Presentation Outline

- Background
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- Objectives & Deliverables
- Project Schedule
- Project Team
- Available Resources
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- Wrap-Up and Next Steps
Background

WVDOT Traffic Modeling & Analysis (TM&A) Unit responsible for collection, analysis, and reporting of traffic data

- **Volume** (AADT, VMT, etc.)
- **Vehicle Classification** (motorcycles, passenger cars, buses, trucks, etc.)
- **Weight** (Weigh-in-Motion (WIM))
Background

- **Volume**
  - Continuous counts (60 locations statewide)
  - 2500 Short Duration counts annually

- **Vehicle Classification**
  - Motorcycles
  - Passenger Cars
  - Buses
  - Trucks

- **Weight**
  - Trucks
Background

- Traffic Data uses (state):
  - Engineering Design (pavement, geometric)
  - Construction
  - Safety Projects
  - Capacity Analysis
  - Truck route planning

- Traffic flow maps
- Permanent Automatic Traffic Recorder (PATR) maps
- Performance-based Planning
- Project Identification & Prioritization
- Asset Management
- Traffic Forecasting
Background

- Traffic Data uses (Federal) and Guidelines:
  - Highway Performance Monitoring System (HPMS) (AADT, annual vehicle miles traveled (VMT))
  - Pavement deterioration models
  - Economic and freight research & planning
  - Traffic Monitoring Guide (TMG)
  - AASHTO Guidelines for Traffic Data programs
## Scope

The Scope of Work to develop the *Traffic Data Collection, Processing and Analysis Handbook* includes 6 basic Tasks:

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Objective

Each project task has its own objective, however, the overall project objective coincides with the objective of Task 6:

“To develop a Traffic Data Collection, Processing and Analysis Handbook to support the traffic data responsibilities of the Traffic Modeling and Analysis Unit”
Task Objectives and Deliverables

Task 1: Existing Traffic Processes

Objective: To review, document and evaluate WVDOT’s existing Traffic Monitoring Program (example from Alaska DOT&PF)
Task Objectives and Deliverables

Task 1: Existing Traffic Processes

Deliverables: Draft and Final Technical Memorandum #1 documenting the existing traffic processes and the evaluation of these processes
Task Objectives and Deliverables

**Task 2: Traffic Data Requirements**

**Objective:** To document the traffic data collection, analysis, and federal and state reporting requirements

**Deliverables:** Technical Memorandum #2 documenting the federal and state traffic data collection and reporting guidelines and requirements
Task Objectives and Deliverables

Task 3: Gaps in Traffic Processes

Objective: To determine and document the gaps in the traffic data collection, processing, analysis, and reporting procedures used at WVDOT that are needed to support the traffic monitoring program.
Task Objectives and Deliverables

Task 3: Gaps in Traffic Processes (example from TMG – Continuous Count process)
**Task Objectives and Deliverables**

**Task 3: Gaps in Traffic Processes** *(traffic data collection needs)*

<table>
<thead>
<tr>
<th>USER NEEDS</th>
<th>SYSTEM NEEDS</th>
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<tbody>
<tr>
<td><strong>ID</strong></td>
<td><strong>User Need</strong></td>
</tr>
<tr>
<td>Access Traffic System</td>
<td>TU001</td>
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<tr>
<td></td>
<td>TU001-S02</td>
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<tr>
<td>Manage incoming Traffic Data Files</td>
<td>TU002</td>
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<tr>
<td></td>
<td>TU002-S02</td>
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<td></td>
<td>TU002-S03</td>
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<td>TU003-S03</td>
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<td>TU004</td>
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<td>TU004-S02</td>
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<td>TU004-S03</td>
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<tr>
<td>Validate Traffic Data</td>
<td>TU005</td>
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<td>TU005-S03</td>
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<td>TU005-S04</td>
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Task Objectives and Deliverables

Task 3: Gaps in Traffic Processes

Deliverables: Draft and Final Technical Memorandum #3 to document the gaps in the traffic data collection and reporting processes at WVDOT that must be addressed to comply with federal and state guidelines and requirements.
Task Objectives and Deliverables

Task 4: Recommendations

Objective: To compile a comprehensive set of recommendations for addressing needs and gaps in the traffic data collection, processing, analysis, and reporting procedures used at WVDOT.

Deliverables: Draft and Final Technical Memorandum #4 to document specific recommendations to support the traffic monitoring program at WVDOT.
Task Objectives and Deliverables

Task 5: Traffic Data Business Plan

Objective: To develop a Traffic Data Business Plan for implementing recommendations outlined in Task 4
Task Objectives and Deliverables

Task 5: Traffic Data Business Plan

- Utilize guidance from **NCHRP 8-70** (NCHRP Report 666)
  
  *Target-Setting Methods and Data Management to Support Performance-Based Resource Allocation by Transportation Agencies*

- NCHRP 8-70 - best practices from other state DOTs
  
  - Data Management
  - Data Business Planning
  - Data Governance
  - Performance-Management
  - Target Setting
Task Objectives and Deliverables

Task 5: Traffic Data Business Plan

Develop Data Business Plan Framework (Example from Alaska DOT&PF)
Task 5: Traffic Data Business Plan - Define Traffic Data Communities of Interest (COIs) (Example from Alaska DOT&PF)
Task Objectives and Deliverables

Task 5: Traffic Data Business Plan – Incorporate data flow diagrams and business process narratives
Task Objectives and Deliverables

**Task 5: Traffic Data Business Plan**

Develop Action Plan to implement recommendations from Task 4

**Deliverables:** Draft and Final Traffic Data Business Plan
Task Objectives and Deliverables

Task 6: Traffic Data Collection, Processing and Analysis Handbook

Objective: To develop a Traffic Data Collection, Processing and Analysis Handbook to support the traffic data responsibilities of the Traffic Modeling & Analysis Unit

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<td><strong>Task 6 – Traffic Data Collection, Processing and Analysis Handbook</strong></td>
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Project Team

- **WVDOT Traffic Modeling & Analysis Unit (TM&A)**
  - Gehan Elsayed, *WVDOT Project Manager*
  - *TM&A staff*

- **Cambridge Systematics, Inc.**
  - Barbara Sloan, *Principal in Charge*  
  - Anita Vandervalk, *Project Manager*  
  - Kim Hajek, *Deputy PM, Transportation Analyst*  
  - Dena Snyder, *Transportation Analyst*  
  - Hui Chen, *Transportation Analyst*  
  - Lisa Smith, *Transportation Analyst*
Available Resources

- WVDOT Traffic Modeling & Analysis Unit
- MPOs
- Other traffic data users at WVDOT
- TRB Highway Traffic Monitoring Committee (ABJ-35)
- NHI – TMG Training Course
- Traffic Monitoring Guide
- AASHTO Guidelines for Traffic Data Programs
- NCHRP 8-70
- HPMS Field Manual
Questions
Wrap-Up/Next Steps
Next Steps

- Identify Key WVDOT and external DOT contacts for project
- Conduct official Project Kick-off Meeting at WVDOT offices
- Conduct on-site work group meetings with TM&A staff and subject matter experts (GIS, traffic, HPMS, etc.)
- Begin review of existing traffic data collection, analysis, and reporting documentation
Thank You!