2010 Minnesota Comprehensive Statewide Freight and Passenger Rail Plan

Public Open House Meetings

January 2010

presented by:

Minnesota Department of Transportation

Your Destination...Our Priority

Agenda

- Introductions
- State Rail Plan presentation
  - Outreach
  - Freight Rail System
  - Passenger Rail System
  - System Development
  - Plan Implementation
- General Question and Answer session
- Open circulation at boards with Mn/DOT personnel

Project Phases

Project Phase	Description	Task
Phase I	Rail Vision	Task 1
Phase II	Inventory Freight System and Passenger Rail Plans	Tasks 2 and 3
Phase III	Integration of passenger and freight planning, and development of performance criteria	Tasks 4 and 5
Phase IV	Plan Development – Needs, Institutional Arrangements, Programs, Financing	Tasks 6-9
Continuous Public Outreach		Task 10
Final Report		Task 11

Stakeholders Outreach (May-November 2009)

- Minnesota HSR Commission
- Joint Environmental Panel
- United Transportation Union
- Minnesota Regional Railroad Association
- TC&W Railroad
- West Central Rail Shippers
- Minnesota Farm Bureau
- Minnesota Grain & Feed Assoc.
- Minnesota Chamber of Commerce
- Transportation Alliance
- Metropolitan Council
- Counties Transit Improvement Board
- Northern Lights Express
- Northstar Corridor Development Auth.
- Rural Counties Association
- Rochester/SEMRA
- Wisconsin DOT
- Mn. Freight Advisory Committee
- Individual Stakeholders
- Total of 80 organizations & numerous individual discussions

Public Review and Comment Period

- Public Open House meetings
  - January 11th – Duluth
  - January 13th – Mankato
  - January 14th – St. Paul
- Public Hearing
  - January 20, 2010, 3 – 5 pm
  - Mn/DOT Central Office and 15 District Offices via videoconference
- Comment period ends at 4:30 pm on January 29, 2010

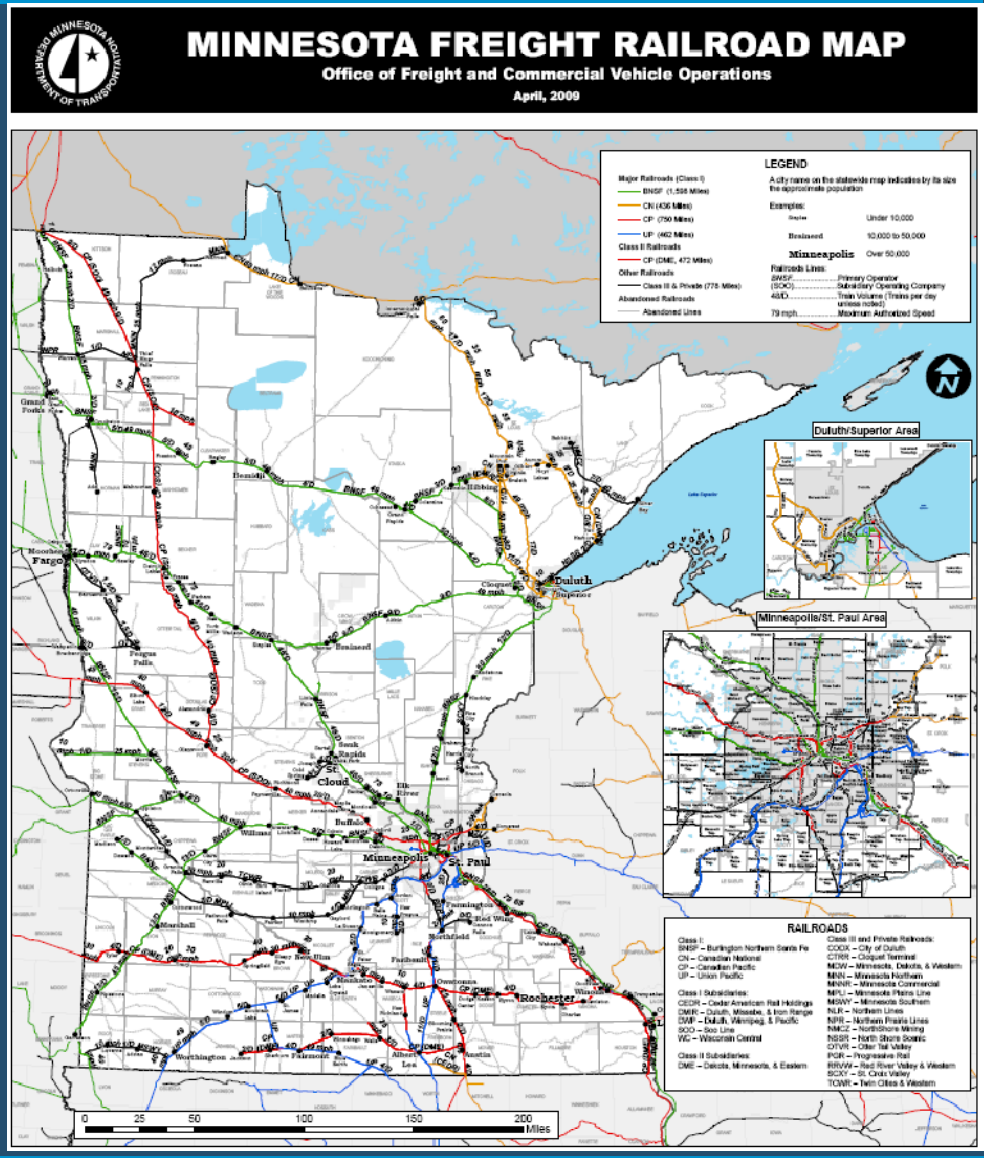
http://www.dot.state.mn.us/planning/railplan/

Freight Rail System

Inventory, Issues, and Vision

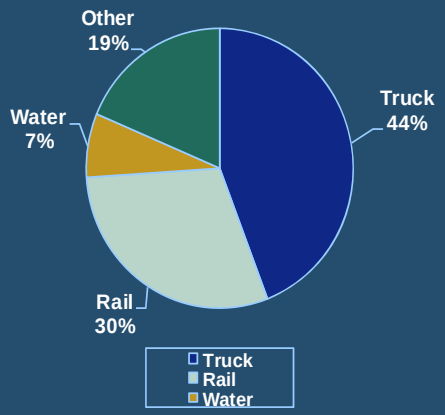
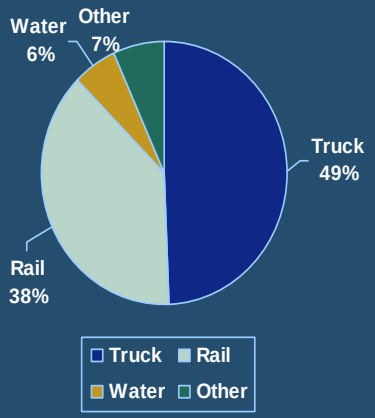
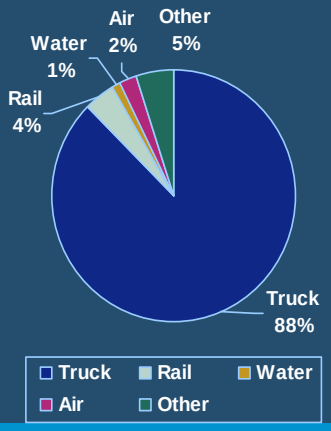
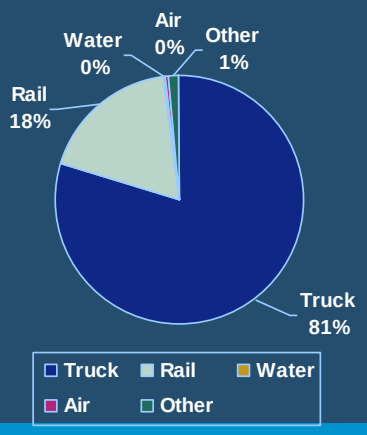
Current Rail System

- 4 Class I Railroads
- 16 Short Line Railroads
- 4500 Route Miles
- Most (but not all) private companies & infrastructure
- 4,500 Public Grade Crossings
- 8th Highest Rail Miles in Nation



U.S. and Minnesota Modal Usage

MN has above-average share of freight by rail

	Overall U.S.	Minnesota
Tonnage		
Value		

Freight Rail Issues

- Freight rail essential to MN economy & industries
- Class I railroads self-sustaining, profitable, efficient
- Shortline and terminal railroads operate 20% of system, essential for local service, access, feeders for Class I railroads
- Growth forecast of 25-40% by 2030; agriculture, intermodal, forestry, minerals
- Direct intermodal market access limited to Metro area, only to Chicago and Pacific Northwest
- Shortline financial capacity limited for infrastructure upgrades, exceptional events and expenses
- Grade crossing signals & automated train controls are underfunded needs

Freight Vision

- Rail is a critical part of the state's multimodal freight system, and provides connections to key markets beyond the state
- Many of the state's major industries rely on freight rail
- A strong rail system supports
  - Economic development
  - Environmental sustainability
  - Preservation of the publicly owned roadway infrastructure
  - Business marketability of the State
- *Therefore, Minnesota should strive to develop a balanced multimodal freight system which can respond to increased regional and international economic competition, constrained highway capacity, environmental challenges, a diverse customer base and rising energy costs*

Accomplishing the Freight Vision

- Infrastructure
  - Improve condition and capacity of the system to accommodate existing and future demand
  - Address critical network bottlenecks
  - Upgrade bridges especially on shortlines
  - Improve track to 25 mph minimum and to support 286k pound cars throughout
  - Implement Positive Train Control (PTC) on key arterials
- Expand intermodal service options

Accomplishing the Freight Vision (continued)

- Planning and policy development
  - Support competitive freight services for shippers throughout the state
  - Integrate rail into a multimodal planning process
- Adapt and enhance existing rail programs
  - Expand state rail assistance to include a range of solutions and financing options
  - Expand highway-rail grade crossing protection to additional locations and replace existing warning devices
  - Better maintain and manage preserved rail corridors for possible future use

Intercity Passenger Rail/High-Speed Rail

Overview, Vision, and System Recommendations

Passenger Rail - Definitions

- Light Rail Transit (LRT) – Enhanced, high capacity 'streetcar' or local transit; stations spaced ½-1 mile: Hiawatha LRT
- Heavy Rail Transit (HRT) – Separated ROW, very high capacity, frequent; stations 1-2 miles apart: New York, Boston, Los Angeles subway, Chicago El
- Commuter Rail – Short distance, conventional trains, concentrated on trips to work; 5-10 mile station spacing: Northstar. Complementary to many intercity corridors
- Intercity Rail – Medium and long distance, incl. Amtrak, High Speed Rail (HSR), regional/state services; limited stops: CalTrains, Cascades, Connecticut, Chicago-St. Louis, Chicago-Detroit, Chicago-Milwaukee, St. Louis-Kansas City

Intercity Passenger Rail - Definitions

- Conventional Passenger Rail
  - 79 mph or less top speed
- Incremental Improvement
  - 80 mph to 110 mph (FRA HSR threshold)
- High Speed Rail
  - Greater than 110 mph (150-220 mph)
  - Grade separation required above 124 mph
  - Partial or full segregation from freight

Passenger Rail Issues

- Current service is one round trip per day, Seattle to Chicago at 79 mph top speed; AMTRAK Empire Builder
- Highway congestion and road condition expected to worsen
- Intrastate air service limited
- High speed rail, 100-500 mile length, offers improved travel time, capacity, reliability, predictability in major corridors
- Positive benefits for energy use, environmental impacts, economic development, land use, modal and transit connections

Passenger Vision

- Forecast shows population and employment growth in the state will continue to increase demand on the state's highway system
- Availability of new federal funds for rail investment creates a unique opportunity
- Global economic and environmental trends are likely to increase fuel costs and impose controls on greenhouse gas emission
- *Therefore, Minnesota should develop a robust intra- and interstate intercity passenger rail system which results in improved travel options, costs, and speeds for Minnesota and interstate travelers*

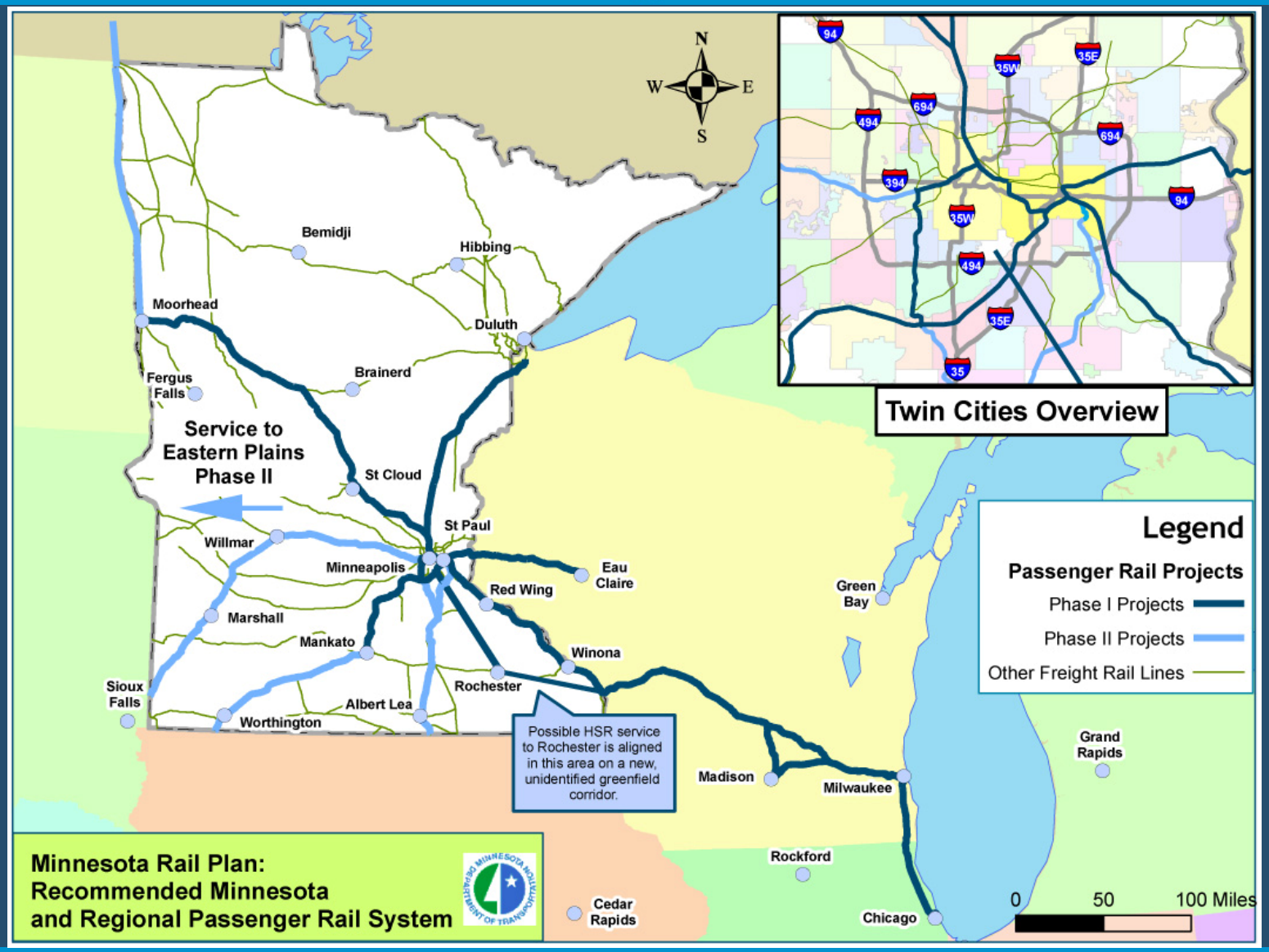
Accomplishing the Passenger Vision

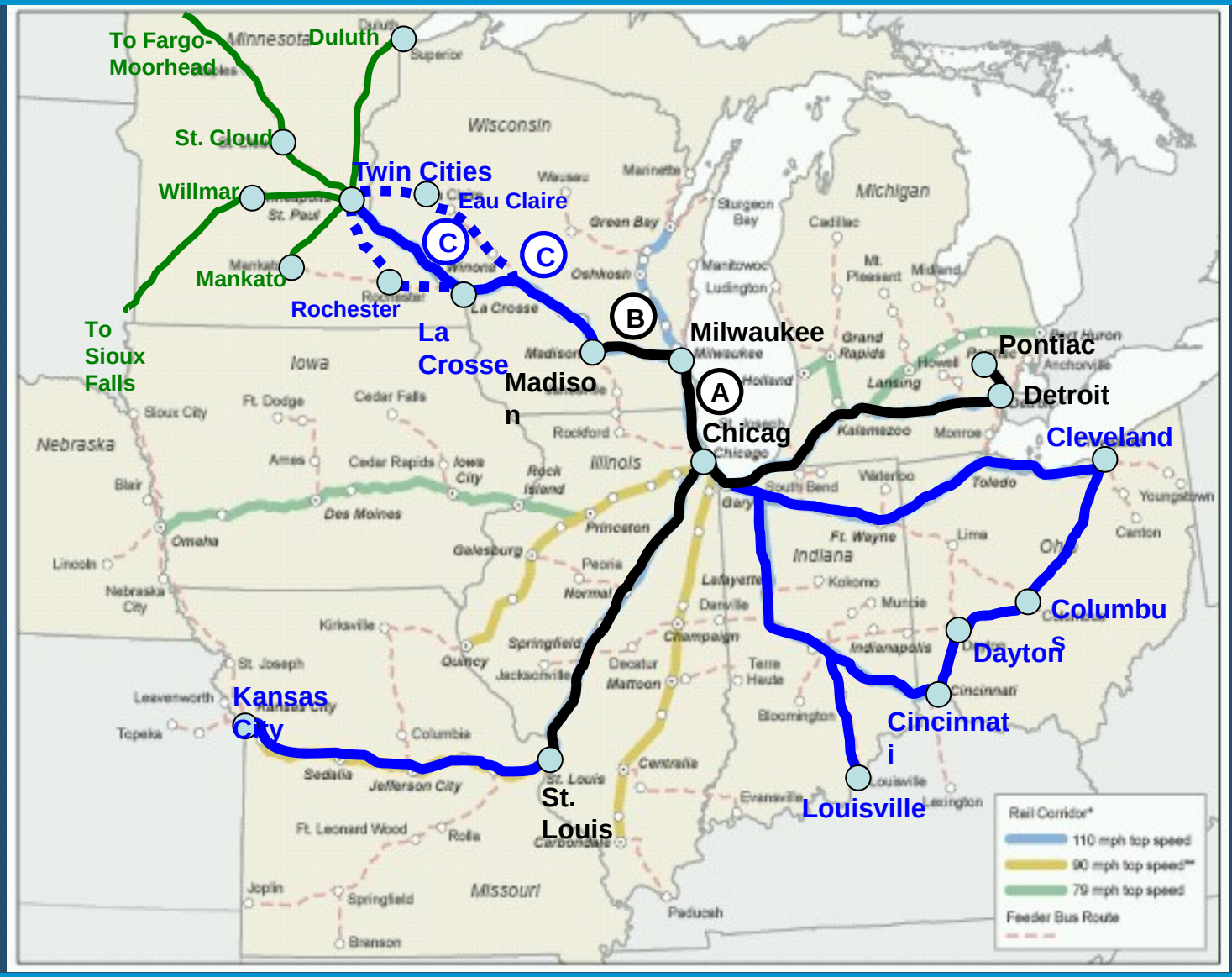
- Participate in the Mid West Regional Rail Initiative to develop 110 mph service connecting the Twin Cities to Wisconsin and Chicago Hub Network

- Develop an intrastate passenger rail network connecting the Twin Cities to major regional trade centers
  - Initial start-up as stand-alone projects, coordinated as part of a larger integrated regional/national system
  - Use interchangeable and interoperable equipment
  - Coordinate with local transit services
  - Achieve minimum speeds of 90 mph, future speeds of 110+ mph

Accomplishing the Passenger Vision (continued)

- Use existing freight track where feasible, new track where necessary
- All services should connect to both the new Minneapolis downtown terminal and St. Paul Union Depot
- Advance corridors incrementally to develop system connectivity and grow ridership
- Projects should advance simultaneously depending on readiness, funding, ROW acquisition, agreements with freight RRs
- Longer term, rail connections to additional intercity and commuter markets in Minnesota and Wisconsin


N
W
E
S
Bemidji
Hibbing
Moorhead
Duluth
Brainerd
Fergus Falls
Service to Eastern Plains Phase II
St Cloud
St Paul
Willmar
Minneapolis
Eau Claire
Red Wing
Marshall
Mankato
Winona
Sioux Falls
Rochester
Albert Lea
Worthington
Possible HSR service to Rochester is aligned in this area on a new, unidentified greenfield corridor.
Green Bay
Grand Rapids
Madison
Milwaukee
Rockford
Cedar Rapids
Chicago
0
50
100 Miles
Twin Cities Overview
94
35W
35E
694
494
394
35
Legend
Passenger Rail Projects
Phase I Projects
Phase II Projects
Other Freight Rail Lines
Minnesota Rail Plan:
Recommended Minnesota
and Regional Passenger Rail System


To Fargo-Moorhead
Duluth
St. Cloud
Twin Cities
Willmar
Eau Claire
Mankato
Rochester
La Crosse
To Sioux Falls
Madison
Milwaukee
Chicago
Pontiac
Detroit
Cleveland
Columbus
Dayton
Cincinnati
Louisville
St. Louis
Kansas City
A
B
C
C
Wisconsin
Michigan
Iowa
Illinois
Indiana
Nebraska
Missouri
Rail Corridor*
110 mph top speed
90 mph top speed**
79 mph top speed
Feeder Bus Route

VISION *for* HIGH-SPEED RAIL *in* AMERICA

System Development

Investment Needs, Strategies, and Funding

Criteria for Public Rail Investment

- Acceptable Cost versus Public Benefits
- Significant Utility: Good Ridership, New Service Access
- Addresses Identified Deficiency: Accommodates new passenger service, freight growth, or corrects bottleneck
- Exhibits Multiple Utility: Benefits intercity passenger, local/commuter, and freight operations and capacity
- Provides Contribution to State Priorities: Environmental and green growth goals, reduced energy use, enhanced land use, improved travel options, life style and competitiveness
- Emphasize Timeliness of Implementation
- Utilize public/private partnerships and private investment where justified or appropriate

Ridership Forecasts Overview

- Purpose – provide a consistent comparison across all possible state passenger rail projects being considered
- Conservative, sketch-planning approach
- Analyzes travel between the Twin Cities and key markets
- Includes analysis of targeted special conditions and intermediate points
- Incorporates generalized sensitivity analysis
- Does NOT serve as the final definitive or operationally defined ridership forecast for a corridor in advanced planning or design phases

Ridership Forecasts Key Variables

- Speeds of 79, 110 and 150 mph
- Fares of $0.20 and $0.32/mile
- Gas prices of $2 and $4/gallon
- Personal/business travel splits of 90/10 and 50/50
- Official state growth forecasts, and:
  - 10% higher
  - More dispersed and less Twin Cities-centric

Ridership Forecasts Results

2030 Annual Trips with Most Favorable Variables Tested

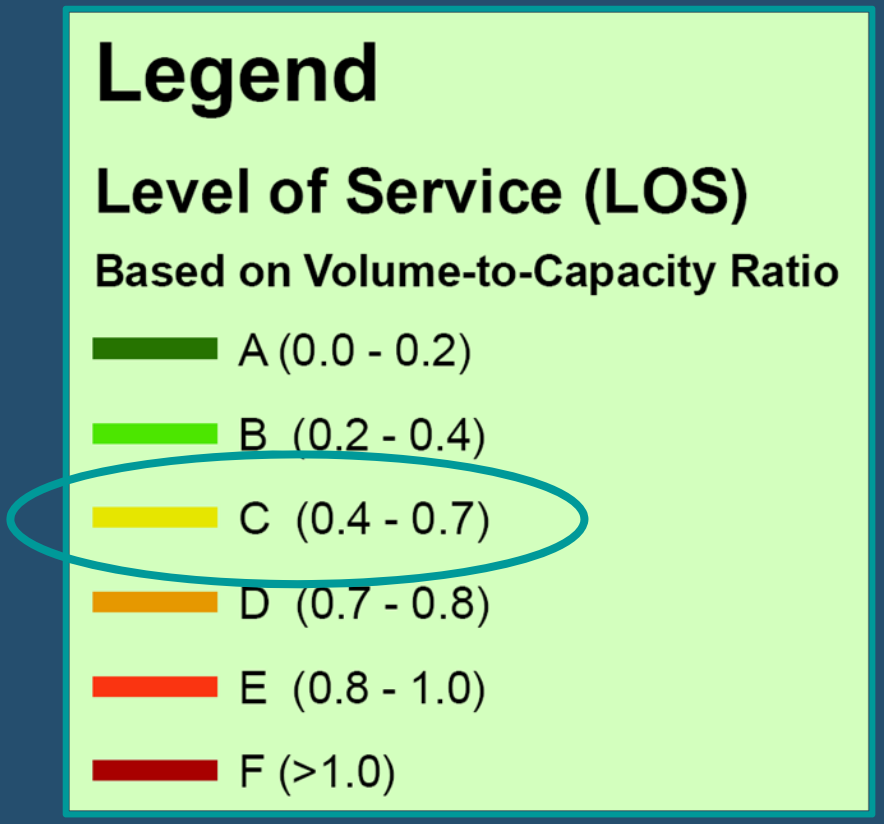
- Over 1 million
  - Chicago
  - St. Cloud
- 400,000-600,000
  - Duluth (NLX)
  - Rochester
- 100,000-300,000
  - Wisconsin points on MWRRI
  - Mankato
  - Eau Claire
  - Northfield

100,000 or under (selected cities)

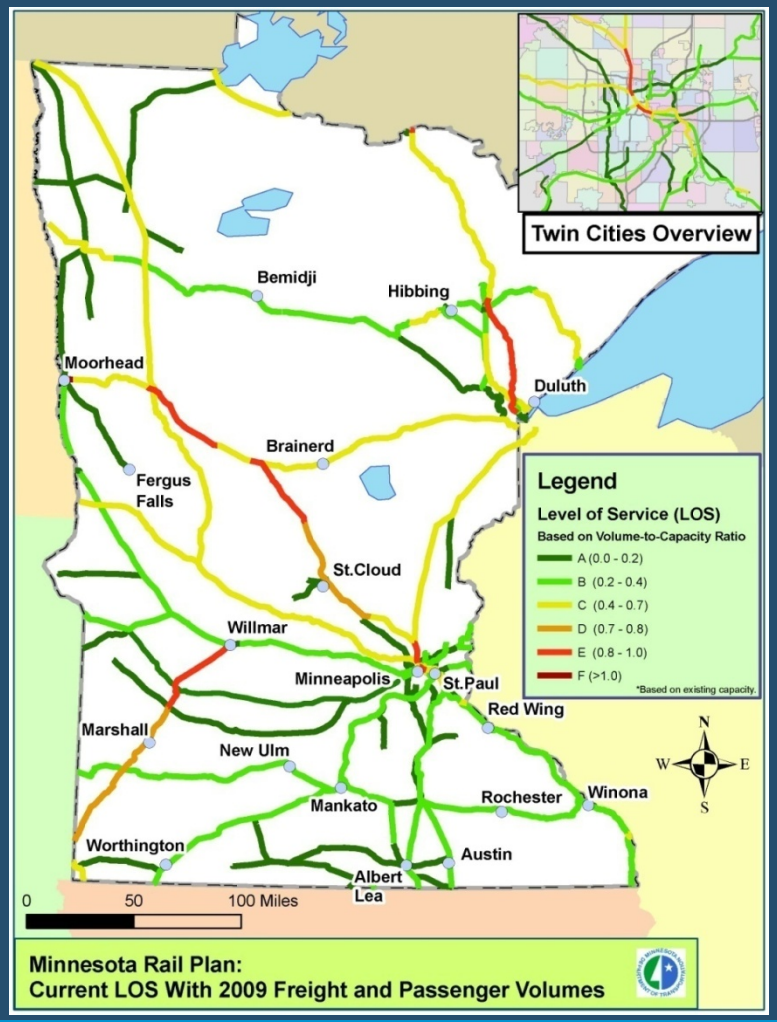
- Fargo
- Red Wing
- Winona
- Willmar

Level of Service (LOS)

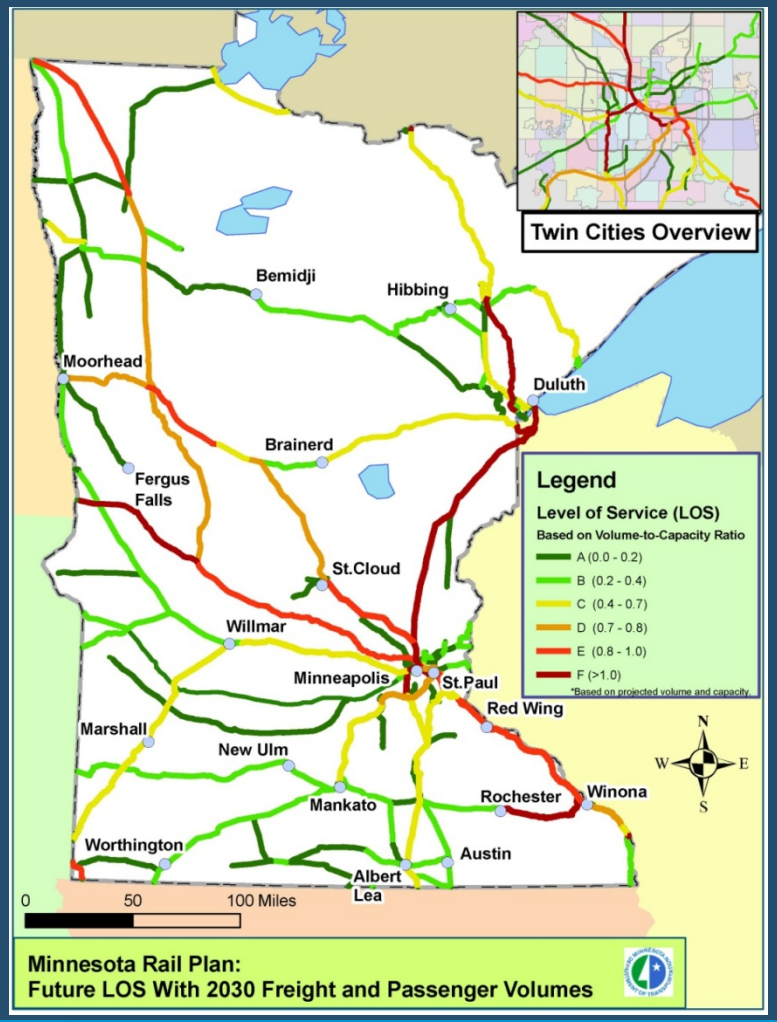
- Volume-to-Capacity Ratio
- Used to determine when upgrades are warranted
  - A, B, C: Below Capacity
  - D: Near Capacity
  - E: At Capacity
  - F: Above Capacity
- Study focus was to ensure freight and passenger rail lines were LOS C, or better



2009 Freight LOS Without Improvements



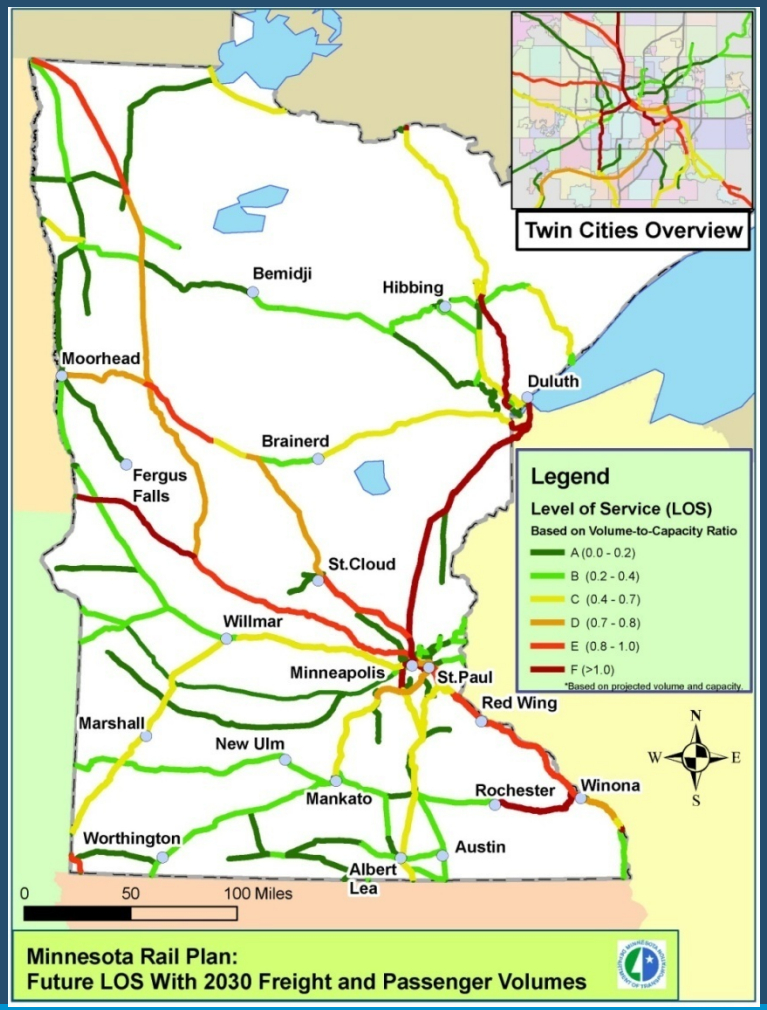
2030 Freight and Passenger LOS Without Improvements



Priority Program Elements/Key Needs

- High speed rail to Chicago, Duluth, and Rochester
  - Upgrade/develop corridors to 110 mph conditions
- Enhanced conventional rail to St. Cloud, Mankato, Fargo, Eau Claire and between the Twin Cities
  - Upgrade corridors to 79-90 mph conditions, eliminate slow speed segments
- PTC on all shared corridors
- Grade crossing upgrades on all shared corridors
- Upgrade major junctions and bridges
- Freight lines capable of 25 mph, 286K loads at minimum

2030 Freight and Passenger LOS Without Improvements



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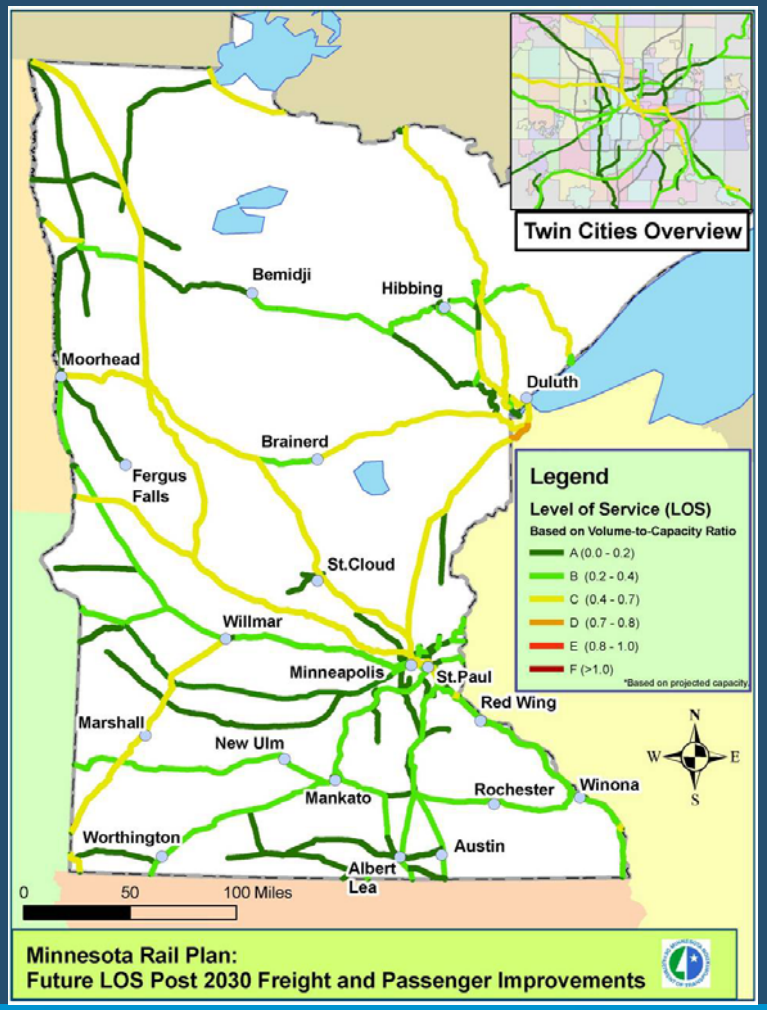

Estimated System Costs & Revenues

(Phase I system – 2009 $)

- Total system capital investment by 2030 = $6.2-9.5B
- Freight portion of total = $2.2-4.5B
- Passenger system portion of total = $4.0-5.1B
- Annual Operating cost = $143-182M
- After farebox revenues, annual subsidy = $41-95M
- Farebox recovery ratio = 48-69%

Benefits

- Federal, state, and regional estimates include Return on Investment of 1.5-2.5 times the rail investment.
- Freight and passenger upgrades directly support local and state economic development
- Travel advantages include improved speed, safety, reliability, capacity, comfort & convenience
- Both freight and passenger environmentally friendly:400-700 VMT saved, 300-500M tons greenhouse gases saved
- Fuel efficiency approximately 3 times better than highway vehicles
- Land use, transit use enhanced with passenger rail growth

Funding Sources & Partnerships

- Private freight railroad investment is assumed to be ¾ of total cost of freight improvements
- Range of costs for local and state public investment in passenger system capital costs assumes from 0 to 80% federal share (up to parity with highway investment)
- Annualized capital costs for non-federal share range from $78-360M per year ($78M assumes 80% federal share)
- Local and state shares may be allocated based on purpose, i.e., station area development may be local responsibility
- Some major costs estimated but unknown, such as PTC

Plan Implementation

Mn/DOT Role, Planning, Procurement, and Operations

Mn/DOT Leadership Role

- Six state agencies, five federal agencies, plus regional, local governmental entities involved in freight and passenger rail
- Mn/DOT primary leadership role in coordinating passenger rail development in State and across various agencies
- Expand working relationships with Metropolitan Council, State of Wisconsin, MWRRI, and partners
- Formalize stakeholders' roles, establish permanent status and responsibilities for advisory bodies, such as Passenger Rail Forum
- Mn/DOT as financial conduit, contracting agency, operations lead and coordinator for fully integrated rail system

Implementing the Plan

- Prepare initial planning and environmental assessments on all identified corridors of passenger system to establish eligibility for federal funding
- Pursue federal funding applications for all projects that are in state of readiness
- Formalize operating agreements with partner states and regional compacts, railroads, funding partners
- Advance implementation plans for design, engineering, contracting, equipment and facility procurement, operations, and continuing incremental improvements

Discussion