Session Objectives

- Consider the importance of transportation in our communities
- Identify transportation challenges
- Discuss the relationship between transportation and land use
- Plan a problem solving approach
What do we want from our transportation system?
Transportation is Important

Our transportation system supports our economy and lifestyle

(Access to destinations and activities, mobility)

Transportation facilities have major impact on community’s character

(Structure, connections, context)

Transportation system is vital link in supply chain

(agriculture, tourism, resource extraction)
What are the transportation issues and challenges in your community?
Rural Transportation Challenges

• Capacity — not adequate for demand
• Connectivity — interstate access, transit, rail service
• Safety — high fatality rate, higher speeds, emergency response times
• Deficient Conditions — pavement and bridge condition

Source: Rural Connections: Challenges and Opportunities in America’s Heartland, 7/2014
Land Use and Transportation Connection
What Do We Mean by Land Use?

- Human development, land management
- Type of use (residential, commercial, industrial, agricultural, etc.)
- Density
- Mix of uses in an area
- Design characteristics
Transportation and Land Use - A Two-Way Street

TRANSPORTATION

Supply

Demand

LAND USE

• Density
• Diversity
• Design

Accessibility

Accessibility
Transportation & Land Use Cycle

- ROADWAY IMPROVEMENTS
- INCREASED ACCESSIBILITY
- INCREASED LAND VALUES
- LAND USE CHANGE
- INCREASED TRAFFIC GENERATION
- INCREASED TRAFFIC CONFLICT
- DETERIORATION IN QUALITY OF TRAFFIC FLOW

Source: Access Management, video FHWA May 1997
Pennsylvania Department of Transportation
Smart Transportation Presentation
Lovell Road and I-40 40 years ago and today
Factors in Development Decisions

- Local economy
- Land values
- Zoning
- Environmental factors (topography, geology, etc.)
- Access to transportation infrastructure
- Other infrastructure (water, sewer, broadband, etc.)
- Any Others?
Who Benefits and Who Pays?

• Local land use decisions impact the regional transportation system

• Local governments rarely consider the longer-term, more widespread costs of their local land use decisions on transportation

• Most major (high cost) transportation improvements rely on limited state/federal funds

Accelerated growth due to improved transportation system can fall on unprepared local governments
Roles and responsibilities vary greatly between and within States:

- Land use decisions are primarily made at the local level
- Transportation decisions for major projects involve local, regional, state and federal agencies
“Trend Is Not Destiny”
Lewis Mumford
The Road Ahead
“The Best Way to Predict the Future is to Create It.”

- Abraham Lincoln
Transportation Planning Process

- Goals and Objectives
- Performance Measures
- Alternative Improvement Strategies
- Evaluation
- Implementation of Strategies
- Short- (3-5 year) Range Program
- Long-Range Plan

Vision

- Economic Development
- Mobility and Accessibility
- Environmental Quality

Data

Analysis Methods

Collaboration with stakeholders and the public
ND Planning Resource Guide

Figure 1: Generalized Planning Process Cycle

1. Identify Reason, Purpose, or Need to Develop Plan
2. State Goals, Objectives and Priorities
3. Collect and Interpret Data
4. Develop Alternative Solutions
5. Evaluate Potential Impacts of Alternatives and how they Relate to Established Goals and Objectives
6. Select Appropriate Alternatives
7. Plan Implementation
8. Evaluate Impacts of Plans and Implementation Programs

Vision
Economic Development
Mobility and Accessibility
Environmental Quality
Linking Land Use and Transportation

Regional Visioning

Land Use
- Local Comprehensive Planning
  - Public Facility Plans
  - Area/Neighborhood Plans
  - Zoning/Development Regulations and Guidelines
  - Development Review and Permitting
  - Project Implementation

Transportation
- Long-Range Transportation Plan
  - Corridor and Area Plans
  - Functional Plans (Modal, Freight..)
  - Project Programming
  - Project Development
  - Project Implementation

Project Programming
Use All the Available Strategies

Supply Management

Intelligent Transportation Systems
- Transit Facilities and Services
- Intermodal Facilities
- Traffic Engineering
- Bike/Walkways
- Access Management
- Highway Capacity

Community Goals

Demand Management

Land Use Management

- Planning and Zoning
- Phasing/Adequacy
- Urban Design
- Mixed Use
- Density

Alternative Work Schedules
Pricing
Alternate Modes
Alternative Work Locations
Employer Support Programs

A Few Key Points

- Transportation decisions are important in shaping communities and quality of life.
- Transportation and Land Use are intertwined. (one interactive system)
- Transportation and land use decisions are often disconnected.
- Planning process to achieve better informed decision making.