



## INFRASTRUCTURE PRESERVATION

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## II. INFRASTRUCTURE PRESERVATION

### MINNESOTA STATEWIDE POLICY PLAN

#### I. Infrastructure Preservation

##### A. Ensure the structural integrity of the transportation systems serving people and freight

##### 1. State Highway Bridge Conditions

- a. Mn/DOT will develop and implement a state highway bridge improvement program that is focused on meeting the overall bridge performance targets as well as fulfilling the requirements set forth by the 2008 Legislature.

##### 2. State Highway Pavement Conditions

- a. Mn/DOT will work toward meeting state highway pavement performance targets while minimizing life-cycle costs.
  - i. Over the short term, increase the level of investment in pavement reconstruction and rehabilitation over previous levels.
  - ii. Continue pavement preventive maintenance strategies such as seal coats, joint seals, micro-surfacing, and overlays.
  - iii. Employ lower-cost fixes such as reclamation to make dollars stretch further and employ cost-effective safety improvements to address safety concerns.
  - iv. Encourage research activities for the development of new materials, processes, and procedures that gain efficiencies and/or extend life-cycles.
  - v. Evaluate innovative contracting methods and assess potential advantages of bundling projects to lower costs.

##### 3. Other State Highway Infrastructure

- a. Mn/DOT will systematically invest in other highway infrastructure such as drainage, traffic signals, lighting, and safety rest areas.
  - i. Improve existing systems and/or develop asset management systems for essential system elements including signals, drainage, retaining walls, signage, and safety rest areas. It will use these systems to monitor and track performance trends as well as assist in identifying future capital needs.
  - ii. Continue to perform preventive maintenance to extend infrastructure life-cycle.

- iii. Develop new ways to track and systematically improve electronic traffic management systems including the Regional Traffic Management Centers (RTMC) and Transportation Operations Communication Centers (TOCC).
- 4. Other State Transportation Infrastructure
  - a. Mn/DOT and its partners will monitor, report the condition of, and identify investment needs for key transportation infrastructure that is owned and operated by other jurisdictions and/or private sector companies, including roads, airports, rail, and port facilities.
    - i. Work with local transportation authorities to track the condition of the County State Aid Highway (CSAH) pavements.
    - ii. Work with partners to inspect and report the condition of publicly owned airport pavements in Greater Minnesota. Mn/DOT will work with its local airport partners to guide investment decisions that maintain and preserve airport pavements.
    - iii. Work with partners to report the condition of the Greater Minnesota and Metro Area transit fleets.
    - iv. Develop methods for tracking and reporting the condition of Class 1 rail systems and port conditions.
    - v. Develop modal investment plans in consultation with its partners. These plans will evaluate the needs of these systems, prioritize investments, and establish implementation roles and responsibilities.

## MINNESOTA AVIATION SYSTEM PLAN

- I. Infrastructure Preservation
  - A. Preserve essential elements of the existing transportation system

## ITS ARCHITECTURE PLAN

- I. Economic Productivity
  - A. Enhance the Present and Future Economic Productivity of Individuals, and Organizations and the Economy as a Whole.
    - 1. Safeguard existing infrastructure.
      - a. O-21 Reduce security risks to transportation infrastructure.
      - b. O-36 Enhance asset and resource management.
      - c. O-40 Reduce commercial vehicle size and weight violations.
    - 2. Aid in transportation infrastructure and operations planning
      - a. O-36 Enhance asset and resource management.
      - b. O-41 Enhance planning with better data.
      - c. O-42 Enhance investment decision making.
- II. Energy Consumption, Environmental Impacts & Costs
  - A. Reduce Energy Consumption, Environmental Impacts and costs of Transportation.
    - 1. Reduce the need for new facilities.
      - a. O-36 **Enhance asset and resource management.**

## **MINNESOTA COMPREHENSIVE STATEWIDE FREIGHT AND PASSENGER RAIL PLAN**

### **I. Freight Rail**

- A. Minnesota should 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
  - 1. Infrastructure
    - i. Continue to make improvements to the condition and capacity of Minnesota's primary railroad arterials to accommodate existing and future demand.
  - 2. Existing Rail Programs
    - i. Build upon the existing Minnesota Rail Service Improvement Program (MRSI), including an increase in the maximum loan amount in excess of the current \$200,000 ceiling.
    - ii. Expand the Rail/Highway Grade Crossing program.
    - iii. Actively manage preserved rail corridors held in the State Rail Bank and evaluate for possible future transportation uses.

## **GREATER MINNESOTA TRANSIT INVESTMENT PLAN**

- 1. To reduce unmet transit service needs by:
  - Understanding the needs of current transit customers and developing a profile of current riders using market research.
  - Determining total and unmet transit needs at the county level using technical analysis.
  - Building support for transit investment priorities through extensive public outreach throughout the planning process.
  - a. Mn/DOT's First priority for Greater Minnesota is to preserve existing systems by funding each system at a level sufficient to continue the current level of service in the future.

## **GREATER MINNESOTA TRANSIT PLAN**

### **I. Access**

- A. Prioritize infrastructure investments to increase access to services
  - i. Invest in transit maintenance and storage facilities and passenger facilities that meet program guidelines and are consistent with local plans as funds are available.
  - ii. Work with transit providers to replace or rehabilitate transit fleets following industry standards for vehicle replacement cycles.

## **STATEWIDE 20-YEAR HIGHWAY INVESTMENT PLAN**

### **I. Infrastructure Preservation**

#### **A. Bridge Preservation**

- 1. Allocate sufficient funding to support the Chapter 152 Bridge Program as well as support approximately 85 percent of district investment needs.

- a. Meet performance targets for the condition of all other bridges.
      - i. Repair or replace 120 fracture critical or structurally deficient bridges by 2018, consistent with Minnesota Laws 2008, Chapter 152.
- B. Pavement Preservation
  - 1. Allocate funds as above, then Districts with adequate remaining funds to meet pavement preservation targets should do so. Districts that do not have sufficient funds to meet targets should invest about 70 percent of their remaining funds towards pavement.
    - a. Maintain the number of state highway miles with pavement in good condition.
- C. Other Infrastructure Preservation
  - 1. Allocate some minimum level of investment.
    - i. Systematically invest in other infrastructure such as signs, lighting, traffic signals, intelligent transportation systems, safety rest areas, and drainage.

## ST. CLOUD APO 2035 TRANSPORTATION PLAN

- I. Infrastructure Preservation
  - A. Promote System Preservation
    - 1. Emphasize system preservation
      - i. Increase system preservation investments

## METROPOLITAN COUNCIL 2030 TRANSPORTATION PLAN

- I. Transportation System Investment
  - A. Ensure adequate resources for transportation system investments
    - 1. The Metropolitan Council will identify and pursue an adequate level of resources for regional transportation investments. The **first priority** is to ensure that adequate resources are available to **preserve**, operate and maintain the existing systems and the second is to seek resources to address identified but unmet needs and demands.
      - a. Resources Available and Needed
        - i. The Metropolitan Council will identify (1) transportation resources currently available and reasonably expected to be available in the future, (2) the level of resources needed for transportation investments in preservation, operations and maintenance of existing systems and (3) resources required to meet unmet needs and demands.
      - b. Adequate Resources
        - i. The Metropolitan Council, working with the Governor, Legislature, local governments and others will pursue an adequate level of transportation resources to **preserve**, operate and maintain existing systems and to meet identified unmet needs.
  - B. Prioritizing for regional transportation investments

1. The priorities for regional transportation investments are to adequately **preserve**, operate and maintain existing transportation systems and to make additional transportation investments on the basis of need and demand consistent with the policies, strategies and priorities of this policy plan and the Regional Development Framework.
  - a. System Preservation
    - i. The first priority for transportation investments for all modes is the preservation, operation and maintenance of existing systems and facilities.

## II. Highway System

### A. Preserve, Operate and Maintain the Metropolitan Highway System

1. A high priority for the region is to continue focusing highway investments toward the safe operation, preservation and maintenance of the Metropolitan Highway System.
  - a. Budget for Preservation
    - i. Mn/DOT should regularly budget adequate resources for existing facilities preservation, operations and maintenance to fully utilize the design life and minimize the investment required over the life-cycle of facilities.
  - b. Diversified Investments
    - i. Mn/DOT should strive to meet its preservation performance targets while also recognizing the need for a diversified investment plan that allows for safety and congestion mitigation so as to optimize system performance.
  - c. Integrate Preservation with Congestion Mitigation and Safety
    - i. Mn/DOT should regularly review planned preservation and maintenance projects to determine if there are opportunities to include lower-cost congestion mitigation and safety improvements.

## III. Transit System

### A. A Cost-Effective and Attractive Regional Transit Network

1. Regional transit providers will **preserve**, operate, maintain and expand the transit system in a cost-effective manner that optimizes existing and future investments. The Council will continue to improve transit service coordination, travel speed, passenger safety, financial incentives and customer amenities to make the system more attractive, visible, travel time competitive and user-friendly.

## IV. Aviation

### A. Adequate Aviation Resources

1. Public investments in air transportation facilities should respond to forecast needs and to the region's ability to support the investments over time.
  - a. Maximize Existing Investments
    - i. Airport sponsors should maintain and enhance existing facilities to their maximum capability, consistent with the Development Framework, prior to investing in new facilities.

## **DIRECTIONS 2035 DULUTH-SUPERIOR LONG RANGE TRANSPORTATION PLAN**

### **I. System Preservation**

#### **A. Preserve** existing infrastructure, ensure transportation facilities are used optimally, and limited financial resources are applied most effectively

1. Ensure longevity of infrastructure
  - a. Increase the functional lifespan of existing infrastructure and ensure new infrastructure is built and maintained to provide the longest functional lifespan
    - i. Maintain communication with jurisdictions about project engineering and timeframes.
    - ii. Work with jurisdictions to coordinate the timing of transportation projects.
    - iii. Use TIP scoring criteria to prioritize preservation projects.
    - iv. Promote access management strategies to prevent avoidable improvement projects.
    - v. Assist jurisdictions in identifying low-cost strategies (e.g., alternative striping) to improve road function and avoid unnecessary reconstruction.
    - vi. Use regular studies, modeling and TSM assessments to identify future capacity needs.
2. Constrain network expansion
  - a. Constrain the number of expansion projects to those that are most necessary and serve the greatest number of users
    - i. Use TIP scoring to promote preservation over expansion projects.

## **FARGO-MOORHEAD METROPOLITAN TRANSPORTATION PLAN**

1. Be good stewards of the public's money
  - a. Utilize good pavement management practices to extend pavement life
    - i. Monitor pavement surface conditions and schedule timely investments.
    - ii. Schedule preventative maintenance and overlays before roadway surfaces are deteriorated.
2. Maintain and improve the region's economic competitiveness
  - a. Rehabilitate/rebuild critical bridges as appropriate
    - i. Prioritize bridges based on ADT, truck traffic, and available alternatives
    - ii. Continue to monitor bridge conditions and schedule rehab/repair work accordingly
3. Manage and operate roadways efficiently
  - a. Ensure that the transportation system will operate in times of manmade or natural disasters
    - i. Create redundancy for critical system elements, including CCTV, sensors, and fiber optics.
    - ii. Identify Regionally Significant Transportation Infrastructure and establish protocol for tracking changes and modifications to RSTI.
4. Improve bicycle route connectivity
  - a. Establish an evaluation and rehabilitation program for bicycle and pedestrian facilities throughout the metro area

- i. Roadway segments of the Principal Bikeway Network should be held to a pavement quality standard that specifically recognizes the needs of bicyclists.

## **GRAND FORKS-EAST GRAND FORKS MPO TRANSPORTATION PLAN**

- 1. Provide a safe transportation system
  - a. Preserve and maintain the existing transportation facilities
    - i. Pavement, signal system, signage, striping and other features of the transportation infrastructure which influence traffic movement should be maintained to a level which permits safe traffic operation.
    - ii. Review and update maintenance goals and objectives.
- 2. Provide an efficient transportation system
  - a. Preserve and maintain the street and highway system.
    - i. Reduce the system mileage that falls below the NDDOT and MnDOT minimum thresholds for ride quality/condition.
- 3. Finance the transportation system
  - a. Improve the cost-effectiveness of maintenance and preservation of existing pavement
    - i. Develop a life-cycle cost analysis of pavement types for all projects.
  - b. Develop a life cycle cost analysis of pavement types for all projects
    - i. Require a cost analysis of all bicycle projects by pavement type.

## **ROCHESTER COUNCIL OF GOVERNMENTS TRANSPORTATION PLAN**

### **I. Funding**

#### **A. Establish adequate and stable funding for transportation**

- a. Provide adequate funding to support timely preservation and capital replacement of the transportation system
  - i. Provide annual funding for capital replacement at a level sufficient to lower the Average Replacement Cycle (ARC) to a level equal to the Anticipated Design Life (ADL) of all system components.
  - ii. Provide adequate funding to eliminate the backlog of transportation system needs.
  - iii. Embody adequate funding within the financial framework of the Long Range Plan for justifiable capacity preservation and enhancement projects.

### **II. Management**

#### **A. Manage transportation systems to maximize effectiveness while minimizing impacts to the fiscal, economic, social, natural and built environments**

- a. Manage short and long term investment to minimize costs consistent with social, economic and environmental goals
  - i. Continue to incorporate revenue and expenditure forecasting and life cycle management into annual budgeting processes.
- b. Provide for timely annual maintenance of the transportation system
  - i. Provide cost-effective operations supporting safety and environmental goals.

- ii. Life cycle pavement maintenance activities on highways and bridges should be completed in a timely manner.
  - c. Utilize where appropriate low cost maintenance strategies on a permanent or temporary basis
    - i. Permanently reduce the level of structural or functional investment where it can be justified on the basis of extremely limited transportation demand.
    - ii. Develop decision support parameters for determining the appropriate maintenance treatments on facilities where deferred maintenance exists.

### III. TDM and Sustainability

#### 1. Sustainability

- i. As a matter of investment principles, ROCOG and its partner agencies should consider sustaining and extending the investment value of existing infrastructure through commitment to "fix it first" policy that would give higher priority to spending on existing facilities before expending funds on new capacity.