



## **ASSET MANAGEMENT:**

**Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**

**Audit Report OIG-A-2016-003| February 1, 2016**

This page intentionally left blank.



# REPORT HIGHLIGHTS

## Why We Did This Review

Amtrak (the company) contracted with CAF USA in 2010 to acquire 130 new single-level long-distance passenger cars, with a scheduled completion date of November 2014. These cars are intended to be used on its long-distance routes to replace aging baggage and diner cars and to augment its sleeper car capacity. The company allocated \$343 million to this capital project, primarily from federal grant funds. With a renegotiated due date, the company has spent about \$195 million on the project as of December 31, 2015. To date, 70 baggage cars—the easiest car type to build—have been delivered.

The company has faced significant challenges in managing this project, and has taken actions to address CAF's poor performance. In April 2015, the company formally notified CAF of its poor performance, detailing specific contract requirements that had not been met. Our reporting objective is to review the actions taken to address the challenges and to determine whether further opportunities exist to reduce project risks.

For further information, contact Edward Stulginsky, Deputy Assistant Inspector General for Audits, 202-906-4600.

The full report is at:  
[www.amtrakoig.gov/reports/audits](http://www.amtrakoig.gov/reports/audits)

## ASSET MANAGEMENT: ADDITIONAL ACTIONS CAN HELP REDUCE SIGNIFICANT RISKS ASSOCIATED WITH LONG-DISTANCE PASSENGER CAR PROCUREMENT

(Audit Report OIG-A-2016-003, February 1, 2016)

## What We Found

The project to acquire new single-level long-distance rail cars has experienced significant delivery delays and they are likely to continue. Further, the delivery delays will increase the cost of the project beyond the original budget and the expected financial benefits associated with having the new cars in active service will not be realized as soon as anticipated.

Through December 2015, the delays have resulted in an estimated \$7 million increase in overall project costs and a deferral of about \$3.7 million in benefits the company expected to accrue from having the cars in revenue service. Our analysis indicates that cost increases and benefit deferrals will continue as the project falls further behind its original schedule. For example, because CAF unilaterally reduced its rate of production, the delivery of all the cars is currently scheduled for completion in March 2017—over two years beyond the original due date.

Delivery delays have been primarily caused by CAF's shortcomings in producing cars that meet the contract's quality requirements. Key findings include:

- Weaknesses in CAF's process for identifying a variety of defects in the baggage cars.
- Quality issues with the initial construction of the diner, baggage-dormitory, and sleeper cars, which are more technically difficult to produce than the baggage cars.

Amtrak has experienced project management challenges in addressing these issues. While actions taken by the Mechanical department and Procurement office have led to improvements in the daily management of the project, other opportunities exist to improve project management and further mitigate risk by clarifying project accountability, enforcing contract terms, and developing a risk mitigation plan.

## Recommendations

To address the risks associated with this project, we recommend several actions to continue to improve project management and address project challenges in a timely manner. Management agreed with our recommendations.

This page intentionally left blank.



## Memorandum

**To:** DJ Stadtler, Jr.  
Executive Vice President, Chief Operations Officer

**From:** Edward Stulginsky  
Deputy Assistant Inspector General, Audits

A handwritten signature in black ink that reads "Edward Stulginsky". The signature is written in a cursive style with a prominent initial "E".

**Date:** February 1, 2016

**Subject:** *Asset Management: Additional Actions Can Help Reduce Significant Risks Associated with Long-Distance Passenger Car Procurement (Audit Report OIG-A-2016-003)*

Amtrak (the company) contracted with CAF USA in 2010 to acquire 130 new single-level long-distance passenger cars. The cars are intended to replace aging baggage and diner cars and to augment sleeper car capacity on the company's long-distance routes. The company allocated \$343 million to this capital project, primarily from federal grant funds:<sup>1</sup>

- the cost of acquiring the cars (\$300 million)
- the cost of obtaining spare parts for the cars (\$29 million)
- project management costs (\$14 million)

Through December 31, 2015, company records show that it spent about \$195 million on the project.

The company has faced significant challenges in managing this project, which was originally scheduled for completion in November 2014. The company has taken, or is in the process of taking, actions to address these challenges. Our reporting objective is to review the actions taken to address the CAF project challenges and to determine

---

<sup>1</sup> The company used about \$28.3 million from revenue to make payments to CAF and used \$68.4 million from its fiscal year (FY) 2014 and FY 2015 annual capital grants from the Federal Railroad Administration to fund the project costs. The company plans to fund the cost to complete the project from its annual capital grant allocations from FY 2016 through FY 2017.

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

whether further opportunities exist to reduce project risks. For a detailed discussion of our scope and methodology, see Appendix A.

## PROJECT MANAGEMENT RESPONSIBILITIES

Three organizations in the company help to manage this capital project:

- The **Mechanical department**, in the Operations department, has day-to-day project management responsibilities through its project management team. The team includes Mechanical department officials who are responsible for project activities and tasks—such as project budgeting, engineering design, railcar inspection, and contract monitoring. Each official has different degrees of decision-making authority, but no one official has responsibility for all aspects of the project.
- The **Procurement office**, in the Finance department, is responsible for administering and monitoring the contract with CAF. The project contracting officer has responsibility for amending the contract, ensuring payment, and deciding on the level of monitoring necessary to determine compliance with the contract's terms.
- The **Controller and Financial Planning offices** in the Finance department also monitor project expenditures. For the project, Finance approves the annual budget, records and tracks ongoing costs, develops spending forecasts, and reports project expenditures to the Federal Railroad Administration.

In addition, the Marketing department has led efforts to identify the benefits of putting the new cars into revenue service, as we previously reported.<sup>2</sup>

## RECENT ACTIONS HAVE HELPED, BUT RISKS OF FUTURE DELIVERY DELAYS EXIST

The company has taken actions to address project challenges, mostly related to quality issues and delays to the delivery schedule. Some of these actions helped facilitate the delivery of all 70 baggage cars by November 2015. However, in March 2015, CAF

---

<sup>2</sup> *Asset Management: Opportunities Exist to Enhance Decision-Making Process for Utilization of Long Distance Equipment*, OIG-E-2015-001, October 23, 2014.

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
 Associated with Long-Distance Passenger Car Procurement**  
 Audit Report OIG-A-2016-003, February 1, 2016

unilaterally reduced its rate of production, which caused the delivery schedule to slip significantly. Quality issues have also persisted throughout the project. This has led to cost increases and has deferred the benefits that the company expected to receive from the car's timely delivery. The Mechanical department and Procurement office have taken some actions that have improved project management, and additional opportunities exist to further minimize risks of delivery delays, project cost increases, and deferred service benefits.

### **Actions Taken Helped Facilitate the Delivery of Baggage Cars, but Delivery Schedules Continue to Slip**

In June 2014, the company renegotiated the delivery schedule and agreed to accept delivery of the cars in two phases. In the first phase, CAF would produce and deliver 70 baggage cars. In the second phase, CAF would produce and deliver 25 diner cars, 25 sleeper cars, and 10 baggage-dormitory cars.<sup>3</sup> This was intended to help CAF focus first on producing the less complex baggage cars, according to responsible project management officials. The delivery schedules that were agreed to<sup>4</sup> are shown in Table 1.

***Table 1. Passenger Car Delivery Dates Agreed to in June 2014***

Car Type	Number of Cars to be Delivered	Delivery of First Car	Delivery of Last Car
Baggage*	70	May 2014	May 2015
Diner	25	January 2015	April 2016
Baggage-Dormitory	10	February 2015	November 2015
Sleeper	25	March 2015	April 2016

*Source:* OIG analysis of the delivery schedule in the fourth contract change order, issued June 2014

\*The process to renegotiate the delivery schedule began in April 2014. The revised date for the delivery of the first baggage car predated the conclusion of the negotiations in June 2014.

In December 2014, CAF made its initial delivery of 28 baggage cars—7 months behind the renegotiated schedule. This delivery occurred after the company decided in November 2014 to accept the cars with some quality defects. As discussed in more detail below, these defects were identified during final inspection and do not create safety issues or impede the cars operating in revenue service, according to a responsible project management official. The contract allows for the acceptance of cars with defects

<sup>3</sup> The baggage-dormitory car includes cargo space for baggage and other items plus sleeping quarters for train crews, making sleeper car space that had been used by the crew available for passengers.

<sup>4</sup> The June 2014 contract modification was the fourth extension of the original contract delivery schedule.

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

and is a common practice in the railroad industry, according to a project official. Under the contract's terms, this delivery also triggered payments by the company of \$34 million to CAF. The decision to accept the cars with defects benefitted the company and helped CAF with cash flow issues. Two new baggage cars are shown in Figure 1.

***Figure 1. New Baggage Cars***



*Source:* OIG photo of new baggage cars at the company's maintenance facility in Hialeah, Florida, February 5, 2015

In March 2015, however, CAF unilaterally slowed its rate of production to from 7-8 baggage cars per month to 4 per month. In February 2015, CAF reported this production schedule change to the company during a monthly project review meeting. CAF also continued to report schedule changes for the other car types during monthly meetings through September 2015. CAF attributed the reduction to the following:

- identification of non-compliance with original design of the cars requiring modifications to the original design
- availability of materials
- having baggage car production end when the diner car production is scheduled to begin in order to maintain its workforce



*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
 Associated with Long-Distance Passenger Car Procurement**  
 Audit Report OIG-A-2016-003, February 1, 2016

During April 2015, the company formally notified CAF of its noncompliance with its contractual requirements. While CAF completed delivery of the baggage cars in November 2015, it continued to allow its production and delivery timelines for the other car types to slip as shown in Table 2. These proposed dates are contingent upon Amtrak agreeing to a change in CAF's production process. The schedule change would require some testing and inspection procedures of the prototypes to be conducted simultaneously with production, rather than prior to production as originally planned. This schedule change could require the retrofitting of production cars to address any defects identified during the inspection process. In addition, CAF has informed the company that it will lose about \$41 million on this contract. Part of this loss is due to CAF having to restructure the contract with its key supplier, which is facing severe financial difficulties.<sup>5</sup> This situation could further complicate CAF's ability to deliver the cars according to this schedule.

***Table 2. CAF's Revised Schedule of Passenger Car Delivery Dates, as of December 2015\****

Car Type	Number of Cars to be Delivered	Delivery of First Car	Delivery of Last Car
Baggage	70	December 2014	November 2015
Diner	25	February 2016	July 2016
Baggage-Dormitory	10	July 2016	December 2016
Sleeper	25	October 2016	March 2017

Source: OIG analysis of the contract and project management documents

\*This schedule may be revised in February 2016.

## Quality Issues Persist Throughout the Project

The contract requires CAF to create and follow a quality control program. It defines a quality control process for testing, detecting, and correcting defects before company employees test and inspect the cars. The cost of the program, about \$6 million, is included in the overall contract cost. This process was designed to lower the risk of inconsistencies (defects) with the agreed-on design and performance specifications. CAF personnel were responsible for identifying and correcting defects before company inspectors reviewed the cars. In February 2011, the Mechanical department accepted CAF's quality control plan.

<sup>5</sup> The Procurement office hired a third party to review CAF's estimated losses and the financial situation of its key supplier.

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

We identified weaknesses in CAF's process for identifying defects. Throughout 2013, company inspectors identified many defects—including safety issues and unapproved railcar design modifications—during the development of the prototypes of the cars. In 2013, the company waived defects related to the look and feel of the cars. A responsible project management official told us this was done to help facilitate CAF's completion of the car prototypes. During this period, CAF and Mechanical department management made efforts to work together to improve the quality control process.

However, through 2014, company inspectors were still detecting defects. During the First Article Inspection<sup>6</sup> of the first baggage car prototype in January 2014, inspectors found 274 defects. In the First Article Inspection of the second baggage car prototype in May 2014, inspectors found 300 defects. Additionally, in July 2014, during their inspections of the baggage car prototypes, inspectors from the Federal Railroad Administration found safety issues involving handrails and step ladders. These problems took over three months to resolve and delayed full-scale production of the baggage cars.

After production began, company inspectors continued to identify defects in the baggage cars. Inspectors identified a total of 392 defects in the first 28 baggage cars that were accepted. These included defects related to the look and feel of the cars and other non-safety issues, which were generally considered minor according to a responsible project management official. The next 10 cars that were delivered were accepted with 118 defects. Under the company's agreement to accept the baggage cars, CAF will address these defects at Amtrak's maintenance facility in Hialeah, Florida.<sup>7</sup> CAF reported on November 17, 2015, that 309 defects from the first 38 cars delivered had yet to be resolved.

CAF continues to have difficulties producing the baggage cars. In August 2015, company inspectors found a defect in the bolts securing the shock absorbers to the car body of the last 10 baggage cars delivered by CAF. The company is going through a process to check all baggage cars for the identified defect, according to a responsible project management official.

---

<sup>6</sup> The First Article Inspection is the final detailed inspection of car prototypes jointly performed by company and CAF personnel. It is the last inspection of the prototypes performed during the manufacturing process before full-scale production begins.

<sup>7</sup> According to a responsible project management official, after the 38th car was delivered, the correction of known defects shifted back to CAF's facility in Elmira, New York.

**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**

Audit Report OIG-A-2016-003, February 1, 2016

Another ongoing issue not included in the open defect total relates to the diaphragms that connect baggage cars with other cars. The diaphragms were collapsing and detaching from the doors at the end of the baggage cars. This defect did not prevent the cars from operating in revenue service because it did not affect the operation of the baggage cars. CAF and the company developed a temporary fix for this issue and a permanent solution is under development, according to a responsible project management official.

Similarly, company inspectors have continued to identify quality issues with the diner, sleeper, and baggage-dormitory cars. For example, the completion date of the first diner car prototype was delayed several months because the heating and cooling interior air-flow design did not perform to contract specifications. According to a responsible project management official, these three car types are more technically difficult to produce than the baggage cars.

**Delivery Delays and Quality Issues Increase Costs and Postpone Benefits**

The contract amount increased slightly during the project, increasing from an original cost of \$298.1 million to \$299.5 million. However, overall project costs continue to increase, but the company's estimated total project cost has not been revised to reflect project management cost increases resulting from quality control and delivery delays issues. Funds to cover this cost increase will have to come from other project components such as funds for spare parts or the project cost will have to be increased. The company also plans to make modifications to the cars, further increasing the overall project cost. However, the modification cost has not been fully estimated or budgeted. The delivery delays have also deferred the benefits the company expected to gain from using the new cars in long-distance service.

**Project Management Costs Are Underestimated Based on the Current Delivery Schedule**

The company is underestimating the total costs of the project. The company initially budgeted about \$14.4 million for project management costs. The Mechanical department originally estimated annual project management costs of about 5 percent of forecasted contract cost per fiscal year through the contract's life.<sup>8</sup> The Mechanical

---

<sup>8</sup> According to a Finance department official, this rate was selected after discussions with railroad freight carriers, based on their practice of assigning 2–5 percent per year to project management costs.

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

department based this estimate on the original contract performance length of 52 months and a cost of \$298.1 million.

The Finance department now forecasts that these costs will exceed \$17.2 million—about \$2.8 million more than the original estimate. An increase in the company's project team staff at CAF's production facility in Elmira, New York—combined with the schedule delays discussed above—has contributed to the increase. According to a responsible project management official, the onsite project team staff was increased for several reasons, including:

- building the capacity to perform additional inspections
- increasing mechanical engineering support to identify and correct safety and quality issues detected during inspections

Based on the current contract completion schedule, project management services costs are understated. The current estimate does not take into account actual expenditures to date, increases in project management staff, and the project's expected completion date. The company's actual project management costs of \$12.4 million through December 2015 were about 7.0 percent of contract costs to date—about \$182.6 million through 65 months of the project. If this trend continues through the completion of the contract, we estimate that total project management costs would be about \$21 million. This would be about \$4 million more than the company's current estimate and about \$7 million more than the original estimate.

The more the company spends on project management, the less it will have to spend on spare parts. Since there are no provisions for adjusting the project management budget, funds are being transferred from the spare parts allocation. The company originally allocated \$29 million for recommended unique and common spare parts needed to operate the cars, but has not updated its overall project budget to reflect the increases in project management costs. The company does not currently have the parts it needs to operate the baggage cars, and a car that was damaged in an accident while in revenue service in April 2015 was still out of service on January 7, 2016 due to a lack of spare parts, according to a company official responsible for repairing the car.<sup>9</sup>

---

<sup>9</sup> The delay in obtaining spare parts can also be attributed to CAF not providing a complete list of spare parts needed for the baggage cars until October 1, 2015.

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

### **Modifications Increase the Total Project Cost**

Once they are delivered, the baggage cars will need to be modified for long-term service operation and maintenance, which will increase the project's total costs. The Mechanical department plans to absorb the cost to fund some of this work and intends to perform the modifications to avoid further delivery delays, according to the company's Chief Mechanical officer. The total cost of 5 of the 6 approved modifications to all 70 baggage cars is estimated at about \$1 million. A timeline for completing these modifications has not been established because funding for these modifications will not be available until FY 2016. The Chief Mechanical Officer also told us that other modifications may be made after the cars have been in revenue service for a year.

A responsible project management official told us that the company may also need to make as many as 18 modifications to the diner cars and may also need to make modifications to the other car types. Some of the proposed modifications will address the defects the company had previously waived during the prototype production. The cost of these modifications has not been estimated.

### **Financial Benefits are Being Deferred**

The company has estimated that the new cars will provide financial benefits, including reduced maintenance costs and increased revenue. However, delivery delays have postponed the realization of about \$3.7 million in benefits. For example:

- Based on the delivery schedule listed in Table 2 above, the delays will cost the company approximately \$2.9 million in additional maintenance costs for existing cars.
- The Marketing department estimates the cars will generate additional revenue of about \$800,000 during the first year that all cars are in revenue service.<sup>10</sup> According to the current schedule, full delivery will not occur now until March 2017, nearly 28 months later than the original contract completion date, delaying the capture of this revenue by more than 2 years. The amount of lost revenue could be greater than \$800,000, but the company does not have an estimate of how much revenue the cars will generate after the first year they are all in service.

---

<sup>10</sup> This March 2015 revenue benefit estimate updates their previous estimate of revenue of \$2.2 million to \$2.8 million, which we previously reported in *Asset Management: Opportunities Exist to Enhance Decision-Making Process for Utilization of Long Distance Equipment*, OIG-E-2015-001, October 23, 2014.

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
 Associated with Long-Distance Passenger Car Procurement**  
 Audit Report OIG-A-2016-003, February 1, 2016

## **Actions Have Helped, but Project Management Challenges Remain**

The company has faced numerous challenges in managing the project. As we have previously reported on other projects, these may have been compounded by the lack of project management capabilities and capacity, and the lack of company-wide policies and procedures to govern project management. Table 3 below shows some of the challenges the Mechanical department and Procurement office have faced in managing the project and the actions taken by company officials to address them.

***Table 3. Project Management Challenges and Actions Taken to Address Them***

Challenge	Actions Taken by the Company
<b>Overdue Contract Deliverables.</b> CAF has not delivered cars according to schedule and has not provided other deliverables, such as a complete project management plan, in accordance with the terms of its contract with the company.	In April 2015, the Procurement office sent a letter notifying CAF of its poor performance and detailing specific contract requirements that had not been met. The letter also notified CAF that Amtrak was assessing liquidated damages for the delivery delays totaling \$9.2 million. CAF responded to the letter, and negotiations are in progress. The company also had a third party review Amtrak's and CAF's management of the project.
<b>Staff Turnover.</b> Since the start of FY 2014, three project managers and other key personnel from the Mechanical department have left the company. There have also been four contracting agents from the Procurement office administering the contract with CAF since the project started.	The company has continued weekly project team meetings and monthly review meetings with CAF. The Mechanical department and Procurement office have assigned senior officials to the project.
<b>Lack of Decision-Making Authority.</b> The lack of a designated person with the authority to make decisions across departmental lines has limited the company's ability to manage the project.	Senior officials from the Mechanical department and Procurement office assigned to the project told us they are working together to make project management decisions.
<b>Duplicative Delivery and Acceptance Requirements.</b> Procedures for accepting delivered baggage cars were unclear, requiring significant efforts from the staffs of the Mechanical department and the Hialeah maintenance facility to work together over a 3-day period.	The inspection and acceptance process was streamlined to more efficiently inspect and accept another set of 10 baggage cars that were delivered in March 2015, according to personnel from the Mechanical department and Hialeah maintenance facility.

*Source:* OIG analysis of project management challenges and actions

These steps have helped the Mechanical department and Procurement office to address the project challenges. While these are important actions, challenges remain to

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

completing the delivery of the remaining new cars. As discussed, delivery schedules continue to slip, quality issues continue to be identified, and CAF seems either reluctant or unable to address these problems.

### **Opportunities Exist to Further Mitigate Risk**

As noted, the company has taken actions to mitigate risk. At the same time, gaps exist in the current matrix management approach used by the company. Specifically:

- Project accountability is unclear. As we recommended on the Gateway program,<sup>11</sup> the company established an executive steering committee to provide senior management oversight of that project and periodic progress reports to the Board of Directors. It also established a project charter that describes the committee's purpose, authority, organization, responsibilities, and protocols for meetings and reporting, in accordance with best practices. A comparable management process does not exist for this project and accountability for results is unclear.
- A risk mitigation plan has not been developed. The company has taken various actions to mitigate risk, as discussed above; however, an overall mitigation plan has not been developed according to responsible project management officials. Preparing a mitigation plan provides an opportunity for all the involved stakeholders to review actions being taken to ensure that they are coordinated and complementary, and to assess whether there are gaps in the mitigation strategy. Once completed, the plan provides stakeholders transparency on actions being taken and a basis for measuring progress toward reducing risk.
- Contract terms can be more tightly enforced. The company's contract with CAF has terms that can help the company mitigate its risk. For example, the company could update its surety bond lender on the status of the project. The surety bond helps the company mitigate its risk if CAF defaults on the contract.

## **CONCLUSION AND RECOMMENDATIONS**

The project to acquire new single-level long-distance rail cars has experienced significant delivery delays. As a result, project costs have increased and the company's

---

<sup>11</sup> *Acquisition and Procurement: Gateway Program's Concrete Casing Project Progressing Well; Cost Increases Will Likely Exceed Project Budget*, OIG-A-2014-004, February 11, 2014.

*Amtrak Office of Inspector General***Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**

Audit Report OIG-A-2016-003, February 1, 2016

anticipated revenue by having these cars in service has been lost. The delays in car deliveries have postponed the benefits of having the cars in service. The delays have been caused largely by the contractor's problems producing cars that meet the contract's requirements in a timely manner and the company's approaches to dealing with that issue.

Amtrak actions have helped facilitate the initial delivery of the baggage cars after the delivery schedule was renegotiated, however; delivery schedules for the other car types continue to slip. Further delays resulting from quality issues seem likely because (1) the diner, sleeper, and baggage-dormitory cars are more difficult to build than the baggage cars and (2) one of CAF's primary suppliers is reportedly financially unstable. Further, project cost estimates do not include the impacts of schedule slippages on management oversight costs, available funds for spare parts, and decisions to modify the cars after deliver acceptance. The original budget for the project has not been updated to address these costs.

The actions taken by the Mechanical department and Procurement office have led to improvements in the project's management, however more can be done. Challenges remain in completing the contract's terms and conditions and project accountability is unclear.

We recommend that the Executive Vice President/Chief Operations Officer take the following actions to help ensure that the Mechanical department and Procurement office continue to improve their management of the project and address project challenges in a timely manner:

1. Establish a more structured, integrated approach to managing the project, such as the approach being used to manage the company's Gateway program. Key issues that need to be addressed are clarifying project decision-making authority and accountability within the matrix management framework.
2. Perform an overall project risk assessment and develop a single risk mitigation plan showing all stakeholders and their accountability for actions.
3. Review the current project cost estimate to ensure that the estimate includes costs for additional project management resources, spare parts purchases, and car modifications.
4. To the extent needed, identify sources of funding to meet project costs that exceed the current project budget.



*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

## **MANAGEMENT COMMENTS AND OIG ANALYSIS**

In commenting on a draft of the report, the company's Executive Vice President/Chief Financial Officer agreed with our recommendations. He also cited the actions the company has planned to address the recommendations. The proposed actions meet the intent of the recommendations. Appendix D contains management's complete response. The company's planned actions are summarized below.

**Recommendation 1:** Management agrees with the recommendation and will research the approach used to manage the Gateway program in order to establish a similar executive steering committee charter for this project.

**Recommendation 2:** Management agrees with the recommendation and will prepare a mitigation plan to include CAF's responsibilities.

**Recommendation 3:** Management agrees with the recommendation and will review the estimates for the project based on the balance of the project schedule and historical project data.

**Recommendation 4:** Management agrees with the recommendation and will review the budget for the project to determine funding sources to meet future needs to sustain and complete the work.

The company's Chief Mechanical Officer provided technical comments on the draft of the report. We made changes to the final report based on these comments, where we felt it appropriate to do so.

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

## APPENDIX A

### Scope and Methodology

This report provides the results of our audit of the company's efforts to manage the procurement of new single-level long-distance cars. The scope of our work focused on the company's efforts to manage the project in FY 2014 and FY 2015. We focused our work on project management issues related to cost, schedule, and performance.

Organizations in the company where we performed our work were the Mechanical department, the company's long-distance business line operating unit, and the Controller and Procurement offices within the Finance department. We performed our audit work from April 2014 through November 2015 at company locations in Washington, D.C.; Philadelphia, Pennsylvania; and Hialeah, Florida. We also visited CAF's production facility in Elmira, New York.

Our methodology for assessing the company's actions to address cost, schedule, and performance issues was to compare the project's progress to date against contract requirements and project cost estimates. We also assessed actions to address project management challenges and opportunities to those actions, based on our prior audits.

To accomplish this, we reviewed the following:

- progress reports and financial data, such as contract expenditures and project management cost estimates
- contract documentation, including change orders and correspondence between the company and CAF

We also observed the production and inspection of the cars. We interviewed officials and reviewed documents obtained from the Mechanical, Procurement, and Finance departments; CAF; and the Federal Railroad Administration.

Our methodology for assessing the company's project management challenges and the actions the company has taken to address them included reviewing decision-making authority for completing project tasks, obtaining information on the adequacy of staff capability, reviewing project management plans, and reviewing project cost estimates. To identify project management best practices, we reviewed our prior reports, American Productivity and Quality Center reports, and the Project Management Institute's *Project Management Body of Knowledge*.

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, 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.

## **Internal Controls**

We generally reviewed the management controls used in the Mechanical department and Procurement office. We focused our work on the management controls for the CAF project. We reviewed controls related to decision-making authority, project management plans, and cost estimates. We limited our conclusions and recommendations on controls to those areas. We did not review the company's or the Mechanical department's overall system of controls for project management.

## **Computer-Processed Data**

We received computer-processed data from the Finance department from the company's system of record, the SAP Enterprise Resource Planning system, which included actual project expenditures from FY 2011 through May of FY 2015. We compared the information contained in this system to project and contract records. Based on this analysis, we determined that the data were sufficient for our purposes.

## **Prior Reports**

In conducting our audit, we reviewed and relied on the following Amtrak OIG reports:

- *Acquisition and Procurement: New Jersey High-Speed Rail Improvement Program Has Cost and Schedule Risks* (Audit Report OIG-A-2015-012, June 17, 2015)
- *Asset Management: Opportunities Exist to Enhance Decision-Making Process for Utilization of Long Distance Equipment* (OIG-E-2015-001, October 23, 2014)
- *Governance: Improved Policies, Practices, and Training Can Enhance Capital Project Management* (OIG-A-2014-009, July 15, 2014)
- *Acquisition and Procurement: Closer Alignment with Best Practices Can Improve Effectiveness* (OIG-A-2014-006, May 7, 2014)
- *Acquisition and Procurement: Gateway Program's Concrete Casing Project Progressing Well: Cost Increases Will Likely Exceed Project Budget* (OIG-A-2014-004, February 11, 2014)

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

**Appendix B**

**Abbreviations**

CAF                      CAF USA

FY                        fiscal year

the company            Amtrak

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
 Associated with Long-Distance Passenger Car Procurement**  
 Audit Report OIG-A-2016-003, February 1, 2016

**APPENDIX C**

**COMMENTS FROM AMTRAK'S MANAGEMENT**

**National Railroad Passenger Corporation**  
 60 Massachusetts Avenue, NE Washington, DC 20002



## Memo

<p><b>Date:</b> January 21, 2016</p> <p><b>To:</b> David R. Warren          Assistant Inspector General, Audits</p>	<p><b>From:</b> Gerald Sokol Jr., Executive Vice          President/Chief Financial Officer</p> <p><b>Department:</b> Finance</p> <p><b>Subject:</b> <i>Acquisition and Procurement:          Additional Actions Can Help          Reduce Risk Associated with Long-          Distance Passenger Car          Procurement</i></p> <p><b>cc:</b> Mario Bergeron, Senior Vice          President, Chief Mechanical          Officer          Matthew Gagnon, Senior Director,          Amtrak Controls          Bernard Reynolds, Vice President          &amp; Chief Procurement &amp; Material          Management</p>
---	--

This memorandum provides Procurement & Logistics' (P&L) response to the OIG Draft Audit Report for Project 008-2104, December 15, 2015: "Asset Management: *Additional Actions Can Help Reduce Risks Associated with Long-Distance Passenger Car Procurement.*"

**Recommendation #1:**

Establish a more structured, integrated approach to managing the project, such as the approach being used to manage the company's Gateway program. Key issues that need to be addressed are clarifying project decision-making authority and accountability within the matrix management framework.

**Management Response/Action Plan:**

Management agrees with the recommendation.

Mechanical will research the approach used to manage the Gateway program in order to establish a similar Executive Steering Committee Charter (see attached) for the CAF program.

- Expected Completion Date: Q3, 2016
- Coordinator(s): Senior Vice President, Chief Mechanical Officer; Senior Director, Amtrak Controls

**Recommendation #2:**

Perform an overall project risk assessment and develop a single risk mitigation plan showing all stakeholders and their accountability for actions.

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

*January 21, 2016*

*Page 2*

**Management Response/Action Plan:**

Management agrees with the recommendation.

Mechanical and Procurement will prepare a risk mitigation plan to include CAF's submission and adherence to a CPM schedule for the program. CAF to provide an ongoing 90 day schedule that further details CAF's activities and milestones. This risk mitigation plan will be prepared by Amtrak's CAF Program Manager and Contract Manager.

- Expected Completion Date: Q3, 2016
- Coordinator(s): Senior Vice President, Chief Mechanical Officer; Vice President, Chief Procurement & Logistics Officer

**Recommendation #3:**

Review the current project cost estimate to ensure that the estimate includes costs for additional project management resources, spare parts purchases, and car modifications.

**Management Response/Action Plan:**

Management agrees with the recommendation.

Mechanical to provide a forecast for resources, spare parts, and car modifications based on the balance of the schedule and historical data. This estimate will be prepared by the CAF Program Manager.

- Expected Completion Date: Q3, 2016
- Coordinator(s): Senior Vice President, Chief Mechanical Officer

**Recommendation #4:**

To the extent needed, identify sources of funding to meet project costs that exceed the current project budget.

**Management Action Plan:**

Management agrees with the recommendation.

Mechanical and Finance to review the Program budget to determine funding sources for future needs to sustain and complete the program.

- Expected Completion Date: Q4, 2016
- Coordinator(s): Senior Vice President, Chief Mechanical Officer; Senior Director, Amtrak Controls

*Amtrak Office of Inspector General*  
**Asset Management: Additional Actions Can Help Reduce Significant Risks  
Associated with Long-Distance Passenger Car Procurement**  
Audit Report OIG-A-2016-003, February 1, 2016

**APPENDIX D**

**OIG Team Members**

Jason Venner, Senior Director–Lead, Audits

Cheryl Chambers, Senior Audit Manager

John Flynn, Senior Auditor–Lead

Mark Scheffler, Senior Auditor

Ka Ryung Sabourin, Auditor



## OIG MISSION AND CONTACT INFORMATION

---

**Mission** The Amtrak OIG's mission is to provide independent, objective oversight of Amtrak's programs and operations through audits and investigations focused on recommending improvements to Amtrak's economy, efficiency, and effectiveness; preventing and detecting fraud, waste, and abuse; and providing Congress, Amtrak management and Amtrak's Board of Directors with timely information about problems and deficiencies relating to Amtrak's programs and operations.

---

**Obtaining Copies of Reports and Testimony** Available at our website: [www.amtrakoig.gov](http://www.amtrakoig.gov).

---

**Reporting Fraud, Waste, and Abuse** Report suspicious or illegal activities to the OIG Hotline (you can remain anonymous):

Web: [www.amtrakoig.gov/hotline](http://www.amtrakoig.gov/hotline)

Phone: 800-468-5469

---

**Contact Information** **Edward Stulginsky**  
**Deputy Assistant Inspector General, Audits**

Mail: Amtrak OIG  
10 G Street NE, 3W-300  
Washington D.C., 20002

Phone: 202-906-4600

Email: [Ed.Stulginsky@amtrakoig.gov](mailto:Ed.Stulginsky@amtrakoig.gov)