Results of the Feasibility Study

This analysis in this study produced a set of conclusions that can assist decisions about moving ahead with a project to relocate freight rail service away from Washington's Monumental Core. These conclusions help define steps that would be necessary to initiate a railroad realignment project.

Conclusions

The present location of the freight railroad in Washington's Monumental Core creates security concerns

The line's proximity to the U.S. Capitol, the National Mall, federal offices, and populous neighborhoods makes it an attractive target for attack because the consequences would be dramatic. Hazardous materials on a freight train could provide the means for an attack.

There are viable alternative railroad alignments that would allow freight trains to be removed from the Monumental Core

A rail line on any of these alternative alignments would connect with the existing railroad network, comply with engineering standards, and operate as an effective component of the nation's freight transportation system. None of these alignments would provide a simple solution—building a railroad on any of them would be a major undertaking. While all the viable alternatives identified in the study would include existing rail lines, some of these lines would need to be upgraded and new railroad segments would need to be built. All would require a new Potomac River crossing either in a tunnel or on a bridge.

Railroad realignment would improve security

Railroad realignment would reduce the threat of attack on the Washington, DC region by the removing freight trains from the Monumental Core. A freight train on some other alignment would be a much less attractive target because it would not be near the iconic structures of the nation's capital, and the consequences of an attack, while still potentially serious, would be far more limited. The probability of an attack cannot be known, so the degree of

Figure 5-1. Present Security Concerns

Railroad realignment would reduce the threat of attack on the Washington, DC region by the removing freight trains from the Monumental Core. A freight train on some other alignment would be a much less attractive target because it would not be near the iconic structures of the nation's capital, and the consequences of an attack, while still potentially serious, would be far more limited.

Findings

improvement cannot be measured, but railroad realignment would reduce the threat, not simply relocate it.

Railroad realignment could create new railroad facilities that would fit appropriately in their setting

A tunnel alignment would separate the railroad entirely from its surroundings. At-grade rail segments would include new grade separations and design characteristics that would respect nearby development. Freight trains on any of the alternative alignments would be near places where fewer people live and work than the existing line. All the viable alternatives would meet environmental justice objectives better than the existing railroad.

Railroad realignment would improve the freight railroad system

Realignment would increase railroad capacity and eliminate major choke points. A realignment project would provide for increased railroad operating speed and reliability, increasing rail transportation's competitiveness and attracting greater volumes of freight. Transporting freight by rail would create savings for the highway network through reduced truck volumes.

Railroad realignment would also improve passenger rail service

Because both passenger and freight trains share the existing rail line, both would benefit from a project that would increase railroad capacity. More capacity would reduce conflicts between different types of trains, allowing higher speeds and greater reliability for passenger service. Separating freight and passenger services onto separate tracks would provide the greatest benefits by removing conflicts between train types entirely.

The transportation benefits of a railroad realignment project would be greater if it were combined with other mid-Atlantic railroad improvements

Solving operating problems would require railroad improvements throughout the mid-Atlantic corridor. The Mid-Atlantic Railroad Operations Study identified 71 needed railroad infrastructure and information-system projects. A railroad realignment project in the Washington, DC region would be more effective if it were combined with other projects elsewhere. Similarly, improvements in other areas, such as improving the Howard Street tunnel in Baltimore, would be more effective if a realignment project were built in the Washington, DC region.

Railroad realignment would remove a barrier within the nation's capital

Removing the existing freight railroad would enhance the unity of the Monumental Core. Neighborhood access to the Anacostia River would be improved, and Anacostia Park would no longer be divided. Parts of the city's street network could be restored to the intent of the historic L'Enfant Plan for the Nation's Capital.

Railroad realignment would allow for redevelopment of the existing right-of-way

Some of the vacated right-of-way could be redeveloped in mixed-use extensions of adjacent neighborhoods. The opportunities for redevelopment are in neighborhoods east of the Anacostia River.

The benefits of railroad realignment would be greater than the costs

A realignment project on any of the three viable alternative alignments identified in this study would produce benefits that would exceed project costs. Even without accounting for the value of the most important benefit—security improvement, which this study did not attempt to quantify—the benefit-cost analysis showed that a realignment project is worth doing. Capturing some of these benefits could help to pay realignment project costs.

Developing a railroad realignment project would require further planning

This study analyzed the characteristics of the region and the railroad at a broad, conceptual level because it was a first step in determining project feasibility. More detailed planning would be needed to define the characteristics of a project. A financial plan should identify funding sources and strategies to cover project costs. The preferred alternative alignment should be

selected and specific location and design decisions made.

Next Steps

The security threat, railroad operations constraints, and community impacts created by the existing rail line will exist until a railroad realignment project is completed. Planning, design, and construction would take at least ten years. Beginning a railroad realignment project and completing it as quickly as possible would reduce the duration of the present problems and hasten the realization of project benefits. During the period of project development, short-term improvements should also be made to address railroad security and operational issues.

Short-Term Improvements

Significant attention is of course already paid to both security concerns and railroad operations in the Washington, DC region. This study identified a program of short-term improvements that would supplement present practices. These short-term improvements are described in Appendix A, which is in a separate report volume.

Operational improvements would be intended to keep trains moving, since this would not only increase rail line capacity but also enhance security, and to enable traffic growth in both freight and passenger services. Operational improvements could include additional inspection tracks, additional wheel-defect detectors, additional track and signal maintenance, continued reviews of train scheduling and dispatching, and increased freight operating speeds. Security improvements could include enhanced security and maintenance where trains stop, memorandums of agreement between railroad companies and law-enforcement units, a security-awareness campaign, and additional regional drills and training.

Though the short-term improvements could reduce the security risk, minimize the effects of a security incident, and improve railroad reliability and capacity, they would not solve the major capacity and security problems. Freight railroad capacity would still be constrained by the Virginia Avenue tunnel, passenger and freight rail service would continue to share the same alignment, and the freight railroad carrying hazmats would continue to run alongside federal office buildings and the U.S. Capitol.

Funding

The large investment needed for a railroad realignment project makes the identification of funding a crucial step in project development. Efforts to develop a funding plan should be the next step in project development, as the ability to build a project will hinge upon the availability of adequate funds.

Project funding should reflect the distribution of project benefits. The security benefits would justify substantial project funding. The greatest benefits quantified in this study are real estate benefits that would accrue within Washington, DC; some means to capture a part of this value for use in railroad realignment funding would be appropriate. Transportation-related benefits are more widely distributed; some national funding sources may be appropriate because some of the transportation benefits would be realized outside the Washington, DC region. Railroad participation in project funding would be appropriate because the improved infrastructure would create railroad operating benefits.

Project funding would likely involve a mix of federal grants, innovative financing tools, and public-private partnership mechanisms similar to those used in other large railroad projects, such as the Alameda Corridor project in Southern California and the CREATE project in the Chicago area. A railroad realignment project in the Washington, DC region may also have real estate value-capture and security funding components. The applicability of these and other financing mechanisms to a realignment project should be thoroughly evaluated in the development of a comprehensive funding plan.

Organization

A key step in project development would be the definition of the organizational structure with responsibility for project implementation. The scale of a new freight railroad would likely exceed the authority of any existing single entity, so some new entity or organizational structure would be needed. Depending upon the alignment alternative, new construction might occur in multiple jurisdictions. There would be both public- and private-sector benefits of railroad realignment, so both should be represented in implementation.

The organizational structure should be identified early in project development so that the entities that will have responsibility for construction will have a voice in project planning. The organization should also be related to project funding so that the sources of funds are appropriately represented in project decisions.

Planning

Project development would require more-detailed planning. This planning should be conducted through the preparation of an environmental impact statement (EIS). An EIS is required for a major federal action that would significantly affect the human environment. A railroad realignment project would likely involve the federal government and would meet this test. An EIS would be a logical next step in planning, as it would be a systematic analysis of a wide range of characteristics of a project and its setting, would support the selection of an alternative and other project decisions, and would provide opportunities to involve a wide range of interested stakeholders.

An alignment alternative must be selected, including possible variations on the ones analyzed in this study. The physical characteristics of the rail line and related structures on the selected alignment must be defined, along with the impacts of construction and railroad operations. Appropriate measures to mitigate impacts, including grade separations, noise barriers, and other enhancements, must be designed. Costs must be estimated in more detail.

Because a realignment project would affect many people and organizations, planning should be an open process with ample opportunity to share information and guide decisions. The affected local, regional, and federal agencies and private companies must participate in planning, and the public in affected parts of the region must be involved.

An EIS for a project of this size, potential impacts, and number of affected people would take two to three years and could cost more than $5 million.

Interregional Coordination

Railroad improvements in the Washington, DC region must be viewed as part of a comprehensive East Coast railroad improvement program. The issues addressed in this study—security threats, constraints on railroad operations, and impacts in urban areas—affect other locations as well. Significant improvements in railroad operations would be possible only if obsolete infrastructure is modernized along the entire railroad corridor.

Both organizational structure and funding decisions in the Washington, DC region should not be made in isolation. Institutional responsibilities for project implementation in the Washington, DC region should be compatible with similar responsibilities in other locations to ensure coordinated project development. Funding decisions must be coordinated because the cost of needed railroad improvement along the East Coast is large. Funding commitments in one area must not preclude investments in others. The Mid-Atlantic Railroad Operations Study set a precedent for such interregional coordination by bringing together a consortium of federal agencies, states, and railroads to address needed railroad improvements. A railroad realignment project in the Washington, DC region should follow that precedent.