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FUNDING PRIORITIES: IMPROVING THE REGION'S TRANSPORTATION SYSTEM OVER THE NEXT 20 YEARS

Key Points

- Working with local jurisdictions and state agencies, the BRTB has developed a preferred alternative consistent with adopted transportation goals and strategies.
- Sponsors of preferred alternative projects have identified committed and reasonably anticipated funding for these projects.
- The preferred alternative allocates \$24 billion to system operations and \$9.4 billion to system preservation.
- The preferred alternative includes \$11.5 billion for expanding highway and transit networks and for additional bicycle and pedestrian projects. This includes more than \$4.3 billion in transit projects.
- *Plan It 2035* identifies opportunities for additional action or study, including corridor analyses to relieve traffic congestion and improve safety.
- Other upcoming initiatives will include regional transit and freight analyses.

Funding Sources: Available Funding/ Reasonably Anticipated Funding

SAFETEA-LU requires that all new regional long-range plans include a list of the transportation investments planned to commence during the next 20-25 years. This federal legislation also mandates that the long-range transportation plan be financially constrained. That is, the estimated cost of the capital investments in the plan must equal the revenues reasonably projected to become available.

The February 2007 Metropolitan Planning Regulations require that existing and proposed revenues cover all forecasted capital, operating, and maintenance costs identified in the Plan. To comply with this rule, the MPO must identify all sources of anticipated revenue available in support of its investment decisions.

Further, the planning regulations require that, as of December 2007, revenue and cost estimates in the Plan must use an inflation rate to reflect "year of expenditure" dollars. This rate must be based on reasonable financial principles and information, developed cooperatively by the MPO and the state.

Determining future funding capacity is the critical first step in the long-range planning process. Current methods for forecasting future transportation revenues, while technically proficient, are not completely reliable. Economic pressures can drive decisions that revise revenue policies that form the basis of calculations to estimate available funding. As a result, projecting future transportation revenues remains an art that generates estimates that fall within a range of rational acceptability. As such, these



estimates serve as the best tool currently available for establishing the funding level in regional transportation plans.

For the federal and state inputs to *Plan It 2035*, the BRTB has relied on revenue projections generated by the Maryland Department of Transportation (MDOT). The Department’s Office of Finance and Office of Planning work closely to develop the financial forecast that the BRTB subsequently reviews and endorses.

MDOT, working closely with its financial consultants, Global Insight and Economy.Com, has over several years and numerous plans established a consistent and reliable methodology to forecast the funding necessary to support *Plan It 2035*. The process uses generally accepted principles, assumptions, and historic spending levels to identify realistically anticipated revenues and expenditures, over a 25- to 30-year horizon.

Annual average growth rates are applied to the historic data to estimate revenues and expenditures for Fiscal Year 2016 and beyond. Appropriate rates are applied to the various funding categories: operations, system preservation, expansion, state, and federal. The resulting statewide total is then subdivided into three funding categories (operations, system preservation, and expansion). A percentage, derived from historic data, is applied to the statewide total to forecast the annual total allocated to the Baltimore region. MDOT’s Documentation of Assumptions as presented to the BRTB is included in Appendix F.

Projected Revenues and Cost Estimates for *Plan It 2035* Projects

Revenues

Projected federal and state revenues as provided by MDOT are approximately \$24.05 billion, \$9.39 billion, and \$11.19 billion for system operations, preservation, and expansion, respectively. In addition, Baltimore City, Anne Arundel County, and Howard County have committed approximately \$348.2 million, \$116 million, and \$165.3 million, respectively, toward system expansion (year of expenditure dollars). A copy of material showing committed funding from Baltimore City as well as letters of commitment of funding from Anne Arundel and Howard counties are included in Appendix F. Local funding estimates are subject to the approval of the appropriate locally elected officials.



Cost Estimates

MDOT staff provided current year cost estimates for highway and transit projects shown in the lists of projects on subsequent pages. BMC staff then applied an annual inflation rate (consistent with MDOT methodology) to these estimates to account for capital cost escalation. See Appendix G for more information on how project cost estimates were developed.

The Consequences of Financial Constraint

Growing needs and less funding, added to the requirement that long-range plans be financially constrained, have forced the BRTB to evaluate and program projects based on verifiable revenue projections. As a result, some projects that jurisdictions have deemed to be critical and necessary have been programmed in later planning years. Or they have been moved to the list of illustrative projects (i.e., projects that are ready to proceed but lack a reasonable assurance that funds for them will be available during the time period covered by *Plan It 2035*). In some cases, projects not able to be funded with federal funds possibly could tap state, local, or other funding sources.

Investments in the Future

Committed Projects – FY 2012 to 2015

Plan It 2035 covers the time period from FY 2016 through 2035. To present a complete picture of planned future transportation investments, Table 5-1 below shows the committed projects in the current Transportation Improvement Program (TIP). “Committed” means that either funds are being spent on these projects (for design, right-of-way acquisition, or construction), or fund sources have been identified and committed to these projects.

TABLE 5-1: COMMITTED PROJECTS, 2012-2015

Year of Operation	Jurisdiction	Project Name	Limits	Description
2012	Baltimore County	Campbell Blvd	MD 7 to US 40	new 4-lane road
2012	Baltimore County	Campbell Blvd	US 40 to Bird River Rd	new 4-lane road
2012	Baltimore County	Campbell Blvd	Bird River Rd to MD 43 ext.	new 4-lane road
2012	Baltimore County	Forge Rd	Cross Rd to Forge View Rd	widen from 2 to 4 lanes

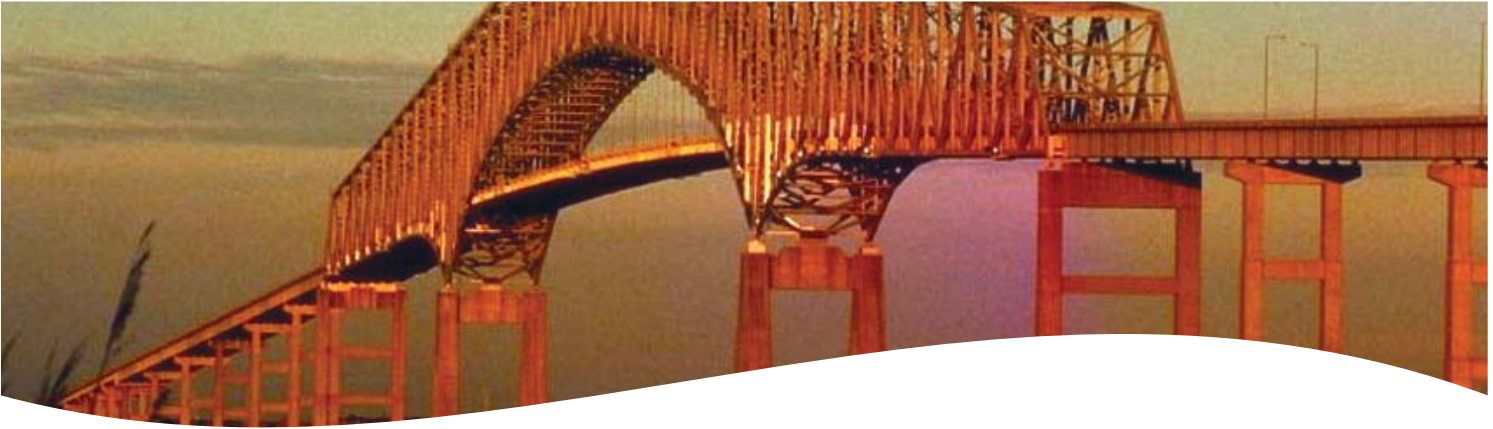
TABLE 5-1: COMMITTED PROJECTS, 2012-2015

Year of Operation	Jurisdiction	Project Name	Limits	Description
2012	Baltimore County	I-695 / MD 139 Charles Street Interchange	I-695 @ MD 139	reconstruct interchange
2012	Baltimore County	I-695 Bridge over MD 26 Liberty Road	I-695 @ MD 26	rebuild I-695 bridge over MD 26
2012	Baltimore County	Owings Mills Blvd	Winands Rd to Lyons Mill Rd	new 4-lane road
2012	Harford County	Harford Transit / Cecil County Transit connection	Harford County to Cecil County	new or extended route across Susquehanna River via US 40
2013	Baltimore City	US 40 Edmonson Avenue Bridge	Bridge over Gwynns Falls	widen from 8 to 10 lanes
2013	Baltimore County	Cherry Hill Rd	extension to Owings Mills Blvd	new 2-lane road
2013	Baltimore County	Old Harford Rd	Placid Ave to Cub Hill Rd	widen from 2 to 4 lanes
2013	Baltimore County	Rolling Rd	Windsor Mill Rd to MD 26	widen from 2 to 4 lanes
2013	Baltimore County	Warren Rd	Abbey Lane to Bosley Rd	widen from 2 to 4 lanes
2013	Harford County	MD 715	@ US 40	upgrade to full interchange
2013	Harford County	North Ave	BUS. US 1 to 924	new 2-lane road
2014	Baltimore County	Owings Mills Blvd	Winands Rd to MD 26	new 2-lane road
2014	Harford County	Perryman Access – Mitchell Lane	US 40 in the vicinity of Mitchell Lane	new 2-lane road
2014	Howard County	Dorsey Run Rd (north section)	MD 103 to Montevideo Rd	new 3 lane road/widen from 2 to 3 lanes
2014	Howard County	MD 32, Sykesville Rd	@ Linden Church Rd	new interchange
2014	Howard County	MD 108	Woodland Rd to W of Centennial La	widen from 2 to 4 lanes
2014	Howard County	US 29 Northbound, Phase 1	Seneca Drive to south of MD 175	widen from 2 to 3 lanes



TABLE 5-1: COMMITTED PROJECTS, 2012-2015

Year of Operation	Jurisdiction	Project Name	Limits	Description
2014	Regional	I-95, JFK Hwy (Section 100)	I-895 (East Baltimore) to north of MD 43	add 2 Express Toll Lanes in each direction (2014); upgrade interchanges @ I-895, I-695, MD 43 (Ramp connections @ I-695, MD 43 to be built in 2025)
2015	Carroll County	Boxwood Dr (extension)	Dogwood Dr to MD 88	new 2-lane road
2015	Carroll County	Georgetown Blvd (extension)	Londontown Blvd to Bennett Rd	new 4-lane road
2015	Howard County	Loop Rd (Skylark Blvd)	At MD 216 East	new interchange
2015	Howard County	MD 216, Scaggsville Rd	Maple Lawn Blvd to Reservoir High School access road	widen from 2 to 4 lanes
2015	Howard County	North Ridge Rd	MD 99 to US 40	new 2-lane road
2015	Howard County	Snowden River Parkway	Broken Land Parkway to Oakland Mills Rd	widen from 4 to 6 lanes
2017	Howard County	Guilford Rd	Dorsey Run Rd to US 1	widen from 2 to 4 lanes



Projects Submitted for *Plan It 2035*

The local jurisdictions submitted 143 projects for consideration for *Plan It 2035*, as described below:

Regionally Significant Projects

- 4 transit, including the Red Line light rail project and 3 projects involving improvements to the MARC system
- 8 highway, including several interstate and other highway projects as well as 2 projects that would significantly improve freight movement in Baltimore City

Other Projects

- 45 bike/pedestrian, including both on-road and off-road facilities
- 7 transit, including an extension of the Metro system, light rail system extensions, and bus service and facility improvements
- 79 roadway, including improvements to interstate highways and to other roadways (many of which include in their scopes improvements to adjoining bike and pedestrian facilities)

The specific criteria used to evaluate and rank these projects are included in Appendix H.

Preferred Alternative

The BRTB, working with local jurisdictions and state agencies, has developed a preferred alternative for the Baltimore region. This preferred alternative consists of projects selected through application of the adopted evaluation and scoring criteria, consistent with the region's approved transportation goals and strategies. Sponsors of the projects in the preferred alternative have identified either committed or reasonably anticipated funding for these projects, consistent with the requirement for a financially constrained Plan.



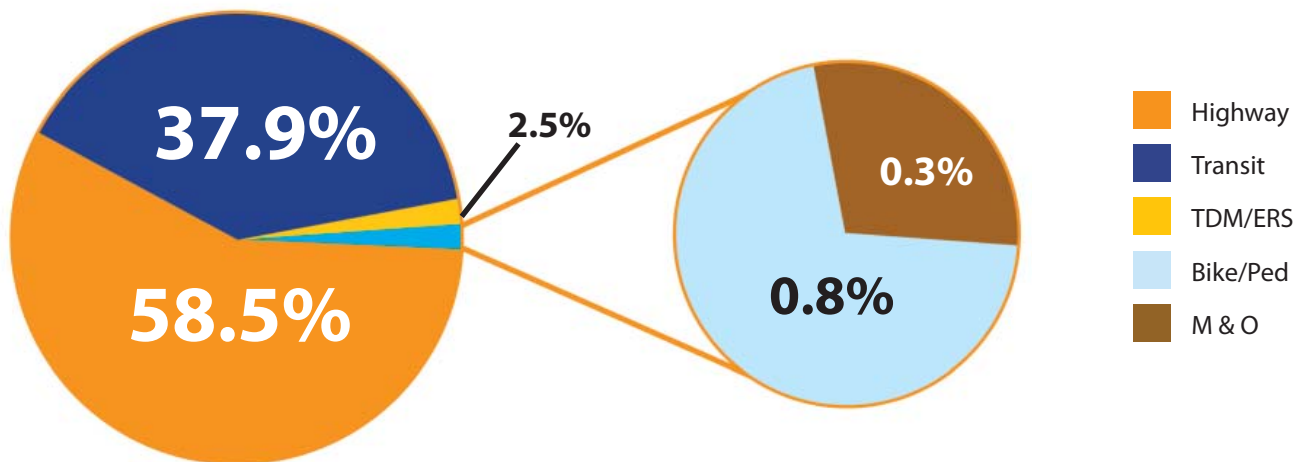
The following chart shows the proposed investments for system operations, preservation, and expansion for the region (year of expenditure dollars):

PLAN IT 2035 INVESTMENTS		
System Operations	\$24,048,128,000	53.6%
System Preservation	\$9,392,448,000	20.9%
System Expansion	\$11,466,800,000	25.5%
SYSTEM EXPANSION BREAKDOWN:		
Highway Projects	\$6,708,450,000	*
Transit Projects	\$4,341,050,000	
Bike/Ped Projects	\$92,680,000	
Management and Operations	\$39,860,000	
Transportation Demand Management / Emissions Reduction Strategies **	\$284,760,000	
TOTALS	\$44,907,376,000	

* See pie charts for percentage breakdowns of system expansion allocations

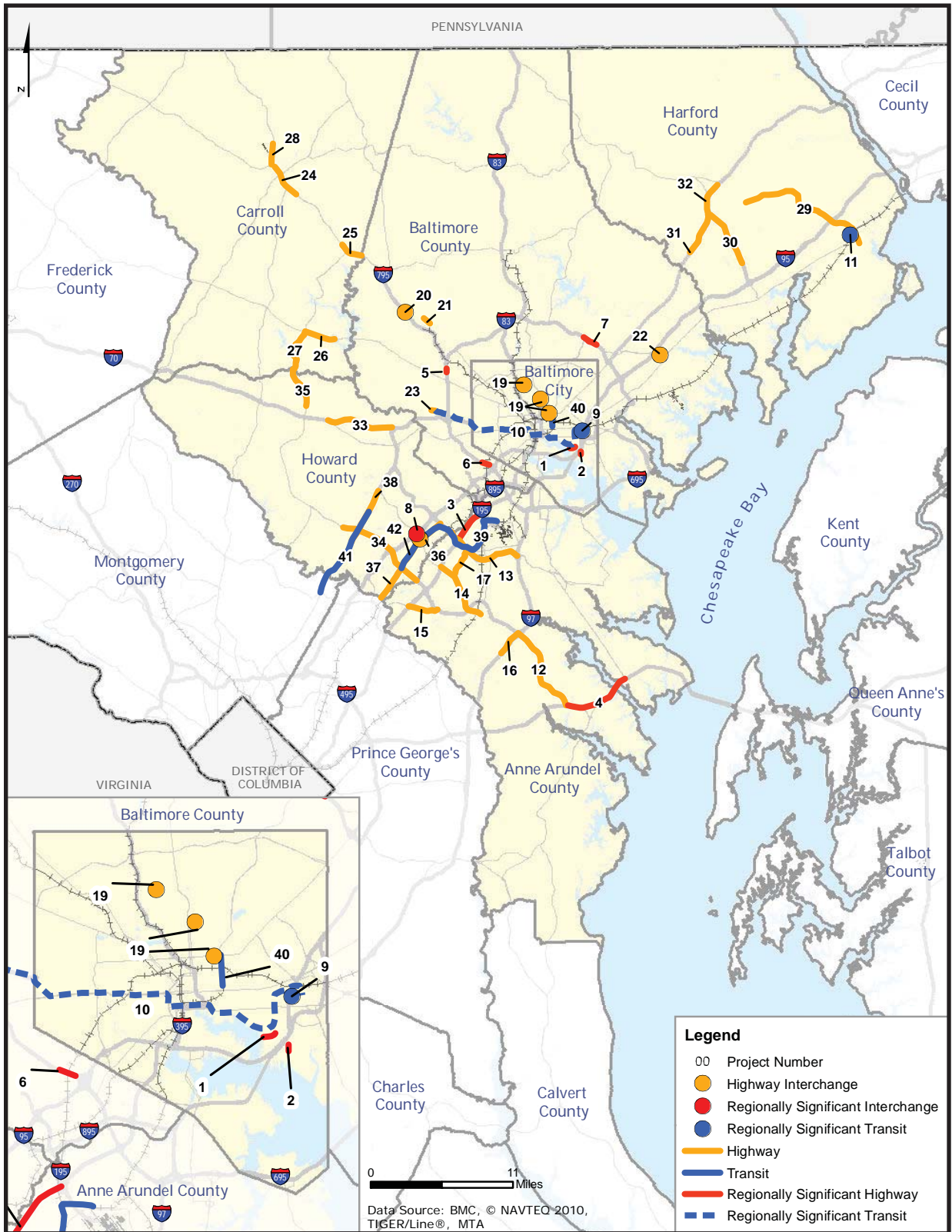
** Examples of Transportation Demand Management approaches include incentives to use transit, rideshare programs, flexible work hour programs, etc. Examples of Emissions Reduction Strategies include traffic signal coordination, traffic flow enhancements, technologies to improve truck fleet efficiency, incentives for electric or hybrid vehicles, etc.

Plan It 2035 Investments System Expansion



Note: "Bike/Ped" indicates stand-alone bicycle and/or pedestrian projects. The "Highway" category also includes many roadway projects that include bicycle and/or pedestrian accommodations and improvements as part of their scopes.

Highway and Transit Projects



Projects with Available/Anticipated Funding

REGIONALLY SIGNIFICANT PROJECTS					
ID	Jurisdiction	Project Name	Limits	Description	Estimated Cost (Year of Expenditure)
FREIGHT					
1	Baltimore City	Canton Truck Bypass	Clinton St. to Haven St.	New 2-lane roadway to accommodate truck traffic from Port of Baltimore	\$14,990,000
2	Baltimore City	New Vail Street	Keith Ave. to Chesapeake Commerce Center	New 2-lane roadway to accommodate truck traffic from Port of Baltimore	\$19,980,000
SUBTOTAL – REGIONALLY SIGNIFICANT, FREIGHT					\$34,970,000
HIGHWAY					
3	Anne Arundel County	MD 295	I-195 to MD 100	Widening from 4 to 6 lanes	\$276,870,000
4	Anne Arundel County	US 50/301	I-97 to MD 2	Bridge reconstruction/widening; movable barrier on bridge	\$316,710,000
5	Baltimore County	I-695 (Baltimore Beltway)	I-695 bridges over Milford Mill Rd.	Bridge reconstruction	\$19,980,000
6	Baltimore County	I-695 (Baltimore Beltway)	I-695 Inner Loop bridges over Benson Ave. and Leeds Ave. / Southwest Blvd.	Bridge reconstruction	\$43,710,000
7	Baltimore County	I-695 (Baltimore Beltway)	MD 41 to MD 147	Widening from 6 to 8 lanes (add two auxiliary lanes)	\$40,460,000
8	Howard County	I-95	Interchange at MD 175	Reconstruct interchange with capacity for HOV lanes on I-95	\$124,890,000
SUBTOTAL – REGIONALLY SIGNIFICANT, HIGHWAY					\$822,620,000
TRANSIT					
9	Baltimore City	Bayview MARC and Intermodal Station	Lombard Street at Bayview Blvd.	New station (to connect with Red Line)	\$49,950,000
	Baltimore City / Baltimore and Howard Counties	MARC: Camden Line	MARC Growth and Investment Plan improvements	Capital investment through 2020	\$374,660,000
10	Baltimore City / Baltimore County	Red Line	Woodlawn to Bayview	New light rail line	\$2,220,480,000
11	Harford County	Aberdeen MARC Station	Existing location	Transit-oriented development (TOD): expanded station	\$46,210,000
SUBTOTAL – REGIONALLY SIGNIFICANT, TRANSIT					\$2,691,300,000
TOTAL – REGIONALLY SIGNIFICANT PROJECTS					\$3,548,890,000

HIGHWAY PROJECTS

ID	Jurisdiction	Project Name	Limits	Description	Estimated Cost (Year of Expenditure)
12	Anne Arundel County	I-97	MD 32 to US 50/301	Widening from 4 to 6 lanes (new roadway in median to accommodate barrier-separated managed lanes with direct access ramps at MD 32 and US 50 interchanges)	\$441,140,000
13	Anne Arundel County	MD 100	Howard County Line to I-97	Widening from 4 to 6 lanes	\$340,650,000
14	Anne Arundel County	MD 175	MD 295 to MD 170	MD 295 to MD 32 - widen from 4 to 6 lanes; MD 32 to MD 170 - bicycle/pedestrian improvements	\$353,800,000
15	Anne Arundel County	MD 198	MD 295 to MD 32	Widening from 2 to 4 lanes	\$301,000,000
16	Anne Arundel County	MD 3	St. Stephens Church Rd. to MD 32	Widening from 4 to 6 lanes	\$246,690,000
17	Anne Arundel County	MD 713 (Ridge Rd.)	MD 175 to MD 176	Widen from 2-4 lanes from MD 175 to Arundel Mills Blvd.; widen from 4-6 lanes from Arundel Mills Blvd. to MD 176	\$79,300,000
19	Baltimore City	Roundabouts	33rd St. / Barclay St., Roland Ave. / Cold Spring Lane, North Ave. / Harford Rd.	Construction of roundabouts at various intersections	\$38,370,000
20	Baltimore County	I-795	Franklin Blvd. to south of Owings Mills Blvd.	Widening from 4 to 6 lanes, including addition of auxiliary lanes to Owings Mills Blvd.; includes new interchange at Dolfield Blvd.	\$223,060,000
21	Baltimore County	MD 140	Garrison View Rd. to Owings Mills Blvd.	Reconstruction and widening from 4 to 6 lanes, including bicycle and pedestrian improvements where appropriate	\$47,490,000
22	Baltimore County	MD 7	Interchange at MD 43	Upgrade from partial to full interchange, including two new ramps to accommodate full movements at interchange	\$59,790,000
23	Baltimore County	Security Blvd.	Existing terminus to Fairbrook Road	New 2-lane roadway; includes sidewalks throughout and roundabout at Fairbrook	\$13,380,000

HIGHWAY PROJECTS

ID	Jurisdiction	Project Name	Limits	Description	Estimated Cost (Year of Expenditure)
24	Carroll County	MD 140	Market Street to Sullivan Road	Widening from 6 to 8 lanes; includes full interchange at MD 97 and continuous-flow intersection at Center Street and Englar Road	\$276,180,000
25	Carroll County	MD 140 (at MD 91)	Baltimore County line to Kays Mill Road	Widening from 2 to 4 lanes; includes interchange at MD 91, additional auxiliary lane east of MD 91, and sidewalks throughout	\$143,220,000
26	Carroll County	MD 26	MD 32 to Reservoir	Widening from 4 to 6 lanes; includes bike and pedestrian facilities	\$89,440,000
27	Carroll County	MD 32	MD 26 to Howard County line	Widening from 2 to 4 lanes; divided section with raised median and sidewalks throughout	\$120,540,000
28	Carroll County	MD 97 North	MD 140 to Pleasant Valley Road	Widening from 2 to 5 lanes; includes sidewalks throughout and interchange at Meadow Branch Road	\$142,950,000
29	Harford County	MD 22	MD 543 to APG Gate	Widening of existing 2- to 3-lane section to 4 lanes, existing 4-lane section to 6 lanes; includes sidewalks and bicycle accommodations where appropriate	\$483,340,000
30	Harford County	MD 24	US 1 to Singer Road	Widening from 4 to 6 lanes; includes sidewalks and bicycle accommodations where appropriate	\$209,350,000
31	Harford County	US 1 - Business	MD 152 to MD 147	Widening from 4 to 6 lanes; includes bicycle and pedestrian accommodations	\$133,000,000
32	Harford County	US 1 Bypass	MD 147 / MD 24/924	MD 147 to MD 24: widening from 2 to 4 lanes; MD 24 to MD 924: widening from 4 to 6 lanes; includes improvements to US 1 / MD 24/924 interchange	\$221,130,000

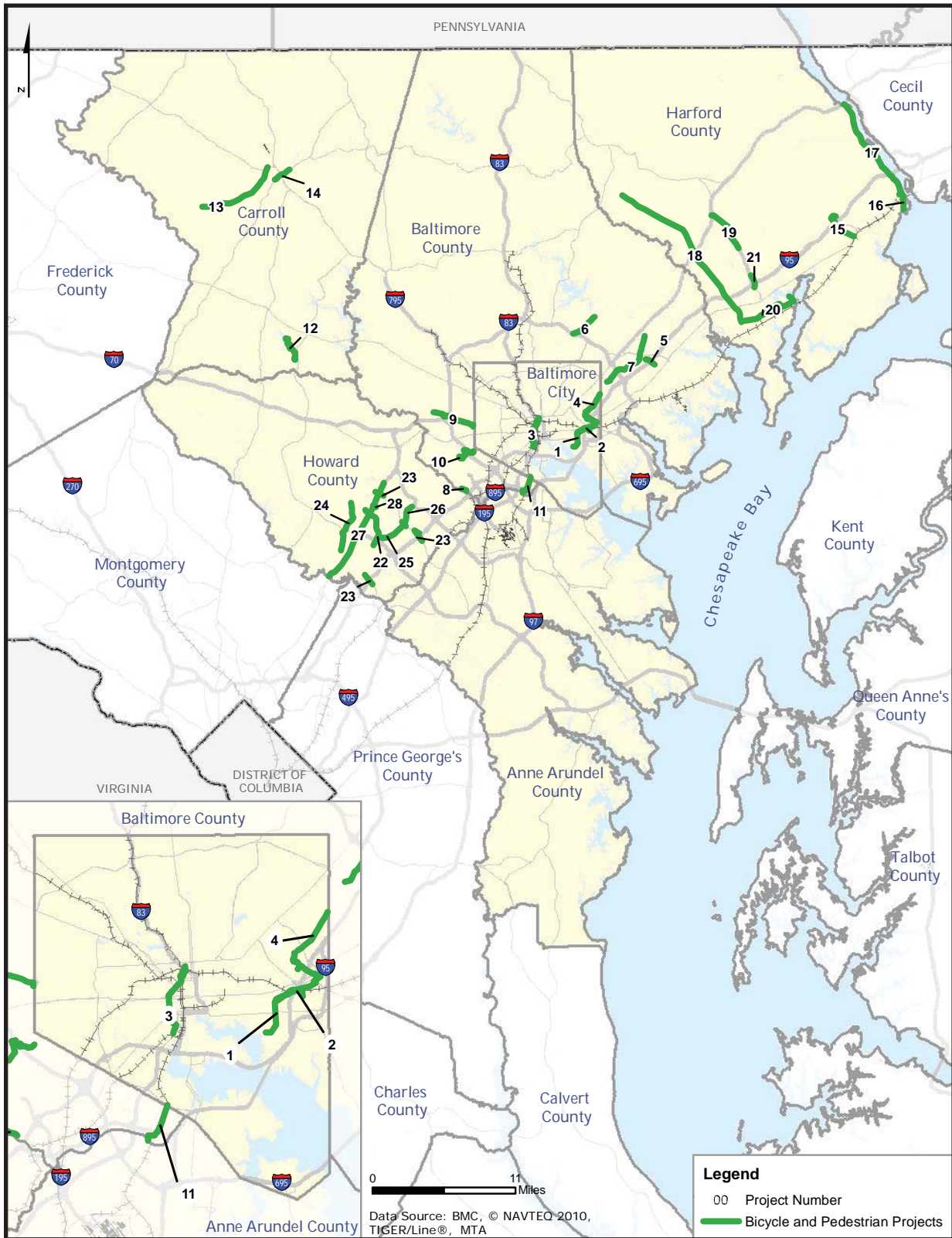
HIGHWAY PROJECTS

ID	Jurisdiction	Project Name	Limits	Description	Estimated Cost (Year of Expenditure)
33	Howard County	I-70	US 29 to US 40	Widening from 4-6 lanes to 8-10 lanes; includes upgrade to interchange at Marriottsville Rd. to accommodate all movements	\$289,310,000
34	Howard County	MD 32	Cedar Lane to Anne Arundel County line	Widening to accommodate 4 through lanes in each direction; includes barrier-separated roadway in median for HOV lanes and separated bicycle facility off-road but within right of way	\$877,140,000
35	Howard County	MD 32	MD 99 / Old Frederick Rd. to Carroll County line	Widening from 2 to 4 lanes; access controls and auxiliary lanes	\$92,130,000
36	Howard County	US 1	Interchange at MD 175	Interchange to enable MD 175 to go over US 1	\$91,730,000
37	Howard County	US 1	MD 100 to Prince George's County line	Reconstruction; widening from 4 to 6 lanes; includes raised median, bike lanes, and sidewalks throughout	\$468,260,000
38	Howard County	US 29 Northbound	Middle Patuxent to MD 175	Widening from 2 to 3 lanes	\$68,470,000
TOTAL – HIGHWAY PROJECTS					\$5,850,860,000

TRANSIT PROJECTS

39	Anne Arundel County	Yellow Line Phase 1	BWI Airport to Dorsey MARC Station	Planning and preliminary engineering to extend light rail line	\$179,850,000
40	Baltimore City	Green Line	Johns Hopkins Hospital to North Ave.	Extension of Metro line, including two new stations (at Amtrak line and North Ave.)	\$559,530,000
41	Howard County	US 29 Bus Rapid Transit (BRT)	Broken Land Parkway to MD 198 in Montgomery County	Grade-separated BRT facilities in median of US 29	\$253,710,000
42	Howard County	Yellow Line Phase 2	Dorsey MARC station (Anne Arundel County line) to MD 32	Planning and preliminary engineering to extend light rail line; includes park-and-ride lots at MD 32	\$173,850,000
	Regional	MARC Growth and Investment: 2016-2025	West Baltimore, Oden-ton, Martin State, and other stations	Improvements to MARC mainline capacity, maintenance facilities, and station areas	\$211,750,000
	Regional	MARC Growth and Investment: 2026-2035	West Baltimore, Oden-ton, Martin State, and other stations	Improvements to MARC mainline capacity, maintenance facilities, and station areas	\$271,060,000
TOTAL – TRANSIT PROJECTS					\$1,649,750,000

Bicycle and Pedestrian Projects



BICYCLE/PEDESTRIAN PROJECTS

ID	Jurisdiction	Project Name	Limits	Description	Estimated Cost (Year of Expenditure)
1	Baltimore City	Haven Street Trail (Redline Rail with Trail)	Highland Town to Canton Waterfront Park	Multimodal trail to be built in conjunction with adjacent Red Line light rail line	\$1,870,000
2	Baltimore City	Herring Run – Southern Extension	Sinclair Lane to Bayview Medical Center	Existing and proposed trail connecting Herring Run Trail at Sinclair Lane to Haven St. Corridor “Rail with Trail”	\$7,490,000
3	Baltimore City	Martin Luther King Jr. Side Path	Jones Falls Trail at Maryland Ave. to Gwynns Falls Trail sidewalk at ramp to Russell St.	Rehabilitation/widening of existing sidepath	\$1,250,000
4	Baltimore City	Northeast Trail (BG&E Access Trail)	Herring Run Trail to Kenwood Ave. at Lillian Holt Drive	New trail connecting Herring Run Trail to proposed Northeast Trail in Baltimore County utilizing existing utility corridor	\$7,490,000
5	Baltimore County	Campbell Blvd. Trail	White Marsh Mall to MD 7	Parallels Campbell Blvd	\$120,000
6	Baltimore County	Cromwell Valley Trail	Along Cromwell Bridge Rd. from Loch Raven Blvd. to Loch Raven Dr.	Off road trail linking Towson area to Loch Raven Reservoir	\$2,400,000
7	Baltimore County	Northeast Trail	From Elmwood ES to Joppa Rd. along Lillian Holt/Perry Hall Blvd.	Off-road trail linking residential communities with local schools, parks, and White Marsh Town Center	\$4,370,000
8	Baltimore County	Patapsco Greenway Connector	Glen Artney Rd. parking area to Gun Rd.	On-road; Completes Balt. County connection from Ellicott City to BWI Trail	\$120,000
9	Baltimore County	Red Line Trail	Baltimore City to Red Line terminus in county	Off-road trail linking Baltimore City and Baltimore County accessing major employment destinations	\$4,000,000
10	Baltimore County	Short Line Trail (Formerly Caton-Loudon Trail)	Mellor Avenue to Charlestown Village	Rails to Trails	\$2,250,000
11	Baltimore County	Southwest Area Park Trail	Baltimore City to Anne Arundel County	Mostly off-road trail within existing park; links Baltimore City, Baltimore County, and Anne Arundel County	\$1,600,000
12	Carroll County	Piney Run/Sykesville Trail Connection	Piney Run Park to Sykesville via Piney Run stream valley	Trail linking two existing trail networks	\$3,440,000

BICYCLE/PEDESTRIAN PROJECTS

ID	Jurisdiction	Project Name	Limits	Description	Estimated Cost (Year of Expenditure)
13	Carroll County	Wakefield Valley Community Trail	connecting Westminster and New Windsor along MD 31 right-of way	Trail linking Westminster and New Windsor, within MD 31 right-of-way	\$1,850,000
14	Carroll County	Westminster Community Trail (Bennett Cerf)	Bennett Cerf Park to downtown Westminster parallel to MD 27 corridor	Trail linking two existing public facilities; includes two pedestrian bridges	\$1,060,000
15	Harford County	Aberdeen Area Bikeway	US 40/MARC Train Station along MD 132 and MD 22 to Ripken Stadium	Bike lane	\$250,000
16	Harford County	Havre de Grace Old Town Loop Bikeway	North Park to Union Ave. to Tydings Park and loop back to Juniata St.	Hiker/biker trail	\$250,000
17	Harford County	Lower Susquehanna Heritage Greenway	Conowingo Dam along Susquehanna River to Havre de Grace	Hiker/Biker Trail	\$1,500,000
18	Harford County	MD 152 Bikeway	Hess Road to Trimble Road	Bike Lane	\$620,000
19	Harford County	MD 24 Bikeway	Business US 1 to Bel Air South Parkway	Bike lane	\$310,000
20	Harford County	Trimble Road Bikeway	Edgewood Recreation Park to Flying Point Park	Bike lane	\$310,000
21	Harford County	Woodsdale Road / Waldon Road Bikeway	Woodsdale Road at MD 924 to Edgewood Road at Waldon Road	Bike/pedestrian path, including bridge across I-95	\$7,870,000
22	Howard County	Broken Land Parkway Town Center	Broken Land Parkway Town Center to Guilford Road	Bike/pedestrian facility; in- / off-road facility; ramp crossings	\$3,120,000
23	Howard County	Interchange - ramp bike crossings	US 29 at MD 175, Broken Land Parkway, and MD 216; I-95 at MD 175 and MD 216; MD 175 at Snowden River Parkway and Gateway Dr.	Crossing of 7 interchange bridges and 16 interchange ramps	\$11,320,000
24	Howard County	Maple Lawn Farms to Columbia Multi-use Pathway	Maple Lawn Farms to Columbia Multi-use Pathway	New bike path parallel to Hopkins, Sanner Road, Cedar Lane	\$2,500,000
25	Howard County	Snowden River Parkway, Phase 1	Oakland Mills to Broken Land Parkway	On/off road bike/pedestrian on both sides of Parkway	\$750,000
26	Howard County	Snowden River Parkway, Phase 2	MD 108 to Oakland Mills	On/off road bike/pedestrian on both sides of Parkway	\$4,800,000

BICYCLE/PEDESTRIAN PROJECTS

ID	Jurisdiction	Project Name	Limits	Description	Estimated Cost (Year of Expenditure)
27	Howard County	US 29	US 29- Montgomery Co. line to MD 108	Safety/mobility improvements; bike path where needed or possible	\$4,120,000
29	Howard County	US 29 Pedestrian Bridge	Stevens Forest Rd. to pathway west of US 29 (existing bridge)	Refurbish; redevelop pathway approaches; lighting; security	\$3,120,000
	Baltimore City; Anne Arundel, Baltimore, Harford, and Howard counties	Bicycle/Pedestrian Access to Rail Stations	MARC, light rail, and Metro transit stations in region	Improve bicycle/pedestrian access to rail transit stations (safety, ADA compliance, etc.)	\$12,530,000
TOTAL – BICYCLE/PEDESTRIAN PROJECTS					\$92,680,000

TRANSPORTATION DEMAND MANAGEMENT (TDM) / EMISSIONS REDUCTION STRATEGY (ERS) ALLOCATION

ID	Jurisdiction	Project Name	Limits	Description	Estimated Cost (Year of Expenditure)
	Regional	TDM / ERS: 2016-2025	Regionwide	Transportation demand management and emissions reduction projects	\$124,890,000
	Regional	TDM / ERS: 2026-2035	Regionwide	Transportation demand management and emissions reduction projects	\$159,870,000
TOTAL – TDM / ERS ALLOCATION					\$284,760,000

MANAGEMENT AND OPERATIONS (M&O) ALLOCATION

ID	Jurisdiction	Project Name	Limits	Description	Estimated Cost (Year of Expenditure)
	Regional	M&O: 2016-2025	Regionwide	Improve conditions related to system management and operations	\$17,480,000
	Regional	M&O: 2026-2035	Regionwide	Improve conditions related to system management and operations	\$22,380,000
TOTAL – M&O ALLOCATION					\$39,860,000

TOTAL ESTIMATED COSTS (YEAR OF EXPENDITURE) FOR ALL PREFERRED ALTERNATIVE PROJECTS AND ALLOCATIONS:

\$11,466,800,000

Following is a detailed list of types of strategies the BRTB can apply using the allocated funds to address emissions reduction in the region:

EMISSION REDUCTION STRATEGIES – PLAN IT 2035		
Technologies	Behavioral Strategies	Capital Improvements
<ul style="list-style-type: none"> • Alternative fuel infrastructure • Bus replacement (non-hybrid and hybrid) • Clean fuel shuttles • Clean fuel vehicles and hybrids • Electric vehicle charging infrastructure • Electrified parking for tour buses • Encourage hybrid use in public fleets • Energy-efficient highway construction and maintenance practices • Enhanced enforcement of smoking and idling vehicles • GPS electronic transportation information systems • Multimodal Traveler Information System • Retrofit highway construction and maintenance equipment • Smart cards for transit modes • Technologies to improve truck fleet efficiency (auxiliary power units (APUs), automatic tire inflation, single-wide tires, trailer fairings, plug-in cabin equipment) • Vehicle-to-grid technology • Voluntary diesel retrofits 	<ul style="list-style-type: none"> • Car share programs • Clean commute marketing (Clean Air Partners outreach – Air Quality Action Days; Commuter Challenge Program) • Commuter Choice tax benefit program • Eco-driving outreach • Emergency ride home • Incentives for low emission/high-fuel-efficiency vehicles • Live Near Your Work • Parking cash out • Preferential parking for carpools, vanpools • Real-time bus schedules • Reduced idling marketing campaign • Rideshare • School course on transportation-related air pollution • Sell Clean Air license plates • Telecourses at colleges and universities • Telework • Transit fare – fare reduction/episodic free transit programs • Transit fare – reduced transit fare pass for college students 	<ul style="list-style-type: none"> • Bicycle and pedestrian improvements • Bike racks on MARC cars and MTA/ LOTS buses • Electronic toll collection (may include overhead gantries) • MARC enhancements: additional or replacement rail cars • Minor transit enhancements; new or expanded bus service • Neighborhood shuttles • Park-and-ride lots/ transit center parking • Traffic signal progression improvements/ signal systemization • Traffic flow enhancements (Coordinated Highway Action Response Team, roundabouts) • Truck stop electrification



Maryland Transportation Authority Projects

The Maryland Transportation Authority (MdTA) is an independent agency responsible for managing, operating, and improving the state’s toll facilities. Because MdTA projects are privately funded, they are not included in the listing of projects to be supported with federal funds. *Plan It 2035*, however, must include these projects because of their effects on air quality conformity and travel demand. The table below shows the single MdTA project that will be implemented by 2035.

TABLE 5-2: MDTA PROJECTS

Jurisdiction	Project Name	Project Limits	Description
Baltimore County	I-95	I-95 / I-895 (North) split to north of MD 43	Interchange improvements; reconstruction to include two express toll lanes and four general purpose lanes in each direction

Illustrative Projects

Federal regulations for metropolitan transportation planning identify the concept of “illustrative projects” as an element of the planning process. These are projects included in a metropolitan transportation plan for illustrative purposes, meaning that they could be included in the adopted transportation plan if additional funds beyond the reasonable financial resources identified in the plan were to become available.

There is no requirement to select any project from an illustrative list of projects in a metropolitan plan at some future date, when funding might become available. Nonetheless, illustrative projects can be helpful in guiding transportation and land use planning efforts at both the regional and local levels because they provide a resource from which the BRTB can select regional priorities should additional funds become available.

The list of illustrative projects for the Baltimore region is shown in Table 5-3:

TABLE 5-3: ILLUSTRATIVE PROJECTS

Jurisdiction	Project Name	Project Limits	Description
HIGHWAY PROJECTS			
Anne Arundel County	US 50/301 widening	MD 2 to William Preston Lane Chesapeake Bay Bridge	Widening from 6 to 8 lanes
Baltimore City	Broening Highway	Reconstruct Colgate Creek Bridge	Provide greater load capacity to Port of Baltimore; direct access for trucks from Port to I-95 truck route
Baltimore City	Pennington Avenue / Curtis Avenue	Patapsco Ave. North to Birch St. South	Realign Curtis Ave to support two-way truck route to serve industrial complexes along the Harbor
Baltimore County	I-695 widening	I-83 (Harrisburg Expressway) to I-95 North	Widening from 6 to 8 lanes
Baltimore County	I-695 widening	MD 122 to I-95 South	Widening from 6 to 8 lanes
Baltimore County	I-83	Padonia Road interchange	Reconstruct interchange
Baltimore County	I-83	Timonium Road interchange	Reconstruct interchange
Baltimore County	MD 7	Rossville Blvd. to Cowenton Ave.	Widening from 2 to 4 lanes
Baltimore County	MD 145 (Paper Mill Road)	MD 45 to Hunters Run Rd.	Relocate roadway; widening from 2 to 4 lanes
Carroll County	MD 140 (Taneytown Bypass)	Trevanion Rd. to MD 140	New 2-lane roadway
Carroll County	MD 30 (Manchester Bypass)	Brodbeck Rd. to north of MD 86	New 2-lane roadway
Harford County	MD 543	MD 136 to US 40	Widening from 2 to 4 lanes, including sidewalks and bicycle accommodations where appropriate
Harford County	MD 715 Extended	US 40 / present terminus to MD 22	Improvement to east-west movement from Aberdeen Proving Ground to points west/north and south; project will tie into US 40 / MD 715 interchange improvement
Harford County	US 40	MD 543 to MD 715	Widening from 4 to 6 lanes, including sidewalks and bicycle accommodations where appropriate
Howard County	I-95	MD 100 interchange	Reconstruct interchange to 6 lanes
Howard County	MD 32	MD 108 to I-70	Widening from 2 to 4 lanes, full interchanges at Dayton Shop, Rosemary Lane, and MD 144; ramps and upgrade to I-70 interchange.
Howard County	US 29 / Little Patuxent Parkway / Moore Circle Interchange	Little Patuxent Parkway at Moore Circle to interchange with US 29 and continuing bridge to Stevens Forest Rd.	New full diamond interchange with US 29 with connecting bridges
TRANSIT PROJECTS			
Anne Arundel County	Yellow Line Phase 1	BWI Airport to Dorsey MARC station	Construction of light rail extension
Howard County	Yellow Line Phase 2	Dorsey MARC station (Anne Arundel County line) to MD 32 – construction	Construction of light rail extension, including park-and-ride lots at MD 32



Opportunities for Additional Action or Study

Using Jurisdictional Priority Letters to Find Opportunities to Relieve Congestion and Improve Safety

Each year, the local jurisdictions send so-called “priority letters” to MDOT. These letters list the projects the jurisdictions consider critical to addressing their transportation needs. These needs often include alleviating traffic congestion and addressing safety concerns.

These priority letters are a potential source of information to help BMC and MDOT staffs identify corridors for additional analysis related to relieving traffic congestion and improving safety. See Appendix D, Congestion Management Process, for additional details on how staff can use these priority letters to analyze congestion “hot spots” and understand how to address these “hot spots” through operational countermeasures.

Regional Transit and Freight Analyses

As noted in Chapter 4, the BRTB has directed BMC staff to undertake two new tasks as part of the FY 2012 UPWP for the Baltimore region: a regional transit analysis and a regional freight analysis. These analyses can provide the means to identify markets, corridors, systems, and facilities in which to concentrate future investments.

The regional transit analysis will look at the current transit systems and users in the Baltimore region, identify needs, analyze potential markets and corridors, and develop recommendations and strategies to improve transit in the region. The regional freight analysis will build on the information in the Maryland Statewide Freight Plan developed by MDOT in 2009. Like the transit analysis, this effort will look at the current freight systems and users in the Baltimore region, identify needs, and develop recommendations and strategies to improve freight movement in the region.