

Montgomery County Rapid Transit System

MD 355 Bus Rapid Transit Corridor Planning Study

Frequently Asked Questions

Project Process:

1. Where are we in the planning for Bus Rapid Transit (BRT) in the MD 355 Corridor?

This is the first of several rounds of engineering, ridership forecasting, and cost estimation that will be completed before construction of any long-term improvements. The current effort is to select a set of reasonable and feasible alternatives that are suitable for a detailed study (ARDS – Alternatives Retained for Detailed Study). We will make those selections within the 2016 calendar year.

The next step, a detailed study leading to a Locally Preferred Alternative (LPA), can take several years depending on the number and type of alternatives selected. If the LPA ultimately selected involves construction, additional work may be required to secure environmental approvals and to prepare detailed engineering design.

2. What is the role of the Corridor Advisory Committee (CAC) in planning BRT for the MD 355 Corridor?

Mandated by the Montgomery County Council when they approved the Countywide Transit Corridors Functional Master Plan, the CACs serve as one part of the overall public outreach process for the BRT corridor studies. Additional activities such as public workshops, community meetings, and the project website allow the general public to learn about the projects and provide input and feedback as the corridor studies progress.

The CACs meet regularly with the project team to review information, ask questions, and provide feedback. Meeting summaries are published on the project website and feedback is reviewed by the project team. The CACs are advisory committees, not decision-making bodies.

3. What additional opportunities are there for public input beyond the CAC process?

The project team is available to meet with community members and organizations upon request. Two formal opportunities to learn about the BRT corridor studies and provide feedback include the Project Introduction Open Houses in the spring 2016 and the Alternatives Open Houses in the fall 2016.

4. Who should the public contact to request information or a meeting?

Please contact these project team members to request information or a meeting:

Rick J. Kiegel, Maryland Transit Administration: rkiegel@mta.maryland.gov

Joana Conklin, Montgomery County Department of Transportation: Joana.Conklin@montgomerycountymd.gov

5. Where are project documents available to the public?

Project documents such as the CAC presentation materials, meeting summaries, and other project-related information can be found on the Montgomery County Rapid Transit System website at <http://www.montgomerycountymd.gov/RTS>.

6. When will the Purpose and Need be formally finalized?

The Locally Preferred Alternative (LPA) report will include a draft statement of Purpose and Need for the project. The final statement of Purpose and Need will be approved as part of the environmental approval process, if one is required.

7. Why do you use National Environmental Policy Act (NEPA) language if this project is not in the NEPA process?

This study is being performed to be consistent with Federal Transit Administration (FTA) guidelines which state that *“Although it [the statement of Purpose and Need] is specifically required by NEPA regulations and typically serves as its own chapter in a Draft and Final EIS, the definition of a concise, direct “purpose and need” statement can help guide the conduct of any corridor-level analysis, whether or not it is part of a NEPA review.”*

Travel Forecasting:

8. What transportation models are being used in this study?

There are two types of models used in the forecasting and analysis for MD 355. The Metropolitan Washington Council of Governments (MWCOC)/Transportation Planning Board (TPB) regional travel demand model is used to project ridership on transit and traffic volumes on the road system. Several models are used to simulate and forecast traffic conditions in the corridor including SYNCHRO, which looks at intersection performance, and VISSIM, a traffic network simulation model.

The travel demand model being used for this study is based on the MWCOC/TPB version 2.3.57 regional model, and has been further validated to match conditions in the MD 355 BRT study area. This model includes planning assumptions reflecting the 2014 Constrained Long Range Plan (CLRP) and MWCOC’s regionally-adopted Round 8.3 Cooperative Land Use Forecast. As part of this process, the project team has tailored the regional model to include more specific information about the MD 355 study area. The traffic volumes projected by the regional model are loaded as input to VISSIM to produce forecasts of traffic conditions along the roadways in the study area. Simulations are run for the future No-Build condition and for each of the conceptual alternatives.

The results of the various model runs are used to compare the performance of the conceptual alternatives and to screen out those that are not realistic or feasible.

9. What is the Metropolitan Washington Council of Governments (MWCOC)?

This regional organization is an independent, nonprofit association that is comprised of elected officials from local governments, the states of Maryland and Virginia, and the U.S. Congress. The MWCOC’s Department of Transportation Planning provides staff for the National Capital Region Transportation Planning Board (TPB), which is the federally designated Metropolitan Planning Organization (MPO) for the Washington region and prepares transportation plans and programs for the region.

10. Why is the MWCOG/TPB travel demand model used (and not the County’s model)?

The MWCOG/TPB model, a sophisticated state-of-practice regional travel demand forecasting tool, has long been used for a variety of purposes including the development of the region’s Constrained Long Range Plan, and highway, transit, and multi-modal project planning studies in the major corridors in the Washington Metropolitan region. The version of the MWCOG/TPB model used for the MD 355 BRT study has been specifically refined and validated for the MD 355 BRT study area. It has enhanced model performance and details which will serve the needs of the MD 355 BRT study well. In particular, the latest land use development and growth and roadway networks have been incorporated.

11. Where does MWCOG/TPB receive its modeling data?

The MWCOG/TPB model uses information from the Census data, the Household Travel Survey, transit on-board surveys, commercial vehicle surveys, traffic counts, and ridership information from transit agencies in the modeling domain. Land use projections are prepared through a cooperative forecast procedure involving local, state and regional agencies. The TPB approves the forecasts for use in a variety of planning processes across Maryland, Virginia, and the District of Columbia.

12. What refinement and calibration efforts were undertaken to adapt the regional model to the MD 355 study area?

The MD 355 study area in the MWCOG/TPB model has been refined in a number of ways to better represent conditions in the study area and to allow for better representation of BRT in subsequent forecasting. Some of the refinements made to the model include:

- Reviewed and revised highway network assumptions regarding roadway characteristics (number of lanes, facility type, etc.) in the study area using aerial photography.
- Used current and historic transit schedules to review and revise transit service characteristics in the study area.
- Slightly modified “area types” in the White Flint area to better reflect the impact of population/employment density on MD 355 capacity and operations.
- Reviewed land use clustering to more accurately represent walk accessibility to transit (original model assumes even distribution of land use with each TAZ)
- Adjusted coding of existing corridor bus routes (RO 46, 55, and 75) to better represent variations in travel speed by segment.
- Several adjustments to adjust 2040 demand on the Red Line to better limit demand to available capacity (including capacity on Red Line cars and at Park-and-Ride locations).

These improvements together result in a model that better represents existing conditions in the study area, and will be better able to represent potential alternatives.

13. How does the model deal with multi-segment trips, like parents who drop kids off at school, then go to gas station, then to work? Does this model capture each of those trips?

This model treats each segment as an individual trip; it does not link or chain these trip segments in the way that individual drivers might think of them. The model defines each segment by trip purpose, for example, home-based-other for a trip with one end at the home and the other end at a non-home location.

Land Use and Growth Assumptions

14. What factors influence daily trip growth in the study area?

The three main factors considered in trip forecasts are population growth, household growth, and employment growth.

15. What assumptions were made regarding work destinations, commuting, etc.?

The MWCOG/TPB travel demand model uses existing and planned land use to determine the origins and destinations for trips, including commute trips. MWCOG updates the projected land use periodically through a process of regional consensus.

16. What is the source of the projected growth numbers used for forecasting?

The growth numbers used in the study are based upon the forecasts developed by MWCOG/TPB. The MD 355 study forecasts use the MWCOG/TPB land use projections Round 8.3, as modified by the Maryland-National Capital Park and Planning Commission (M-NCPPC) to reflect recent land use changes. The study area for the MD 355 BRT study is refined, validated, and updated to Montgomery County land use.

17. What developments were included in the forecasting process?

The regional travel demand model is updated to include the latest land use information available, as provided by M-NCPPC, including anticipated developments such as White Flint and White Oak among others. Potential trips to and from planned development are taken into consideration.

18. Why is the MWCOG/TPB Round 8.4 not used?

Round 8.4 was adopted in October 2015, after the MD 355 BRT project was well under way. The changes in Round 8.4 land use largely affected areas outside of Montgomery County.

Transit Service and Operations

19. Does the 2014 bus ridership data, include every rider within that study area?

The 2014 bus ridership includes riders of Metrobus, Ride On, and MTA Commuter Bus. The project team collects the data directly from WMATA, Montgomery County Transit, and MTA.

20. Is an on-board bus survey needed to determine exact ridership origin-destinations?

An on-board survey is not needed at this stage of study. The regional model is the appropriate tool for ridership forecasts for this level of analysis and is updated regularly using traffic and transit data, including on-board surveys, collected periodically.

21. When will the expected BRT ridership be provided?

Ridership forecasts for the proposed BRT conceptual alternatives will be prepared in mid-2016 and will be used as part of the screening process for the selection of alternatives retained for detailed study.

Traffic Operations

22. Travel demand is fluid and people decide to change paths based on minute-to minute traffic conditions. Is there any modeling of uncertainty of people's route choices?

The current study looks at the average weekday peak period experienced on the roadway. The study does not include modeling for all incidents or occurrences that could affect reliability or travel paths.

23. Why are truck volumes important?

Trucks are an input used in the modeling to accurately reflect the existing traffic conditions. Because of their larger size, driver behaviors for trucks are different than those of car drivers. For example, with trucks, the gap between vehicles leaving a signal is likely to be greater because truck take longer to accelerate from a stop condition.

24. Is the Watkins Mill Road/I-270 interchange taken into consideration?

Yes, the planned interchange is part of the study model network. Projects currently **funded** in the Fiscally Constrained Long Range Plan (CLRP) are taken into consideration and are factored into the traffic forecasts.

25. What data sources are used for the study?

Current data was collected during 2011 and 2015: WMATA bus ridership, Ride On ridership, MTA ridership, SHA traffic counts (turning movements, class counts for truck percentage, and pedestrian volumes), Montgomery County signal timings, corridor car level travel time runs, corridor bus dwell and bus travel time runs, and MWCOG Round 8.3 data as modified by M-NCPPC to include recent development projections. For additional detail, see:

- Traffic Counts: http://shagbhisdadt.mdot.state.md.us/itms_Public/default.aspx
- MWCOG: <http://www.mwcog.org/>
- M-NCPPC: <http://www.mncppc.org/>

26. What peak hours are used in the traffic operations analysis?

The peak hours analyzed for this study were 7:00 a.m. to 9:00 a.m. and 5:00 p.m. to 6:00 p.m. These hours are representative of the worst typical congestion in the corridor.

27. How were the peak hour traffic volumes established?

Existing peak hour traffic volumes for the study use traffic counts from SHA's Traffic Monitoring System (TMS) for locations with counts taken between 2011-2014, and included new count locations where needed, performed in fall of 2014. Volumes were balanced throughout the entire corridor.

28. Does the simulation model capture the delay building prior to the 7:00 a.m. or 5:00 p.m. peak hour?

Yes, the simulation models takes into consideration the time to build up the delay, called seeding time, which is used to ensure that the network is "loaded" when the peak period begins.

29. Why are only AM/PM peak hours considered and not off-peak hours and weekend traffic?

The AM/PM peaks are typically the worst-case traffic conditions for corridors. The analysis at this phase of study is focused on the weekday commuter peak, which occurs several days a week. However, if additional periods are key, such as off-peak or weekend conditions, the analysis could be prepared as part of the detailed study of alternatives.

30. What calibration efforts were undertaken for traffic operations?

The MD 355 network is calibrated using SHA standard practices, which are more restrictive than Federal standards at this time. The calibration ensures that travel speeds simulated are within range of the collected travel speeds and vehicle throughput from the software is within range of the actual vehicle throughputs collected via counts. Additionally, the team takes bus travel time information into account.

Roadway Conditions

31. Why is crash data included in the study?

Safety is a core value for the Maryland Department of Transportation and is addressed in every planning study. The implementation of a BRT system may impact the median and/or bus stop locations and, at a minimum, a qualitative review of the crash history in the corridor must be considered.

32. How does the state determine high crash segments and what happens as a result?

A high crash segment is a portion of a roadway having a crash rate above the statewide average for similar facilities. When a segment is above the statewide average, it becomes a candidate for safety improvement and put on the list to be improved.