

GAO

Report to the Chairman, Committee on  
Transportation and Infrastructure, House  
of Representatives

May 2000

# INTERCITY PASSENGER RAIL

## Amtrak Will Continue to Have Difficulty Controlling Its Costs and Meeting Capital Needs



G A O

Accountability \* Integrity \* Reliability



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## Abbreviations

GAO      General Accounting Office

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**United States General Accounting Office**  
**Washington, D.C. 20548**

**Resources, Community, and  
Economic Development Division**

B-283107

May 31, 2000

The Honorable Bud Shuster  
Chairman, Committee on Transportation  
and Infrastructure  
House of Representatives

Dear Mr. Chairman:

Since its inception in 1971, the National Railroad Passenger Corporation (Amtrak) has received over \$23 billion in federal subsidies for operating and capital expenses.<sup>1</sup> Over the last 3 years, Amtrak has received over \$3.6 billion, including about \$2.2 billion in 1998 and 1999 from the Taxpayer Relief Act of 1997, that it could use for capital improvements, among other things. In December 1994, at the direction of the administration, Amtrak established the goal of eliminating its need for federal operating subsidies by 2002 (called “operational self-sufficiency”). To achieve this goal, Amtrak has developed and implemented a series of strategic business plans designed to increase revenues and control costs. However, despite these plans, Amtrak’s losses have remained high: In 1999, its net loss—revenues minus expenses—was about \$900 million.

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<sup>1</sup>Unless stated otherwise, all years are the federal and Amtrak fiscal years (October through September). Amounts in this paragraph are in nominal dollars.

This report responds to your request that we review Amtrak's costs and capital investment needs. In particular, this report discusses (1) changes since 1995 in Amtrak's operating costs, including labor costs, payments to freight railroads to access their track and keep Amtrak trains on time, and interest on commercial debt; the projected changes over the next 5 years; and Amtrak's plans to address these costs; (2) Amtrak's short- and long-term capital investment requirements,<sup>2</sup> including investments to address "state of good repair" issues and investments in its progressive overhaul program<sup>3</sup> and Northeast Corridor high-speed rail program; and (3) the availability of federal and nonfederal funds for Amtrak's capital investments. Unless otherwise noted, all dollar amounts in this report are in constant 1999 dollars.<sup>4</sup>

## Results in Brief

Amtrak's operating costs have increased since 1995, and future increases can be expected. In particular, costs in three areas—labor, interest on commercial debt, and payments to other railroads to access track and keep Amtrak's trains on time—have all contributed to these increases. Amtrak has attempted to control costs. However, while its performance has improved in recent years, from 1995 to 1999 Amtrak's operating costs were, in total, about \$150 million (in nominal dollars) more than planned. Amtrak has no measures of labor productivity for its lines of business (e.g., intercity passenger service, commuter service) that could help it better manage its labor costs. Because future cost increases can be expected, it will be critical for Amtrak to achieve the revenue projections for such things as its high-speed rail program on the Northeast Corridor.

<sup>2</sup>Amtrak has not comprehensively identified its short- and long-term capital investment needs. Therefore, to identify these needs, we asked Amtrak managers to identify capital investments they believed are needed to maintain current service levels and improve Amtrak's service and reviewed Amtrak and non-Amtrak reports addressing capital investment needs. As a result, the investment needs identified in this report may not coincide with those needs or priorities that might be established by Amtrak's management if it had comprehensively assessed its capital needs.

<sup>3</sup>"State of good repair" is defined as the capital investment needed to restore Amtrak's right-of-way (track, signals, and auxiliary structures) to a condition that requires only routine maintenance. Progressive overhauls are maintenance checks and repairs of passenger cars each year in addition to comprehensive overhauls every several years.

<sup>4</sup>See app. I for a more detailed discussion of the scope and methodology used to perform the work for this report.

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We estimate Amtrak has short- and long-term capital investment needs totaling about \$9.1 billion through 2015. These needs include safety improvements on tunnels and bridges on the Northeast Corridor and restoration of the Northeast Corridor to a condition that requires only routine maintenance, among other things. Amtrak will also have other capital investment needs for which it has not yet developed cost estimates. Finding the financial resources to meet these needs will be difficult since Amtrak's identified capital investment needs are expected to exceed available federal capital funds by nearly \$2 billion over the next 5 years. Amtrak expects to share the cost for some infrastructure investments with other railroads and will have to look increasingly to nonfederal sources, such as states, to obtain capital funds. Compounding the potential funding shortfall is the lack of a multiyear capital plan, which Amtrak has not prepared since 1997. Development of such a plan will be critical in Amtrak's attempt to address its capital investment needs. We are recommending that Amtrak develop measures of labor productivity for its different lines of business and a multiyear capital plan. Amtrak agreed to these recommendations.

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## Background

The Rail Passenger Service Act of 1970 created Amtrak to provide intercity passenger rail service. Like all major national intercity passenger railroads in the world, Amtrak has received substantial government support, including federal capital funds. However, the Amtrak Reform and Accountability Act of 1997 (Amtrak Reform Act) prohibited Amtrak from using federal funds for operating expenses, except for an amount equal to excess Railroad Retirement Tax Act payments, after 2002.<sup>5</sup> To help accomplish this goal, the Amtrak Reform Act provided Amtrak with flexibility to address certain costs. It eliminated a statutory ban on contracting out work that would result in employee layoffs (except food and beverage service that could already be contracted out) and made contracting out work a part of the collective bargaining process. It also abolished labor protection arrangements that provided up to 6 years of compensation for employees who lost their jobs because of the discontinuance of intercity passenger rail service on a route or certain other actions. The Amtrak Reform Act required negotiations with the unions over the new arrangements. Amtrak also developed a series of business plans to help it achieve its financial goals. By following these plans, Amtrak has attempted to increase revenues and control costs by such actions as reorganizing itself into strategic business units.<sup>6</sup>

The implementation of high-speed rail service on the Northeast Corridor and the expansion of Amtrak's express service business are the cornerstones of Amtrak's plans to eliminate federal operating subsidies by the end of 2002. The Northeast Corridor high-speed rail program includes the electrification of the track between New Haven, Connecticut, and Boston, Massachusetts, and improvements to reduce trip times from New York City to Boston as well as New York City to Washington, D.C.<sup>7</sup> According to Amtrak, the high-speed rail program is expected to generate about \$180 million (nominal dollars) annually in net revenue by 2003.

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<sup>5</sup>Amtrak participates in the railroad retirement system, under which each participating railroad pays a portion of the total retirement and benefit costs of the industry for employees.

<sup>6</sup>Amtrak has three strategic business units: Northeast Corridor, Intercity, and Amtrak West. It also has a Corporate/Service Center.

<sup>7</sup>The program includes the introduction of Acela Express service. Acela Express trains are expected to reach speeds of up to 150 miles per hour and have trip times of about 3 hours between New York City and Boston and 2-½ hours between New York City and Washington, D.C.



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Amtrak also transports mail and express to supplement its passenger revenue. The program involves the transportation of higher-value, time-sensitive products such as frozen foods and produce and is expected to generate about \$200 million (nominal dollars) in revenue by 2002. Also noteworthy is Amtrak's progressive overhaul program to maintain its equipment. Under this program, passenger cars and other equipment receive more frequent maintenance checks and repair work. This program was implemented to keep more cars in service—thereby generating more revenues.

Railroads are very capital-intensive businesses, and Amtrak is no exception. Amtrak has received substantial capital funding from the federal government. Of the federal assistance that Amtrak has received from 1971 through 2000, about \$10.2 billion (nominal dollars) has gone for capital improvements and equipment overhauls. This amount includes about \$1.8 billion of the \$2.2 billion that Amtrak received from the Taxpayer Relief Act of 1997.<sup>8</sup> Amtrak has also obtained capital funding from state and local governments, generally for specific capital investments, and from commercial markets. These funds support Amtrak's 22,000-route-mile passenger rail system, including 650 route miles of track owned by Amtrak. (About 360 route miles are on the Northeast Corridor—between Washington, D.C., and Boston. According to Amtrak, the southern end of the Northeast Corridor—between Washington, D.C., and New York City—is the most heavily used passenger rail link in the United States. Approximately 60 percent of all passenger-trips on Amtrak's entire network use at least part of this segment of track.) Amtrak also maintains an active fleet of 2,600 cars and locomotives.

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<sup>8</sup>In nominal dollars. The remaining Taxpayer Relief Act funds have either not been spent or were used for another purpose, such as debt service.

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## Amtrak's Operating Costs Have Increased Since 1995, and Future Increases Will Necessitate Revenue Growth

Amtrak's operating costs increased from 1995 to 1999, and future increases are expected. Although Amtrak's business plans have attempted to keep annual cost growth at no more than the rate of inflation, Amtrak's total operating costs during the period increased about 12 percent above the rate of inflation and, in total, were about \$150 million (nominal dollars) more than planned. In particular, costs in three areas—labor, interest on commercial debt, and payments to freight, commuter, and other railroads (collectively called “other railroads”) to access their track and keep Amtrak trains on time—have contributed to these increases. Labor costs—which continue to represent over 50 percent of Amtrak's total operating costs—have grown by about 10 percent above the rate of inflation since 1995 (from about \$1.3 billion to about \$1.4 billion).<sup>9</sup> In part, this reflects the fact that the size of Amtrak's workforce has not changed substantially in recent years. In 1999, Amtrak employed about 22,500 agreement (union-represented) employees and about 2,700 nonagreement (management) employees—about the same number as in 1994. Amtrak has attempted to offset this cost growth by, among other things, negotiating productivity improvements with its unions. However, Amtrak does not have measures of labor productivity for its lines of business (e.g., intercity passenger service, commuter service) that would allow it to better manage its labor costs.

Amtrak's interest costs on commercial debt and payments to other railroads have also increased. The increase in interest on commercial debt was largely the result of Amtrak's efforts to improve its reliability and quality of service by acquiring new passenger cars and other equipment in the 1990s. The increase in interest costs (which went from about \$50 million in 1995 to about \$83 million in 1999) is noteworthy because, although this expense only represented 3 percent of Amtrak's total operating costs in 1999, it has been growing at a faster rate than either Amtrak's total operating expenses or revenues. From 1995 to 1999, it grew 5 times faster than total expenses and about 4 times faster than total revenue. The increase in payments by Amtrak to other railroads (which went from about \$92 million to just under \$100 million from 1995 to 1999) was mainly due to Amtrak's signing new agreements to operate over other railroads' lines. In some cases this has, or will, lead to cost increases. For example, under the new agreements, Amtrak will pay other railroads a higher amount for track maintenance than it had paid using a different approach contained in the old agreements.

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<sup>9</sup>Includes one-time lump-sum payments as well as other wage increases.

Future cost increases can be expected if Amtrak implements planned service expansions. These expansions could affect both Amtrak's labor costs and its payments to other railroads. In addition, Amtrak's interest expense on its commercial debt will increase as Amtrak continues to acquire new passenger cars and locomotives. Such cost increases will make it critical for Amtrak to achieve the net revenue growth projected for such things as implementing high-speed rail on the Northeast Corridor and expanding its express service program. As a result of these and other actions, Amtrak projects that its revenues will increase about \$166 million over the next 5 years. However, Amtrak has had difficulty achieving its planned revenue targets, and, from 1995 to 1999, met its revenue targets only twice. As a result, Amtrak earned \$14 million (nominal dollars) less in revenue than it planned over this period. (See app. II for additional information about Amtrak's operating costs.)

## Amtrak Faces Significant Short-and Long-Term Capital Investment Needs

Amtrak has significant short- and long-term capital investment requirements. Through discussions with Amtrak officials and a review of published reports, we identified about \$4 billion in short-term capital investment needs through 2004.<sup>10</sup> These needs include improving the safety of various tunnels and bridges on the Northeast Corridor (called "life safety investments"), restoring Amtrak's Northeast Corridor to a condition that requires only routine maintenance (called a "state of good repair"), addressing equipment maintenance needs and backlogs, and continuing the Northeast Corridor high-speed rail program. Although they are not the highest-cost items, the life safety investments (with a total cost estimated by Amtrak's Northeast Corridor engineering staff at \$316 million) are of particular importance since they are concentrated on the tunnels leading into and out of New York City's Pennsylvania Station—a station that serves, on average, over 300,000 rail passengers each day. Amtrak and the two commuter railroads that use the tunnels and Pennsylvania Station have reported that because of the outdated systems and equipment there, a fire or other serious incident there could endanger not only the lives of passengers but also the lives of those who respond to an incident. Among the other short-term capital needs is an additional \$1.4 billion to make state of good repair investments on the Northeast Corridor. According to Amtrak officials and reports, not addressing state of good repair needs in the past

<sup>10</sup>This figure may not represent the cost to Amtrak. Amtrak expects that other railroads (commuter and/or freight) will contribute to projects with mutual benefits.

has resulted in deteriorating bridges and a decline in the overall quality of service.

For the longer term (through 2015), we identified through discussions with Amtrak officials and a review of published reports at least \$5.1 billion in capital investment needs.<sup>11</sup> These needs include investments to continue life safety improvements and the restoration of the Northeast Corridor to a state of good repair. They also include about \$630 million to replace and rehabilitate the Northeast Corridor's electric power system, which is roughly 70 years old. According to Amtrak officials, the replacement and rehabilitation of this system are critical to reliably providing power to trains using the Northeast Corridor and to achieving the highest speeds planned for Amtrak's Acela Express service—a key component of the Northeast Corridor high-speed rail program.

Amtrak will also have other short- and longer-term capital investment needs for which it has not yet developed cost estimates. These include station repairs, the acquisition of new equipment, and the development of high-speed rail corridors outside the Northeast Corridor. (See app. III for more information about Amtrak's short- and long-term capital investment needs.)

## Potential Funding Shortfall and Lack of Multiyear Capital Plan Present Difficulties in Addressing Future Capital Investment Needs

The capital investment needs we identified are expected to exceed the available federal funds by nearly \$2 billion over the next 5 years.<sup>12</sup> The shortfall may be even higher because this estimate does not include other investment needs, such as development of high-speed rail corridors outside the Northeast, for which Amtrak has not yet developed cost estimates. Federal capital grants and Taxpayer Relief Act funds should allow Amtrak to meet its planned capital investment needs through 2000. However, beginning in 2001, capital investment requirements will exceed expected federal capital grants (\$521 million per year). This potential shortfall will require Amtrak to increasingly look to other funding sources to meet its capital investment needs, including state and local governments and the commercial debt market. Historically, state and local governments have

<sup>11</sup>Amtrak expects that other railroads (commuter and/or freight) will contribute to projects with mutual benefits to help meet these needs.

<sup>12</sup>Some portion of this shortfall may be paid by other railroads that contribute to capital projects that provide mutual benefits.

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provided capital for specific purposes, such as for state-supported passenger rail routes, not for general capital uses. Amtrak may also face difficulties in funding its capital investment needs because it expects to use a portion of its federal capital grant for expenditures other than asset acquisition or replacement. These expenditures include equipment maintenance and principal payments on debt. Amtrak estimates that of the over \$1.6 billion in federal capital funds expected to be available from 2000 to 2002, it anticipates using about \$900 million for asset acquisition and replacement and about \$550 million (all figures in nominal dollars) for maintenance of equipment and rights-of-way.

Compounding the potential funding shortfall is Amtrak's current lack of a multiyear capital plan that identifies critical capital investment needs and how they will be financed. Such a multiyear plan has not existed since 1997. Instead, Amtrak has developed a series of capital plans covering only a limited horizon—not more than 1 year at a time. Although these plans present an overall picture of Amtrak's annual spending for capital projects, they fail to fully describe capital investment requirements, how these requirements will be funded, and their relative priority. The development of a multiyear capital plan will be critical as Amtrak attempts to address its capital needs. Such a plan would also help congressional decisionmakers in deciding what the federal government's financial commitment, if any, might be for Amtrak's capital improvements over the long term. (See app. IV for more information about Amtrak's capital funding shortfall and multiyear capital plans.)

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## Conclusions

Amtrak's record shows that it has had, and continues to have, difficulty in controlling its costs and meeting its capital investment needs. Controlling costs and making capital improvements will be important as Amtrak approaches the end of 2002—less than 2 years from now—when it is statutorily mandated to be operationally self-sufficient. Although Amtrak's business plans envision significant revenue increases from such actions as implementing high-speed rail service on the Northeast Corridor and expanding its express business to offset cost growth and allow it to reach operational self-sufficiency, attention to costs will be equally important. Unexpected costs or cost growth greater than planned would jeopardize Amtrak's ability to operate within the revenues it generates. In particular, because labor costs represent over half of Amtrak's operating costs, the development of measures of labor productivity for its different lines of business will be a valuable tool in ensuring that Amtrak is efficiently managing its workforce.

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Amtrak's lack of a comprehensive multiyear capital plan presents a particular problem in light of the substantial capital investment needs the railroad faces. Amtrak cannot be expected to improve its financial health without fully identifying what its investment requirements are, their priority in relation to each other and Amtrak's strategic goals, and how these needs will be financed. This can be accomplished only through the development of a well-thought-out multiyear plan that links specific benefits to specific investments and that includes the priorities of these investments. This is especially important given the critical relationship between capital investment and quality of service—a relationship that is necessary to attract and retain passengers—one of the foundations for making Amtrak financially viable over the long term.

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## Recommendations

To ensure Amtrak efficiently manages its workforce, we recommend that the President of Amtrak develop measures of labor productivity for its different lines of business. These measures should directly measure the resource inputs of these business lines with the corresponding outputs. Development of these measures should also include the establishment of benchmarks against which productivity changes can be assessed.

To better ensure that Amtrak fully identifies and adequately plans for its capital investment needs, we recommend that the President of Amtrak expeditiously adopt a multiyear capital spending plan that (1) fully identifies the capital investment needs of the Corporation over a period of not less than 5 years, (2) prioritizes these needs according to corporate goals and strategies, (3) establishes specific measurable benefits to be achieved from these investments, and (4) identifies the expected funding sources available to finance the capital investment needs.

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## Agency Comments and Our Evaluation

We provided Amtrak and the Federal Railroad Administration with a draft of this report for review and comment. We met with Amtrak officials, including the Vice President for Labor Relations, the General Counsel, and a Director for Government Affairs. Overall, Amtrak stated that the draft report was comprehensive, generally accurate, and useful and that it agreed with the recommendations we made. However, Amtrak stated that the draft report appeared to confuse dollar savings resulting from its actions to control labor costs and measures of labor productivity. Amtrak said that it is not the case that, as the draft report implied, Amtrak had not measured its dollar savings achieved in controlling costs. We revised our

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report to eliminate any confusion. In this final report, we discuss productivity measures as a means of managing cost growth. Amtrak also stated that, in discussing its short- and long-term capital needs, we should make it clear that the reported estimates are ours and not Amtrak's. Amtrak has not developed a comprehensive list of its capital needs, and the cost of those needs could be higher or lower than our estimates. We clarified the source of our estimates. Finally, Amtrak officials offered a number of technical and clarifying comments that were incorporated where appropriate.

We also met with Federal Railroad Administration officials, including the Acting Associate Administrator for Railroad Development and the Director of Passenger Programs. Overall, Federal Railroad Administration officials agreed with our draft report and said it reflected their understanding of Amtrak's cost and capital needs situation. However, they noted the absence of a federal policy for the long-term funding of Amtrak, especially after 2002, when the current authorization for federal appropriations expires, and expressed their opinion that the development of such a policy by the federal government and of a meaningful multiyear capital plan by Amtrak are inextricably linked. We agree with the Federal Railroad Administration and have reflected its comments in our report. Finally, Federal Railroad Administration officials offered several comments designed to make the report more useful that were incorporated where appropriate.

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We conducted our review from June 1999 through May 2000 in accordance with generally accepted government auditing standards.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies of this report to congressional committees with responsibilities for the activities discussed in this report; George D. Warrington, President and Chief Executive Officer of Amtrak; the Honorable Rodney E. Slater, Secretary of Transportation; the Honorable Jolene Molitoris, Administrator of the Federal Railroad Administration; the Honorable Jacob J. Lew, Director of the Office of Management and Budget; and Gilbert Carmichael, Chairman of the Amtrak Reform Council. We will make copies available to others upon request.

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If you or your staff have any questions about this report, please call me at (202) 512-2834. Key contributors to this report were Angela Clowers, Helen Desaulniers, Gregory Hanna, Richard Jorgenson, and James Ratzenberger.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis F. Scheinberg". The signature is written in a cursive style with a large, stylized 'P' and a long, sweeping underline.

Phyllis F. Scheinberg  
Associate Director,  
Transportation Issues



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# Scope and Methodology

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To determine Amtrak's costs, we reviewed Amtrak's financial reports, the Amtrak Reform and Accountability Act of 1997, Amtrak's October 1998 strategic business plan, appendixes to Amtrak's business plan for 2000 to 2004, and the business plan's April 2000 update. We also reviewed Amtrak's February 2000 report to the Congress on its market-based network analysis, summaries of Amtrak's labor agreements and documents related to labor cost control initiatives, the arbitration panel's November 1999 decision on labor protection payments, and Amtrak documents concerning debt and the payment of interest on commercial debt.<sup>1</sup> We also reviewed copies of selected freight railroad agreements and interviewed Amtrak's labor relations, financial, and contract administration officials and representatives from unions representing Amtrak employees. In addition, we interviewed representatives from four freight railroads with which Amtrak has operating agreements. To analyze Amtrak's labor productivity, we obtained information such as passenger miles, seat miles, ridership, overhauls completed, and hours worked from Amtrak and the Surface Transportation Board. We also discussed the development of labor productivity measures with Amtrak officials. We obtained commuter railroad data from the American Public Transportation Association.

To determine Amtrak's capital investment needs and how Amtrak plans to meet these needs, we asked Amtrak managers to identify the capital investments they believed are needed to maintain current service levels and improve Amtrak's service. We used this approach because Amtrak does not currently have a multiyear capital plan. Instead, its most recent capital plan (dated December 1999) covers through 2000 only. As a result, the investment needs identified in this report are not necessarily those needs or priorities that might be established by Amtrak's management in a multiyear plan. Nonetheless, we characterize the capital investments identified by Amtrak's managers as capital "needs" or "requirements" in this report.

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<sup>1</sup>We did not independently verify financial or other data provided by Amtrak or others. We used the Gross Domestic Product price index from the Department of Commerce and projected inflation data from the Congressional Budget Office to convert Amtrak's financial data to constant 1999 dollars.

To determine capital investment needs and funding, we also reviewed Amtrak's October 1998 strategic business plan, appendixes to Amtrak's business plan for 2000 to 2004, the business plan's April 2000 update, Amtrak-Federal Railroad Administration reports on the Northeast Corridor's capital needs, and the Federal Railroad Administration's 2001 budget request for Amtrak. In addition, we reviewed fleet maintenance schedules and other Amtrak documents pertaining to capital investment needs and projected sources of capital investment funds. We also interviewed officials from Amtrak's finance, planning, high-speed rail, and mechanical and mail and express departments, in headquarters as well as in strategic business units, and Federal Railroad Administration officials. In addition, we interviewed officials in four state departments of transportation about their departments' relationships with Amtrak and capital investments in intercity passenger rail.<sup>2</sup> Finally, we interviewed officials from five commuter railroads and four freight railroads that do business with Amtrak on their companies' relationships with Amtrak and their cost structures, labor productivity, and Amtrak-related capital investment needs.<sup>3</sup> As part of our work, we visited Amtrak's three major maintenance facilities—Beech Grove, Indiana; Wilmington, Delaware; and Bear, Delaware—and two secondary maintenance facilities in New York City and Washington, D.C.

We conducted our review from June 1999 through May 2000 in accordance with generally accepted government auditing standards.

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<sup>2</sup>The state departments of transportation were California, Illinois, North Carolina, and Washington state.

<sup>3</sup>The commuter railroads were the Long Island Rail Road, the Massachusetts Bay Transportation Authority, Metro-North Railroad, New Jersey Transit, and the Southeastern Pennsylvania Transportation Authority. The freight railroads were Burlington Northern and Santa Fe Railway Company, CSX Transportation, Norfolk Southern Corporation, and Union Pacific Railroad Company.

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# Amtrak's Operating Costs Have Increased Since 1995, and Future Increases Will Necessitate Revenue Growth

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Amtrak's operating costs have grown in recent years and are expected to continue growing. Although Amtrak's business plans have attempted to keep annual cost growth at no more than the rate of inflation, Amtrak's total costs have increased about 12 percent above the rate of inflation and, in total, were about \$150 million<sup>1</sup> more than planned from 1995 to 1999. In particular, the costs in three areas—labor, interest on debt, and payments to freight and other railroads for access to their track and to keep Amtrak trains on time—have increased since 1995. These three costs account for about 60 percent of Amtrak's total operating costs. Amtrak has tried to reduce its cost growth by, among other things, attempting to improve worker productivity and refinancing its commercial debt. Amtrak expects continued cost growth over the next several years. This will make it more difficult for Amtrak to meet its net revenue projections and reach operational self-sufficiency. However, Amtrak has no measures of labor productivity for its different lines of business that would help it manage its cost growth.

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## Amtrak's Operating Costs Have Increased Since 1995 and Are Expected to Continue Growing

Amtrak's annual operating costs have increased since 1995—about 12 percent in total over the rate of inflation. Amtrak's costs were \$2.4 billion in 1995 and \$2.7 billion in 1999. The growth in costs was only slightly less than revenue growth. (See fig. 1.) As a result, Amtrak did not materially reduce the gap between expenses and revenues, as measured by net loss. The 1999 net loss was about \$85 million (nominal dollars) larger than it was in 1995. Amtrak attributed the cost increases and larger net loss to such things as the results of labor negotiations, expanded service levels, increased depreciation, and implementation of the progressive overhaul program. In addition, while Amtrak has “spent money to make money,” it has made little progress in gaining financial benefits that exceed the expenditures it has made. For example, in 1995, for every operating dollar Amtrak spent, it earned \$0.65 in total revenue. In comparison, Amtrak earned \$0.67 in total revenue for every dollar spent in 1999.<sup>2</sup>

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<sup>1</sup>In nominal dollars. Unless otherwise noted, all dollar amounts in this report are in constant 1999 dollars.

<sup>2</sup>Although the slight improvement in the amount Amtrak earned for every dollar it spent might appear to suggest that it has been closing the gap between revenues and expenses, this is not the case. The slightly better performance in 1999 over that of 1995 reflects that even though, on an absolute basis, expenses increased more than revenues (resulting in a larger net loss), revenues increased at a greater rate than did expenses.

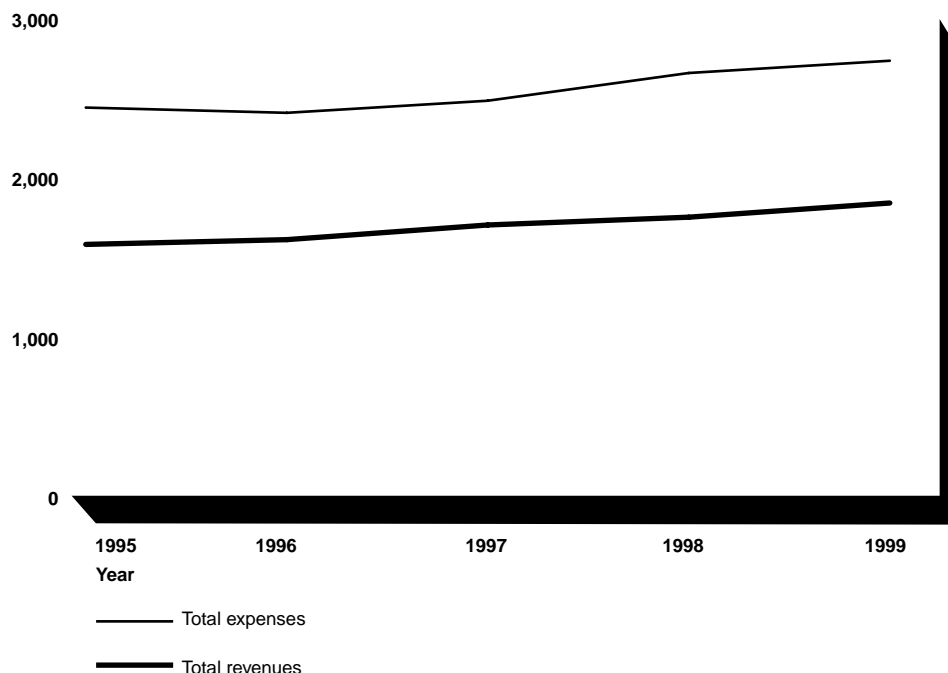
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**Appendix II**  
**Amtrak's Operating Costs Have Increased**  
**Since 1995, and Future Increases Will**  
**Necessitate Revenue Growth**

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**Figure 1: Comparison of Amtrak's Total Revenues and Total Expenses, 1995-99**  
Dollars in millions



Source: GAO's analysis of Amtrak's data.

In an effort to control costs and increase revenues, since 1995, Amtrak has developed and implemented a series of strategic business plans. These plans have attempted to increase revenues and control costs through such actions as expanding mail and express service, adjusting routes and the frequency of service, and reorganizing the company into strategic business units. Reorganizing the company into strategic business units was also expected to result in better service. In general, these business plans have attempted to hold cost increases to no more than the rate of inflation. Amtrak's record in controlling its expenses has been mixed since 1995. (See fig. 2.) Amtrak missed its expense targets from 1995 through 1997 by a total of about \$355 million. However, in 1998 and 1999, Amtrak spent less than planned by a total of \$205 million. Overall, Amtrak incurred about \$150 million more in expenses than planned over the 1995-99 period.<sup>3</sup>

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<sup>3</sup>Data on Amtrak's expense targets are in nominal dollars.

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**Appendix II**  
**Amtrak's Operating Costs Have Increased**  
**Since 1995, and Future Increases Will**  
**Necessitate Revenue Growth**

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Amtrak has attributed not meeting its expense targets to such things as missed energy savings targets and disruptions due to weather.

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**Figure 2: Comparison of Planned and Actual Operating Expenses, 1995-99**

Dollars in millions

3,000

2,500

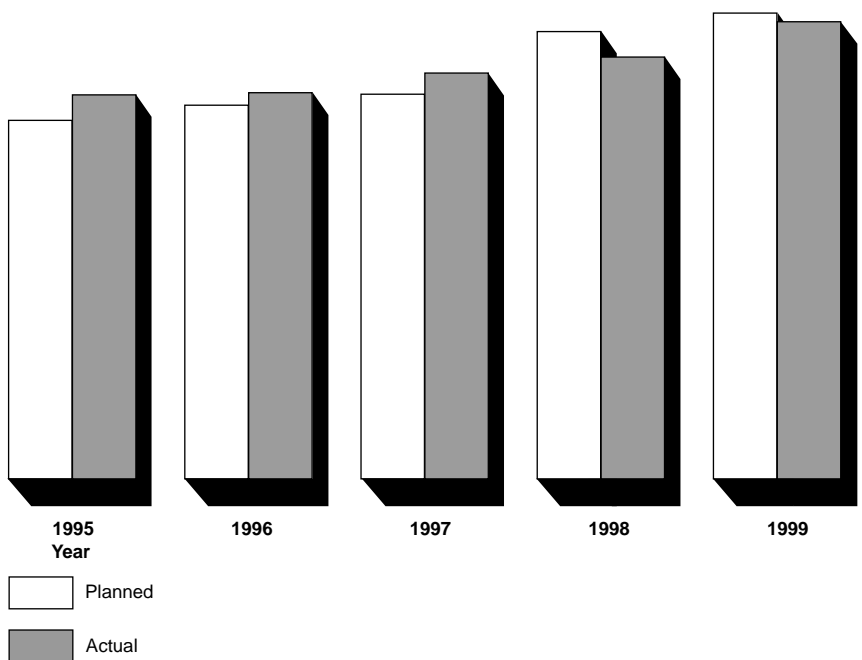
2,000

1,500

1,000

500

0



Notes: This analysis does not include about \$106 million in retroactive labor payments for 1998 because they were not in Amtrak's strategic business plans. If these payments had been included, Amtrak would have spent less than it planned in 1998 by \$47 million. Overall, including these payments would have resulted in Amtrak incurring about \$256 million more in operating expenses than it planned from 1995-99.

For 1998, we used Amtrak's September 1997 strategic business plan rather than the revised March 1998 plan. In our opinion, the September 1997 plan provides a better benchmark for evaluating financial performance because it reflects expected performance at the beginning of the fiscal year. Revising a plan 6 months into a fiscal year significantly reduces the uncertainty inherent in preparing an estimate of annual performance. In addition, the primary financial revisions contained in the March 1998 plan (a reduction of mail and express revenue) did not directly influence the factors shown in this figure.

Source: GAO's analysis of Amtrak's data.

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**Appendix II**  
**Amtrak's Operating Costs Have Increased**  
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Just as Amtrak has attempted to spend money to make money over the last 5 years, it plans to continue to do so in the future. As a result, Amtrak's operating costs will continue to increase as Amtrak incurs costs to further increase ridership and improve the quality of its service. These increases will make it critical for Amtrak to achieve the revenue growth it has projected in its most recent business plan. According to Amtrak's operating plan for 2000, Amtrak's total operating costs are expected to increase by a net \$60 million over the next 5 years—from about \$2.91 billion in 2000 to \$2.97 billion in 2004.<sup>4</sup> This is a net increase because it includes growth in such costs as labor, interest expenses, and payments to freight and other railroads as well as savings to be achieved from such things as productivity improvements.

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<sup>4</sup>This includes the costs of progressive overhauls. Amtrak funds progressive overhauls through its capital program. However, under generally accepted accounting principles, the costs of such overhauls are considered operating expenses.

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## **Amtrak's Labor Costs Have Increased Since 1995 and Will Likely Continue to Grow**

Labor costs represent Amtrak's single largest operating cost. In 1999, Amtrak's labor costs, including salaries, wages, and benefits, accounted for about 52 percent of the railroad's total operating costs.<sup>5</sup> From 1995 through 1999, labor costs increased from \$1.296 billion to about \$1.420 billion—a total increase of about 10 percent over the rate of inflation (includes one-time lump-sum payments as well as other wage increases).<sup>6</sup> This is a net increase—that is, net of the savings achieved through such actions as negotiated productivity improvements and savings in costs of health and welfare benefits. Although labor costs can change for a variety of reasons, at least part of the increase in Amtrak's labor costs is attributable to new collective bargaining agreements. In 1995, Amtrak began renegotiating contracts with the 13 unions and 2 employee councils (collectively called "unions") that represent about 90 percent of its total workforce. These negotiations were completed in early 2000. As a result of these negotiations, Amtrak estimates that wage payments for these employees increased by about \$144 million in 1998 and 1999.<sup>7</sup> These wage increases included such things as negotiated general wage increases, signing bonuses, and retroactive wage payments. For example, Amtrak's union-represented employees received, on average, general wage increases of 2.4 percent per year over the past 5 years.

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<sup>5</sup>In comparison, in 1998, labor costs represented about 33 percent of the total costs for all major U.S. carriers in the air transportation industry and, according to a bus company official, about 47 percent of total costs for the largest intercity bus company.

<sup>6</sup>In comparison, labor costs for commuter railroads increased about 1.5 percent over the rate of inflation from 1995 to 1998 as reported by the American Public Transportation Association. Data for 1998 were preliminary.

<sup>7</sup>In nominal dollars. Total negotiated wage payments (including general wage increases, signing bonuses, and retroactive payments) were \$260 million. The balance of this amount (\$116 million) is expected to be paid in 2000.



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Amtrak's labor costs reflect the fact that the size of its workforce has not changed substantially in recent years. In 1999, Amtrak employed about 22,500 agreement (union-represented) employees and about 2,700 nonagreement (management) employees—about the same number as in 1994.<sup>8</sup> (See fig. 3.) Amtrak attempted to reduce its management staff in 1994 and 1995 by offering management employees early retirement and buyouts to leave the company. As a result of these buyouts and early retirements, Amtrak's management staff declined by a total of about 15 percent between 1994 and 1995. But, by 1999, the number of management employees was almost the same as it was in 1994. Union-represented employment declined 7 percent from 1994 through 1996. But union-represented employment has also grown since then, and, in 1999, Amtrak had more union-represented workers than in 1994. Amtrak officials attributed the employment increases to such things as service expansion, Federal Railroad Administration safety regulations, and capital investments. The company does not plan to reduce the size of its workforce in the future with the exception of positions that may be eliminated as a result of negotiated productivity and work rule changes. In fact, Amtrak's recent report to the Congress on its plans to expand service on 11 routes and increase train frequencies on 3 other routes indicated that additional employees (especially train and engine crews) would be needed.<sup>9</sup>

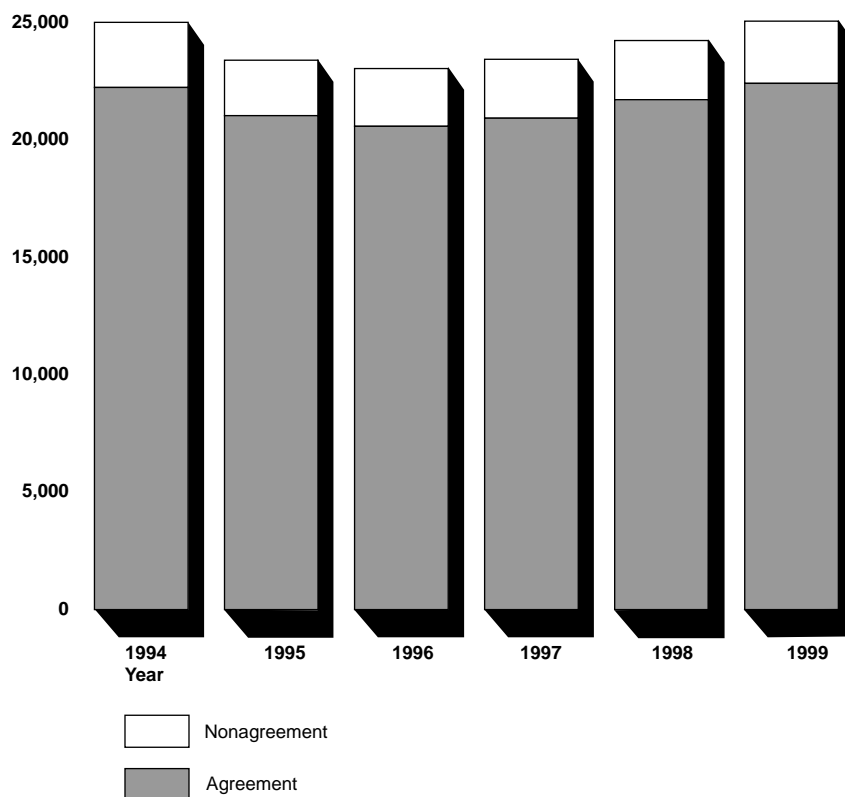
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<sup>8</sup>Employment figures are as of September 30 of each year.

<sup>9</sup>*Report to Congress: The Market Based Network Analysis of the National Railroad Passenger Corporation*, Amtrak (Feb. 28, 2000).

**Appendix II**  
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**Figure 3: Number of Amtrak Employees, by Type, 1994-99**  
 30,000



Source: GAO's analysis of Amtrak's data.

We were unable to determine how Amtrak's actual labor costs have compared with planned labor costs prior to 1998. This is because Amtrak's business plans did not enumerate planned labor costs before the September 1997 business plan (which covered the 1998 to 2000 period). In 1998, Amtrak's actual labor costs were about \$11 million less than planned.<sup>10</sup> In 1999, Amtrak's actual labor costs were less than planned—by about \$28 million. This was primarily due to lower than expected benefit

<sup>10</sup>In nominal dollars. Excludes \$106 million in retroactive labor payments because they were not in Amtrak's strategic business plans.

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costs, not lower wages or salaries. In 1999, expected benefits costs were about \$35 million less than planned. In contrast, actual wages and salaries exceeded planned wages and salaries by about \$7 million. Amtrak officials said the wages and salaries target was missed because of adverse weather conditions (such as Hurricane Floyd) and increased progressive overhaul work.

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**Amtrak Has No Measures of**  
**Labor Productivity for Its**  
**Different Lines of Business**

Amtrak does not have standard measures of labor productivity for its different lines of business (e.g., intercity passenger service, commuter service). We attempted to develop four corporatewide labor productivity measures for Amtrak—passenger miles per employee hour worked, seat miles per employee hour worked, passengers transported per employee hour worked, and overhauls per employee hour worked—to determine the trends in Amtrak's productivity since 1995. However, discussions with Amtrak officials identified limitations in its data needed to calculate these measures. Specifically, Amtrak's data included hours of employees involved in Amtrak's capital projects, commuter passenger service, contract equipment repairs, and mail and express business.<sup>11</sup> According to Amtrak, this type of information should not be included in the measures because those employees do not directly influence the number of passenger miles, seat miles, passengers transported, or overhauls Amtrak records annually. As a result, Amtrak said that these data would inaccurately portray its labor productivity. Amtrak could not provide data without these limitations.

The Amtrak Reform Council (the Council) has also experienced difficulties in measuring Amtrak's productivity. As we did, the Council encountered problems with the data required for measuring productivity. In its January 2000 report to the Congress, the Council developed and reported seven productivity measures. These included seat miles per employee, passenger miles per employee, and passengers transported per employee. Although the Council reported the results of its productivity measures, the Council noted that its measures had similar data limitations to those discussed above. In its report, the Council stated that it was working with Amtrak to obtain additional productivity data and to agree with Amtrak on acceptable methodologies for monitoring general labor productivity so the Council could comply with its statutory reporting requirement.

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<sup>11</sup>In commenting on a draft of this report, Amtrak noted that the fact its workers can and do work on more than one line of business is a positive aspect of its labor productivity.

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Labor productivity measures are important because they indicate the efficiency with which labor is being utilized. Although Amtrak does not have measures of productivity for its different lines of business, others in the rail industry do. For example, many officials of the commuter and freight railroads we spoke with stated that, in general, they track labor productivity with a variety of measures including employees per passenger mile and gross ton-miles per employee. It is especially critical that Amtrak determine the efficiency of its labor force. Amtrak has had difficulty controlling the growth of its labor costs, and labor costs are Amtrak's largest operating cost. Finally, Amtrak incurs a fairly high amount of overtime to provide its services, which may suggest some level of inefficiency in its utilization of its labor force. From 1995 to 1999, overtime represented, on average, about 11 percent of Amtrak's total employee hours worked. The amount of overtime hours also increased steadily during this period—from about 4.2 million hours in 1995 to about 6.3 million hours in 1999. In commenting on a draft of this report, Amtrak speculated that overtime hours may have increased because of an increase in capital spending and/or decisions not to hire additional employees to cover increases in its business. However, Amtrak did not know specifically why overtime had increased.

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## **Amtrak Has Implemented Various Strategies to Control Labor Costs**

Amtrak has employed a variety of strategies to control labor costs. One of these strategies is to negotiate productivity improvements with its agreement workforce. Amtrak set a goal of offsetting, through productivity improvements, 20 percent (about \$49 million) of the \$248 million in wage increases it negotiated in the latest round of collective bargaining.<sup>12</sup> Amtrak officials told us that the goal was set at 20 percent because it allowed sufficient flexibility to overcome implementation problems. This goal is to be achieved by September 2000—only a few months away. In 1998 and 1999, Amtrak estimated that it saved \$21.2 million in work rule and productivity savings—\$1.7 million in 1998 and \$19.5 million in 1999. This leaves about \$28 million in savings to be achieved in 2000 to realize the goal. According to Amtrak documents and discussions with Amtrak officials, achieving these savings will require, among other things, that Amtrak continue to selectively reduce its workforce and realize savings from contracting out its food service functions.<sup>13</sup> To help ensure that this goal will be met, Amtrak has for the first time linked productivity cost savings with strategic business unit and service center budgets. In general, these budgets were reduced by the amount of the projected cost savings from the specific productivity changes negotiated.<sup>14</sup>

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<sup>12</sup>The wage increase has since risen to \$260 million; however, the productivity savings goal has remained at \$49 million. Data on wage increases due to collective bargaining and productivity savings are in nominal dollars.

<sup>13</sup>In January 1999, Amtrak contracted out part of its food service function to Dobbs International Services. This included preparing the food and beverages served on board trains.

<sup>14</sup>Amtrak officials told us that productivity savings were not a function of budget cuts. Rather, in general, productivity savings were actually calculated by subtracting the current cost of an activity (under the new work rule or other change) from the cost that would have been incurred for that activity on a historical basis. Amtrak has tasked its strategic business units with calculating and tracking the specific cost savings. Amtrak officials told us that they do not confirm the productivity savings information provided by the strategic business units. Therefore, it may not be clear how much savings is attributable to productivity changes compared to savings from budget cuts.

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In addition to negotiating productivity changes, Amtrak has used other strategies to help control its labor costs. In 1997, because of rising costs for health care coverage and payments for coverage seldom used by its employees, Amtrak opted out of the railroad industry's health care plan. Instead, Amtrak established its own plan (called "Amplan"). Amtrak estimates that this new plan saved over \$3 million during the first year it was in effect. In 1999, to reduce absenteeism and increase worker productivity, Amtrak introduced its "presenteeism" program. Under this program, union-represented employees who maintain perfect work attendance for at least 6 months are eligible to win an automobile.<sup>15</sup> Amtrak expects to save approximately \$6 million per year as a result of this program.<sup>16</sup> According to Amtrak, preliminary analysis indicates that the presenteeism program reduced the number of unexplained absences by about 10 percent during the first 6 months it was in effect.

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**Labor Costs May Increase**  
**More Than Amtrak Plans**

Amtrak's projections, after accounting for inflation, show about a \$20 million net decrease in its labor costs through 2004. This takes into consideration such things as planned work rule and productivity changes. We do not believe Amtrak's projections are reasonable. This is because Amtrak has entered into a new round of collective bargaining with its union-represented employees. If the new round of collective bargaining follows the pattern of past negotiations, Amtrak's labor costs can be expected to increase. This is illustrated by the results of the last two rounds of collective bargaining. As the result of the 1988 to 1994 round of collective bargaining, Amtrak estimated that wages increased between \$120 million and \$140 million. As a result of the most recently completed round of bargaining (1995 to early 2000), Amtrak has estimated that wage payments have increased by \$144 million through 1999.<sup>17</sup>

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<sup>15</sup>Twice a year, Amtrak randomly selects two union-represented employees who have maintained perfect attendance for the past 6 months, for a total of four winners a year.

<sup>16</sup>Data on estimated savings from Amtrak's Amplan and presenteeism programs are in nominal dollars.

<sup>17</sup>Total negotiated wage payments (including general wage increases, signing bonuses, and retroactive payments) were \$260 million. The balance of this amount (\$116 million) is expected to be paid in 2000. Data on wage increases due to past collective bargaining rounds are in nominal dollars.

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## **Amtrak's Interest Expenses and Payments to Freight and Other Railroads Have Also Increased and Are Expected to Continue Increasing**

As Amtrak has acquired new cars and equipment (called "refleeting"), it has taken on significant debt, and its interest costs have grown accordingly—over 60 percent over the past 5 years. In addition, over the past 5 years, Amtrak has experienced modest increases in its payments to freight and other railroads as a result of signing new agreements to use their lines. About 95 percent of Amtrak's operations are over track owned by other railroads. Together, these costs represent a relatively small portion of Amtrak's total operating costs—about 7 percent. However, they are important because these costs are projected to grow faster than Amtrak's overall costs in the future.

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## **Interest Expenses Have Increased Significantly as Amtrak Acquired New Equipment and Future Increases are Expected**

To renew its fleet of passenger cars, locomotives, and other equipment, Amtrak has borrowed heavily in recent years in the commercial markets. We reported in 1995 that about 31 percent of Amtrak's cars and 54 percent of its locomotives were beyond their useful life.<sup>18</sup> To improve service, reduce maintenance costs, and increase customer satisfaction, during the 1990s, Amtrak embarked on a large-scale refleeting effort. For example, it invested about \$312 million (nominal dollars) to acquire approximately 120 locomotives. Amtrak borrowed most of the money needed to acquire new rolling stock (i.e., locomotives and passenger cars). According to Amtrak officials, it made better financial sense to borrow funds to lease this equipment and use the capital funds for other purposes. As a result, Amtrak's debt obligations increased dramatically—more than doubling from about \$890 million in 1995 to about \$1.9 billion in 1999. (See fig. 4.) In making these investments, Amtrak expected the actual and potential benefits, such as increased ridership, to outweigh the costs of additional borrowing.

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<sup>18</sup>See *Intercity Passenger Rail: Financial and Operating Conditions Threaten Amtrak's Long-Term Viability* (GAO/RCED-95-71, Feb. 6, 1995).

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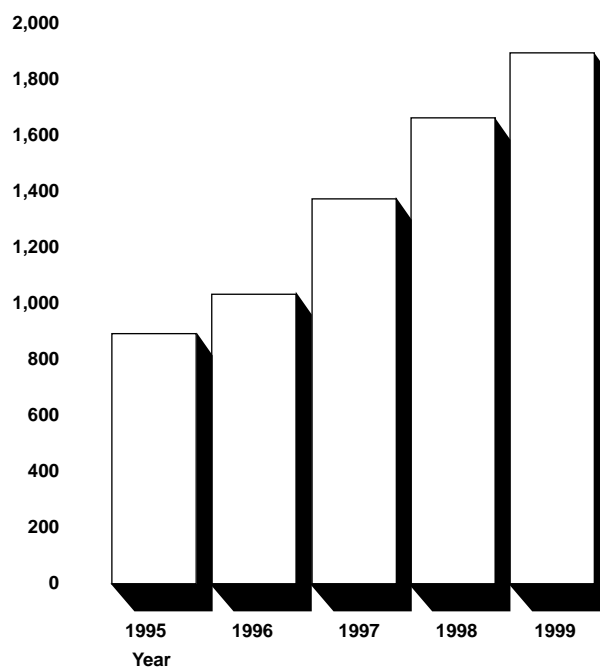
**Appendix II**  
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**Figure 4: Amtrak's Debt Obligations, 1995-99**

Dollars in millions



Source: GAO's analysis of Amtrak's data.



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As a result of increased borrowing, Amtrak's interest expenses also increased by over 60 percent over the past 5 years. (See fig. 5.) As the figure shows, Amtrak's interest expenses increased from about \$50 million in 1995 to about \$89 million in 1998 before declining somewhat to about \$83 million in 1999. Amtrak expects interest expenses will be about \$86 million in 2000. Although interest expenses represented only about 3 percent of Amtrak's total operating costs in 1999, they have been gaining importance in Amtrak's cost structure because this expense is growing at a faster rate than either Amtrak's total operating costs or revenues. From 1995 to 1999, Amtrak's interest expenses increased about 5 times faster than total expenses and about 4 times faster than Amtrak's revenues. Amtrak has tried to control its interest expenses by refinancing its debt to get the best interest rates possible. According to Amtrak, it can secure favorable interest rates because it is able to pass the depreciation and interest payments back to investors through "sale-lease back" arrangements.<sup>19</sup>

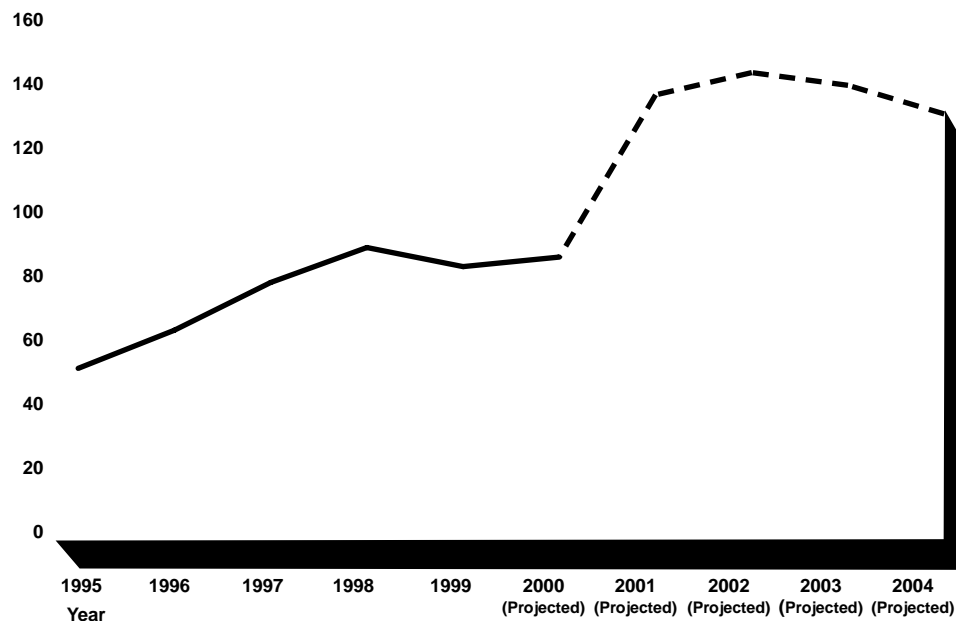
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<sup>19</sup>In a sale-lease back arrangement, a lending institution funds the construction of rolling stock. When construction is complete, Amtrak takes delivery of the equipment, but the legal title is turned over to a third-party investor who pays the lending institution. Amtrak then makes lease payments to the investor for the life of the loan (usually the estimated useful life of the rolling stock). The rolling stock, however, belongs to Amtrak for accounting purposes and is reported in Amtrak's annual financial statements as an asset. Amtrak benefits by obtaining the equipment and a relatively lower interest rate. The investor benefits by paying interest and by taking depreciation on the equipment, thereby lowering the investor's taxes.

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**Figure 5: Amtrak's Interest Expenses, 1995-2004**

Dollars in millions



Source: GAO's analysis of Amtrak's data.

Amtrak expects that the annual interest expense on its commercial debt will increase as the railroad continues to acquire new equipment, including 20 trainsets (cars and locomotives) for its high-speed rail program. Over the next 5 years, Amtrak projects that its annual interest payments will generally increase by over 50 percent—from \$86 million in 2000 to about \$130 million in 2004. Amtrak projects that it will pay a total of about \$640 million in interest in the next 5 years as part of the over \$2 billion in debt that Amtrak has incurred or will incur primarily to acquire new equipment. Over 60 percent of this total interest represents debt for Amtrak's high-speed rail program and the acquisition of new passenger cars. (See fig. 6.) The other 40 percent represents such things as the acquisition of locomotives and mail and express equipment. As previously discussed, both the high-speed rail and mail and express programs are cornerstones of Amtrak's plans to improve its financial health.

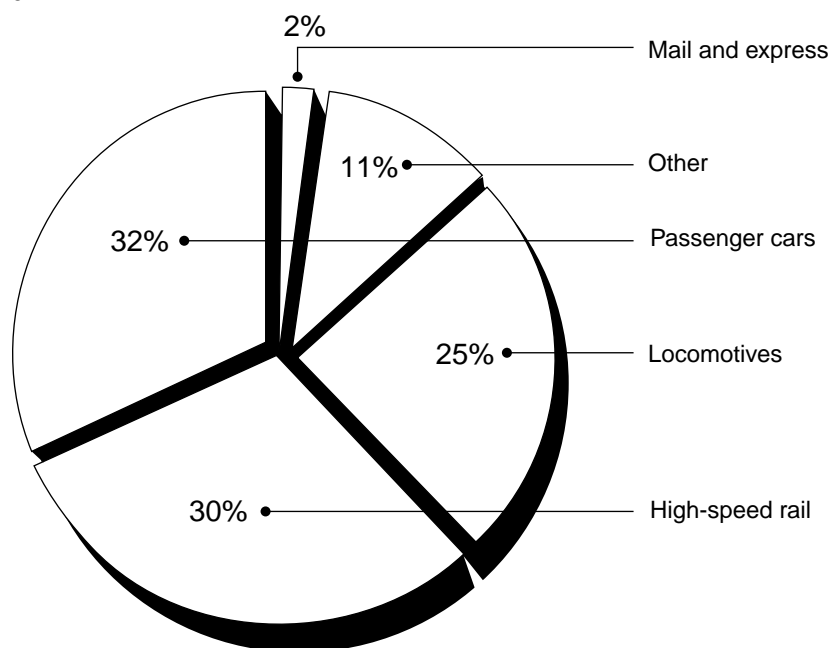
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**Appendix II**  
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**Figure 6: Percentage of Amtrak's Future Interest Expenses by Items Financed, 2000-04**



Source: GAO's analysis of Amtrak's data.

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**Amtrak's Payments to  
Railroads Have Increased  
Since 1995 and Will Likely  
Continue Increasing**

Amtrak's payments to freight, commuter, and other railroads (collectively called "other" or "host" railroads) have also generally increased since 1995, largely as the result of renegotiating operating agreements with these railroads. (See fig. 7.) Although Amtrak has a statutory right of access to other railroads' tracks to provide service, the implementation of Amtrak's access rights is handled through negotiated agreements. Most of Amtrak's initial 25-year agreements signed in 1971 with other railroads expired in 1996. Amtrak has been renegotiating these agreements over the past several years, and as of February 2000, it had renegotiated 17 of its 21 operating agreements. For the most part, the renegotiated agreements have resulted in cost increases. From 1995 through 1999, Amtrak's payments to other railroads generally increased about 8 percent—from a total of \$92 million to \$99 million per year. This includes both base payments and incentive payments. In general, base payments are the incremental costs<sup>20</sup> incurred by a railroad that result from Amtrak's use of the railroad's tracks and infrastructure. Base payments also include any additional services (such as emergency repairs) provided to Amtrak by a host railroad. Incentive payments are bonus amounts earned by a host railroad to keep Amtrak's trains on time.<sup>21</sup>

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<sup>20</sup>Incremental costs are the short-term avoidable costs incurred by a railroad to support Amtrak service. They do not include allocations of overhead or fixed costs. Avoidable costs include such things as wear and tear on the track.

<sup>21</sup>Most operating agreements generally stipulate that the host railroads shall keep greater than 80 percent of Amtrak trains on time to receive an incentive payment.

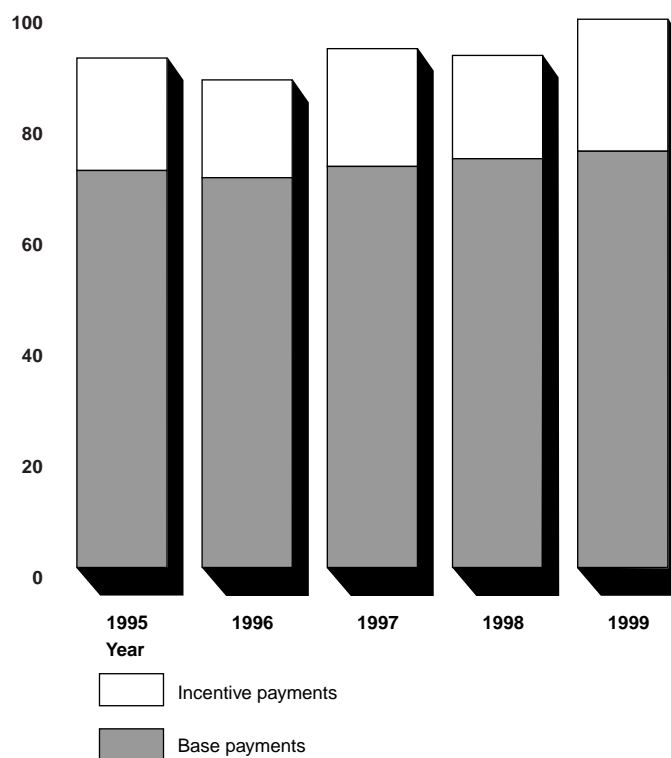
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**Appendix II**  
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**Figure 7: Amtrak's Payments to Other Railroads, 1995-99**  
Dollars in millions



Source: GAO's analysis of Amtrak's data.

The new operating agreements have increased Amtrak's payments to other railroads because of increased track maintenance costs, changed incentive payment structures, and restructured liability provisions, among other things. For example, under the old agreements, Amtrak paid a lower amount for track maintenance than it will pay using a different approach contained in most of the new agreements. Although these new agreements increase Amtrak's payments, Amtrak believes they encourage host railroads to improve services provided to Amtrak, including on-time performance of its trains. According to Amtrak, better on-time performance will increase its ridership and revenues. Amtrak has attempted to control its payments to other railroads by aggressively enforcing the statutory provisions requiring other railroads to provide access to their tracks at incremental costs.

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**Appendix II**  
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Amtrak's payments to other railroads are expected to increase in the future for several reasons. First, Amtrak still has to negotiate new agreements with four railroads. If these agreements follow the pattern of the 17 previous agreements, the payments to these 4 railroads can be expected to increase. Second, Amtrak believes that railroads will earn larger incentive payments by improving Amtrak's on-time performance. Amtrak estimates its total incentive payments will increase, on average, about \$7 million annually over the next 5 years. Finally, Amtrak potentially faces higher payments to other railroads if the planned service expansion called for in its market-based network analysis and expansion of the mail and express program occur. For example, as its mail and express program expands, Amtrak is likely to operate longer trains to accommodate the additional mail and/or express business.<sup>22</sup> Railroads whose tracks Amtrak operates over may seek additional compensation for these longer trains.

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<sup>22</sup>In May 1998, the Surface Transportation Board required Amtrak to observe a self-imposed limit of 30 cars for its mail and express business over the lines of the Union Pacific/Southern Pacific Railroad. If Amtrak wanted to use trains longer than this, it would have to negotiate with the railroad.

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## **Increasing Costs Necessitate Revenue Growth**

To meet its expected cost growth, it will be critical for Amtrak to achieve its projected net revenue growth. Amtrak projects that its total revenue (adjusted for inflation) will increase about \$166 million over the next 5 years—from \$2.09 billion in 2000 to \$2.25 billion in 2004. According to Amtrak, this will be accomplished by such things as implementing new high-speed rail service between Boston and Washington, D.C., expanding its mail and express service, and realigning its route network more closely with customer demand. For example, Amtrak's recent market-based network analysis calls for expanded service on 11 routes and increased train frequencies on 3 routes, among other things. Amtrak believes it can generate more than \$65 million (nominal dollars) in net revenue over the next 3 fiscal years by implementing the actions called for in its market-based analysis. Because of the Amtrak Reform Act and an arbitrator's decision, Amtrak now has additional flexibility in testing the financial viability of expanded routes called for in its market-based network analysis without liability for labor protection payments. Prior to the Amtrak Reform Act, the elimination of routes or reduction of intercity passenger rail service on a route below 3 times per week could trigger labor protection payments to displaced or dismissed employees. The Amtrak Reform Act also abolished labor protection requirements as of May 31, 1998, and made them subject to collective bargaining. Since November 1999, as the result of an arbitrator's decision, Amtrak has been able to end train service on new routes within 2 years of inception without incurring labor protection liability.<sup>23</sup>

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<sup>23</sup>Under the arbitrator's ruling, dismissed employees are eligible for up to 5 years of wages, as opposed to 6 years of wages under the previous arrangements. In addition, workers have to work longer (25 years) to receive the maximum payment. Under the old arrangement, workers could obtain 5 years of wages if they worked 5 years.

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Historically, however, Amtrak has had difficulty in achieving its planned revenue targets. For example, Amtrak achieved its planned revenue targets only twice from 1995 to 1999. As a result, Amtrak earned \$14 million (nominal dollars) less in revenues than planned over the 5-year period. (See fig. 8.) Additionally, our recent reports, and those of the Department of Transportation's Inspector General and the Amtrak Reform Council, have questioned some of Amtrak's future revenue targets as being uncertain or unrealistic.<sup>24</sup> For example, in July 1999, we reported that Amtrak's business plan claimed about \$160 million (nominal dollars) in revenue for actions that had yet to be identified. In addition, we reported that Amtrak's expectations for increased revenues from high-speed rail service in the Northeast Corridor and from its express service were based on critical assumptions that had yet to be tested in the marketplace.

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<sup>24</sup>See *Intercity Passenger Rail: Amtrak's Progress in Improving Its Financial Condition Has Been Mixed* (GAO/RCED-99-181, July 9, 1999); *Report on the 1999 Assessment of Amtrak's Financial Needs Through Fiscal Year 2002*, Office of Inspector General, U.S. Department of Transportation, CE-1999-116 (July 21, 1999); and *A Preliminary Assessment of Amtrak*, Amtrak Reform Council (Jan. 24, 2000).



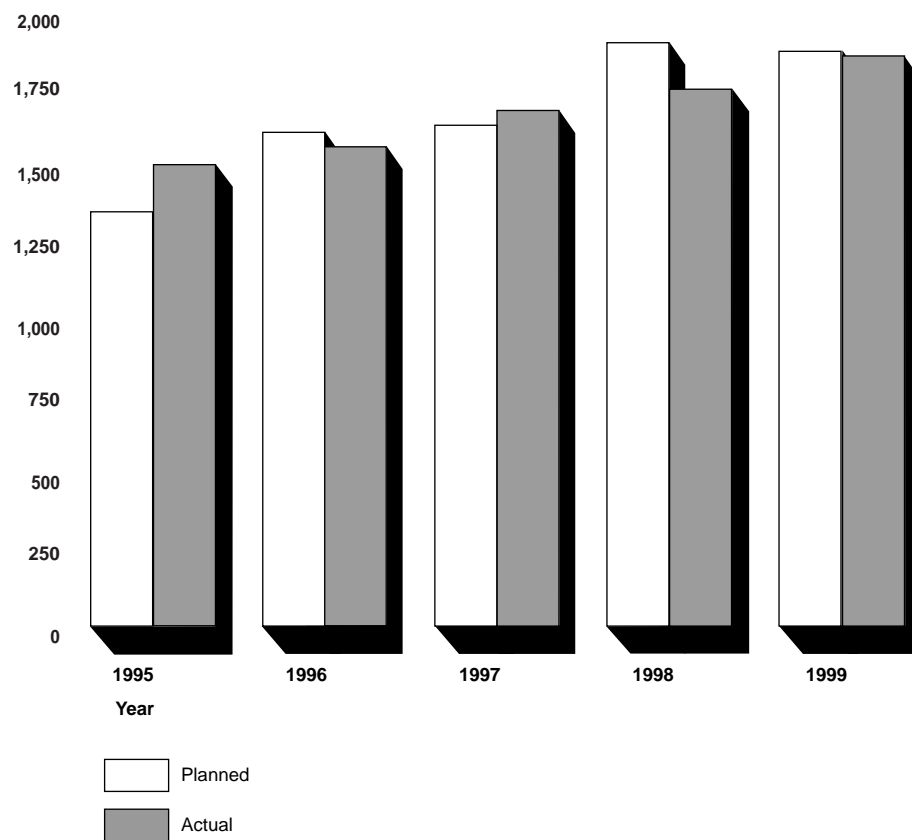
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**Appendix II**  
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**Figure 8: Comparison of Planned and Actual Total Operating Revenues, 1995-99**  
Dollars in millions



Note: Data for 1998 are based on Amtrak's September 1997 strategic business plan rather than the revised March 1998 plan.

Source: GAO's analysis of Amtrak's data.

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# Amtrak Faces Short- and Long-Term Capital Investment Needs

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On the basis of discussions with Amtrak officials and our review of published reports, we estimate that Amtrak has over \$9.1 billion in capital investment needs through 2015 to maintain and improve its operations.<sup>1</sup> These investments are critical for Amtrak to attract and maintain revenue and to provide high-quality service. These needs include both short-term needs, such as addressing infrastructure needs on the Northeast Corridor and maintaining equipment, and long-term needs, such as replacing bridges and tunnels and the electric system that supplies power to trains between Washington, D.C., and New York City. In addition, Amtrak will have other capital investment requirements for which cost estimates have not yet been developed, such as acquiring new equipment and technology.

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## Short-Term Capital Investment Needs Total About \$4 Billion

Our discussions with Amtrak officials and our review of reports show Amtrak's capital investment requirements over the next 4 years (through 2004) to total about \$4 billion. These requirements focus mainly on infrastructure and equipment. (See table 1.) Infrastructure investment needs account for over \$2.5 billion of the total and are targeted toward addressing deferred maintenance and improving the quality of service on the Northeast Corridor. Amtrak plans to share the costs for some of these infrastructure improvements with other railroads that use the Northeast Corridor. Amtrak's Chief Mechanical Officer estimates that Amtrak's short-term equipment maintenance needs total over \$1 billion. These investments are designed to eliminate backlogs in Amtrak's progressive overhaul program and to increase the efficiency of maintenance facilities. The remainder represents principal payments on commercial debt incurred to finance past equipment acquisitions. In addition to these investments, Amtrak will have other capital improvement requirements for which cost estimates have not been developed. These include the acquisition of new equipment and technology, station improvements, and investments in high-speed rail programs outside of the Northeast Corridor.

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<sup>1</sup>We asked Amtrak managers to identify capital investments they believed are needed to maintain current service levels and improve Amtrak's service in the future and reviewed Amtrak and non-Amtrak reports addressing capital investment needs because Amtrak has not comprehensively assessed its capital needs.

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**Appendix III**  
**Amtrak Faces Short- and Long-Term Capital**  
**Investment Needs**

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**Table 1: Amtrak's Short-Term Capital Investment Requirements, 2001-04**

Constant 1999 dollars in millions

| <b>Investment</b>  | <b>Estimated cost</b> |
|--|-----------------------|
| Infrastructure investments                               |                       |
| State of good repair investments                         | \$1,415               |
| Completion of Northeast Corridor high-speed rail program | 792                   |
| Life safety investments                                  | 316                   |
| <b>Infrastructure subtotal</b>                           | <b>\$2,523</b>        |
| Equipment investments                                    |                       |
| Equipment maintenance, repairs, passenger car upgrades   | 1,100                 |
| Debt service principal payments                          | 346                   |
| Maintenance facilities                                   | 42                    |
| <b>Equipment subtotal</b>                                | <b>\$1,488</b>        |
| <b>Total</b>   | <b>\$4,011</b>        |

Source: GAO's analysis of Amtrak's data.

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## **Short-Term Investment Needs Focus on the Northeast Corridor**

The short-term capital investment needs that Amtrak officials and reports have identified focus largely on the Northeast Corridor. In particular, Northeast Corridor officials have estimated that about \$316 million will be needed over the next 4 years to continue life safety investments at various locations on the Northeast Corridor. While not one of the highest cost investments, Amtrak officials have said that safety to passengers, employees, and others is of paramount importance. An analysis conducted by Amtrak's Northeast Corridor business unit of life safety improvements shows short-term investment needs concentrated primarily on the tunnels leading into and out of New York City's Pennsylvania Station. This station serves, on average, over 300,000 intercity and commuter rail passengers each weekday. The tunnels were built in the early 1900s and, according to Amtrak, are in serious need of modernization. According to Amtrak's assessments, these tunnels have outdated ventilation systems, emergency exits, and communications equipment, among other things. In June 1997, Amtrak, along with the Long Island Rail Road and New Jersey Transit—the two commuter railroads that use these tunnels—reported that a fire or other serious incident in these tunnels or in Pennsylvania Station could endanger the safety of passengers and those who respond to the accident.<sup>2</sup> According to this report, necessary improvements include adding improved exits, emergency power sources, tunnel lighting, better communications systems, structural repairs, and fire protection. Amtrak will be working with New Jersey Transit and the Long Island Rail Road to identify what specific work remains to be done and how this work will be funded.<sup>3</sup> Amtrak is also studying the life safety needs of other tunnels and stations, such as those in Baltimore and Philadelphia.

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<sup>2</sup>See *Life Safety Effort, Pennsylvania Station and the New York Tunnels: An Improvement Program for the North and East River Tunnels*, Amtrak, Long Island Rail Road, and New Jersey Transit (June 1997).

<sup>3</sup>In commenting on a draft of this report, both Amtrak and the Federal Railroad Administration noted that work is being done on these tunnels, and according to the Federal Railroad Administration, \$40 million (nominal dollars) has been budgeted for this in 2000.

Amtrak officials estimate that about \$1.4 billion will need to be invested to address several state of good repair issues on the Northeast Corridor.<sup>4</sup> This amount includes \$1.2 billion to eliminate deferred maintenance and restore the infrastructure to a condition where only routine maintenance is required. We,<sup>5</sup> the Department of Transportation's Inspector General,<sup>6</sup> and Amtrak itself have all stated that the corridor is not in a state of good repair and that this issue needs to be addressed soon. Amtrak has invested about \$530 million (nominal dollars) from 1994 to 1999 in routine maintenance in the Northeast Corridor and believes that additional funds will be needed to bring the Corridor up to a state of good repair. Amtrak officials estimate that restoring the Northeast Corridor will require, among other things, the rehabilitation of interlockings (crossovers allowing trains to move to different tracks), modernization of communications and signal equipment, and replacement of rails and ties. These improvements also include about \$180 million to replace bridges and replace and rehabilitate portions of the electric power distribution system that supplies power to trains between Washington, D.C., and New York City. According to Amtrak officials and reports, not addressing state of good repair issues on the Northeast Corridor has resulted in deteriorating bridges, increased trip times, and a decline in overall ride quality. These officials and reports maintain that if this situation is not addressed soon, it will start to seriously affect the company's ridership and financial health, particularly since over half of Amtrak's passenger trips are on the Northeast Corridor. (See fig. 9 for illustrations of current infrastructure conditions on Amtrak's Northeast Corridor.)

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<sup>4</sup>This estimate is predicated on infrastructure investments to be made under the high-speed rail program. According to Amtrak, if these investments are not made, this estimate could increase.

<sup>5</sup>See *Intercity Passenger Rail: Financial and Operating Conditions Threaten Amtrak's Long-Term Viability* (GAO/RCED-95-71, Feb. 6, 1995) and *Northeast Rail Corridor: Information on Users, Funding Sources, and Expenditures* (GAO/RCED-96-144, June 27, 1996).

<sup>6</sup>See *Summary Report on the Independent Assessment of Amtrak's Financial Needs Through Fiscal Year 2002*, Report No. TR-1999-027 (Nov. 23, 1998).

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**Appendix III**  
**Amtrak Faces Short- and Long-Term Capital**  
**Investment Needs**

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**Figure 9: Illustrations of Current Infrastructure Conditions on Amtrak's Northeast Corridor**



Top and bottom of a 10-story, single-width emergency staircase in the tunnels leading into and out of New York City's Pennsylvania Station. The stairs are inadequate for simultaneous use by exiting passengers, rescue personnel, and the rescue personnel's equipment.

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### Appendix III Amtrak Faces Short- and Long-Term Capital Investment Needs

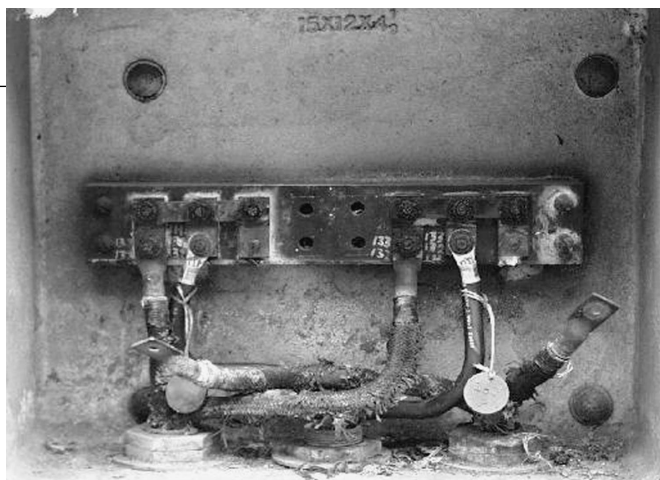
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Cracked and displaced headwall at a bridge in Maryland on Amtrak's main line between Washington, D.C., and Philadelphia, Pennsylvania. Defects such as this can occur from repeated freeze and thaw cycles and can lead to deviations in track surface or alignment. The complete failure of an embankment structure can result in a total loss of service on a line.



A junction box that is in poor condition and, according to Amtrak, is illustrative of conditions throughout Amtrak's Northeast Corridor. Junction boxes control electricity to the electric traction system that supplies power to Amtrak trains. The wiring is frayed and deteriorated, causing short circuits and high-resistance connections. The copper connections have become unreliable because of corrosion.



A section of Northeast Corridor main line track at an interlocking in Philadelphia, Pennsylvania, along Amtrak's Harrisburg line. The arrows indicate poor water drainage that, according to Amtrak, is illustrative of conditions existing at various locations on the Northeast Corridor. An inability to maintain adequate drainage can ultimately weaken track structure and lead to deviations in track surface or alignment that must be corrected or speeds reduced.

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**Appendix III**  
**Amtrak Faces Short- and Long-Term Capital**  
**Investment Needs**

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Note: Amtrak provided the above illustrations to show the types of infrastructure deterioration that can occur over time. According to Amtrak, in the short-term, it addresses such problems with frequent inspections, short-term spot repairs, slower train speeds, and removal of infrastructure segments from service. These measures allow Amtrak to maintain a safe railroad. However, over the longer term, Amtrak said, such actions are costly and result in the gradual loss in the infrastructure's ability to support Amtrak's operations.

Source: Amtrak.

Finally, Amtrak officials and reports also estimate that about \$792 million will need to be invested to continue implementing its Northeast Corridor high-speed rail program. This program is expected to generate over \$180 million (nominal dollars) annually in net revenue starting in 2002 and is critical to Amtrak's efforts to increase its revenue and reach operational self-sufficiency. From 1995 through 1999, Amtrak invested about \$1.5 billion (nominal dollars) in the high-speed rail program. According to Amtrak, short-term infrastructure investments for this program will focus on completing high-speed rail improvements between New York City and Boston (including straightening curves and improving bridges) and reducing trip times between New York City and Washington, D.C. The latter effort will also include, among other things, improving signal and communications systems to handle more trains moving at faster speeds and station platforms and signs.

In January 2000, Amtrak issued a report further assessing its capital investment needs on the south-end of the Northeast Corridor.<sup>7</sup> According to this report, a total of \$12 billion (in constant 2000 dollars) will be needed over the next 25 years, including about \$3.2 billion through 2005, to address south-end infrastructure needs. This includes bringing the south-end of the Corridor between Washington, D.C., and New York City up to a state of good repair, replacing the electric system that supplies power to trains, making life safety improvements, and replacing selected bridges and tunnels. Amtrak estimates that its portion of the total cost will be about \$6 billion, including about \$1.8 billion over the next 5 years. Amtrak believes that other users of the Corridor—commuter and freight railroads—should be responsible for the remaining \$6 billion. However, cost-sharing arrangements are still being negotiated.

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<sup>7</sup>See *The Northeast Corridor South End Transportation Plan, Washington, D.C. to New York City, Phase II Letter Report* (Jan. 2000).



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**Other Short-Term Capital  
Investment Needs Include  
Reducing Maintenance  
Backlogs and Making Debt  
Payments**

Other short-term capital investment needs include addressing equipment maintenance backlogs in the progressive overhaul program. Amtrak established a progressive overhaul program to more efficiently maintain passenger cars and other equipment. Instead of only performing intensive maintenance (called a “heavy overhaul”) every 4 years, under this program, a less intensive and more frequent maintenance step was introduced in addition to a heavy overhaul.<sup>8</sup> Although this program was designed to increase the number of cars that received maintenance, a lack of funding led to a backlog in the number of cars maintained. In 1995, we reported that nearly 40 percent of Amtrak’s passenger car fleet was overdue for a heavy overhaul. Our analysis of data from Amtrak’s Chief Mechanical Officer shows that, as of November 1999, the heavy overhaul backlog on Amtrak’s active fleet of passenger cars was about 15 percent.<sup>9</sup> Although the heavy overhaul backlog has declined, Amtrak is facing a significant increase in the number of cars that will be coming due for overhaul. This will necessitate capital investment. Based on our analysis, Amtrak will need to increase its overhaul production by over 85 percent over the next 5 years—or overhaul about 735 more cars and other equipment per year—to meet its future overhaul needs and eliminate the existing heavy overhaul backlog for some types of cars.<sup>10</sup> The Chief Mechanical Officer estimates that Amtrak will need about \$1 billion in capital funds alone through 2004 to meet this need plus repair wrecked cars and locomotives and continue the equipment upgrades it performs at its maintenance facilities. The Chief Mechanical Officer told us that Amtrak is in the process of developing a new maintenance plan to address, among other things, its overhaul needs in light of service expansions envisioned by the recent market-based network analysis.

Amtrak’s short-term capital investment needs include the repayment of debt principal for past and future acquisitions of cars and locomotives. Amtrak data show that Amtrak expects its debt principal payments to total

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<sup>8</sup>Not all of Amtrak’s fleet undergoes a heavy overhaul every 4 years. For example, cars that carry automobiles are considered freight cars and are not overhauled on the same schedule.

<sup>9</sup>While progress has been made in reducing the overhaul backlog, the Chief Mechanical Officer said there will always be a backlog because capacity constraints at Amtrak’s maintenance facilities and the scarcity of certain types of cars in Amtrak’s fleet make it hard to take cars out of service to meet maintenance schedules. The Chief Mechanical Officer stated that a 10-percent overhaul backlog rate is “acceptable.”

<sup>10</sup>This production rate includes passenger cars, locomotives, and mail and express equipment.

about \$346 million through 2004. About two-thirds (67 percent) of these funds (about \$232 million) will repay debt that was incurred for past equipment acquisitions. The remaining one-third (about \$115 million) will be used for debt incurred for such things as current and/or future equipment acquisitions or facility improvements. The latter includes about \$45 million to repay the principal on the construction of Amtrak's high-speed rail trainsets and facilities and about \$69 million for future equipment acquisitions (such as cars and locomotives).

Short-term capital investments further include maintenance facility upgrades. For example, the Chief Mechanical Officer anticipates changing the progressive overhaul program for a part of Amtrak's fleet to shift some of the progressive overhaul work to selected secondary repair facilities—facilities located throughout Amtrak's system that perform routine maintenance as well as “as needed” repairs—and to increase the frequency at which the work is done.<sup>11</sup> The Chief Mechanical Officer estimates that up to \$5 million (nominal dollars) will be required to upgrade the secondary repair facilities selected to perform this increased workload. In addition, Amtrak has investment needs at its three main maintenance facilities. He estimated that these facilities would require over \$40 million in capital investments over the next 5 years to meet future production requirements and to modernize the facilities. This amount is in addition to the \$30 million (nominal dollars) that Amtrak has invested in these facilities since 1995. Finally, there will be other upgrade needs as well. For example, Amtrak officials believe that production at the Beech Grove facility could be increased substantially if it could purchase or build a warehouse building and install an automated parts inventory system. The estimated cost would range from about \$6 million to \$8 million (nominal dollars).

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<sup>11</sup>In commenting on a draft of this report, Amtrak said that this change is still in the planning phase and has not yet been approved.

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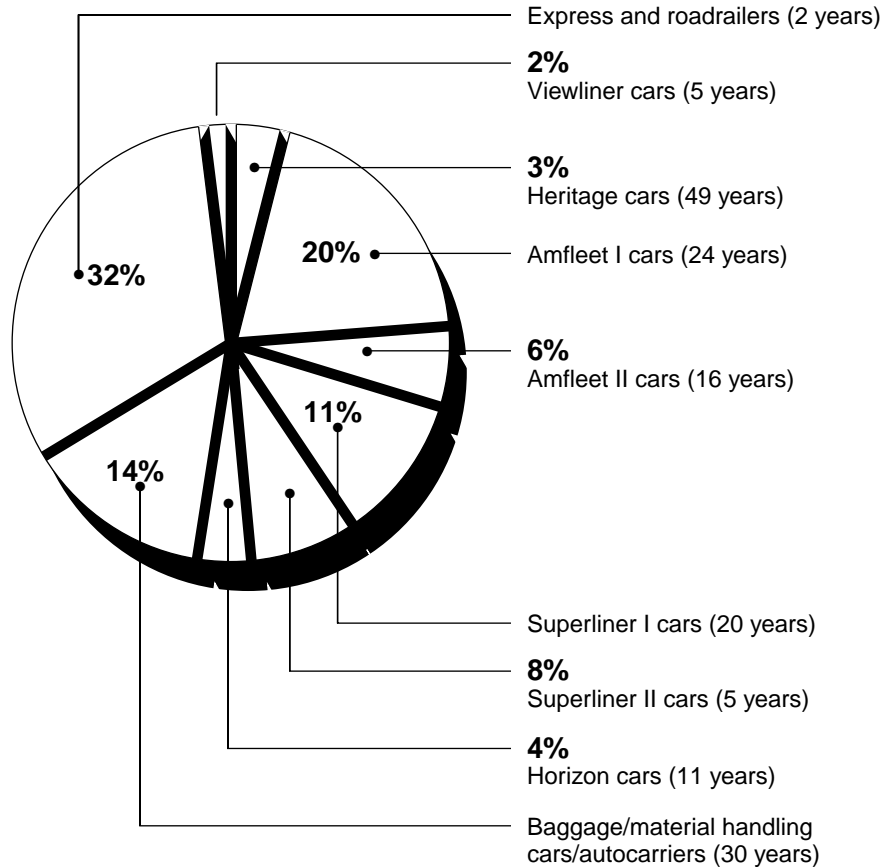
**Short-Term Capital  
Investment Needs Include  
Items for Which Cost  
Estimates Have Not Yet  
Been Developed**

In addition to its identified short-term capital investment needs, Amtrak will have other short-term capital investment needs for which cost estimates have not yet been developed. These include the acquisition of new technology and additional equipment. For example, while Amtrak acquired large numbers of new passenger cars and locomotives during the 1990s, certain portions of its fleet may need to be replaced because they are reaching the end of their useful lives. A good illustration is Amtrak's switch locomotives (locomotives used to move cars in a rail yard) and auto carriers (railroad cars that carry automobiles). As of April 1999, Amtrak had 68 switch locomotives and 64 auto carriers. On average, both of these equipment types are over 35 years old and, according to Amtrak officials, need to be replaced. Overall, Amtrak's entire fleet (including cars and locomotives) is, on average, about 15 years old. (See fig. 10.)<sup>12</sup> About 13 percent (276 cars) of Amtrak's fleet of passenger cars and about 16 percent (68 locomotives) of Amtrak's locomotive fleet are 26 or more years old and are at, or near, the end of their useful lives.

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<sup>12</sup>Amtrak's car fleet, excluding the recent additions of Roadrailer and Express cars and all locomotives, has an average age of over 21 years.

**Figure 10: Average Age of Amtrak's Car Fleet, April 2000**



Note: The average age of Amtrak's fleet is 15 years. The figure does not include 5 Turboliner and 2 Talgo trainsets as they constitute less than one-quarter of 1 percent of Amtrak's fleet. However, they are included in the average age calculation.

Source: GAO's analysis of Amtrak's data.

It is likely that Amtrak will also acquire new cars, locomotives, and other equipment to support any expanded service it might offer, including corridor service as proposed by the Midwest Regional Rail Initiative,<sup>13</sup> or proposed by Amtrak's recent market-based network analysis. The latter strategy includes not only an expansion of passenger service but an expansion of Amtrak's mail and express program as well. Amtrak's planned expansion of the mail and express program will require some business partners to provide their own equipment. For example, in two recent agreements, two partners agreed to provide Amtrak with over 900 refrigerated cars to transport various food products. However, Amtrak itself will still need to purchase up to 1,100 more pieces of equipment to expand its mail and express business to reach the planned target of \$214 million (nominal dollars) in revenue by 2002. Ultimately, Amtrak plans to acquire about another 2,000 pieces of equipment to meet the service expansion envisioned by its February 2000 market-based network analysis.<sup>14</sup>

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## **Long-Term Capital Investment Needs Focus on the Northeast Corridor and Other High-Speed Rail Corridors**

Amtrak's long-term capital investment needs are also focused largely on the Northeast Corridor. We estimate that about \$5.1 billion in investments may need to be made from 2005 to 2015. (See table 2.) As with the short-term investments in the Northeast Corridor, Amtrak expects to share some portion of these capital investment costs with other railroads that use the Corridor. The capital needs identified in the Corridor consist of making further life safety improvements to tunnels, including the tunnels into and out of New York City's Pennsylvania Station; continuing to restore the Corridor to a state of good repair; completing the high-speed rail program; and continuing other investments begun earlier. Long-term capital investment needs also include items for which cost estimates have not yet been developed, such as the development of high-speed rail corridors outside the Northeast Corridor. In addition, Amtrak officials and reports have also identified about \$3 billion in capital investments that should be made in the 2016-27 period. These needs represent continuing investments

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<sup>13</sup>The Midwest Regional Rail Initiative is an ongoing effort to develop an improved and expanded passenger rail system in the Midwest. It is sponsored by Amtrak, the Federal Railroad Administration, and transportation agencies from nine Midwest states.

<sup>14</sup>Amtrak's report on its market-based network analysis indicated that about 4,000 total pieces of equipment would be required for the mail and express program. This total includes about 1,100 pieces of equipment provided by third parties.

in state of good repair and high-speed rail improvements in the Northeast Corridor, among other things.

**Table 2: Amtrak's Long-Term Capital Investment Requirements, 2005-15**

Constant 1999 dollars in millions

| Investment   | Estimated cost |
|--|----------------|
| State of good repair investments                         | \$4,462        |
| Completion of Northeast Corridor high-speed rail program | 262            |
| Life safety investments                                  | 376            |
| <b>Total</b>   | <b>\$5,100</b> |

Source: GAO's analysis of Amtrak's data.

## Long-Term Capital Investment Requirements Concentrate on Continuing Restoration of the Northeast Corridor

As with Amtrak's short-term investments, one of Amtrak's highest priorities in the long term is life safety improvements in the New York tunnels and other structures. While these improvements are not the largest single long-term capital investment, they are one of Amtrak's most important investments. An Amtrak Northeast Corridor engineering analysis estimates that a total of \$376 million in life safety improvements will be needed from 2005 to 2015. These improvements include the structural rehabilitation of the New York tunnels, construction of an emergency power system, and the study and design of possible ventilation and communications systems for other tunnels and stations on the Northeast Corridor.

Most of the long-term capital investments we identified are concentrated on continuing the restoration of the Northeast Corridor's infrastructure to a state of good repair. This effort represents almost 90 percent—about \$4.5 billion out of the total of \$5.1 billion—of Amtrak's total identified long-term capital investment needs. This estimate shows Amtrak continuing its short-term Northeast Corridor restoration program, including the rehabilitation of interlockings, modernization of communications and signal equipment, and replacement of rails and ties. In addition, other projects would be continued or initiated as well, such as replacing and rehabilitating the electric power distribution system from Washington, D.C., to New York City and replacing several bridges and tunnels. These projects alone account for almost \$1.2 billion of the 2005-15 total.

One of the major components of these long-term capital investments is the electric power distribution system on the south-end of the Northeast Corridor—a system that dates from the late 1920s to the 1940s. Amtrak’s recent report on the south-end estimates that it will cost about \$630 million over 25 years to replace and rehabilitate this system.<sup>15</sup> According to Amtrak officials, replacing and rehabilitating this system will minimize electric failures, provide additional power for future growth, and facilitate higher train speeds. Amtrak is currently completing a program to allow higher speeds (from 125 mph up to 135 mph) using existing wires and installing a new electrical frequency converter to provide for future traffic growth. However, Amtrak officials believe that the replacement and rehabilitation of certain parts of the system are necessary to reliably supply power throughout the network and achieve the highest speeds for its planned Acela Express service.

Another major component of the long-term capital investment requirements is Amtrak’s bridges and tunnels in the Northeast Corridor. Amtrak officials estimate that replacing the three major bridges (Bush, Gunpowder, and Susquehanna in Maryland) and one tunnel (the Baltimore and Potomac tunnel in Baltimore) that have been identified as being in greatest need of replacement will cost a total of about \$816 million. All three of the bridges are critical to Amtrak’s New York City to Washington, D.C., service, and some accommodate commuter and intercity trains as well as the river traffic that passes under them. According to Amtrak officials, these bridges have undergone regular maintenance and inspections but are all approaching 100 years of age and need to be replaced in order to avoid mechanical failures that could disrupt both rail and river traffic. Amtrak Northeast Corridor officials estimate the total cost to replace these bridges and their approaches to be \$326 million. Amtrak and the Federal Railroad Administration have also identified the Baltimore and Potomac tunnel in Baltimore as being in need of major structural repairs or replacement. This tunnel is over 130 years old and is also critical to Amtrak’s Northeast Corridor service. Among the current problems with this tunnel are substandard life safety conditions, poor drainage, and structural defects. Amtrak’s preliminary cost estimate for replacing this tunnel is about \$563 million.

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<sup>15</sup>The current system is designed to convert commercially generated power for train use. If Amtrak decides to use unconverted power in a new system, the design time and costs will be higher.

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**Long-Term Capital  
Investment Needs for Which  
Cost Estimates Have Not  
Been Developed Center on  
High-Speed Rail Service  
Outside the Northeast  
Corridor**

Our discussion with Amtrak officials and report reviews indicate that there will be other long-term investment needs for which cost estimates have not yet been developed. These include the continuation of short-term investments such as equipment maintenance and the acquisition of new equipment and technology. They also include the development of high-speed rail corridors outside the Northeast. To date, Amtrak's role in developing these corridors has primarily been to provide state and local organizations with encouragement and seed money as they study the feasibility of high-speed rail service. However, Amtrak officials have stated that in the future, Amtrak plans to take a more prominent role, including making some capital investments and/or operating such service. Amtrak is currently working with various states and other entities to identify the investments required to bring high-speed rail service to corridors designated under the Intermodal Surface Transportation Efficiency Act of 1991 and the Transportation Equity Act for the 21st Century. Most of these corridors are on track and other infrastructure now owned by freight railroads. An Amtrak official estimates that making this track and infrastructure suitable for high-speed rail service will require, among other things, increasing speeds in curves and through interlockings; improving safety at highway-rail grade crossings; and upgrading track capacity and communications equipment. While Amtrak has no firm long-term cost estimates for this work, Amtrak officials estimated that a total of about \$13 billion (nominal dollars) or more would be needed from a combination of sources—including Amtrak; federal, state and local governments; and freight railroads—to make these improvements.



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# Potential Funding Shortfall and Lack of Multiyear Capital Plan Present Difficulties in Addressing Future Capital Investments

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Amtrak faces two difficulties in addressing its short- and long-term capital investment requirements—a potential shortfall in capital funding and the lack of a multiyear capital plan. Through our discussions with Amtrak officials and report reviews, we have identified capital investment needs that could exceed expected levels of federal capital funding by nearly \$2 billion through 2004. In addition, Amtrak officials anticipate that Amtrak will use a substantial portion of its expected federal funding for needs other than asset acquisition and replacement. These needs include track and equipment maintenance, principal payments, and mandatory expenses (e.g., the cleanup of contamination, called “environmental remediation costs”). The gap between capital investment requirements and available funding could increase even more if those investments currently without cost or scope estimates (especially in the long term) are considered. Amtrak has not yet identified the funding sources to meet these latter investments. In addition, Amtrak has no current multiyear capital plan designed to identify or prioritize its future capital investments or identify funding sources.

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## Expected Federal Capital Funding Sources Will Not Meet Future Investment Requirements

The capital investments we identified will exceed expected levels of federal capital funds by nearly \$2 billion over the 2001 to 2004 period.<sup>1</sup> Since Amtrak has never covered the cost of its operations, it has relied solely on external funds for capital investments. Historically, these funds have come from the federal government as well as from state and local governments and the commercial debt market. Amtrak should be able to meet its planned investment requirements through 2000 from the Taxpayer Relief Act funds and the 2000 federal capital grant. However, beginning in 2001, these capital investments will begin to exceed expected available federal funding. (See fig. 11.) The deficit in funds assumes that Amtrak will receive federal capital grants of \$521 million through 2004.<sup>2</sup> Amtrak’s funding shortfall will be even higher than that shown because the projection does not include investment requirements for which cost estimates have not yet been developed. These include improvements to stations and secondary maintenance facilities, the development of high-speed rail lines outside of

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<sup>1</sup>As noted earlier, Amtrak expects that some portion of this shortfall may be paid by other railroads that contribute to capital projects that provide mutual benefits.

<sup>2</sup>Our analysis is based on Amtrak receiving \$521 million in capital appropriations beginning in 2001. Amtrak’s most recent business plan update (April 2000) also generally assumes Amtrak will receive \$521 million in federal capital support through 2003. No estimate was available for 2004.

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**Appendix IV**  
**Potential Funding Shortfall and Lack of**  
**Multiyear Capital Plan Present Difficulties in**  
**Addressing Future Capital Investments**

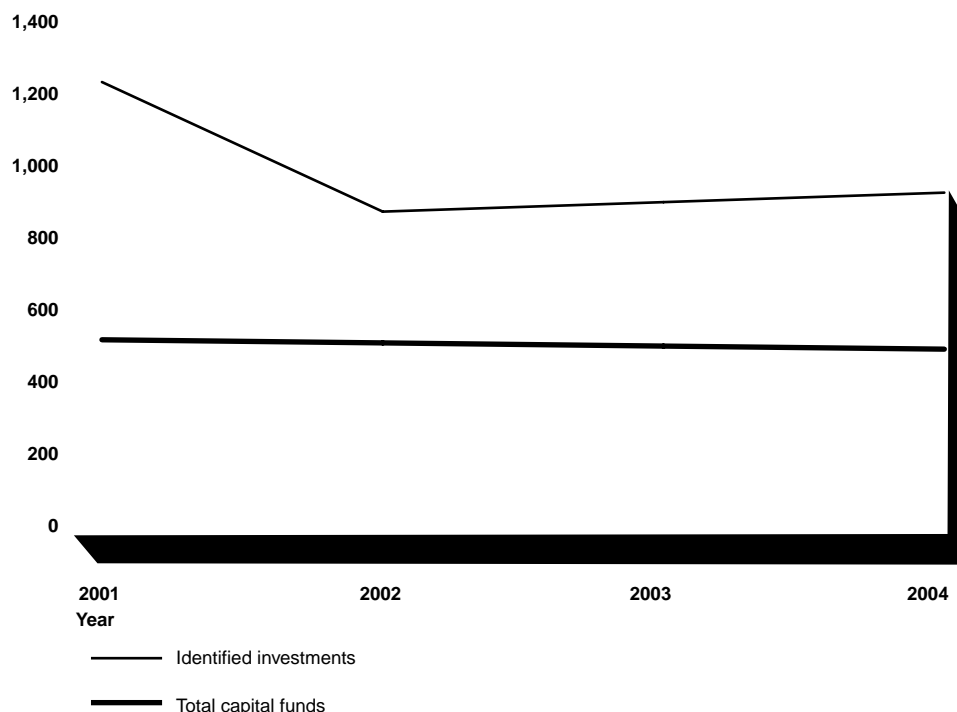
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the Northeast Corridor, and acquisitions of new technology or additional equipment.

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**Figure 11: Capital Investments and Capital Funding Sources, 2001-04**

Dollars in millions



Note: Figures include only investments for which Amtrak has developed cost estimates.

Source: GAO's analysis of Amtrak's data.

Not only will Amtrak face funding shortfalls but Amtrak also anticipates spending a portion of its federal capital grant for things other than asset acquisition and replacement. Amtrak's projections show that nearly one-third of its available federal capital funds in 2000 will be used for maintenance and debt service principal. Only about \$5 million<sup>3</sup> (nominal dollars) will be available for asset acquisitions and replacements in 2000—the remainder will be used for maintenance of way and equipment, legally

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<sup>3</sup>In addition, Amtrak expects to have available for capital projects about \$412 million of Taxpayer Relief Act funds it previously borrowed for equipment maintenance expenses.

mandated expenses (such as environmental remediation), and debt service principal payments. Amtrak's projections also show that of the over \$1.6 billion (nominal dollars) expected to be available in federal capital grants from 2000 to 2002, it anticipates using about \$900 million (nominal dollars) for asset acquisition and replacement and about \$550 million (nominal dollars) for maintenance (both equipment and way).

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## **Potential Shortfalls Will Increase Amtrak's Reliance on Sources Other Than Federal Capital Grants to Meet Future Capital Investments**

Potential shortfalls in federal capital funds will require Amtrak to increase its reliance on sources other than federal capital grants to meet its capital investment requirements. Historically, Amtrak has received funds from such sources as state and local governments and commercial borrowing for specific capital investments. For example, since 1996, Amtrak has received about \$857.4 million (nominal dollars) from state and local governments for specific capital investments in certain states and borrowed about \$1.6 billion (nominal dollars) from the commercial markets to acquire new equipment and other assets. In 2000, Amtrak plans to receive about \$220 million (nominal dollars) from state and local governments and to borrow about \$520 million (nominal dollars). These funds will be used for such investments as capital improvements to state-supported passenger routes and fleetings, respectively. However, through 2004, Amtrak may need to obtain nearly \$2 billion in additional funds from these and/or other funding sources for such things as restoring the Northeast Corridor to a state of good repair, continuing the implementation of the Northeast Corridor high-speed rail program, and maintaining equipment. This potential shortfall does not include funds that will be needed for investments for which Amtrak has not yet developed cost estimates.

Other sources of capital funds may be available to Amtrak. For example, the administration has proposed \$468 million (nominal dollars) for an Expanded Intercity Rail Passenger Service Fund, supported by the Highway Trust Fund, in its fiscal year 2001 budget. Funds would be available to Amtrak, a state, and/or a consortium of states to improve passenger rail service across the country. States would be required to pay for any operating losses incurred by Amtrak in any joint state-Amtrak projects. The projects can be on either current or potential intercity passenger rail corridors. In addition, two bills are pending before the Congress that would permit Amtrak to issue \$10 billion (nominal dollars) in bonds over 10 years to, among other things, acquire, finance, or refinance equipment or rolling stock on the Northeast Corridor or other high-speed rail corridors.<sup>4</sup> The holders of these bonds would receive tax credits. States would be required to contribute at least 20 percent of the cost of projects. Although each of these proposals could increase the amount of capital funds available to Amtrak, the Secretary of Transportation and states will also play roles—along with Amtrak—in determining how these funds will be spent.

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## **Amtrak Lacks Multiyear Capital Plan**

Compounding Amtrak's potential lack of funds to meet its capital investment needs is the fact that Amtrak lacks a multiyear capital plan that identifies its short- and long-term capital investment requirements, prioritizes them for funding, and identifies funding sources.<sup>5</sup> A multiyear capital plan is important, as Amtrak has significant capital investment requirements and many capital investments will take years to complete. For example, Amtrak officials told us it could take over 10 years to design, construct, and replace a bridge. However, since 1997, Amtrak has developed a series of capital spending plans that cover only a limited horizon—not more than 1 fiscal year at a time. Although these plans detail Amtrak's spending for individual capital projects and describe the criteria used to fund projects, they fail to fully describe Amtrak's current and future capital investment requirements, how these requirements will be funded, and the relative priorities of the requirements. The effective use of capital funds depends on whether they are invested to meet priority needs and whether they meet expected benefits. Without a multiyear plan, Amtrak is

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<sup>4</sup>S. 1900, the High-Speed Rail Investment Act was introduced on Nov. 10, 1999, and H.R. 3700, the High-Speed Rail Investment Act of 2000, was introduced on Feb. 29, 2000.

<sup>5</sup>Amtrak stated that it is preparing a multiyear capital plan.

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**Appendix IV**  
**Potential Funding Shortfall and Lack of**  
**Multiyear Capital Plan Present Difficulties in**  
**Addressing Future Capital Investments**

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incapable of ensuring the effective use of these funds. Finally, such a plan would help congressional decisionmakers in deciding what the federal government's financial commitment, if any, might be for Amtrak capital improvements over the long term.

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