Hennepin County: Complete Streets
From Planning through Design, Construction, Operations and Maintenance

A New Balance for Transportation
Future guided by the past…

• Most design standards were developed during the delivery of the Interstate era

• “Wider, faster, flatter, straighter…

• and cost was not an issue!
Other modes are secondary
Figure 6. 85th percentile speed versus posted speed for NCHRP, Texas, and FHWA data.

Source: NCHRP Report 504
Vehicle Speeds and Pedestrians

UK: Department of Environment, Transport, and the Regions, (DETR)

Florida, 1993-1996; pedestrians in single-vehicle crashes
Future guided by the past…

- No “unlimited funding” in the future
- Stakeholder requirements restate historical needs
- Over-designed vehicle space
- Speeding a common issue

- How can we add better functionality and reduce costs?
- How can we improve public trust in transportation to improve funding
Consider Level of Service for All

- Pedestrians
- Bicyclists
- Vehicles
  - Trucks
  - Cars
  - Transit Vehicles
- Transit Users
- Parking
Community Based Design

Comprehensive Problem Statement

Engaged Public and Regulatory Agencies

One Solution can address multiple Problems
HUD-EPA-DOT Partnership

Community Based Design

**Community Problem Statement**
- Economic
- Accessibility
- Parks
- Trails
- Redevelopment
- Security
- Safety
- Quality of Life

**Regulatory Problem Statement**
- MNRRA
- Wetland Habitat
- Water Quality
- Air Quality
- Visual Quality
- Floodplains
- Endangered Species
- Vibration
- Contaminated Soils

**Technical Problem Statement**
- Traffic Forecasts
- Railroad
- Soil Tests
- Crash Data
- Multimodal
- Transit
- Construction Staging
- Funding Constraints
- Utilities
- Right-of-Way
- Drainage

Solution
Lane Width Trade-Offs

• Wider lanes:
  ▫ encourage higher speeds
  ▫ reduce lane departure crashes

• Narrower lanes:
  ▫ Improved safety
  ▫ reduce right-of-way needs
  ▫ lessen pedestrian crossing time
  ▫ reduce construction cost
Achieving the Benefits

MOBILITY & COMPLETE STREETS

ADDITIONAL MODES
- BIKE
- PEDESTRIAN
- MASS TRANSIT

LEGAL (ADA)    SAFETY    CONVENIENCE    ADVANTAGEOUS

PARTICIPATION
HEALTH
QUALITY OF LIFE
FUNDING
COST SAVINGS
EDUCATION

RESULT
Achieving the Benefits

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<th>IMPLEMENTATION</th>
<th>RECOMMENDATIONS</th>
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The City Council created a Transportation Committee in the Spring of 2003 to advise it on various transportation policy issues.
Richfield Design Considerations

- Safety
- Arterials, Collectors and Residential Streets
- Transit Routes
- Regional trails
- Land Use/ Redevelopment
- Trees
- Water Quality
- Utilities
- Parking
- Maintenance
Design Flexibility: 76th Street

Cost Savings: 30% less than reconstruction of existing street
Road Diets

- 4-lane, undivided converted to a 3-lane roadway. (Center lane is a two-way left turn lane.)
- Less than 15,000 to 20,000 vehicles per day
- Can reduce crashes up to 37%
- Reduce speeds
Case Study: Portland Ave, Richfield
Case Study: MCES Sewer, Richfield

Cost Savings: 30% less than reconstruction of existing street
Richfield Intersections
Richfield Intersections
“...low speed residential areas...”
Snow Removal
Bloomington Ave in Richfield

- 30 mph
- ADT less than 2500
- Bus route
- City “collector”

- Parking on both sides
- Existing Bicycle route
- Residential Land Use
Bloomington Ave in Richfield

- Consider space for bicycles and cars

- And Busses
Bloomington Ave in Richfield

- Consider the probability of interactions between vehicles and bicyclists

Cost:
Cost of Signs and Paint
# Design Flexibility and Standards

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<th>Deviation from Standard</th>
<th>Deviation From Practice</th>
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<td>Design Exception (Formal process)</td>
<td>Agency Approval</td>
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<td>State Aid</td>
<td>Design Variance (Formal Process)</td>
<td>Agency Approval</td>
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<tr>
<td>Local (County or City)</td>
<td>Local Decision</td>
<td>Agency Approval</td>
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</table>

Formal Peer Review process avoids legal concerns for individual designer.
More Flexibility with deviations from “practice” than Standards.
Questions?

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