project phases.

8. Revise the Monitoring Procedures to better align with FRA’s financial assistance programs and strengthen the MTACs’ role in the oversight of FRA financial assistance programs.

9. Develop and implement policies and procedures that require the MTACs to follow a consistent process for conducting oversight reviews and documenting deliverables in a manner appropriately scaled for the size, complexity, and type of project.

10. Develop and implement procedures that (a) direct the MTACs to describe each recommendation in terms of impact, such as safety or cost; (b) clearly state whether the recommendation is required or optional; and (c) track MTAC recommendations to resolution.

11. Develop and implement a process that ensures that completed MTAC oversight reports are uploaded and maintained at regular intervals in FRA's Program Management Tracker database.

Agency Comments and OIG Response

We provided FRA and Volpe with our draft report on May 3, 2019, and received their response on June 10, 2019, which is included as an appendix to this report. FRA and Volpe concurred with all eleven of our recommendations and provided appropriate actions and completion dates. Accordingly, we consider all recommendations resolved but open pending completion of the planned actions.

Actions Required

We consider recommendations 1 through 11 resolved but open pending completion of planned actions.
Exhibit A. Scope and Methodology

We conducted this performance audit between April 2016 and May 2019 in accordance with generally accepted Government auditing standards as prescribed by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The audit objectives were to assess (1) FRA’s acquisition of MTACs through the Volpe Center and (2) FRA’s management and use of MTAC oversight services for HSIPR projects.

To assess how FRA acquired the MTACs, we reviewed Volpe’s contracting practices and interviewed FRA and Volpe contracting and program personnel. We also reviewed Federal and DOT procurement policies and guidance, as well as contracts, task orders, technical memoranda and job orders, cooperative agreements, and invoice universes from Volpe and FRA.

For objective 1, we requested from Volpe all contract, task order, and technical memoranda data that resulted from FRA’s IAAs for MTAC services on the HSIPR projects. The universe consisted of 11 cost-reimbursement contracts, 23 cost-reimbursement task orders, and 73 technical memoranda. We verified these data by independently obtaining the universe and comparing it to the Volpe-provided contracts, task orders, and technical memoranda. We identified one error, but it did not impact our sample. To assess Volpe’s compliance with procurement requirements, we reviewed from the universe of 11 cost-reimbursement contracts and 23 cost-reimbursement task orders a stratified probability proportional to size with replacement sample of 6 contracts and 12 task order files that were competitively awarded. We developed a file review checklist to determine if key pre-award steps—such as ensuring contractors’ accounting system adequacy, developing adequate IGCEs, and checking the SAM exclusion list—as well as contracts, task orders, and other documents were completed and included in the applicable contract files. From the universe of 73 technical memoranda, we developed a stratified probability proportional to size with replacement sample of 34 technical memoranda and used it to select contract and task order files for review.

To assess Volpe’s invoice review reliability, we developed and reviewed two statistical samples of invoice line items.

- To develop our first sample, we obtained a list of 411 invoice transactions dated between June 30, 2014, and September 30, 2016, from Volpe. We verified the data reliability by independently obtaining the invoice universe and comparing it to the Volpe-provided list. From these 411 transactions, we
selected 52 (12.7 percent) with probability proportional to size with replacement where size was the absolute value of the invoice transaction. Our sample totaled $2.6 million, or 46 percent of the $5.7 million in our universe. We did not project the results of this sample. We selected these invoices for review because they were project payments for the cooperative agreements sample in our audit objective 2.

Our second sample focused on one particularly high-risk MTAC with a publicized history of improper billing practices. We obtained a list of 397 invoice transactions Volpe processed for this MTAC through October 12, 2017. We stratified this universe by type of transaction and selected a stratified probability proportional to size with replacement sample of 60 of the 397 invoice line items where size was the absolute value of the invoice transaction amount. Six transactions were selected twice due to our “with replacement” sampling methodology, which reduced our actual sample size from 60 to 54, or 13.6 percent of the 397 invoice transactions in our universe. These transactions represent 46 of 231 invoices, or 20 percent of our universe. Our sample included a total invoice transaction amount of $2.8 million, or 33.5 percent of the $8.4 million in our universe for this one contractor. Our sample sizes were computed to allow for estimates with a 90-percent confidence and a precision no greater than +/- 10 percent. Our actual precision for our second sample was no greater than 1.3 percent. We chose this sample design because it is widely accepted and used by audit agencies and industry due to its straightforward formulas, which make the computations transparent without the use of sophisticated software. We used our sample to validate the accuracy of Volpe’s transaction listing and found no discrepancies. We tested the completeness of the listing by independently replicating the invoice universe that Volpe provided and used 36 variables to verify its accuracy. Based on our observations, we determined that this listing was reliable enough for the purposes of this audit.

For objective 2, we obtained the HSIPR cooperative agreement universe from FRA and Volpe, which contained 155 cooperative agreements. From this universe, we selected 17 cooperative agreements with award amounts greater than $100 million, so that the total value was $9.2 billion. We stratified this universe to two strata. Stratum 1 consisted of three cooperative agreements for two projects identified in an OIG Hotline complaint (Chicago-St. Louis Corridor Improvement Program and Pacific Northwest Rail Corridor Program). Stratum 2 consisted of 1 of 14 cooperative agreements selected with probability proportional to the award amount, for a project with substantial preliminary engineering and/or construction phases underway (North Carolina Piedmont Improvement Program). In total, we reviewed four cooperative agreements pertaining to three projects valued at $2.6 billion or 28.3 percent of the universe.

To assess how the MTACs were tasked to conduct and report on their oversight duties, we analyzed FRA’s guidance and procedures and interviewed FRA, Volpe,
and MTAC personnel. We also interviewed State DOT and host railroad managers and employees. We reviewed engineering and construction documents and acquired the technical services of Maser Consulting—a high-speed passenger and freight rail design and engineering firm with expertise in shared corridor issues, light-rail and heavy-rail transit systems, and commuter and freight railroads, as well as the methodologies and tools used to plan and oversee such railroads systems. Maser provided support services to determine if modifications made to the freight track and sidings on the Chicago-St. Louis Corridor Improvement Program were needed to meet HSIPR project goals.
Exhibit B. Organizations Visited or Contacted

**DOT Facilities**
- Federal Railroad Administration, Washington, DC
- John A. Volpe National Transportation Systems Center, Cambridge, MA

**State DOTs**
- Illinois Department of Transportation (IDOT)
- North Carolina Department of Transportation (NCDOT)
- Washington State Department of Transportation (WSDOT)

**Monitoring and Technical Assistance Contractors**
- Booz Allen Hamilton (IDOT MTAC)
- TranSystems (NCDOT MTAC)
- Hill International (WSDOT MTAC)

**Railroads**
- BNSF Railway (WSDOT Host Railroad)
- Norfolk Southern Railroad (NCDOT Host Railroad)
- Union Pacific Railroad (IDOT Host Railroad)

**Technical Consultant**
- Maser Consulting, P.A.
### Exhibit C. List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREMA</td>
<td>American Railway Engineering and Maintenance-of-Way Association</td>
</tr>
<tr>
<td>ARRA</td>
<td>American Recovery and Reinvestment Act</td>
</tr>
<tr>
<td>CO</td>
<td>Contracting officer</td>
</tr>
<tr>
<td>DCAA</td>
<td>Defense Contract Audit Agency</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>FAR</td>
<td>Federal Acquisition Regulation</td>
</tr>
<tr>
<td>FRA</td>
<td>Federal Railroad Administration</td>
</tr>
<tr>
<td>FTA</td>
<td>Federal Transit Administration</td>
</tr>
<tr>
<td>GAO</td>
<td>Government Accountability Office</td>
</tr>
<tr>
<td>HSIPR</td>
<td>High-Speed Intercity Passenger Rail</td>
</tr>
<tr>
<td>IAA</td>
<td>Intra-agency agreement</td>
</tr>
<tr>
<td>IDOT</td>
<td>Illinois Department of Transportation</td>
</tr>
<tr>
<td>IGCE</td>
<td>Independent government cost estimate</td>
</tr>
<tr>
<td>MTAC</td>
<td>Monitoring and Technical Assistance Contractor</td>
</tr>
<tr>
<td>NCDOT</td>
<td>North Carolina Department of Transportation</td>
</tr>
<tr>
<td>OIG</td>
<td>Office of Inspector General</td>
</tr>
<tr>
<td>PMOC</td>
<td>Project Management Oversight Contractor</td>
</tr>
<tr>
<td>PMT</td>
<td>Program Management Tracker database</td>
</tr>
<tr>
<td>PRIIA</td>
<td>Passenger Railroad Investment and Improvement Act</td>
</tr>
<tr>
<td>RTC</td>
<td>Rail Traffic Controller software</td>
</tr>
<tr>
<td>SAM</td>
<td>System for Award Management</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard operating procedure</td>
</tr>
<tr>
<td>TAM</td>
<td>Transportation Acquisition Manual</td>
</tr>
<tr>
<td>TOCOR</td>
<td>Task order contracting officer representative</td>
</tr>
<tr>
<td>Volpe</td>
<td>John A. Volpe National Transportation Systems Center</td>
</tr>
<tr>
<td>WSDOT</td>
<td>Washington State Department of Transportation</td>
</tr>
</tbody>
</table>
Exhibit D. HSIPR Reporting Relationships

Source: OIG analysis
Exhibit E. FRA, Volpe, and MTAC Acquisition Relationship

Source: OIG analysis
Exhibit F. HSIPR Shared-Use Corridor Stakeholders

Source: OIG analysis
### Exhibit G. Key Events, Risks and Challenges in FRA’s and Volpe’s HSIPR Program Oversight

<table>
<thead>
<tr>
<th>Dates</th>
<th>Key Events</th>
<th>Risks and Challenges</th>
</tr>
</thead>
</table>
| 2009 and 2010     | • Congress appropriates over $10 billion for HSIPR, to be administered by FRA.  
                   • Of the $10.5 billion appropriation, $8 billion in ARRA funds is to be obligated by September 30, 2012 and expended by September 30, 2017. | • FRA is primarily a safety regulatory agency and unaccustomed to managing high-dollar cooperative agreements or complex projects.  
                   • FRA lacks HSIPR oversight program guidance and has limited resources to expend HSIPR appropriations within the time constraints. |
| Mid-2010 to mid-2014 | • FRA uses PMOCs to help its staff oversee the HSIPR program. | • FRA relies upon an Interim Monitoring Plan to guide its HSIPR oversight, which includes a limited, risk-based approach for selecting projects to be monitored. a |
| June & September 2012 | • FRA enters into an ARRA-funded IAA, valued at $50 million, with Volpe, which will award contracts for monitoring and technical assistance services. | • The monitoring and technical assistance services are intended to strengthen FRA’s oversight of its higher risk investments. |
| November 2013     | • Volpe awards 11 master contracts—estimated value $75 million—to obtain MTAC oversight services for FRA. | • Volpe acquires the MTAC services 4 years after Congress appropriates $10.5 billion for HSIPR projects.  
                   • By this point, FRA has awarded 147 of 155 total HSIPR cooperative agreements to State recipients. |
| December 2013     | • Volpe gives FRA its acquisition and oversight strategy document: Technical Approach Document (TAD), Revision 1 | • Volpe does not give FRA its final plan for implementing MTAC acquisition and oversight strategies until after the MTAC contracts are awarded. |
| Mid-2014          | • FRA, through Volpe, assigns the MTACs their first oversight duties. | • Many of the HSIPR projects are already under construction.  
                   • FRA has not developed adequate oversight guidance and procedures for HSIPR projects. |
| August 2014       | • FRA drafts Monitoring Procedures—guidance for the MTACs—9 months after their contracts were awarded. | • FRA implements the Monitoring Technical Assistance Program before it has adequate tools and guidance. The Monitoring Procedures are still in draft form, are not mandatory, and do not contain clear direction for overseeing high-risk issues or addressing recommendations.  
                   • According to FRA, establishing guidance for the MTACs is challenging due to the unique rail environment, as well as the Agency’s lack of resources and inexperience with such complex projects. |


Source: OIG analysis of FRA and Volpe data
## Exhibit H. Issues Identified in MTAC Reviews and Reports in Three HSIPR Regions

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Recurring Oversight and Related Reports. Review materials related to project planning, design, construction, and grantee’s ability to implement.</td>
<td>Unclear. Unclear if MTAC reviewed all 10 required documents listed in the MP.</td>
<td>Partially reviewed. MTAC appears to have only reviewed 2 of 10 required documents.</td>
<td>Partially reviewed. MTAC was not tasked to review NCDOT’s 2 required documents, which limited the report’s impact. MTAC also did not follow format prescribed in MP 1 for MP 25, resulting in a less detailed report.</td>
</tr>
<tr>
<td>Project Schedule Review. Evaluate projects schedule to determine completeness and reliability.</td>
<td>Not reviewed. MTAC did not assess the planned performance of the project because IDOT’s schedule was too summary and did not rely on logic to estimate the project’s scope, resources, and manpower.</td>
<td>Not reviewed. MTAC was unable to complete the analysis prescribed in the MP and independently verify the results because WSDOT provided PDFs instead of the original project files.</td>
<td></td>
</tr>
<tr>
<td>Preliminary Engineering, Final Design, Readiness to Procure Construction. Review and discuss project management plan, scope of work, delivery plan, and other topics.</td>
<td>Partially reviewed. MTAC only reviewed 4 of 35 projects for this corridor; FRA conducted the remaining 31 reviews.</td>
<td></td>
<td>Partially reviewed. MTAC performed a limited review, likely, because the project was already in the Final Design phase.</td>
</tr>
<tr>
<td>Management and Technical Capacity/Capability. Review Management and Technical Capacity /Capability Plan and Project Management Plan.</td>
<td></td>
<td>Not reviewed. MTAC was unable to review the plan because WSDOT did not create one. MTAC identified potentially critical staffing gaps that would impact WSDOT’s ability to manage this project.</td>
<td></td>
</tr>
<tr>
<td>Real Estate Acquisition and Management Plan (RAMP). Review and analyze this plan and supporting documents.</td>
<td></td>
<td>Partially reviewed. MTAC performed a limited review because WSDOT did not have a complete RAMP and only provided 2 of the 5 required documents.</td>
<td></td>
</tr>
</tbody>
</table>

Note: Blank boxes indicate that either the agency could not identify if a procedure had been assigned or was not necessary based on documentation provided.
<table>
<thead>
<tr>
<th>Monitoring Procedure</th>
<th>Project: Chicago-St. Louis Corridor Improvement Program</th>
<th>Project: Pacific Northwest Rail Corridor Program</th>
<th>Project: North Carolina Piedmont Improvement Program</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grantee: Illinois Department of Transportation (IDOT)</td>
<td>Grantee: Washington State Department of Transportation (WSDOT)</td>
<td>Grantee: North Carolina Department of Transportation (NCDOT)</td>
</tr>
</tbody>
</table>

**Note:** Blank boxes indicate that either the agency could not identify if a procedure had been assigned or was not necessary based on documentation provided.

**Quality Assurance/ Quality Control (QA/QC) Review.** Ensure grantee complies with FRA’s requirements for review.

- **Partially reviewed.** MTAC could only perform a limited review, 6 of 31 products, because WSDOT did not provide complete documentation.


- **Unclear.** 2015 report does not include the checklists from FRA’s Monitoring Manual, which limits the effect of the review. 2016 report includes the checklists; thus the review complies with the MP. Both reports are marked as “prepared by” a FRA Project Manager. MTAC personnel are listed but their contributions are not distinguished from other participants.

**Capital Cost Estimate Review.** Evaluate cost estimates using Key Principles for Cost Estimating and other requirements.

- **Not reviewed.** MTAC was unable to verify the cost estimates because the WSDOT did not use the required Standard Cost Coding format. At FRA’s request, MTAC did not evaluate WSDOT’s management and control of project costs on certain tasks. MTAC did not agree with the inclusion of Positive Train Control in a task because WSDOT did not provide a detailed cost estimate.

**Buy America Review.** Evaluate compliance with Buy America/American standards.

- **Partially reviewed.** MTAC only performed a “spot check” because WSDOT did not provide 3 of the 6 documents listed in the MP.

**Finance Plan.** Review financial plan, project cost estimate and schedule, and if available, market analysis and regional economic condition study.

- **Partially reviewed.** MTAC reviewed 1 of 2 required documents. MTAC found that the financial plan did not clearly demonstrate that adequate contingency funds were available to cover potential project cost overruns.

**Source:** OIG analysis
Exhibit I. Major Contributors to This Report

ANTHONY WYSOCKI  PROGRAM DIRECTOR
KATHRYN NOVICKY  PROJECT MANAGER
ANGELA HAILES  SENIOR ANALYST
MEREDITH HOWELL  SENIOR ANALYST
JONATHON NUCKLES  ANALYST
CHARLES BRADFORD  ANALYST
ZACHARY DESJARDINS  ANALYST
GRACE ENTWISTLE  STUDENT TRAINEE
AMY BERKS  SENIOR COUNSEL
ANNE-MARIE JOSEPH  ENGINEERING SERVICES MANAGER
PETRA SWARTZLANDER  SENIOR STATISTICIAN
MAKESI ORMOND  STATISTICIAN
JANE LUSAKA  WRITER-EDITOR
CHRISTINA LEE  VISUAL COMMUNICATIONS SPECIALIST

From: Ronald Batory
Administrator, Federal Railroad Administration

To: Mary Kay Langan-Feirson
Assistant Inspector General for Acquisition and Procurement Audits

In 2013, the Federal Railroad Administration (FRA) entered into an Intra-Agency Agreement with the Department of Transportation's (DOT) John A. Volpe National Transportation Center (Volpe Center) to help fulfill its High-Speed Intercity Passenger Rail (HSIPR) Program oversight responsibilities with the Volpe Center providing technical expertise and national oversight support. FRA, with monitoring and technical assistance contractor (MTAC) support through the Volpe Center, has successfully administered the HSIPR grants. For example, FRA has overseen the completion of 66 grant projects and returned $95.5 million to the U.S. Treasury, because some projects cost less than budgeted amounts. Volpe Center MTACs helped FRA achieve these program accomplishments despite FRA having initial limited grant processes, freight and passenger rail shared-use corridor challenges, and grantees unfamiliar with Federal funding requirements. FRA currently administers significant additional funding for other rail-related grant programs, such as the Consolidated Rail Infrastructure and Safety Improvement Program.

FRA and Volpe continue to collaborate and have initiated or completed the following actions to further improve how oversight contractors are acquired and used:

- updated and issued Volpe's contractor invoice review, approval, and payment authorization processes policy to improve verification of indirect rates;
- initiated an FRA acquisition process to directly contract with MTACs. The new acquisition process is an opportune time to improve governance procedures, including reporting and tracking of oversight deliverables and recommendations; and
- strengthened FRA standard operating procedures for critical project and grant compliance oversight.
Based upon our review of the OIG draft report, the FRA and Volpe Center concur with all eleven OIG recommendations, as written, and plan to complete actions to address the recommendations by December 31, 2020.

We appreciate this opportunity to offer additional perspective on the OIG draft report. Please contact Rosalyn G. Millman, 202-493-1339, with any questions or if the OIG would like to obtain additional details about these comments.
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OIG conducts audits and investigations on behalf of the American public to improve the performance and integrity of DOT’s programs to ensure a safe, efficient, and effective national transportation system.