I-24 Multimodal Corridor Study

Nashville Area Public Meeting
Crossings Event Center
October 22, 2013
Presentation Outline

- Corridor Overview
- Schedule
- Survey Results
- Types of Proposed Projects
- Questions
I-24 and Tennessee
I-24 Corridor
Population Growth in Nashville

Davidson, Rutherford, Sumner, Williamson and Wilson Counties

Source: Nashville MPO, June 19, 2013

+79%
Employment Growth in Nashville
Davidson, Rutherford, Sumner, Williamson and Wilson Counties
Source: Nashville MPO, June 19, 2013
Why Have a Plan for the Future?

- Develop solutions now to prevent future problems
- Need to start the planning process in order to get to construction
- Determine how to best spend future money (i.e., prioritize projects)
Schedule

- Completed Identification of Potential Projects in September
- Currently Evaluating Feasible Projects
- Will Develop Prioritized List by January `14
Survey

- Started January 24, 2013
- Ended June 20, 2013
- Total of 503 Responses
I-24 Survey Final Results

How were the surveys submitted?

- 96% On-line Survey
- 2% Electronic PDF
- 1% Mail
- 0% Fax
I-24 Survey Final Results

What is your main purpose for traveling along I-24?

- To/From Work: 59%
- Business: 12%
- Leisure: 21%
- Other: 8%
I-24 Survey Final Results

How often do you travel along I-24?

- Frequently: 72%
- Often: 20%
- Sometimes: 6%
- Rarely: 2%
- Never: 0%
I-24 Survey Final Results

What is the importance of congestion on I-24 to you?

- Very - 5: 71%
- 4: 18%
- 3: 4%
- 2: 2%
- Least - 1: 4%
I-24 Survey Final Results

What is the importance of safer travel on I-24 to you?
What is the importance of better/more efficient interchanges on I-24 to you?

**I-24 Survey Final Results**

What is the importance of better/more efficient interchanges on I-24 to you?
I-24 Survey Final Results

What is the importance of other issues on I-24 to you?
I-24 Survey Final Results

What other transportation options would you consider along I-24?

- High-Speed Rail: 51%
- Bus Routes: 19%
- Park & Ride: 19%
- Other: 11%
List of All Proposed Projects & Strategies

- Total List Available at [http://www.tdot.state.tn.us/i24/](http://www.tdot.state.tn.us/i24/)
- 572 proposals by citizens
- 169 specific projects & strategies proposed by citizens
- 31 types of projects & strategies
- List includes additional improvements by TDOT, MPOs, consultant and other agencies
Proposed Projects & Strategies

- Roadway Capacity (add lanes on I-24)
  - 129 proposals by citizens
  - 21 specific projects and/or strategies

- Examples
  - Add lanes on I-24 from Clarksville to Nashville
  - Add lanes on I-24 from Smyrna to downtown Nashville
Proposed Projects & Strategies

- **Transit – Express Bus & Rail**
  - 82 proposals by citizens
  - 6 specific projects and/or strategies

- **Examples**
  - Bus Rapid Transit / Express Bus on I-24 with circular stop at Bell Road and Hickory Hollow Pkwy
  - Express Bus / Rail Options between Murfreesboro and Nashville
Proposed Projects & Strategies

- **Operational - Ramps**
  - 52 proposals by citizens
  - 22 specific projects and/or strategies

- **Examples**
  - Extend entrance and exit ramps on Exit 59 / Bell Road
  - West merge with I-65, add lane (Exit 44)
Proposed Projects & Strategies

- Corridor Capacity (improve roads parallel to I-24)
  - 47 proposals by citizens
  - 16 specific projects and/or strategies

- Examples
  - Remove overlap of I-65, from Exit 44B to Exit 46B, to avoid crisscrossing traffic
  - Widen Murfreesboro Pike to handle traffic diversion from Murfreesboro into Nashville
Proposed Projects & Strategies

- Operational - Enforcement
  - 38 proposals by citizens
  - 5 specific projects and/or strategies

- Examples
  - HOV lane enforcement in Nashville
  - Improve enforcement of traffic violations
Proposed Projects & Strategies

- **Policy – HOV Lanes**
  - 32 proposals by citizens
  - 6 specific projects and/or strategies

- **Examples**
  - Open HOV lane to single occupancy vehicles from Downtown Nashville to Murfreesboro
  - Extend the HOV hours in the Nashville Area
Proposed Projects & Strategies

- Operational – Signing & Marking
  - 29 proposals by citizens
  - 15 specific projects and/or strategies

- Examples
  - New signage to divert through traffic via SR 840 or Briley Pkwy
  - Install lane reflectors throughout the I-24 corridor
Proposed Projects & Strategies

- New Access - Interchanges & Rest Areas
  25 proposals by citizens
  10 specific projects and/or strategies
- Examples
  Add new interchange in Smyrna between Exit 66 and Exit 70
  Add new rest area between Nashville and Monteagle
Proposed Projects & Strategies

- Operational – Truck Restrictions
  - 20 proposals by citizens
  - 7 specific projects and/or strategies

- Examples
  - Restrict large trucks to right two lanes
  - Increased truck restrictions for left lane
Truck Equivalencies

[Diagram showing truck and equivalent vehicles]

MODAL COMPARISON OF TRUCK EQUIVALENCIES

- Small truck = Large truck
- Semi-trailer = 18 trucks
- Container = 54 trucks
- Cargo ship = 240 trucks
Freight System

Legend

Freight System Elements
- Interstate System Corridors
- CSX RR Mainline
- Norfolk Southern RR Mainline
- Waterways

Boundaries
- I-24 Corridor Analysis Area
- Tennessee (Outside I-24 Corridor)
- Nearby States

Freight Terminals
- Freight Airports
- Intermodal Rail Terminal
- Waterway Port

Map showing freight system with major cities and transportation routes.
Proposed Projects & Strategies

- Operational – Intelligent Transportation Systems (ITS)
  - 19 proposals by citizens
  - 7 specific projects and/or strategies

- Examples
  - Control merging traffic from ramps by using ramp metering
  - Use Variable Speed Limit (VSL) signs to mitigate congestion through Nashville

PLEASE WATCH YOUR SPEED DON'T TEXT AND DRIVE
Proposed Projects & Strategies

- Operational – Interchange Modifications
  - 14 proposals by citizens
  - 10 specific projects and/or strategies

- Examples
  - Redesign Exit 53 interchange (I-24 at I-440)
  - Redesign and rebuild interchanges at Exits 47, 47A and 49 for efficiency
Proposed Projects & Strategies

- **Operational – Emergency Response**
  - 12 proposals by citizens
  - 5 specific projects and/or strategies

- **Examples**
  - Expand median to accommodate safety vehicles in Nashville
  - Add emergency lanes in SE Nashville area
Proposed Projects & Strategies

- Transit – Commuter Rail
  - 11 proposals by citizens
  - 4 specific projects and/or strategies

- Examples
  - Clarksville - Murfreesboro commuter rail
  - Commuter rail in Nashville expanding existing CSX tracks
Proposed Projects & Strategies

- Operational – Speed Limits
  - 7 proposals by citizens
  - 3 specific projects and/or strategies

- Examples
  - Reduce speed limit from Smyrna into Nashville
  - Increase speed limit in Nashville
Proposed Projects & Strategies

- **Operational – Narrow Lanes**
  - 6 proposals by citizens
  - 2 specific projects and/or strategies

- **Examples**
  - Widen narrow lanes between Haywood Lane (Exit 57) and Hickory Hollow Pkwy (Exit 60)
  - Widen narrow lanes in major cities like Nashville & Chattanooga
Proposed Projects & Strategies

- Policy – Beautification
  - 6 proposals by citizens
  - 3 specific projects and/or strategies

- Examples
  - Consolidate billboards and add landscaping at interchanges
  - Exit 59 Bell Road interchange
Proposed Projects & Strategies

- Operational – Signals
  - 5 proposals by citizens
  - 2 specific projects and/or strategies

- Examples
  - Improve traffic signal patterns at Bell Road (Exit 59) to mitigate traffic issues coming onto I-24
  - Install traffic lights on westbound at Rossview Road (Exit 8)
Proposed Projects & Strategies

- Operational – Truck Lanes
  - 6 proposals by citizens
  - 5 specific projects and/or strategies

- Examples
  - Add a commercial vehicle/truck lane through metro areas
  - Exit 169 - Exit 178
    Dedicated EB truck climbing lane in Chattanooga
Proposed Projects & Strategies

- Rock Fall/Slide Mitigation
  - 5 proposals by citizens
  - 1 specific project and/or strategy

- Examples
  - Mitigate rock slide issues on Monteagle mountain (Exit 135 - Exit 143)
Roadway Construction Costs

- Add one lane in both directions
  - Rural & Flat - $7 million per mile
  - Urban & Mountainous - $27 million per mile

- Bridge - Add one lane in both directions for a typical 300’ bridge
  - $1 million - $1.5 million
Other Roadway Construction Costs

- **New Interchange - Rural**
  - $8 million - $36 million

- **New Interchange - Urban**
  - $18 million - $86 million

- **Traffic Signal**
  - $90,000 - $120,000 per installation
Transit Capital Costs

- **Express Bus**
  - $100,000 - $300,000 per mile

- **Bus Rapid Transit - Exclusive**
  - $3 - $10 million per mile

- **Commuter Rail**
  - $5 - $15 million per mile

- **Light Rail Transit**
  - $40 - $70 million per mile
Questions