TRAVEL MONITORING PROGRAM

Contractor Procurement

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TPB Travel Forecasting Subcommittee (TFS)
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Agenda Item 5

National Capital Region
Transportation Planning Board

Presentation Outline

- Background and brief history of the TPB travel monitoring program
- Previous travel monitoring activities and evolution of program
- Why procure a contractor?
- Request for Proposals (RFP) scope of work and status
- Linkage with NextGen travel forecasting model
- Planned travel monitoring work for Spring 2018
- Next steps

Background and Brief History of the TPB Travel Monitoring Program

- TPB has maintained an active travel monitoring program for decades
- "…involves the conduct of special traffic counts, travel time runs, and other special travel monitoring studies to support regional travel demand model validation and refinement activities and other activities…"
- Funded in both the "core" Unified Planning Work Program (UPWP) and Technical Assistance Program
- Early 1990s, multiple small-budget discrete projects
- Early 2000s, two line items in core UPWP: cordon counts and congestion monitoring and analysis
- Initial oversight: TPB Travel Monitoring Subcommittee (TMS)
- TMS merged into TFS effective July 1, 2004

Example Travel Monitoring Studies (1)

- Non-motorized (bicycle and pedestrian) data collection using field personnel
- Two-day ramp counts, three-day volume counts, and seven-day classification counts of motorized vehicles to support the District of Columbia (DC) annual HPMS submittal
- Special generator studies such as entrance counts at major civilian and military facilities impacted by actions of the Base Realignment and Closure commissions and other Congressional actions using field personnel
- Special generator studies such as entrance counts at major regional freight generators using Bluetooth readers
- Analysis of parking cost on traveler behavior
- Park and Ride utilization and turnover studies
- Motorized vehicle volume and occupancy on freeways (both general purpose and HOV lanes) using windshield inspection methodology
- Aerial monitoring of the freeway system (e.g., Skycomp)
- Truck and bus sign inventory, mapping and GIS layer development in DC
- Bus transit patronage counts (ons/offs) at stops and major bus bay locations
- Survey and GIS mapping / layer development of loading zones in DC using field personnel

Example Travel Monitoring Studies (2)

• Non-motorized data collection using video detection (Miovision)
• Highway travel time (floating car method) on freeways (general purpose, HOV/HOT/ETL) and arterials or longer specialized routes
• Cordon counts of both motorized (including transit) and non-motorized travel. (Cordons: “Metro Core”, the Capital Beltway, a regional “external cordon”, suburban employment centers, and other specialized study areas)
• Residential trip generation studies (similar to those conducted for the Institute of Transportation Engineers)
• Parking utilization and turnover studies using license plate readers
• Intercity bus patronage counts at Union Station and other major regional stops
• Volume and classification counts (cars, trucks, light-duty commercial vehicles, etc.) at regional locations using field personnel
• Special generator studies (e.g., Klingle Road, NW)
• Motorcoach volume and classification counts in DC using field personnel
• Regional commercial vehicle roadside (intercept / interview) survey
• Private loading dock inventory, mapping and GIS layer development in the DC using field personnel and the ArcGIS Collector application

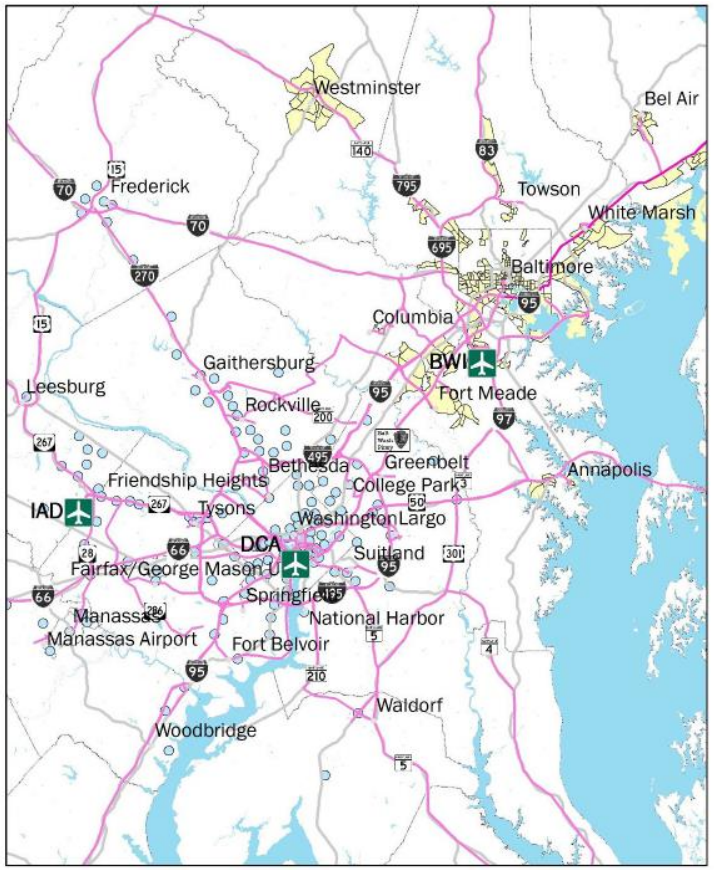
Program Evolution

- Move from 3-year cycle for cordon counts to an as-needed update basis; some projects discontinued
- Shift from field data collection personnel to non-intrusive collection (GPS, video, loops, etc.) and use of archived, continuously collected data sources (i.e., “Big Data”)
  - VPP for congestion monitoring and analysis
  - AirSage for external travel analysis
- Organizational / staffing changes
- Changes in planning requirements (e.g., PBPP) and data requirements for travel demand model

Weigh station on SB US 15 / 17 / 29 Bypass, Warrenton VA

Project Evolution: Regional Airport Ground Access Travel Time Study

- Conducted 1989, 1995, 2003, 2011 using field data collection (floating car travel time runs)
- 2015 study completed using VPP data and included comparison with similar data from 2011
- Travel Time Indices (TTIs) reported
- Updates now part of regular air systems planning cycle



Routes analyzed for
2015 Airport Ground Access Travel Time Study

Why Procure a Contractor (1)?

- Travel monitoring has been performed by COG personnel and temporary field workers
  - Senior citizen retirees made available through a general services temporary staffing agency
- Existing program has reached a point of unsustainability
  - Pool of field data collectors is diminishing rapidly through attrition with no likelihood of replenishment
  - Level of available personnel has fallen below minimum thresholds to carry out planned program activities
  - Cancellation of planned vehicle occupancy and travel time data collection and analysis along I-270 and US 50 in Maryland during the fall 2017 count season
- TPB staff associated with the travel monitoring program no longer available

Why Procure a Contractor (2)?

- Having TPB transportation engineers in the field collecting data or managing temporary field personnel is a method on the decline
  - Not highest and best use of staff time; provides little to no value added
- While field data collection remains part of our travel monitoring program, a contractual relationship with a professional transportation firm specializing in data collection is required
- Staff also believes that the longer-term future of travel monitoring is in mining big data
- Short-term goal: continue traditional data collection
- Longer-term goal: program evolves into a big data, data science driven state of the practice
- To meet both goals, COG is issuing a broadly-scoped request for proposals (RFP) to procure a travel monitoring contractor

RFP Scope of Work and Status

- RFP 18-007: On-Call Travel Monitoring Support issued January 12, 2018
- Details may be found at the following URL:
  - https://www.mwcog.org/purchasing-and-bids/cog-bids-and-rfps/2018/01/12/rfp-18-007-on-call-travel-monitoring-support/
- Pre-proposal conference will be held on January 22, 2018 at 10:00 AM at COG, Conference Room 3 (first floor)
- Prior to the conference, technical and procedural questions concerning the RFP must be submitted in writing to Alieu Turay at aturay@mwcog.org no later than 12:00 PM on Friday January 19, 2018
- Proposal submission deadline February 2, 2018, 2:00 PM EST

Linkage with NextGen Travel Forecasting Model

From RFP 18-007:

"Potential bidders should be aware that during Spring 2018, COG, under a separate procurement, will be contracting with a qualified firm to develop the next-generation TPB regional travel demand forecasting model; travel monitoring data collection and studies that may be required as part of the model development are anticipated to be issued as task orders under this travel monitoring on-call contract."

Planned travel monitoring work for Spring 2018

From RFP 18-007:

"As of the time of RFP publication, the following travel monitoring activities are anticipated for the spring 2018 count season:

a) Volume, occupancy, and travel time monitoring along I-270 and US 50 in Maryland
b) Volume, occupancy, and travel time monitoring along I-95 / I-395 in Virginia
c) Bicycle and pedestrian counts (24 or 48 hours) using video detection at 10 to 12 locations in Northern Virginia
d) Bicycle and pedestrian counts (4 hours in the morning, 4 hours in the evening) using field personnel at 40 locations in the District of Columbia"

Next Steps

- Proposal submission deadline February 2, 2018, 2:00 PM EST
- Convene Technical Selection Committee (TSC) and review and score proposals
- Issue contract award recommendation
- Execute contract with selected vendor(s)
- Issue task orders and begin Spring 2018 travel monitoring projects
- Future reports back to TFS

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