Southeastern Wisconsin Regional Freeway Reconstruction System Study

February 8, 2001
Agenda Item 1

Welcome and Introductions
Study Purpose

- To develop a consensus as to how to best approach the reconstruction of the freeway system of Southeastern Wisconsin.
Desired Regional Consensus

- Need for, and timing of, reconstruction
- Deficiencies of the existing freeway system
  - Design
  - Safety
  - Congestion
Desired Regional Consensus—continued

- Plan for the reconstruction for the freeway system
  - Reconstruction in-kind
  - Reconstruction with minor design improvements
  - Reconstruction with substantial design improvements
  - Reconstruction with substantial design improvements and additional traffic lanes
  - Downgrading from freeway to surface arterial or removal

- Program for freeway system reconstruction and funding shortfall
Study Advisory Committee

Purpose

- To guide and direct the study, including:
  - the determination of the need for freeway system reconstruction
  - the identification of freeway system deficiencies
  - the definition and evaluation of freeway system reconstruction alternatives
  - the preliminary recommendation of freeway reconstruction system plan and program
Advisory Committee Members

- **Local Government**
  - Seven Southeastern Wisconsin counties
  - Municipalities in Milwaukee and Waukesha counties

- **State Government**
  - Wisconsin Department of Transportation
  - Wisconsin Department of Natural Resources

- **Federal Government**
  - Federal Highway Administration

- **Business and Labor Associations**
  - Metropolitan Milwaukee, Kenosha, Racine, and West Bend business associations
  - Transportation Development Association
  - Teamsters Union
Agenda Item 2

Study Scope of Work
Southeastern Wisconsin Regional Freeway System Study—Scope of Work

- Work Elements of Study
- Consensus Seeking Process
Work Elements of Study

1. Overview of the regional transportation and freeway system
   - Description of transportation system
   - Definition of travel on transportation system
   - Description of system costs and funding
2. Definition of condition of freeway system and need for reconstruction

- Construction history
- Expected remaining life
- Anticipated time period of reconstruction
Work Elements of Study—continued

3. Function of freeway system

- Origins and destinations of trips
- Trip length of trips
Work Elements of Study—continued

4. Deficiencies of the existing freeway system

- Physical design deficiencies
- Traffic safety problems
- Traffic congestion problems
  - Historic, existing, and probable future
5. Design and evaluation of alternatives for freeway reconstruction

- Segment-by-segment design and evaluation
  - Reconstruction in-kind
  - Reconstruction with minor design improvements
  - Reconstruction with substantial design improvements
  - Reconstruction with substantial design improvements and additional traffic lanes
- Downgrading from freeway to surface arterial or removal
- System evaluation
Work Elements of Study—continued

6. Development of preliminary and final recommended regional freeway reconstruction system plan and program
Five key stages of study

- Study initiation and system overview
- Problem identification
- Design and evaluation of reconstruction alternatives
- Development of preliminary reconstruction plan and program
- Development of final reconstruction plan and program
**Project Involvement and Outreach—At Each of These Five Study Stages**

- **Advisory Committee**
  - Review, discuss, and reach consensus (two to four meetings per stage)

- **County Executives/Boards/Public Works Committees**
  - Provide briefings

- **Municipal Elected and Appointed Officials**
  - Offer briefings

- **State Legislators**
  - Provide briefings
Project Involvement and Outreach—
At Each of These Five Study Stages—continued

- Business, Community, and Other Groups
  - Offer briefings
- Study Website
- Public Informational Meetings and Hearings
  - Problem definition
  - Preliminary plan and program
Consensus Seeking Process–Preliminary and Final Plan

1. County Board/Executive Briefing, Review, Reaction
2. Municipal Briefing, Review, Reaction
3. State Legislator Briefing, Review, Reaction
4. Business, Community, and Other Group Briefing, Review, Reaction
5. Public Informational Meetings and Hearings

Advisory Committee
Consensus on Preliminary Plan

Advisory Committee
Development of Final Plan

Municipal Review and Action
County Board and Executive Review and Action
State Legislator Review and Reaction

Advisory Committee
Endorsement of Final Plan

SEWRPC
Endorsement of Final Plan
Agenda Item 3

Schedule and Content of
Future Advisory Committee Meetings
### Potential Schedule of Advisory Committee Meetings

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>2</td>
<td>March</td>
<td>Freeway Function and Need for Reconstruction</td>
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<td>3</td>
<td>April</td>
<td>Design, Safety, Congestion Problems</td>
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<td>4</td>
<td>May</td>
<td>Congestion Problems and Reconstruction Alternatives</td>
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<td>5 and 6</td>
<td>June and July</td>
<td>Evaluation of Alternatives</td>
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<td>7 and 8</td>
<td>August and September</td>
<td>Evaluation of Alternatives and Preliminary Plan</td>
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<td>9</td>
<td>November</td>
<td>Final Plan and Program</td>
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<td>II</td>
<td>Overview of Regional Freeway and Transportation System</td>
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<td>III</td>
<td>Function of Freeway System</td>
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<td>IV</td>
<td>Need for Freeway System Reconstruction</td>
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<td>Freeway System Design, Safety, and Congestion Problems</td>
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<td>VI</td>
<td>Design and Evaluation of Freeway Reconstruction Alternatives</td>
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<td>Recommended Freeway System Plan and Program</td>
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Overview of the Regional Freeway and Transportation System of Southeastern Wisconsin
Overview Outline

- Travel within Southeastern Wisconsin
- Regional Transportation System
  - Streets and Highways
  - Freeways
  - Urban and Rural Public Transit Systems
- Regional Transportation System Plan
Regional Travel

- The dominant form (almost 95 percent) of all travel within Southeastern Wisconsin on an average weekday is made over streets and highways.
  - By automobile for personal travel
  - By truck for freight travel
Personal Travel

About 92 percent of all personal travel on an average weekday is made by automobile.
Freight Travel

About 88 percent by weight, and 93 percent by value, of all freight moved within, and to and from, Wisconsin is moved by truck over streets and highways.
Regional Travel

About 95 percent of all travel within Southeastern Wisconsin on an average weekday is *internal* to the Region

- **Internal** — both ends of trip within Southeastern Wisconsin
- **External** — one or both ends of trip outside Southeastern Wisconsin
Streets and Highways

Arterial Streets and Highways
Principal Function—moving through traffic
3,277 miles

Collector and Land Access Streets
Principal Function—providing access to abutting land use
7,991 miles

Total Street System
11,268 miles
Arterial Streets and Highways and Collector and Land Access Streets
Freeways

- A special type of arterial street and highway
  - A divided arterial highway with full control of access, including grade separations at all intersections
    - All access at interchanges via on-and-off ramps
    - No driveways, street intersections, moveable bridges or at-grade railway crossings
  - The highest traffic speeds—50 to 65 mph
  - The highest traffic carrying capacities—about 2.5 times that of a standard surface arterial street and highway with the same number of traffic lanes
Freeway System in Southeastern Wisconsin: 2000
Miles of Freeways and Other Streets and Highways

- Freeways: 273 miles
- Standard Surface Arterial Streets and Highways: 3,004 miles
- Collector and Land Access Streets: 7,991 miles
- Total Streets and Highways: 11,268 miles
Daily Travel on Freeways and Other Streets and Highways

Vehicle-Miles of Travel (VMT) on Streets and Highways

- Freeways: 12.9 million VMT
- Standard Surface Arterial Streets and Highways: 23.0 million VMT
- Collector and Land Access Streets: 4.0 million VMT
- All Streets and Highways: 39.9 million VMT
Daily Travel on Freeways and Other Streets and Highways—continued

Vehicle-Miles of Travel (VMT) per Mile of Street and Highway

- Freeways: 47,300 VMT per mile
- Standard Surface Arterial Streets and Highways: 7,700 VMT per mile
- Collector and Land Access Streets: 500 VMT per mile
Vehicle travel within Southeastern Wisconsin has been growing over the past 40 years, but at a decreasing rate:

- **1960s** — 4.8% annually
- **1970s** — 2.6% annually
- **1980s** — 2.6% annually
- **1990s** — 2.0% annually
Freeways—Importance to the Region

- Amount of traffic carried by freeways
  - About one-third of daily travel within Region

- High level of travel service and speed provided by freeways
  - Defines the level of travel accessibility and mobility within the Region
Southeastern Wisconsin Freeway System—Importance to State of Wisconsin

- Freeway system is important to the entire State of Wisconsin, and particularly eastern, central, and northern Wisconsin
Southeastern Wisconsin Freeway System—Importance to State of Wisconsin—continued

- Two million annual truck trips and four million annual automobile trips travel through Southeastern Wisconsin on freeway system
- Another 20 million annual truck trips and 40 million automobile trips travel between Southeastern Wisconsin and remainder of State
- Two-thirds of all goods shipped from Fox Valley travel on the Southeastern Wisconsin freeway system
Urban and Rural Public Transit within Southeastern Wisconsin

**Urban Fixed-Route Systems**
- Milwaukee County
- Waukesha County
- Waukesha City
- Kenosha City
- Racine City
- Ozaukee County
- Washington County
- Kenosha-Racine-Milwaukee Commuter Bus

138 routes
- 76,200 weekday bus-miles
- 172,000 weekday passengers

**Rural Demand-Responsive Systems**
- Ozaukee County
- Washington County
- Hartford City
- Port Washington City
- Whitewater City
- West Bend City

5,900 weekday van-miles
- 1,000 weekday passengers
Urban and Rural Public Transit within Southeastern Wisconsin—continued

Annual Vehicle-Miles of Transit Service

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Urban and Rural Public Transit within Southeastern Wisconsin—continued

Annual Transit Ridership

0
10,000,000
20,000,000
30,000,000
40,000,000
50,000,000
60,000,000
70,000,000
80,000,000
90,000,000
100,000,000

Urban and Rural Public Transit within Southeastern Wisconsin—continued

Trips as Percent of Total Travel in Region

0 1 2 3 4 5 6 7 8 9 10

State of Wisconsin Department of Transportation Annual Revenues and Expenditures for 1999-2001 Biennial Budget

Annual Revenues $2.06 Billion

- State Funds (Primarily Motor Fuel Tax and Registration Fees) $1,281.55 million (62.2%)
- Other Funds $70.45 million (3.4%)
- Bond Funds $128.30 million (6.2%)
- Federal Funds $580.90 million (28.2%)

Revenues allocated to:
- WisDOT $2,061.20 million
- Other Agencies $2,044.05 million

Annual Expenditures $2.044 Billion

- DOT State Operations $192.8 million (9.4%)
- Debt Service/Reserves $112.8 million (5.5%)
- Local Programs $788.05 million (38.6%) (includes $111.05 million or 5.4% for Transit)
- State Highways $950.35 million (46.5%)

$2,044.05 million

$1,281.55 million 62.2%

$70.45 million 3.4%

$128.30 million 6.2%

$580.90 million 28.2%

$2,061.20 million

$2,044.05 million

$192.8 million 9.4%

$112.8 million 5.5%

$788.05 million 38.6%

$950.35 million 46.5%

$111.05 million or 5.4% for Transit
Estimated Annual Expenditures on the Regional Transportation System

**County and Municipal Arterials**
- Construction: $65 million
- Operations/Maintenance: $50 million
- Total: $115 million (33%)

**State Highways**
- Construction: $100 million
- Operations/Maintenance: $25 million
- Total: $125 million (36%)

**Public Transit**
- Capital: $16 million
- Net Operating: $93 million
- Total: $109 million (31%)
### Estimated Source of Annual Revenues for Regional Transportation System Expenditures

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Southeastern Wisconsin Regional Planning Commission Regional Land Use and Transportation Plans

- Principal responsibility of Commission is to prepare a comprehensive plan for physical development of Region
  - Most basic comprehensive plan element is land use plan, upon which all other elements—including transportation and sanitary sewerage—are based
Regional Land Use Plan
Design Year 2020 Recommendations

- Attainment of a more centralized future regional settlement pattern
  - Moderation of current decentralized development trend
  - Stabilization and revitalization of existing urban centers—Milwaukee, Racine, and Kenosha
Regional Land Use Plan
Design Year 2020 Recommendations—continued

- New development should occur as:
  - Infill in existing urban centers and in defined urban growth areas adjacent to existing urban centers
  - New development should occur in areas
    - with suitable soils for development, and not subject to hazards such as flooding or shoreland erosion
    - capable of being readily served by essential urban facilities and services, and at densities—five units or more per acre—which can efficiently support such facilities and services
    - not located in the Region’s primary environmental corridors or on remaining prime agricultural lands
Regional Transportation System Plan
Design Year 2020

- A plan of recommended transportation actions to address existing and anticipated future transportation problems
  - Designed to serve the regional land use plan
  - Three plan elements:
    - Systems management
    - Public transit
    - Arterial street and highway
  - Highway capacity additions are measure of last resort, addressing congestion not resolved by land use, systems management, or public transit measures
Regional Transportation Plan

- Systems Management Element
  - Freeway traffic management system
  - Curb parking restrictions
  - State-of-the-art traffic engineering
  - Intelligent transportation systems technology
  - Promotion of alternatives to the automobile
  - Detailed land use and neighborhood planning
  - Enhancement of the quality of transit service
Regional Transportation Plan—continued

Public Transit Element

- Substantial expansion and improvement of transit service
  - Expansion of vehicle-miles of service from 66,100 in 1995 to 111,500 in 2020, a 70 percent increase
  - Develop true system of rapid transit bus routes connecting all major travel corridors to Milwaukee CBD
  - Develop true system of express bus routes with grid pattern serving Milwaukee CBD and connecting to rapid transit routes
  - Expand service area and frequency of local bus service
  - Consider rail alternatives to bus-based transit in corridor studies, with decision on implementation to be made by local governments concerned—particularly the local transit operator—and the Wisconsin Department of Transportation.
Regional Transportation Plan—continued

- Arterial Street and Highway Element
  - 3,613 total miles of arterial streets and highways
    - 124 miles, or 3 percent, of proposed new facilities
    - 405 miles, or 11 percent, of facilities widened to carry additional traffic lanes
    - 3,083 miles, or 86 percent, of facilities to be maintained at existing capacity
Regional Transportation Plan—continued

- Inadequate Funding to Implement Each Plan Element:
  - Systems management
  - Public transit
  - Arterial street and highways, including state trunk, arterial highways, and county and municipal arterials
The dominant form of travel (almost 95 percent) of all travel in Southeastern Wisconsin is over streets and highways by automobile for personal travel and by truck for freight travel.

Freeways are a special type—the highest type—of street and highway with the highest speeds and highest traffic carrying capacities.
Transportation and Freeway System Overview Summary and Conclusions—Freeway System—continued

- Freeways represent by mileage 3 percent of all streets and highways but carry nearly 33 percent of all vehicle-miles of travel, and over 30 percent of all travel.

- The amount of daily travel carried on the freeway system indicates the superior level of travel service and speed provided by the freeway system, and its contribution to the level of travel mobility and accessibility within Southeastern Wisconsin.