

1. Study Context

1.1 Vision: Midwest Regional Rail System

Since 1996, the Midwest Regional Rail Initiative (MWRRI) has advanced from a series of individual corridor service concepts into a well-defined, integrated vision to create a 21st century regional passenger rail system. This vision reflects a paradigm shift in the manner in which passenger rail service will be provided throughout the Midwest, and forges an enhanced partnership between USDOT, FRA and the Midwestern states for planning and providing passenger rail service. This system would use existing rights-of-way shared with existing freight and commuter services and would connect nine Midwestern states and their growing populations and business centers. System synergies and economies of scale, including higher equipment utilization, more efficient crew and employee utilization, and a cooperative federal and state infrastructure and rolling stock procurement, can be realized by developing an integrated regional rail system.

This vision has been transformed into a transportation plan – known as the Midwest Regional Rail System (MWRRS). The primary purpose of the MWRRS is to help meet future regional travel needs through significant improvements to the level and quality of regional passenger rail service and its integration with its own feeder bus system. The rail and bus service and the MWRRI stations also provide a stimulus for joint station development, downtown redevelopment, economic development and for a growth in travel and tourism. The Business Plan has been reviewed by the FRA, the states and Wall Street and it has been confirmed that it is indeed feasible and practical to implement and operate this 21st century regional passenger rail system.

Collectively, the key elements of the MWRRS plan will improve Midwestern travel well beyond currently available train service. These elements include:

- Upgrading existing rail rights-of-way to permit frequent, reliable, high-speed passenger train operations
- Operation of a hub-and-spoke passenger rail system providing through-service and connectivity in Chicago to locations throughout the Midwest region
- Introduction of modern train equipment with improved amenities operating at speeds up to 110-mph
- Provision of multimodal connections and feeder bus systems to improve system access
- Introduction of a contracted rail operation that will provide improvements in efficiency, reliability and on-time performance

The MWRRS encompasses a rail network of more than 3,000 route miles and serves nine states with a combined population of 60 million people. The frequent service proposed for the MWRRS (Exhibit 1-1) serves intermediate sized cities on each corridor, such as Jefferson City, Springfield, Des Moines, Indianapolis, Madison and Toledo, as well as their respective larger endpoint cities such as Kansas City, St. Louis, Omaha, Cincinnati, Twin Cities and Cleveland. Mainline service to destinations such as Detroit and Twin Cities is supplemented by branch line services to Lansing, Grand Rapids and Green Bay. The analysis demonstrated that the proposed service, with modern stations and a high level of on-board amenities, could attract significant

numbers of riders and achieve a respectable modal market share for trips up to 300 miles. Since air service is increasingly focused on trips over 300 miles, the MWRRS tends to complement rather than compete with air service in the Midwest.

**Exhibit 1-1
Proposed Midwest Regional Rail System¹**



The MWRRS will increase mobility choices and stimulate economic development throughout the region. The system affords the opportunity to:

- Develop attractive public/private partnerships that will enhance both rail and bus travel in the Midwest
- Achieve significant reductions in travel times and improve service reliability
- Introduce passenger rail service to Midwestern areas currently not served by passenger rail
- Introduce an alternative to auto travel to many small towns and cities of the Midwest that lack travel choices

¹ Indiana DOT is currently evaluating additional rail links to South Bend, IN and Louisville, KY.

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- Introduce a regional passenger rail system designed to generate revenues that cover operating costs when it is fully implemented
 - Provide major capital investments in rail infrastructure to improve passenger and freight train efficiency, safety and reliability on shared rights-of-way
 - Provide impetus for station-area development

1.2 Previous Planning Studies and Findings

Since the early 1980s, a wide range of studies has been completed evaluating the potential for introducing or expanding passenger rail service in the Midwest. Individual studies have focused on the introduction of different technologies on specific corridors. Key studies include the Michigan *Back on Track Program for High-speed Transportation: The Detroit-Chicago Corridor* in 1983, Federal Reserve Bank of Chicago *High-speed Rail in the Midwest: An Economic Analysis* in 1984, Michigan *Detroit-Chicago Rail Passenger Developmental Blueprint Study* in 1991, Illinois-Wisconsin-Minnesota *Tri-State High-speed Rail Study* in 1991, Illinois *Chicago-St. Louis High-speed Rail Corridor Study* in 1996, Wisconsin-Illinois *Chicago-Milwaukee Rail Corridor Study* in 1997, and Federal Railroad Administration *High-speed Ground Transportation for America* in 1997.

The findings of these studies supported the feasibility of new passenger rail service on selected Midwest corridors. Specific findings included the following:

- A significant market for passenger rail service exists in the Midwest for travel between major cities
- The passenger rail market is comprised of business and leisure travel, with each market sensitive to different quality of service factors when making mode of travel choices
- The corridors on which intermediate and high-speed passenger rail services have been assessed appear to be able to generate sufficient revenues to cover operating costs
- The cost of developing an integrated passenger rail system appears affordable, given federal and state funding capabilities

MWRRS plan is based upon previous studies – *Milwaukee-Green Bay Rail Passenger Study*, for Wisconsin Department of Transportation, TEMS, Inc., November 2001; *Northern Indiana/Northwest Ohio Passenger Rail Routing Study*, for Indiana Department of Transportation, Ohio Rail Development Commission and Amtrak, by TEMS, Inc., November 2002; *Iowa Rail Route Alternatives Study*, for Iowa Department of Transportation, TEMS, Inc., June 1998. These studies recommended:

- The West Bend alignment to Green Bay
- The Ft. Wayne alignment to Toledo/Cleveland
- Des Moines routing to Omaha

1.3 The Planning Process for the MWRRRI

The Midwest Regional Rail Initiative (MWRRRI) began in 1996 under the auspices of the Mississippi Valley Conference – a regional division of the American Association of State Highway and Transportation Officials (AASHTO). Sponsors of the MWRRRI include the States

of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio and Wisconsin, Amtrak, and the Federal Railroad Administration.

A steering committee comprised of representatives from Amtrak and the nine states was developed to provide organizational structure. The steering committee supplied oversight and direction to the consultant team, which started research into the viability of an enhanced Midwest rail system. Based on favorable results from these early 1990's corridor-specific studies, a vision emerged for developing an integrated Chicago Hub regional rail system. An integrated system would allow MWRRRI to benefit from reduced costs from economies of scale and better equipment utilization, as well as increase its interconnecting passenger revenues.

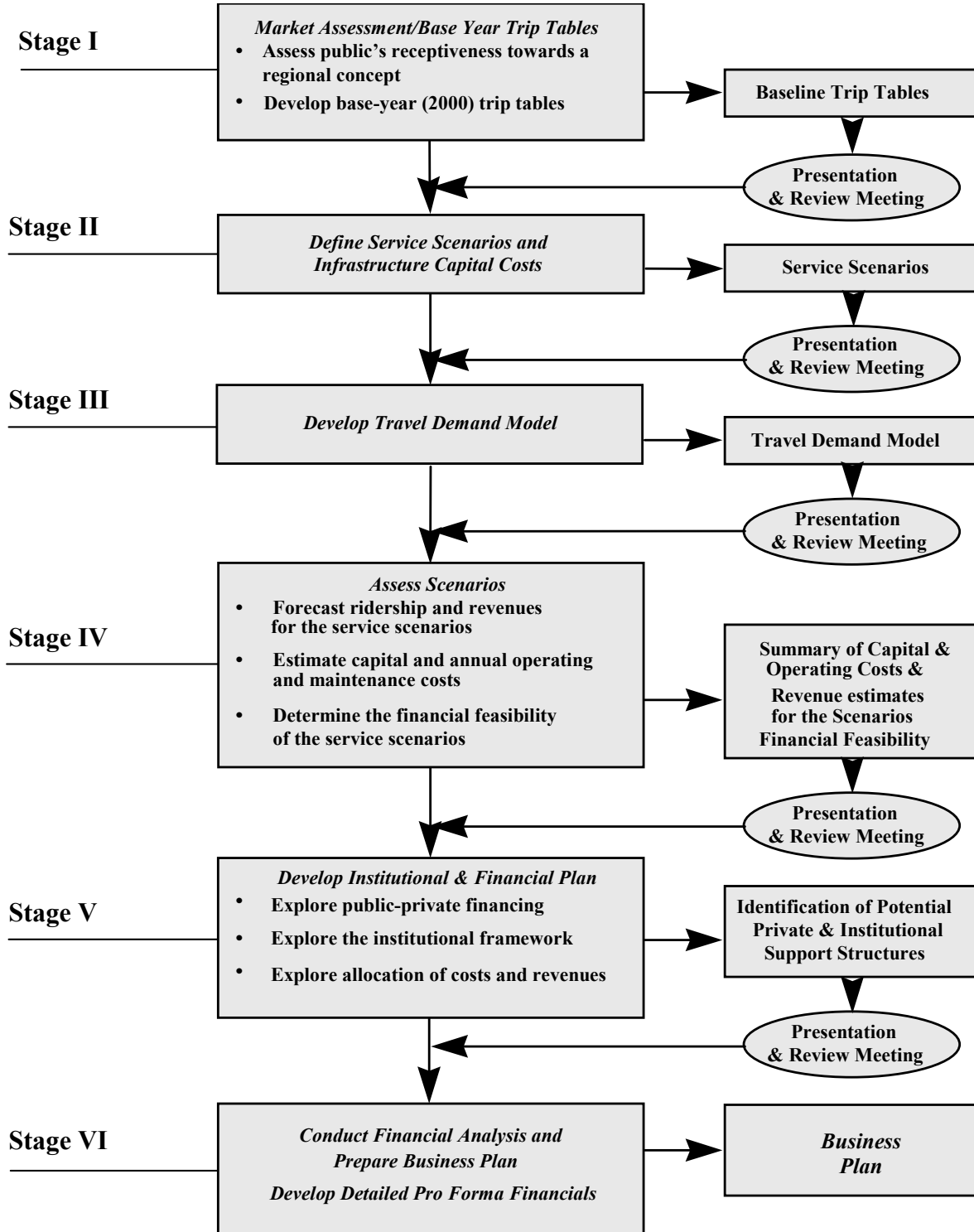
- In 1998, the MWRRRI consortium in cooperation with the consultant team released a draft "1998 Plan" report outlining estimated costs and detailing the potential benefits of the rail network. This analysis evaluated alternative speed options: 79-mph, 100-mph and 125-mph. The planning process involved twelve tasks grouped into six stages² which are shown in Exhibit 1-2. Intensive market research and stated preference surveys resulted in development of an initial demand forecast for the feasibility study. This study determined that a 110-mph system was the best fit to the Midwest region's needs, and that this "intermediate speed" option would provide an affordable and operationally and economically viable system.
- In 1999, the "2000 Plan" efforts were begun. This phase focused on 110-mph operations, resulting in considerable refinement to the operating and cost assumptions. An institutional workshop was held to develop alternatives for system financing and governance. A detailed financial plan, ramp-up plan, branch line analysis and an express parcel market assessment were also developed. An equipment vendors' workshop was held to refine vehicle life cycle costs with Talgo, Bombardier and Adtranz participating. The 2000 Plan report presented, at a feasibility level, a complete assessment of MWRRRI market potential, delineated expected system operating and capital costs, outlined a strategy for funding capital needs, suggested a financing plan, and provided a cost-benefit analysis. The 2000 Plan report was delivered to the MWRRRI participants in 2002.
- From 2002-2004, the current "2004 Plan" recognizes that the MWRRRI will share infrastructure with freight railroads, therefore, this portion of the planning process was undertaken largely to address freight railroads' concerns. During this phase, substantial line capacity simulation work was performed³, route-specific track maintenance costs were developed, the infrastructure capital plan was further refined, and a detailed feeder bus and express parcel operations plans were developed.

A detailed synopsis of key findings of each MWRRRI planning phase is given in Chapter 2. The ideal and typical day analyses produced as part of the 2000 Plan represent the most current work available, but because of funding constraints have not been updated to reflect the latest 2004 Plan assumptions. Some assumptions may have changed since those sections were originally completed, but any such older material is clearly marked with a notation that it represents work previously performed for, and approved by, the MWRRRI Steering Committee.

² Each time the Business Plan was updated, all six stages shown in Exhibit 1-2 would be revisited as necessary to recheck assumptions and recalculate total revenues and costs.

³ Documented in Chapter 6, the Ideal Day and Typical Day Analyses.

**Exhibit 1-2
MWRRI Planning Process**



At the conclusion of each planning phase the financing plan, operating ratios and benefit/cost analysis were updated to reflect the most current assumptions. In a few situations, previous financial results were retained in the report so the reader can see how some of the planning assumptions have evolved over time. However, whenever this occurs, previous results are identified with respect to which planning report (i.e., 1998, 2000) they apply. The most up-to-date results are associated only with current planning in the 2004 Plan.

1.4 Organization of the Report

As the planning for the MWRRS continues, there is a continual need to update and revise the MWRRS documentation. To meet this need, a Project Notebook was created to support the 2000 Plan that provides the critical information associated with the concept and feasibility studies conducted to date and establishes a format for documenting project work. The Project Notebook includes the following sections, which have been updated as part of the zone plan. This layout is used to report the 2004 Plan findings of the study:

Chapter 1: Study Context

Chapter 2: Strategic Assessment

Chapter 3: Proposed Midwest Regional Rail System

Chapter 4: Market Analysis

Chapter 5: Infrastructure, Rolling Stock and Capital Investment

Chapter 6: Freight Rail Activities

Chapter 7: Operating Plan and Costs

Chapter 8: Implementation Plan

Chapter 9: Funding Alternatives

Chapter 10: Financial Analysis

Chapter 11: Economic Analysis (not updated)

Chapter 12: Institutional and Organizational Issues

Chapter 13: Conclusions and Findings