Agenda

• Welcome & Introductions
• Announcements and Briefings
• Livability 2040: Regional Transportation Plan
• Congestion Management Process
• Midtown Alternatives Analysis Study
• New Business
• Adjourn
Announcements and Briefings

• 2014 Regional Bicycle and Pedestrian Plan Update

• TDOT Multimodal Access Grant

• FHWA Bicycle-Pedestrian Counter Pilot Program

• Transit Infrastructure Design Study

• Greenprint Coordinator Position

• City of Memphis Pedestrian and School Safety Action Plan
## Schedule Update

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- **RTPAC/ETC/TPB Meetings**
- **Public Meetings**

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**LIVABILITY 2040**
Draft Revenue and Needs Forecast

• Draft revenue projections complete and under TDOT, MDOT, and FHWA review

• Draft maintenance funding projections complete

• Initial capital cost estimates underway
Draft Revenue and Needs Forecast

$10 B
Projected Revenue

- Federal
  $4.6 B

- State and local match
  $2.3 B

- State and local O&M
  $2.9 B

$14 B
Needs Estimate

- Maintenance of existing bridges
  $0.9 B

- Maintenance of existing pavement (NHS)
  $1.9 B

- New capital investments
  $11B

- Maintenance for new capital investments
  $TBD

DRAFT completed as part of Livability 2040 Financial Analysis; presented for discussion purposes only.
Understanding the Tradeoffs

$3B
(MAINTAIN EXISTING)

$11B
(NEW CAPITAL IMPROVEMENTS)
Understanding the Tradeoffs

$10B (AVAILABLE)
Understanding the Tradeoffs

$10B (AVAILABLE)

FUNDED

$3B

$7B

UNFUNDED

$4B
Understanding the Tradeoffs

$10B (AVAILABLE)

UNFUNDED

$3B

$1B

FUNDED

$10B
Understanding the Tradeoffs

<table>
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Understanding the Tradeoffs

Multimodal Capacity

Roadway Capacity

$8.5B (AVAILABLE)

$1.5B  $1.5B  $8.5B  $2.5B
Scenario Analysis

• Scenario analysis used to communicate tradeoffs
• Shape strategic and cost-effective investment strategy within available resources
• Link project selections decisions to broader regional goals
• Two scenario applications for Livability 2040
  1. System Maintenance (Roads and Bridges)
  2. Capital Investment
Maintenance Scenario 1: Today’s Roadway Conditions

Maintenance Scenario 2: Optimal Roadway Conditions

Maintenance Scenario 3: Deferred Maintenance

Bridge and Pavement Performance

Roadway Infrastructure Needs ($Billion)

- Un-Funded Capital Needs
- Funded Capital Needs
- Total Maintenance Spending
- Revenue Estimate

Pavement NHS Conditions (% fair or better)

Bridge NHS Conditions (% non-SD)

Bridge Non-NHS Conditions (% non-SD)

DRAFT completed as part of Livability 2040 Scenario Analysis; presented for discussion purposes only.
Regional Roadway Connections Scenario

• Transportation strategy emphasis
  • New or widened roadways
  • Bottleneck removal
  • Last mile connectivity at intermodal and freight facilities
  • Targeted multimodal investment at activity centers
Regional Roadway Connections Scenario

• Growth characteristics
  • Low-density, decentralized growth
  • Greater roadway maintenance cost
  • Increased distance between neighborhoods and centers
  • New commercial development follows along widened corridors (linear development pattern)

• Growth drivers
  • Proximity to major roads
  • Interchanges & major intersections
  • General preference for greenfield development patterns
Expanded Travel Options Scenario

• Transportation strategy emphasis
  • Transit capital
  • Transit operations
  • Bicycle/pedestrian enhancements
• Roadway operations
• Shifting investment approach from a radial pattern
Next Steps

• Complete needs analysis
• Conduct scenario analysis
  • Present key projects and strategies associated with each
  • Present system level performance impacts
  • Discuss preferences
• Preferred scenario adoption in April
Expanded Travel Options

- Growth characteristics
  - Higher-density growth in transit station areas
  - Local greenspace and agricultural land protected
  - Average household transportation costs reduced
  - Lower roadway maintenance costs
  - More opportunity for active transportation

- Growth Drivers
  - Transit service
  - Station areas & existing centers
  - General preference for infill development & redevelopment
  - Protect environmentally-sensitive areas & agriculture
Agenda

1. Introduction and Background
2. How does the CMP fit in with other MPO Plans?
3. CMP Timeline and Development
4. CMP Performance Measures
5. Engineers and Planners on the same Page
6. Congestion Strategy Toolbox
7. Next Steps
8. Questions
Congestion Working Definition:
Is the level at which transportation system performance is no longer acceptable due to traffic interference.

Source: http://international.fhwa.dot.gov/pubs/pl07012/images/figure_1.cfm
Introduction

- Congestion Management Process (CMP)
  - Federally required for large MPOs
    - SAFETEA-LU required that Traffic Management Areas (TMAs) with populations over 200,000 have a CMP
  - MAP-21 retains the CMP requirement featuring a new emphasis on Performance Measurement

- EPA has designated Shelby County and portions of DeSoto County as non-attainment for Ozone
  - CMP must demonstrate that new transportation projects don’t result in an increase in air pollution emissions
Background

• What is a CMP?
  • A CMP is a process that monitors transportation facilities for congestion problems and seeks to implement congestion mitigation strategies

• Memphis MPO’s CMP
  • Is committed to developing a CMP that emphasizes the need to link the effective management and operations of transportation systems to the planning process, environmental review process and travel demand management

• Implementation
  • Strategies identified in the CMP are used in the development of the Regional Transportation Plan
Travel Surveys
Regional Land Use Model
Regional Travel Demand Model
Congestion Management Process
Greenprint, other regional studies

2040 Regional Transportation Plan
Public/Stakeholder Outreach

Performance Measures Reporting
CMP Project Schedule

Current Status

Peer Review of CMP Plans

- August ETC and TPB meetings

Technical Input and Public Input

- Mobility Summit October 2014
- November ETC and TPB meetings

Identify CMP network and strategies

- March/April 2015 DOT and FHWA review
- April/May 2015 ETC+TPB and Public review

Plan Review

- June 2015 ETC+TPB Adoption of CMP
Development of the CMP

1. Peer Review of Best Practices
2. Performance Measures Workshop
3. Mobility Summit
4. Community Remarks
5. Updated Strategy Toolbox
6. Stakeholder Meetings
7. Corridor Audits
8. Identify and Validate the CMP Network
Purpose of CMP Performance Measures

- Benefits of Performance Measures
  - Monitoring provides the MPO with up-to-date performance information and, for the areas and facilities where congestion or deficiencies in mobility or safety are found, it leads to recommendations for improvements to be implemented through the Regional Transportation Plan, LIVABILITY 2040
Memphis MPO Performance Measures

1. Volume to Capacity Ratio
2. Travel-Time Index, Planning-Index, and Buffer Index
3. Number of Crashes
4. Transit Passenger Trips, Bus on-time Performance
5. Miles of Bike Facilities
6. Truck Hours Delay
7. VMT per capita
Engineers thinking like Planners and vice versa

- The CMP strives to combine transportation operations with planning.
- The CMP **Strategy Toolbox**, which proposes a number of strategies to reduce congestion and increase mobility, reflects both a planning and engineering perspective.
- **Planning, Transportation and Demographic trends that will influence Congestion and Mobility in the years to come**
  1. Peak Vehicle Miles Traveled (VMT) reached in the U.S.
  2. Close to half of all trips consist of 3 miles or less
  3. 2/3 of millennials born after 1984 live in cities
  4. People are driving less than before the recession
  5. Transit ridership has increased around the U.S.
Using the Strategy Toolbox - Planning

- **Demand Management Strategies**
  - Land Use Planning policies
  - Smart Growth
  - Parking Management
  - Congestion Pricing
  - Rideshare
  - Public Relations Programs
  - SOV Reduction Programs
    - Transit Incentives, Bicycling Incentives
  - Commuter Programs
    - Flexible Work Hours
    - Telecommuniting
Using the Strategy Toolbox: Planning

Multimodal Strategies

- Complete Streets
- Dedicated Transit Travel Lanes
- Adding Capacity to the Transit System
- Bicycle and Pedestrian Planning
- Park and Ride
- Real-time transit information
- Transit Signal Priority
- Electronic Fare Payment
- Multimodal Level Of Service Analysis
Using the Strategy Toolbox- Engineering

- **Operational Improvements**
  - Traffic Signal Improvements
  - Traffic Calming
  - Reversible Lanes
  - Access Management
  - Road Diets
  - Ramp Management Strategies

- **Strategic Capacity Enhancements**
  - New Roadways and Travel Lanes
  - Bottleneck Removal
  - Interchange Construction
  - Freight Capacity Enhancements
Next Steps

• Finish the Memphis MPO Congestion Management Process Document

• Review by State and Federal Agencies

• Public Review

• Adopt the CMP at the Transportation Policy Board of the Memphis MPO
Questions
Agenda

- Study Purpose
- Study Goals and Objectives
- Study Approach
- Study Process
- Evaluation Framework
- Identification of Initial Alignments
- Initial Screening Criteria
- Initial Screening Results
- Potential Modes/ Stops
- Project Schedule
- Next Steps
Purpose of Alternatives Analysis (AA) Study

- Engage the community regarding transit needs in Midtown Memphis
  - Internal Circulation
  - Regional Connectivity

- Develop enhanced transit service options to meet community needs
  - Bus Rapid Transit
  - Trolley/Modern Streetcar
  - Light Rail Transit
  - Complementary bus service and facility investments

- Advance a “signature” transit service for the community
  - Reinforces neighborhood vitality
  - Creates momentum for comparable service enhancement throughout the MATA area

- Position study recommendations for federal funding
- Position MATA for growth
Study Goals & Objectives

Enhance: Make Midtown Corridor transit service more compelling

Connect: Connect neighborhoods and improve local circulation

Develop: Support local and regional economic development goals

Thrive: Strengthen Midtown Corridor neighborhoods and business areas

Sustain: Create an environment that will be sustainable over the long term
Study Approach

- **Identify Corridor Goals and Objectives**
  - Service within corridor
  - Regional connectivity
  - Access to key sites
  - Economic development

- **Develop and Evaluate Conceptual Route Alternatives**
  - Identify potential high capacity transit routes (mode neutral)
  - Evaluate based upon goals and objectives
  - Select final options for detailed development

- **Develop Final Service Options**
  - High capacity transit routes (by mode)
  - Overall transit service improvements (internal and external to corridor)
Study Approach - Continued

- **Evaluate Final Service Options**
  - Mobility impacts for transit riders
  - Traffic and parking impacts along route(s)
  - Economic impacts
  - Environmental impacts
  - Costs for implementation (capital and operating)

- **Selection of Locally Preferred Alternative**
  - Public input
  - Stakeholder input
  - Board review and action

- **Implementation Plan**
  - Funding options
  - Staging and prioritization of service improvements
Overall Alternatives Analysis (AA) Process

1. **Identification of Potential Alignments**
   - Long List of Alignments

2. **Tier 1 Screening**
   - Screening of Long List of Alignments

3. **Development of Alternatives**
   - Determine services and facilities associated with each alignment
   - Alternatives:
     - Alt 25
     - Alt 2B
     - Alt 15
     - Alt 1B

4. **Tier 2 Evaluation**
   - Detailed Evaluation of Alternatives
   - Locally Preferred Alternative (LPA)
Goals & Objectives

**Goal 1: Enhance**

Make Midtown Corridor transit service more compelling

**Objectives:**
- Provide better service for existing transit users and attract new riders
- Provide fast, frequent, comfortable, and reliable service
- Improve transit options for Memphis’ most vulnerable residents

**Goal 2: Connect**

Connect neighborhoods and improve local circulation

**Objectives:**
- Improve access to transit for Midtown Corridor residents
- Improve access to jobs
- Improve connections to major attractions and destinations
- Enhance access to civic and cultural assets
- Enhance access to visitor destinations
- Complement other transit investments and transit plans

**Goal 3: Develop**

Support local and regional economic development goals

**Objectives:**
- Support small businesses and retail districts
- Foster compact, mixed-use development
- Attract residential and commercial growth

**Goal 4: Thrive**

Strengthen Midtown Corridor neighborhoods and business areas

**Objectives:**
- Support community desires
- Support and enhance the character of neighborhoods
- Support walkable neighborhoods and multimodal transportation choices

**Goal 5: Sustain**

Create an environment that will be sustainable over the long term

**Objectives:**
- Develop/Implementable transit services
- Develop cost-effective transit solutions
- Reduce greenhouse gases
- Minimize impacts on natural, historical, and cultural resources

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**Tier 1 Screening Criteria (Higher Level)**

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<th>Screening Criteria</th>
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<td>ENHANCE Make Midtown Corridor transit service more compelling</td>
<td>Ridership on existing transit services</td>
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<td>Provide better transit service for existing riders and attract new riders</td>
<td>Directness and average auto speeds</td>
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<tr>
<td>Provide fast, frequent, and reliable service</td>
<td>Transit-sensitive residents and social service centers within ½-mile of alignment</td>
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<tr>
<td>Improve transit options for Memphis’ most vulnerable residents</td>
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**Tier 2 Evaluation Criteria (Detailed)**

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<td>ENHANCE Make Midtown Corridor transit service more compelling</td>
<td>Total projected ridership</td>
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<td>Provide better transit service for existing riders and attract new riders</td>
<td>Directness, average speeds, frequency, and alignment traffic conditions</td>
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<tr>
<td>Provide fast, frequent, and reliable service</td>
<td>Transit-sensitive residents and social service centers within ½-mile of stations</td>
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Identification of Initial Alignments

- Input from stakeholders and the public
- Ridership on existing routes
- Population and employment densities
- Service to major activity centers/planned developments
- Streets that would be suitable for HCT
Initial Universe of Alignments

- **26 Alignments**
- All except one to/from downtown
- All major arterials
- All major activity centers
  - Hospital Area
  - Overton Square
  - Cooper-Young
  - Fairgrounds
  - University of Memphis
  - Graceland
  - Airport
  - Transit centers
  - Others
Initial Screening Criteria

Based on three factors:

- Population and employment densities high enough to warrant High Capacity Transit
- Strong terminal anchors to support bi-directional travel
- Consistent with MATA’s service design guidelines for effective transit
Initial Screening Results

- In total, **16 of 26** alignments recommended to advance into Tier 1 analysis
Potential Transit Modes/Stops

- Bus Rapid Transit (BRT)
- Trolleys
- Modern Streetcars
- Light Rail Transit (LRT)
- Superstops
Next Steps

- Branding the Project
  - Midtown Area Connector
  - macmemphis.com
- MATA Board Workshop Preliminary Screening
- Tier 1 Screening
- Tier 2 Evaluation of Modal Alternatives
- Environmental Scan of Alternatives
- Assessment of Development Potentials
- Recommendation of Locally Preferred Alternative
For more information on the Midtown Area Connector project, please visit www.macmemphis.com
Next Steps

• LIVABILITY 2040: Regional Transportation Plan
  • Public review of draft plan in July

• Congestion Management Process Draft Review
  • Public review phase to begin in mid-April

• New Business
2015 ATAC Meeting Calendar

• Next Meetings
  • May 26, 2015
  • July 28, 2015
  • October 28, 2015

• Meeting Location
  Benjamin L. Hooks Central Library
  3030 Poplar Avenue, Memphis
  Conference Room A