MD 355 South Corridor Advisory Committee Meeting #7 Summary
June 14, 2016 from 6:30 to 9:00 PM
Montgomery County Executive Office Building
101 Monroe Street
Rockville, MD 20850

Attendees

Members	
Nancy Abeles	Deborah Michaels
Joshua Raymond Arcurio	Susan Roberts
Barbara Condos	Chad Salganik
Ryan Emery	Ana Milena Sobalvarro
Roger Fox	Jan White
Celesta Jurkovich	Stephen Wilcox
Richard Levine	
Apologies	
Peter Benjamin	Todd Lewers
Bill Carey	Damon Luciano
Francoise Carrier	Jeremy Martin
Jay Corbalis	Patty Mason
Elizabeth Crane	Philip Neuberg
Kristi Kruzat	Sasha Page
Ronit Dancis	Ananda Palanisamy
Jad Donohoe	D. Todd Pearson
Miti Figueredo	Ralph Schofer
Greg Ford	David Sears
Debbie Friese	Gerard Stack
Jerry Garson	John Alex Staffier
Victoria Hall	Emily Vaias
Peter Katz	Francine Waters
Eleanor Kott	Jon Weintraub
Tony Kouneski	Max Wilson
Staff	
Lead Facilitator – Yolanda Takesian	MTA – Kyle Nembhard
Study Team – Alvaro Sifuentes	SHA – Laura Barcena
Facilitation Staff – Andrew Bing	Montgomery County Department of
Facilitation Staff – Liz Gordon	MCDOT – Joana Conklin
AECOM Transit Service/Forecasting– Chris Bell	MCDOT – Warren Barrett
Maryland Transit Administration (MTA) –	WMATA – Jamaica Arnold
MTA – Rick Kiegel	

Handouts

Handouts provided to CAC Members included:

- Agenda for CAC Meeting #7
- Presentation for CAC Meeting #7
- BRT Draft Alternatives Handouts
- BRT Draft Service and Station Map
- Summary of CAC Meeting #6

Meeting materials and video of the meeting will be posted on the project website: *www.montgomerycountymd.gov/rts*

Introduction

Facilitator Yolanda Takesian welcomed attendees, introduced meeting content, and outlined the agenda.

Montgomery County DOT Update

Joana Conklin updated attendees on the status of an $80,000 grant that MCDOT applied for through the Transportation Land Use Connections (TLC) grant program. TLC grants are made available to jurisdictions in the region by the Metropolitan Washington Council of Governments (MWCOG). The County's application was for a consultant to develop BRT station prototypes that can be used on various corridors. The grant was awarded, and a consultant is being chosen to complete the work. The project should begin in late summer-early fall and be completed by June of 2017. The County plans to come back to the CAC with ideas generated through this effort.

Summary of Open House

Jackie Seneschal updated attendees on the project public open houses conducted since the last CAC meeting. Between the two open houses about 160 people attended, as a result of outreach through mailers to addresses within a half mile of the corridor and other media. Outreach was performed in English, Spanish, Russian, Chinese and Vietnamese. Ms. Seneschal encouraged CAC members to continue to share public open house and CAC materials with their neighborhood associations and other networks.

The BRT project team also received around 50 comments directly through the online comment form. The comments received both through the form and the open houses focused mostly on the following non-exhaustive list of topics:

- Relationship of BRT to Metro
- BRT amenities
- Impact to traffic operations
- Improved bicycle facilities
- Dedicated BRT lanes to attract riders
- Fixing existing infrastructure (roads, Metro)
- Parking needs at northern station
- Need for frequent service (5-10 minutes)

Commenters were also pleased that an alignment was added to Observation Drive. The fact that comments from open house visitors were similar to those expressed by CAC comments is a good indication that the CAC process is doing a good job of representing the public's input.

(Question) Different stations will have different needs. How will the work recognize this?

(Response) There will be a variety of station prototypes considered; analysis will predict ridership and size stations accordingly.

(Q) How did the attendance at the first and second open houses compare?

(R) There were approximately 60 attendees at the first meeting, and 100 at the second.

(Q) How did people react to the Observation Drive alignment?

(R) We heard a lot of support for it. People also expressed concerns about community impacts that could occur with any widening of MD 355 in that section.

Project Process and Screening Criteria

Ms. Seneschal discussed the progress made through the CAC process thus far, and showed where this meeting falls in that timeline, namely, introducing five conceptual BRT alternatives. Next, the process will turn toward comparing alternatives against each other, in terms of how well they meet the project's purpose and need and screening criteria.

The Alternatives screening process starts with examining fundamental physical constraints, followed by a high level comparative analysis. Those results will be presented to the CAC and to the broader public in the Fall. After the options have been vetted, they will be narrowed down to several that will be advanced to detailed study. These alternatives will be evaluated in greater detail and quantitatively compared before the selection of a Locally Preferred Alternative (LPA).

The general screening criteria that will be used to evaluate the conceptual alternatives include

- Transit ridership (BRT, bus, total)
- Boardings by station
- Travel time (BRT, automobiles)
- Person throughput
- Jobs/people within 45 and 60 minutes
- Property impacts
- Environmental impacts
- Costs (capital, operating)

(Q) Will changes to Metro ridership be accounted for?

(R) Metro ridership will be analyzed, but BRT service will not likely have much impact on Metro ridership.

(Q) Is total transit time including transfers between service also included in the analysis?

(R) Yes, that will be included.

Conceptual Alternatives

Alvaro Sifuentes reviewed with the CAC the three components that characterize each alternative: the running way, the station locations, and a service plan. At the previous CAC meeting, the members had the opportunity to review the station locations and service plans proposed for the entire corridor. The service plan consists of three routes:

- Clarksburg (northern termini) to Rockville Metrorail Station;
- Lake Forest Transit Center to Rockville Metrorail Station; and
- Montgomery College (Rockville Campus) to Southern Termini.

Meeting 7's discussion will focus on the running way.

The development of conceptual alternatives began with the Countywide Transit Corridors Functional Master Plan. Given the diverse characteristics found along the corridor, the team has divided it into the seven sections described below.

- Section 7 – Clarksburg / Germantown (~6.2 miles), Clarksburg to Middlebrook Road
    - MD 355 transitions to a four lane roadway at Middlebrook Road and then quickly to a two lane roadway north of MD 27
    - Character and land use along MD 355 changes considerably from a suburban to rural environment
    - Section would isolate comparison between the MD 355 alignment and an Observation Drive alignment

- Section 6 –Germantown / Montgomery Village (~3.2 miles), Middlebrook Road to MD 124 (Montgomery Village Avenue)
    - Predominantly a six lane roadway section
    - Predominantly suburban in nature
    - North of the congested MD 124 intersection

- Section 5 – Gaithersburg (~1.4 miles), MD 124 (Montgomery Village Avenue) to Summit Avenue
    - Challenging section with many constraints. Alvaro discussed how more detail would be provided for this section on a later slide

- Section 4 – Rockville / Shady Grove (~3.2 miles), Summit Avenue to College Parkway
    - Predominantly a six lane roadway section
    - Similar land use with commercial on the east side of the road and pockets of residential on the west side

- Section 3 – Rockville Town Center (~1.8 miles), College Parkway to Dodge Street
    - Challenging section with many constraints. Mr. Sifuentes discussed how more detail would be provided for this section on a later slide

- Section 2 – White Flint / Rockville (~4.1 miles), Dodge Street to Grosvenor Metrorail Station
  - Predominantly a six lane roadway section
  - Land use is commercial
  - White Flint Sector Plan and Rockville Pike Plan cover most of this section

- Section 1 – Bethesda (~3.2 miles), Grosvenor Metrorail Station to Bethesda Metrorail Station
  - Challenging section with many constraints. Alvaro discussed how more detailed would be provided for this section on a later slide

Sections 1, 3, and 5 are the most constrained and complicated of the corridor. The character of the roadway and constraints on the possible BRT running way types in those places were discussed in more detail.

- Section 5, Gaithersburg
  - 5 lane section
  - Center left turn lane used to access businesses
  - Buildings in close proximity to roadway
  - Constrained by bridge over railroad tracks and roadway

- Section 3, Rockville Town Center
  - Buildings in close proximity to roadway
  - Service roads providing inter-parcel connectivity
  - Rail tracks on east side in close proximity to roadway
  - Park and historic property

- Section 1, Bethesda
  - Buildings in close proximity to roadway south of Jones Bridge Road
  - Federal properties abutting both sides of roadway
  - Three listed historic properties
  - Beltway bridges

Mr. Sifuentes then explained each of the conceptual alternatives using the plans provided to the CAC members and available on the project website.

- Alternative 1: No Build
  - Includes planned and programmed transit and roadway improvements as currently listed in the Financially Constrained Long Range Transportation Plan (CLRP)

- Alternative 2: Transportation System Management (TSM - Figure 1)
  - Enhanced bus service in existing lanes, including greater frequency
  - Bus will be in mixed traffic
  - Queue jumps at some intersections
  - Transit Signal Priority (TSP) at some intersections
  - TSM is being considered for entire length of the corridor from Bethesda to Clarksburg

Introduction of Alternative 3:

Alternative 3 was divided into a 3A and 3B option. Both Alternatives include BRT that is mostly in the median, however Alternative 3A provides BRT service from the Grosvenor Metrorail Station to the Clarksburg Outlets along Observation Drive and Alternative 3B provides BRT service from the Bethesda Metrorail Station to Redgrave Place in Clarksburg, staying on MD 355. The specifics of each alternative are listed below, and depicted graphically on Figure 2 and Figure 3 which are available with the meeting #7 materials at http://www.montgomerycountymd.gov/RTS/md355north.html.

- Alternative 3A:
  - Provides new BRT service from the Grosvenor Metrorail Station to the Clarksburg Outlets
  - No BRT service between Bethesda and Grosvenor Metrorail Stations
  - Service would be on dedicated lane(s) from Grosvenor Metrorail Station to Middlebrook Road along MD 355
  - Two dedicated median lanes where feasible proposed for Sections 2, 4, 6 through widening of the road
    - Within the median sections all existing unsignalized intersections would be closed. Those movements would need to occur at signalized intersections.
  - Bi-directional dedicated median lane proposed for Section 3 achieved through the widening of the road
    - Passing zones would be created to achieve necessary headways
    - Within the median sections all existing unsignalized intersections would be closed. Those movements would need to occur at signalized intersections.
  - Bi-directional dedicated median lane proposed for Section 5 achieved through the repurposing of the center turn lane
    - Passing zones would be created to achieve necessary headways
    - All left turn movements will only occur at signalized intersections
  - Service would be in mixed traffic north of Middlebrook Road up to the Clarksburg Outlets along Observation Drive (Section 7)

- Three Route Patterns Along MD 355
  - The first (northern) pattern is from either Clarksburg Outlets (Alternative 3A) or Redgrave Place (Alternative 3B), and would end at Rockville Metro Station
  - The second (northern) pattern is from Lake Forest Transit Center to Rockville Metro Station
  - The third (southern) pattern is from Montgomery College (Rockville Campus) to the southern terminus, which would be Grosvenor (Alternative 3A) or Bethesda Metro Station (Alternative 3B)

- Alternative 3B
  - Provides new BRT service from the Bethesda Metrorail Station to Redgrave Place in Clarksville.
  - Service would be in dedicated lane(s) from Bethesda Metrorail Station to Redgrave Place along MD 355.
  - Alternative 3B running way options are the same as Alternative 3A except for:

- Section 1 – BRT would operate in the curb lane. The roadway inside of the Beltway will be converted into a reversible system where more lanes will be assigned to the peak direction of traffic. This condition is similar to the existing reversible system on US 29 inside the Capital Beltway. A lane in the off-peak direction would be repurposed. For example in the AM peak direction there would be four lanes of southbound traffic into Bethesda where the curb lane would be the dedicated BRT lane and shared with local buses and right turning movements to and from MD 355. The BRT operation in the off-peak direction would be in mixed traffic.
  - A median BRT lane was not analyzed because there is a proposed pedestrian tunnel at Bethesda Medical Center, which is intended to diminish at-grade pedestrian crossings of MD 355 at this location. A median BRT station would be in direct conflict with the goals of the pedestrian underpass project.
  - All concrete median along this section of the road would need to be removed.
- Section 3 – Lane repurposing of two inside lanes to provide two dedicated median BRT lanes.
  - Within the median sections all existing un-signalized intersections would be closed. Those movements would need to occur at signalized intersections.
- Section 7 – This section is proposed as a two lane median BRT along MD 355
  - Within the median sections all existing unsignalized intersections would be closed. Those movements would need to occur at signalized intersections.

Introduction of Alternative 4:

Alternative 4 was divided into a 4A and 4B option. Both Alternatives are mostly in the curb lane; however Alternative 4A provides BRT service from the Grosvenor Metrorail Station to Redgrave Place in Clarksburg and Alternative 4B provides BRT service from the Bethesda Metrorail Station to Redgrave Pace in Clarksburg. Both alternatives keep BRT service on MD 355. The differences were in approaches to constrained roadway sections, as outlined in the below bullet points. The specifics of each alternative are also depicted graphically on Figure 4 and Figure 5 and are available with the meeting #7 materials at http://www.montgomerycountymd.gov/RTS/md355north.html.

- Alternative 4A
  - Provides new BRT service from the Grosvenor Metrorail Station to Redgrave Place in Clarksburg.
    - No BRT service between Bethesda and Grosvenor Metrorail Station.
    - Service would be on dedicated lane(s) from Grosvenor Metrorail Station to Redgrave Place along MD 355.
  - Two dedicated curb lanes where feasible proposed for Sections 2, 6 and 7 through the widening of the road.
    - The curb lanes will be shared with local buses and right turning vehicles to and from MD 355.
  - A median running way was proposed for Sections 3, 4 and 5 to minimize switching from curb to median repeatedly.
  - Bi-directional dedicated median lane proposed for Section 3 achieved through the widening of the road.

    - Passing zones would be created to achieve necessary headways.
    - Within the median sections all existing unsignalized intersections would be closed. Those movements would need to occur at signalized intersections.
  - Two dedicated median lanes where feasible proposed for Section 4 through the widening of the road.
    - Within the median sections all existing unsignalized intersections would be closed. Those movements would need to occur at signalized intersections.
  - Bi-directional dedicated median lane proposed for Section 5 achieved through the repurposing of the center turn lane.
    - Passing zones would be created to achieve necessary headways.
    - All left turn movements will only occur at signalized intersections.
  - The transition from curb to median would occur over several blocks where the BRT may be in mixed traffic.

- Alternative 4B
  - Provides new BRT service from the Bethesda Metrorail Station to Redgrave Place in Clarksburg.
  - Service would be on dedicated lane(s) from Bethesda Metrorail Station to Redgrave Place along MD 355.
  - All running way options remain the same as Alternative 4A except for:
    - Section 1 (Same as running way proposed for Alternative 3B) – BRT would operate in the curb lane. The roadway inside of the beltway will be converted into a reversible system where more lanes will be assigned to the peak direction of traffic. This condition is similar to the existing reversible system on US 29 inside the Capital Beltway. A lane in the off-peak direction would be repurposed. For example in the AM peak direction there would be four lanes of southbound traffic into Bethesda where the curb lane will be the dedicated BR lane and shared with local buses and right turning movements to and from MD 355. The BRT operation in the off-peak direction would be in mixed traffic.
      - A median BRT lane was not analyzed because there is a proposed pedestrian tunnel at Bethesda Medical Center, which is intended to diminish at-grade pedestrian crossings of MD 355 at this location.
      - All concrete median along this section of the road would need to be removed.
    - Section 3 – Lane repurposing of two outside lanes to provide two dedicated curb BRT lanes.
      - The curb lanes will be shared with local buses and right turning vehicles to and from MD 355.
    - Section 4 – Two dedicated curb lanes where feasible
      - The curb lanes will be shared with local buses and right turning vehicles to and from MD 355.

- Conceptual Alternatives – Next Steps
  - The next step in the process is to complete the preliminary analysis of the alternatives.
  - The analysis performed will be used to complete the screening criteria information and compare alternatives.

- This information will also be used to guide the Alternatives Retained for Detailed Study (ARDS) selection.

(Q) How are right-turn pockets used for queue jumps?

(R) A dedicated phase allocated to moving the buses through the signal will precede the general through traffic phase.

(Q) How does that work with right turn on red?

(R) The bus might block right-turning vehicles until the next queue jump phase. Queue jump locations will be evaluated for traffic impacts intersection by intersection

(Q) Will passing in a bi-directional lane cause bus slowdowns?

(R) Possibly. The VISSIM modeling will help reveal possible bi-directional operations issues.

(Q) Will traffic being forced to double back from closed left turns be included in traffic modeling?

(R) Yes, it will, but will take place in later phases of the study.

(Q) During the analysis phases of the study, will business impacts be analyzed? Closed lefts cause access concerns.

(R) The full extent of these kinds of impacts will be vetted through the CAC and public process.

(Q) Summer traffic counts might not represent typical conditions; are your counts from summer?

(R) No, they're from the fall of 2015

(Q) How many lanes are there on Observation Drive?

(R) Four.

(Q) How would pedestrians access median stations safely?

(R) They would use the pedestrian phase at signalized intersections, which are the only locations where median stations would be located.

(Q) What will happen to redirected lefts?

(R) They'll have to take place at signalized intersections.

(Q) Will queueing at intersections be taken into account?

(R) Yes, in the detailed analysis phases of the project.

(Q) In Bethesda, how will the BRT lane work in the off-peak direction?

(R) BRT will operate in mixed traffic in the off peak direction.

(Q) What happens to the median?

(R) The median would need to be removed.

(Q) A dual left is planned at the NIH Navy Support Center.

(Q) With planned roadway enhancements there are going to be some intersection changes; will these be modeled?

(R) Planned conditions will be used in the models, yes.

(Q) Some of these streets are already wide, and older people are already having trouble crossing them in a single stage; how will this be addressed, since some alternatives call for widening?

(R) There will usually be a median to wait for a potential two stage crossing. It may also be possible to adjust the length of the pedestrian phase. However, it is county policy for signal timing to allow pedestrians to get all the way across the street, regardless of street width.

(Q) How will people get into the neighborhoods, especially where a reversible lane system is planned?

(R) Left turns will be permitted from the inside lane.

(Q) How efficient is it to switch between running way types over the length of the corridor?

(R) It can cause problems, especially when the switches are between curb and median. We tried to minimize switching in each alternative to the greatest extent possible.

(Q) Did you consider adjusting the route alignment to go off of MD 355 in the Rockville Town Center?

(R) The alternatives in that section are consistent with Rockville's plan, but during the study process the City of Rockville will be involved in discussions and other options can be considered for study. One of the redundant routes shown in the service plan concept could be routed through the town center on local streets.

(CAC Comment) Rockville Pike in this area also has lots of truck traffic and sideswipes.

(Q) Does Alternative 4B maintain the median where there currently is one in Section 1?

(R) Because of the reversible lane system, the median would be removed throughout.

(Q) How wide are the lanes?

(R) 10 to 12 feet.

(Q) Are you going to use computer modeling to look at effects of alternatives?

(R) Yes; we are modeling alternatives using a VISSIM multimodal simulation model and the regional travel demand model.

Breakout Exercise

Meeting participants conversed with project staff at tables with maps of each of the sections, to understand and get into the details of the running way options being considered in each location. An additional table was available for members to discuss the proposed screening criteria.

Notes from Breakout Conversation:

Section 1 – Bethesda Metrorail Station to Tuckerman Lane

- Agreed that the alternatives proposed were realistic.
- Some expressed support for the reversible lane concept, but with curiosity on how that could interface with I-270/495 and the exit for Beach drive.
- Others were concerned with the impacts of a reversible lane system and wanted to see the results of analysis, but expressed support for the route extending from Grosvenor to the Bethesda Metro station operating in mixed traffic, especially with the future link to the Purple Line at Bethesda.
- Support for the route extending from Grosvenor to the Bethesda Metro station, especially with the future link to the Purple Line at Bethesda.
- For the reversible lane option, consider the constraints of limited median width and left turns from unsignalized intersections, particularly at the Jones Bridge Road dynamic left location.
- Criteria for evaluating alternatives should include imminent technological and behavioral changes including vehicle technology advances and non-owned on-demand single occupancy vehicles. These changes are likely coming sooner than the 25 year planning window of this project.
- Just inside the Beltway, MD 355 has many merge and turn lanes leading to many sideswipe and rear end collisions. There is also a lot of truck and commercial traffic that is redirected from Connecticut Avenue. These conditions make dynamic lanes and median elimination proposals very scary.

Section 2 – Tuckerman Lane to Dodge Street

- Use current problems with Ride On service to diagnose what needs to be included/avoided to make BRT work better.
- If a service plan has a turnaround at Grosvenor, where will the buses turn around?
- Support for a route from Montgomery College to Bethesda Metro
- Support for section 2 alternatives conforming with the White Flint Sector Plan. The Plan prioritized center lanes, and this project should too, as long as transitions between adjacent sections work out.
- Questions about what turnaround and other facilities will be required if the route terminates at Grosvenor.
- Median lanes are much more functional, especially in this section with current and planned mixed use development. The proposed BRT could be used to replace convenience driving along MD 355, since the service would be permanent and more functional than existing bus service.

Section 3 – Dodge Street to College Parkway

- Some drivers currently drive on Norbeck Road to Gude Drive to avoid Town Center traffic.

- Prioritize installing two lane sections with occasional bi-directional lanes in space constrained areas, enough to minimize bus delays.

Section 4 – College Parkway to Summit Avenue

- Still need to identify where buses will turn around, and to consider BRT bus height.
- Going into Shady Grove station can cause significant delay, buses at Twinbrook can add as much as 15 minutes to the trip.
- Metro closes its platforms to pedestrians when service isn't operating. Will BRT service run longer, and if so will pedestrian access through Metro Stations be maintained?

Section 5 – Summit Avenue to MD 124 (Montgomery Village Avenue)

- Strive to take as few of the left turn pockets as possible to minimize impacts to businesses.

Section 6 – MD 124 (Montgomery Village Avenue) to Middlebrook Road

- Concern about ridership potential.

Section 7 – Middlebrook Road to Clarksburg

- Concern about ridership potential.

General Comments

- Alternatives should have flexibility to accommodate change in traffic patterns.
- Alternatives should have flexibility to account for imminent technology changes.