
PURPOSE AND NEED STATEMENT



Southeastern Minnesota Freight Rail Capacity Study

Feasibility and Alternatives Analysis Study

Prepared for:



Prepared by:



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Revision History

Revision Number	Date	Description
0	5/31/2012	Initial draft to Project Management Team for comment
1	6/11/2012	Project Management Team comments integrated
2	6/15/2012	Technical Advisory Committee comments integrated
3	6/29/2012	Project Advisory Committee comments integrated
4	7/16/2012	FRA and public comments integrated; Project name changed



List of Acronyms

AA	Alternatives Analysis
CP	Canadian Pacific
DM&E	Dakota, Minnesota and Eastern Railroad
FAQ	Frequently Asked Questions
FEIS	Final Environmental Impact Statement
FRA	Federal Railroad Administration
MnDOT	Minnesota Department of Transportation
NEPA	National Environmental Policy Act
OCRRA	Olmsted County Regional Railroad Authority
PAC	Project Advisory Committee
PMP	Project Management Plan
PMT	Project Management Team
PRB	Powder River Basin
SDIC	Systematic Development of Informed Consent
SEIS	Supplemental Environmental Impact Statement
SRC	Southern Rail Corridor
STB	Surface Transportation Board
TAC	Technical Advisory Committee



Table of Contents

Revision History	i
List of Acronyms	ii
Table of Contents	iii
1. Reason for the Study	1
2. Context	2
2.1. Project Area	2
2.2. Project History	3
3. Project Purpose and Need	5
3.1. Project Purpose	5
3.2. Need for Action.....	5
4. Goals and Objectives	6



1. Reason for the Study

On December 16, 2009, Congress directed funds under the Rail Line Relocation and Improvement program for the Southern Rail Corridor project, referred to herein as the Southeastern Minnesota Freight Rail Capacity Study. The Southeastern Minnesota Freight Rail Capacity Study is a freight rail planning project proposed by Olmsted County Regional Railroad Authority (OCRRA) to evaluate the need and feasibility to mitigate and/or relocate the existing Dakota, Minnesota and Eastern Railroad (DM&E) freight rail line in Rochester to accommodate a potential increase in train traffic and address capacity, environmental, and safety concerns associated with the current route through the city's downtown. The Minnesota Department of Transportation (MnDOT) has been designated as the grantee of these funds.

The project is intended to advance the study of reasonable and feasible alternatives, including improvements to existing infrastructure and consideration of a bypass around Rochester, through completion of an initial environmental analysis of all alternatives. In order to qualify for future federal and state funding, the study must be conducted in accordance with Federal Railroad Administration (FRA) guidelines. MnDOT, in coordination with OCRRA and FRA, will complete a series of technical reports and analyses that can be included in subsequent environmental documentation as part of the National Environmental Policy Act (NEPA) and Minnesota Environmental Policy Act (MEPA) compliant environmental review process, and will result in the milestones indicated below as noted in the FRA approved Statement of Work:

i. Scoping

- Development of a purpose and need statement
- Identification of the corridor study area
- Facilitation of scoping meetings with the public, stakeholders, and other agencies
- Preparation of a scoping report

ii. Feasibility Study/Initial Alternatives Analysis:

- Development of evaluation criteria that address:
 - The purpose and need for the action, including scenarios of varied possible/potential rail traffic levels based on industry trends and passenger rail planning
 - Engineering feasibility and conceptual costs
 - Preliminary environmental analysis
- Comprehensive evaluation of all reasonable alternatives that avoid or minimize adverse effects on the environment, including:
 - No Build alternative with and without increased rail traffic
 - Mitigation of current route through Rochester with and without increased rail traffic
 - Proposed Southern Rail Corridor (SRC) Alternative
 - All other reasonable alternative bypass routes
- Preparation of a Feasibility Report and an Initial Alternatives Analysis Report that will result in the recommendation of further NEPA compliant review of the set of reasonable and feasible alternatives

2. Context

2.1. Project Area

The Southeastern Minnesota Freight Rail Capacity Study project area is located in southeastern Minnesota within Dodge and Olmsted counties. The area is generally bound by Dodge Center to the west, I-90 to the south, Dover to the east, and the Olmsted County line to the north. The existing DM&E rail corridor between Dodge Center and Dover covers approximately 40 miles and runs through downtown Rochester.

The figures below illustrate the project area, highlighting key facilities including highways, the existing DM&E freight rail corridor, and Mayo Clinic facilities. Additional points of reference include Rochester city limits and the previously proposed bypass alternatives.

Figure 1 - Project Area Overview

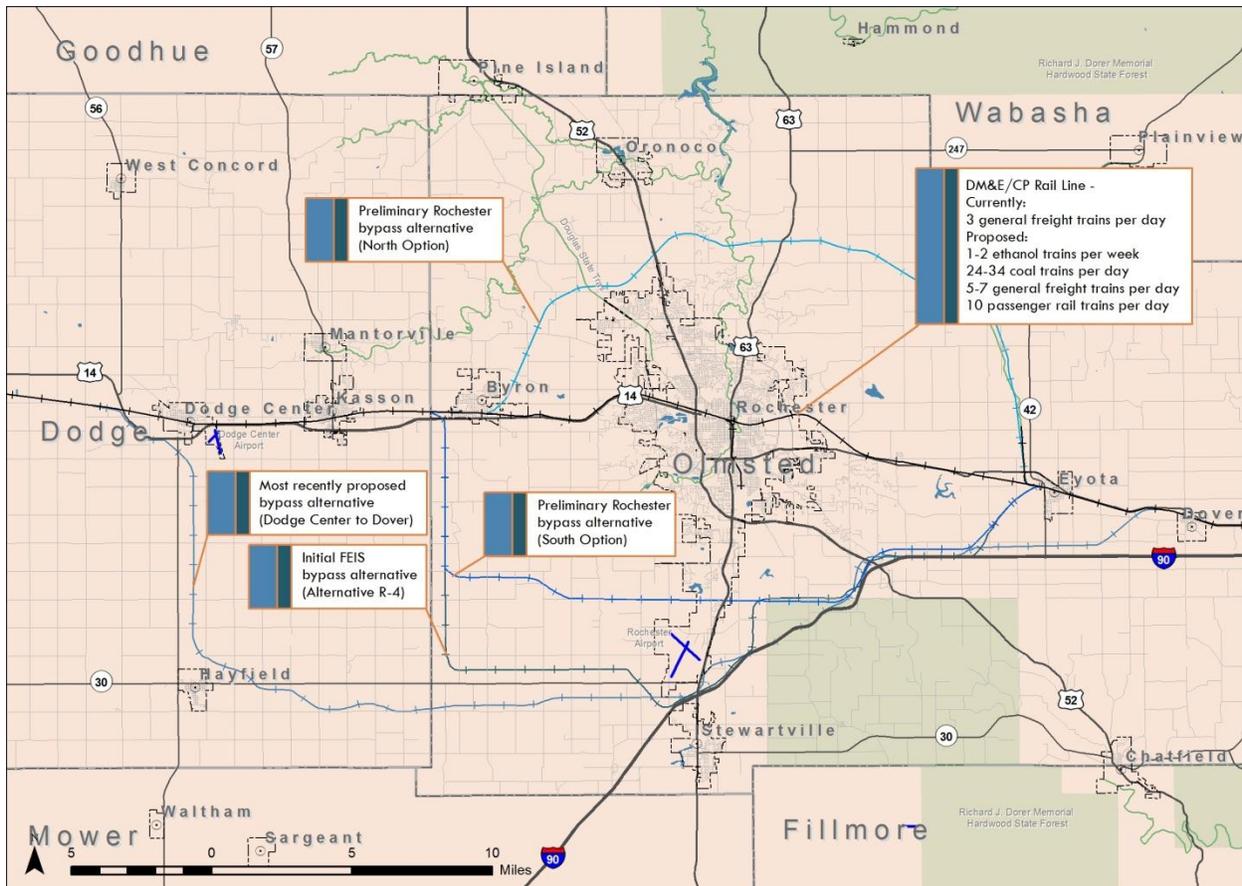
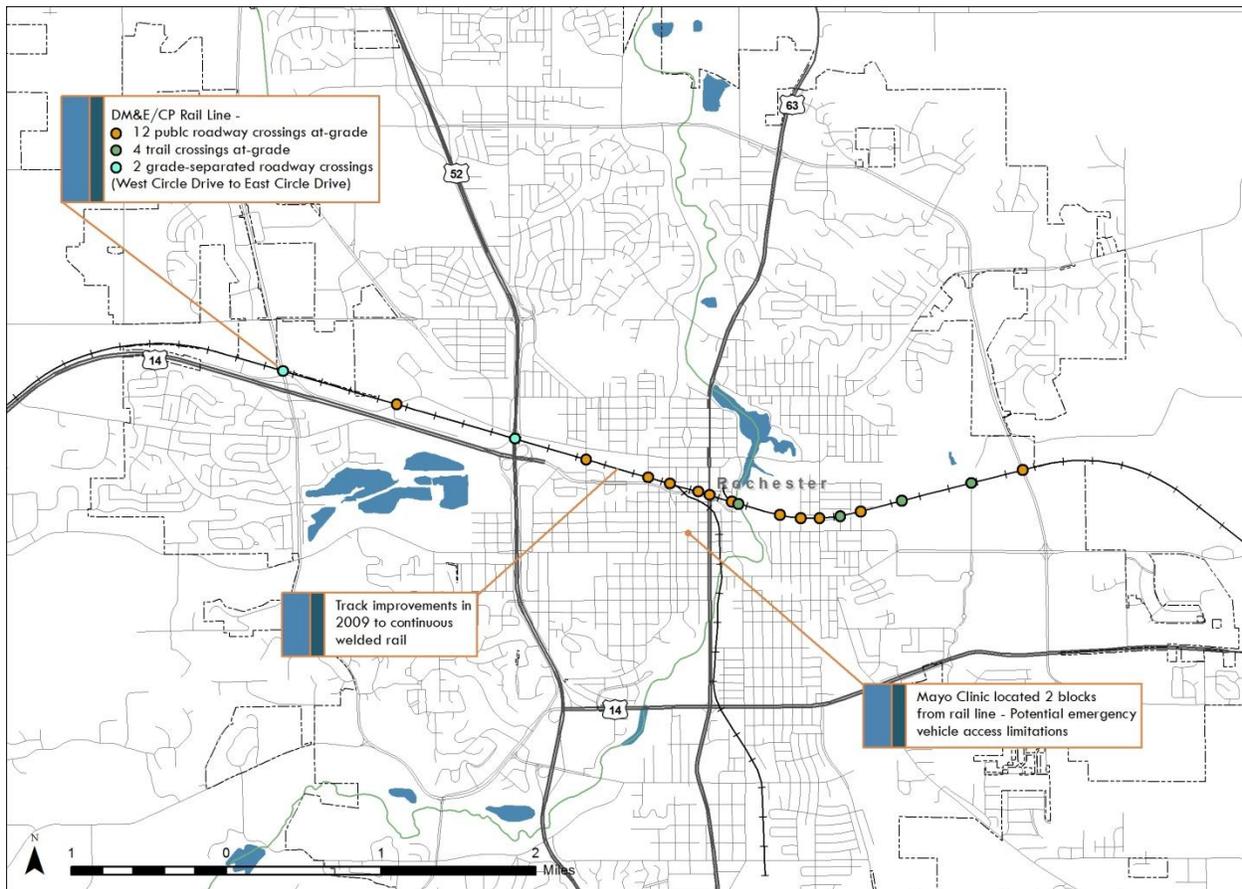


Figure 2 - Rochester Overview



2.2. Project History

In 1998, DM&E filed an application with the Surface Transportation Board (STB) to construct and operate a 281-mile rail line into the Powder River Basin (PRB) in Wyoming. If completed, the expansion would generate as many as 34 one mile long loaded and empty unit coal trains per day on the existing rail corridor through downtown Rochester (Power River Basin Expansion Project Final Environmental Impact Statement, Surface Transportation Board, pg. 9-4, 2001). To mitigate the effects of this increase in train traffic through downtown, a 34-mile bypass alternative (referred to as Alternative R-4, see Figure 1), selected from five potential grade separation and alignment options, was compared to a scenario involving the rehabilitation of existing facilities (referred to as Alternative R-2). Due to the cost of new construction and the risk associated with karst geology along the bypass alternative, the STB's Final Environmental Impact Statement (FEIS) recommended the rehabilitation of existing facilities in conjunction with several mitigation measures:

- Installation of a train location monitoring system in the Rochester emergency-response center to allow for the display of train location information and the position of grade crossing warning signals to facilitate coordination of train movements and emergency vehicles.

- Installation of two grade separated crossings prior to transporting more than 50 million tons of coal annually through Rochester, including one grade separated crossing prior to transporting more than 20 million tons of coal annually through Rochester, at two of the following grade crossings in Rochester or another mutually acceptable location:
 - East Circle Drive/CSAH 22 East
 - 2nd Avenue Northeast/West Silver Lake Drive
 - Broadway Avenue
 - 6th Avenue Northwest
- Installation of additional grade crossing protection devices at Broadway Avenue prior to transporting 50 million tons of coal annually through Rochester.
- Coordination with Mayo Clinic to determine how to best minimize project-related impacts on the Clinic.

During the EIS process, MnDOT conducted an analysis of the impacts of increased train traffic on all grade crossings within 10 southern Minnesota counties, including both Dodge and Olmsted. In addition to providing various recommendations on general guidelines for safety improvements at all remaining at-grade crossings, the study identified a total of seven grade separation candidates within the City of Rochester under a full build scenario. The final report recommended the installation of five additional grade separated crossings within Rochester once train traffic levels reached 37 trains per day, likely selected from 11th Avenue Northeast, 11th Avenue Northwest, and the four crossings identified within the FEIS (Southern Minnesota Corridor Safety Plan, MnDOT, pg. 14, 2000). While the technical data from the MnDOT study were used in the EIS, the final recommendations were significantly modified.

Following a court challenge to the STB's 2002 approval of the DM&E line (Mid States Coalition for Progress v. STB, 345 F.3d 52, 8th circ. 2003), the STB issued a Supplemental Environmental Impact Statement (SEIS). The SEIS reimposed all 147 mitigation conditions documented in the FEIS over the entire DM&E line and included one additional recommendation that DM&E community liaisons provide assistance to communities interested in developing quiet zones. No additional mitigation conditions were recommended, and construction of the DM&E line was reapproved in 2006.

In 2009, Mayo Clinic released an independent evaluation of the potential impacts of increased train traffic through downtown in advance of the construction of the PRB line. Simulations conducted as part of this study indicated that in-town improvements, including a second mainline through the study area and new sidings, might not be sufficient to support 28 or more daily coal trains in addition to six other freight trains per day (DM&E Rail Alternative Analysis and Cost Study Task 3 Report, Mayo Clinic, pg. 13, 2009). The report presented a revised 48-mile bypass alternative to allow through freight traffic to avoid downtown Rochester, indicating that the associated geological and environmental concerns identified in the STB environmental analysis could be addressed.

Concurrent with these studies, OCRRA and MnDOT have been actively studying a high-speed passenger rail connection to the Twin Cities. Zip Rail, the name and brand adopted for a high-speed passenger rail corridor by the Southeast Minnesota Rail Alliance in 2011, is listed as a Tier I corridor in the Minnesota Comprehensive Statewide Freight and Passenger Rail Plan. Access to downtown Rochester is conceptually planned using the existing DM&E freight corridor, joining at a yet to be determined point west of downtown. Zip Rail will be the subject of a separate and independent study.

At present, the PRB line in Wyoming has not entered construction despite STB approval. DM&E, now a wholly owned subsidiary of Canadian Pacific (CP) Railway, has recently implemented several improvements within the project area, including the installation of a defect detection system, bridge improvements at the Zumbro River crossing, as well as track upgrades to continuous welded rail through downtown Rochester.

3. Project Purpose and Need

3.1. Project Purpose

The purpose statement defines the fundamental reasons why the project is being proposed.

The purpose of the proposed action is to provide the future infrastructure required to serve current and long term rail demand while addressing public health, safety, and accessibility issues within the project area.

3.2. Need for Action

The needs statement outlines the specific need for action that any project alternative must address in order to satisfy the purpose for the project.

The project is needed to effectively address rail capacity, public health, safety, and accessibility needs associated with current and long term rail demand within the project area.

Four primary factors contribute to the need for the project:

- **Projected increase in freight traffic on the existing DM&E line** – DM&E has approval to construct and operate a 281-mile rail line into the PRB coalfields of Wyoming. This action has the potential to generate as many as 34 one mile long loaded and empty unit coal trains per day through Rochester on the existing route in addition to the three trains per day currently operating. *The project is needed to address the current and potential long term freight shipping trends and rail capacity needs within the project area.*
- **Potential capacity issues with future passenger rail traffic along existing DM&E corridor** – Current plans identify the existing DM&E corridor as part of a potential alignment for a passenger rail route between the Twin Cities and Rochester, with passenger trains entering the corridor at a yet to be determined point west of downtown. *The project is needed to address the long term rail capacity and safety needs associated with commingling of freight and passenger rail within a portion of the existing DM&E right-of-way.*

- **Accessibility considerations at grade crossings with increased rail activity** – Increased rail activity along the existing DM&E corridor has the potential to increase delay at grade crossings, impacting pedestrians, bicyclists, motorists, commercial activity, and emergency vehicle response times. Without the construction of additional grade separations, travel patterns may change in response to unreliable travel times. *The project is needed to address pedestrian, bicycle, and vehicle accessibility considerations associated with increased rail activity.*
- **Public health, safety, and environmental considerations relative to increased rail activity** – Delay increases at grade crossings may lead to additional collisions, hazardous grade-crossing behavior, as well as increases in emergency vehicle response times. Long queues during peak hours may generate additional collisions at surrounding intersections and degrade the pedestrian environment in some areas. Increased rail activity in commercial and residential areas may also contribute to a variety of environmental issues such as noise and vibration impacts, reductions in air quality, as well as heightened risks associated with the transport of hazardous materials. *The project is needed to address health, safety, and environmental considerations associated with increased rail activity.*

4. Goals and Objectives

The project aims to address the issues associated with the identified needs. The establishment of goals and objectives articulates the desired benefits of the project and establishes a foundation for the definition of evaluation measures including quantitative and qualitative criteria to be used in comparing the performance of the alternatives.

The following goals and objectives have been developed to serve as a framework to evaluate the alternatives.

- **Goal 1 - Provide sufficient rail capacity through the project area**
 - *Objective 1* - Minimize train delay associated with increased rail activity
 - *Objective 2* - Maximize rail travel time reliability within the project area
 - *Objective 3* - Preserve freight rail access for shippers and maintain access for freight business growth in the area
- **Goal 2 - Maintain acceptable traffic conditions at grade crossings within the project area**
 - *Objective 1* - Maintain acceptable levels of service at grade crossings
 - *Objective 2* - Minimize peak queue lengths at grade crossings



- **Goal 3 - Provide appropriate accessibility for emergency response vehicles within the project area**
 - *Objective 1* - Maximize emergency response time reliability
 - *Objective 2* - Minimize emergency vehicle delay associated with grade crossings

- **Goal 4 - Address health, safety, and environmental issues relative to increased rail activity within the project area**
 - *Objective 1* - Minimize total collisions at grade crossings
 - *Objective 2* - Minimize collision severity at grade crossings
 - *Objective 3* - Support a safe crossing environment for pedestrians, bicyclists, and other non-vehicular traffic
 - *Objective 4* - Minimize or mitigate environmental impacts associated with increased rail activity including related capital improvements
 - *Objective 5* - Minimize risks associated with the transport of hazardous materials