MULTIMODAL TRANSPORTATION BOARD
May 22, 2018
7:00 p.m.
George Howard Building, Columbia-Ellicott Room
3430 Court House Drive, Ellicott City, MD 21043

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AGENDA

1. Approval of the April 23, 2018 Minutes

2. Public Comment

3. Announcements/Updates
   i. Transit Development Plan
   ii. Office of Transportation Advisory Groups
   iii. US 1 Safety Evaluation
   iv. RTA Fares Policy
   v. Patuxent Branch Trail – Storage Facility
   vi. Land Development Process
   vii. Downtown Columbia Transportation Demand Management Plan

4. Old Business

   Multimodal Transportation Board Role

5. New Business

   Bus Rapid Transit ridership analysis

6. Adjournment

   Future MTB Meetings Dates
   June 28, 2018 – Downtown Columbia Transportation Demand Management Plan
   July 24, 2018
1. Approval of the March 27, 2018 Minutes (minute 01 1)

Jason Quan moved to approve the minutes of the March 27, 2018 meeting and Astamay Curtis seconded the motion. The minutes were approved by a vote of 5-0.

2. Public Comments (minute :02)

There were no public comments.

3. Announcements/Updates (minute :02)

Clive Graham, Office of Transportation (OoT) Administrator made the following announcements:

i. Transit Development Plan (TDP) (minute :02)

Clive attended a work session at the County Council this evening prior to the MTB meeting but the TDP topic was tabled and would be heard at a subsequent work session.

The County Executive released his proposed operating budget on April 20 which includes funding to begin to implement phase 1 of the TDP. Clive added that the State has awarded a $140,000 grant to assist in the planning, preparation and public hearings. The hope is to start implementation of phase 1, including routes reconfiguration around April 1st of 2019.

Clive also informed the board that Anne Arundel County proposes to remove two routes from the RTA service and run those routes internally. They also intend to run shuttle service from Arundel Mills Mall to BWI Airport.

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1 Minute references are to the meeting audio recording; see link on the Multimodal Transportation Board webpage.
ii. **Office of Transportation Advisory Groups** (minute :03)

The Advisory groups met on April 17, 2018. The two groups met independently and also held a joint meeting. The Transit and Pedestrian Advisory Group (TPAG) meeting included presentations regarding the OoT’s Bus Stop Improvement Program and the US 1 Safety evaluation. Ms. Kelli Shimabukuro of Howard County Striders attended the TPAG meeting and advised she was very interested in safety coordination on sidewalks and trails.

At the Bicycle Advisory Group (BAG) meeting there was a lot of discussion regarding the Patuxent Branch Trail issue. Larry Schoen shared that he had heard an announcement that Howard County and Columbia Association (CA) were in conversation to build a fully separate off-road trail. Phil Nichols of the County Administration commented that the County and CA were working together on this issue.

iii. **US 1 Safety Evaluation** (minute :05)

Clive advised OoT is currently waiting on the consultant’s (Sabra Wang) safety evaluation draft that should be available for next month meeting for MTB review.

iv. **June Meeting Dates** (minute :07)

Clive stated that the MTB June meeting has a conflict with the primary election on June 26. It was agreed the June meeting would be moved to Thursday June 28.

v. **RTA Fare Policy** (minute :12)

Clive advised the RTA Commission is holding a public hearing on Tuesday April 24, 2018 which will be addressing a change in the fare structure in the RTA region

4. **Old Business** (minute :17)

i. **Patuxent Branch Trail- Storage facility** (minute :05)

This topic was already covered in the above under Office of Transportation Advisory.

5. **New Business** (minute :17)

i. **Land Development Plan Process Review** (minute :18)

David Cookson, OoT Planning Manager gave a presentation of the lengthy and complicated land development plan process (see attachment) which included the following:

- Development and approval process
- Plan types and sequence
- How to review site plans
- Roles of reviewing agencies
- OoT’s role, including examples of OoT site plan comments

MTB Role- OoT will provide MTB members a notice of major plans submitted since the last MTB meeting.
ii. Multimodal Transportation Board Role (minute :83)

This topic discussed above as part of Land Development Plan Process Review. Clive added that land development will be a topic at future MTB meetings.

iii. Bus Rapid Transit Update (minute :95)

David Cookson gave an update on the Bus Rapid Transit (BRT). Under Phase 1 the OoT will develop ridership estimates considering Montgomery County’s US 29 proposed BRT and Howard County’s previous BRT studies. Depending on the Phase 1 results Phase 2 would focus on implementation considerations such as:

- Field review of routes
- Environmental Inventory
- Shoulder analysis and right of way
- Operations and maintenance costs and fleet costs
- Service Plan
- Ridership Forecasting

Status of commuter bus service on US 29 and approach to integration with Montgomery County BRT service was also discussed.

6. Adjournment (minute :110)

Ron adjourned the meeting at 8:50 pm. The next MTB meeting is scheduled for May 22, 2018 at 7:00 pm.
<table>
<thead>
<tr>
<th>Plan Name</th>
<th>Plan Number</th>
<th>Description</th>
<th>Office of Transportation Comments</th>
<th>Plan Status / Next Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hidden Ridge</td>
<td>F-18-081</td>
<td>This proposed development is located along Owen Brown Road (North of Cedar Lane &amp; Owen Brown Intersection) and is in the R-SC (Residential Single Cluster) Zoning District. The developer is proposing 12 town homes and one open space lot in a forest conservation easement. The 12 town homes will be served by a 24'-26' Private Access Driveway with a T-Turnaround for emergency vehicles. The developer is providing sidewalks throughout the development with curb ramps and a marked crosswalk at the entrance. This location is currently served by the 404 and there are 2 bus stops to the north of the site along Sunny Spring.</td>
<td>Bike Howard calls for Bike Lanes along Owen Brown Road, however since the developers are not adding additional pavement to the existing road the Office of Transportation will explore the idea of a fee in lieu to substitute the bike improvements along Owen Brown Road. The Office of Transportation is recommending approval for this development.</td>
<td>Comments submitted by 4/24/18. OOT recommended approval. If approved by DPZ, signature set will be submitted.</td>
</tr>
<tr>
<td>Rockburn Meadows</td>
<td>F-18-093</td>
<td>This proposed development is located along Bellanca Drive in Elkridge, and is in the R-20 zone. (Residential, with 20,000 square feet minimum). The developer is proposing six new single family homes, and one existing single family home that will be served by a Private Use In Common Driveway. The developer is providing sidewalks along the entire frontage on Bellanca Drive, and worked with the county to provide additional sidewalk to Montgomery Road. This will now provide a safe walk access for students attending Rockburn Elementary School. Bellanca Drive is not on the Bicycle Master Plan, and doesn't not receive bus service.</td>
<td>The Office of Transportation is recommending approval for this development.</td>
<td>Comments submitted 5/18/18. OOT recommended approval. If approved by DPZ, signature set will be submitted.</td>
</tr>
<tr>
<td>Oxford Square</td>
<td>SDP-18-055</td>
<td>Oxford Square is a 90 acre mixed use project, located near the intersection Coca Cola Drive and MD 100, with a final build out of just under 1,500 residential units and ~190,000 square feet of commercial/retail space, and a public school, partially funded by the applicant. Typical of many large projects, the project is being delivered in phases via separate site plans for specific sections of the projects. These two site plans, Bristol Court and The Yards, when constructed, will include 409 apartment and 56 town houses. This project is designated as transit oriented development and is a County Green Neighborhood. As part of the project’s original approval, the applicant will need to provide a pedestrian connection to the Dorsey MARC station and a shuttle.</td>
<td>As of submission of these site plans, the pedestrian connection to the MARC station and information on the shuttle service has not been delivered. The Office of Transportation is requesting resubmission with information on how these items will be delivered.</td>
<td>Comments submitted 4/19/18. Requesting resubmission</td>
</tr>
<tr>
<td>Oxford Square</td>
<td>SDP-18-019</td>
<td>Blue Stream is a 76 acre project composed of multiple parcel. Blue Stream is located north of the intersection of US1 and Port Capital Drive and extends west to I-95. Blue Stream has been in development since 1999, under sketch plan S-99-008, and is primarily residential with some commercial sites along the US 1 portion of the site. The plan proposes two apartment buildings, one wrapped around a parking structure, the other, standalone, totaling 116 units. There are also two commercial pad sites, a Starbucks and a two-story building with 24,000 square feet of commercial space. The Office of Transportation, in conjunction with DPZ Comprehensive and Community Planning, seeks improved pedestrian connections as well as transit-related improvements.</td>
<td>The Office of Transportation, in conjunction with DPZ Comprehensive and Community Planning, seeks improved pedestrian connections as well as transit-related improvements.</td>
<td>Comments submitted 5/21/18. Requesting resubmission</td>
</tr>
</tbody>
</table>
BUS RAPID TRANSIT

Multimodal Transportation Board
Howard Building
May 22, 2018

David Cookson

Howard County Office of Transportation
PURPOSE

• What is BRT
• Previous Planning efforts
• Update on Planning Efforts
BRT FUNDAMENTALS
DEDICATED RIGHTS OF WAY
BRT FUNDAMENTALS
OFF BOARD FARE COLLECTION
BRT FUNDAMENTALS
INTERSECTIONS
BRT FUNDAMENTALS
PLATFORM LEVEL BOARDING
• Routes and Service
  • Direct and more widely spaced stations
  • High frequency, turn up and go
  • Anchored by major activity centers
  • Major corridors—Where people are!
  • Feeder routes by local bus service, pedestrian and bike access
BRT PLANNING IN HOWARD COUNTY

Diagram:
- Systems/Sketch Planning
- Alternative Analysis
- Preliminary Engineering
- Final Design

Number of Alternatives vs. Level of Detail
The Traffic Group has designed Howard County's Phase I Rapid Transit Vehicle System (B.R.T.) with the following goals and attributes.

- Rapid
- Efficient
- Cost-effective – different cross section typicals
- Quickly constructed
- Little or no environmental impact if bridges are not built for the transit way
- Creative and Innovative (Example: Uses railroad right of way)
- Rapid Transit Technology – for vehicle and stations
- Traffic Engineering Problem Solving Techniques
- Little or No R.D.W. required
- Limited utility pole relocations
BRT PLANNING IN HOWARD COUNTY
CONCEPT STUDY

- MD29
- MD32
- MD216
- Broken Land Parkway
- CSX ROW
BRT PLANNING IN HOWARD COUNTY
CONCEPT STUDY
BRT PLANNING IN HOWARD COUNTY
PHASE I STUDY

- Travel Forecasting Study
- BRT route evaluation
- Most viable networks
- Assumed: all day service, high frequency service, dedicated ROW

Countywide Bus Rapid Transit System
Travel Forecasting Study
October 2013
BRT PLANNING IN HOWARD COUNTY
PHASE I STUDY

- US 29 between Mount Hebron and Silver Spring
- Broken Land Parkway between Columbia Town Center and Savage MARC Station
- MD 32 between Clarksville and Odenton Town Center
- MD 216 between Scaggsville and Odenton Town Center
BRT PLANNING IN HOWARD COUNTY PHASE I STUDY

- Average AADT reduction of 4.5% in Howard County and 3% in Montgomery County when compared to No Build year 2035 conditions.
- 2.5% more person-throughput in Montgomery County.
- Up to 23% faster travel time advantages between Burtonsville and Silver Spring.
- A 500% increase in transit ridership when compared to current commuter bus ridership to and from Washington, DC.

Figure 8. US 29 BRT Route Average Station Daily Boarding Forecasts.
BRT PLANNING IN HOWARD COUNTY

PHASE II STUDY

- Refine BRT corridors to include local feeder networks, potential park-and-rides, and increased pedestrian accessibility
- Congestion reduction impacts on future transportation networks
- Develop alternative land use scenario
- Select alignments to test
- Develop Final recommendations and next steps
- Add Route 1
- Enhanced Regional Coordination
BRT PLANNING IN HOWARD COUNTY
PHASE II STUDY- US 1

South (Prince George’s Co.)

North (Howard and Anre Arundel Co.)
BRT PLANNING IN HOWARD COUNTY PHASE II STUDY-US 29
### 2035 BRT Summary Statistics (Trips to/from BMC Region)

<table>
<thead>
<tr>
<th></th>
<th>US 29</th>
<th>US 1</th>
<th>Broken Land Parkway</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boardings</td>
<td>18222</td>
<td>20266</td>
<td>18213</td>
<td>56701</td>
</tr>
<tr>
<td>Passenger Miles</td>
<td>221404</td>
<td>186401</td>
<td>122466</td>
<td>530271</td>
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<tr>
<td>Passenger Hours</td>
<td>4510</td>
<td>4004</td>
<td>3357</td>
<td>11871</td>
</tr>
<tr>
<td>Average Trip Length (miles)</td>
<td>12.2</td>
<td>9.2</td>
<td>6.7</td>
<td>9.4</td>
</tr>
<tr>
<td>Average Trip Length (minutes)</td>
<td>14.9</td>
<td>11.9</td>
<td>11.1</td>
<td>12.6</td>
</tr>
</tbody>
</table>

For comparison: Baltimore Redline BRT Boardings = 18,915

Boardings for trips made within the Washington Region not included (within Montgomery County, Prince George’s County)
Phase I

Service plan and ridership estimates based on Montgomery County’s US 29 proposed project

Phase II

- Field review of routes
- Refine the ridership analysis
- Desktop Level Natural Environmental Inventory and Environmental Base Mapping
- Public workshops
- Shoulder analysis and ROW
- Conceptual Designs
- Operations and Maintenance Costs and Fleet Costs
- Development of an implementation plan
15 Minute Headways
Shoulder running in HC
Shoulder in MC until Tech Road
Also includes a new route connecting DTC to Gateway

3 Scenarios:
- No removal of MTA commuter Routes
- Remove the 315 MTA commuter Route
- Removal of all MTA Routes

• Alignment specifics are not final-tweaks were done in the model
• RESULTS ARE PRELIMINARY-THEY WILL CHANGE
### BRT Planning in Howard County

US 29 Corridor - Phase I and II

Preliminary Results

<table>
<thead>
<tr>
<th>Stops</th>
<th>2040 BRT+ALL MTA</th>
<th>2040 BRT + NO MTA</th>
<th>2040 - MTA315</th>
<th>Headway 10 min</th>
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</thead>
<tbody>
<tr>
<td>Ellicott City</td>
<td>1,150</td>
<td>1,209</td>
<td>1,151</td>
<td>1,250</td>
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<tr>
<td>Long Gate</td>
<td>797</td>
<td>867</td>
<td>799</td>
<td>963</td>
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<tr>
<td>Town Center</td>
<td>1,568</td>
<td>2,465</td>
<td>1,609</td>
<td>2,159</td>
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<tr>
<td>Scaggsville</td>
<td>144</td>
<td>582</td>
<td>144</td>
<td>603</td>
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<tr>
<td>Physics Lab</td>
<td>118</td>
<td>158</td>
<td>119</td>
<td>160</td>
</tr>
<tr>
<td>Burtonsville</td>
<td>414</td>
<td>543</td>
<td>418</td>
<td>583</td>
</tr>
<tr>
<td>Briggs Chaney</td>
<td>113</td>
<td>150</td>
<td>114</td>
<td>150</td>
</tr>
<tr>
<td>Tech Road</td>
<td>517</td>
<td>702</td>
<td>523</td>
<td>702</td>
</tr>
<tr>
<td>Burnt Mills Ave</td>
<td>73</td>
<td>98</td>
<td>73</td>
<td>102</td>
</tr>
<tr>
<td>Four Corners</td>
<td>67</td>
<td>87</td>
<td>67</td>
<td>89</td>
</tr>
<tr>
<td>Silver Spring</td>
<td>1,280</td>
<td>1,620</td>
<td>1,291</td>
<td>1,714</td>
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<tr>
<td><strong>Total BRT</strong></td>
<td>6,241</td>
<td>8,481</td>
<td>6,308</td>
<td>8,475</td>
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</table>

<table>
<thead>
<tr>
<th>Buses</th>
<th>2040 BRT+ALL MTA</th>
<th>2040 BRT + NO MTA</th>
<th>2040 - MTA315</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTA325</td>
<td>1,120</td>
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<td>1,112</td>
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<tr>
<td>MTA305</td>
<td>1,493</td>
<td>0</td>
<td>2,345</td>
</tr>
<tr>
<td>MTA315</td>
<td>1,684</td>
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<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>10,538</td>
<td>8,481</td>
<td>9,765</td>
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### AM Peak Period Stop Level Ons and Offs, by Direction

<table>
<thead>
<tr>
<th>Stop</th>
<th>Ellicott City</th>
<th>Long Gate</th>
<th>Town Center</th>
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</thead>
<tbody>
<tr>
<td>2040 BRT+ALL MTA</td>
<td>575</td>
<td>195</td>
<td>780</td>
<td>72</td>
<td>0</td>
<td>185</td>
<td>0</td>
<td>47</td>
<td>0</td>
<td>0</td>
<td>1,792</td>
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<tr>
<td>Off Peak Direction</td>
<td>0</td>
<td>1</td>
<td>29</td>
<td>0</td>
<td>0</td>
<td>180</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>640</td>
</tr>
<tr>
<td>2040 BRT + NO MTA</td>
<td>605</td>
<td>398</td>
<td>1,723</td>
<td>291</td>
<td>0</td>
<td>244</td>
<td>0</td>
<td>47</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Off Peak Direction</td>
<td>605</td>
<td>1,037</td>
<td>2,237</td>
<td>0</td>
<td>59</td>
<td>244</td>
<td>57</td>
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<tr>
<td>2040 - MTA315</td>
<td>576</td>
<td>399</td>
<td>801</td>
<td>72</td>
<td>0</td>
<td>187</td>
<td>0</td>
<td>47</td>
<td>0</td>
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<tr>
<td>Off Peak Direction</td>
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<tr>
<td>Headway 10 min</td>
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<td>1</td>
<td>2,145</td>
<td>259</td>
<td>0</td>
<td>2,447</td>
<td>253</td>
<td>54</td>
<td>0</td>
<td>2,488</td>
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<td>Off Peak Direction</td>
<td>625</td>
<td>481</td>
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BRT PLANNING IN HOWARD COUNTY
US 29 CORRIDOR-PHASE I AND II
NEXT STEPS

• 1. MC Service
• 2. Service Model Refinement
• 3. Technical Report
• 3. Decision to move forward
• 4. Advance to Phase II
QUESTIONS AND COMMENTS?

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