

I-95 Transit and TDM Plan Technical Memorandum #3 Summary of Recommendations

Commonwealth Transportation Board
December 4, 2013

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I-95 Transit and TDM Plan

The Commonwealth of Virginia is committed to addressing the transportation needs for the Interstate 95 (I-95) corridor through a package of concurrent improvements, including:

- ✓ I-95 Express Lanes
- ✓ Constructing an HOV/transit only ramp at Seminary Road
- ✓ Increased Transit Service

Project Objectives

1. Preserve and Maximize Capacity and Operational Efficiency of the I-95 HOT/HOV Lanes
2. Maximize Transit Utilization and Transit Market Share in the I-95 Corridor Through:
 - ✓ Expansion of Park-and-Ride Supply Through the Corridor;
 - ✓ An Increase in Transit Service Levels to Employment Centers; and
 - ✓ An Expansion of Transportation Demand Management (TDM) Programs

Project Process

1. Document Existing Conditions
 - ✓ Park-and-Ride Lot Utilization
 - ✓ Transit Service Utilization
 - ✓ TDM Programs
2. Determine Corridor Transit and TDM Needs
 - ✓ Review of Prior Study Recommendations
 - ✓ Review of Demographic Projections
 - ✓ Discussions with Stakeholders and Service Providers
3. Presentation of Needs and Costs to Secretary of Transportation
4. Completion of Plan Recommendations

I-95 Transit and TDM Plan Recommendations

- ✓ Park-and-Ride Lot Spaces for Bus and Car/Vanpool Users
- ✓ **Bus Service Expansion**
- ✓ TDM Program Expansion
- ✓ Franconia-Springfield Station Off-Site Parking Expansion and Shuttle

I-95 Transit and TDM Plan

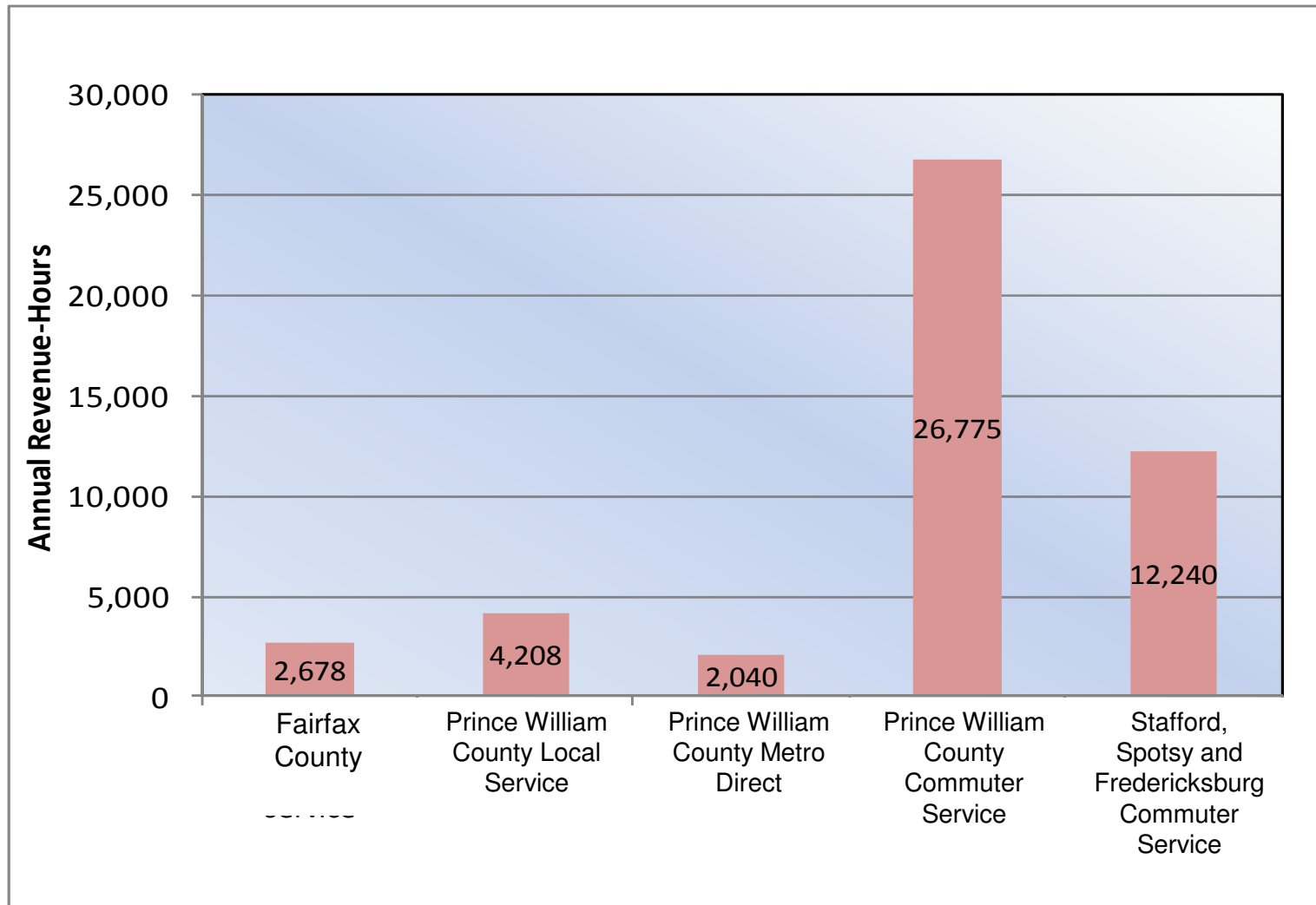
Technical Memorandum #3 Recommendations

Bus Service Expansion

Commuter Bus Service Expansion

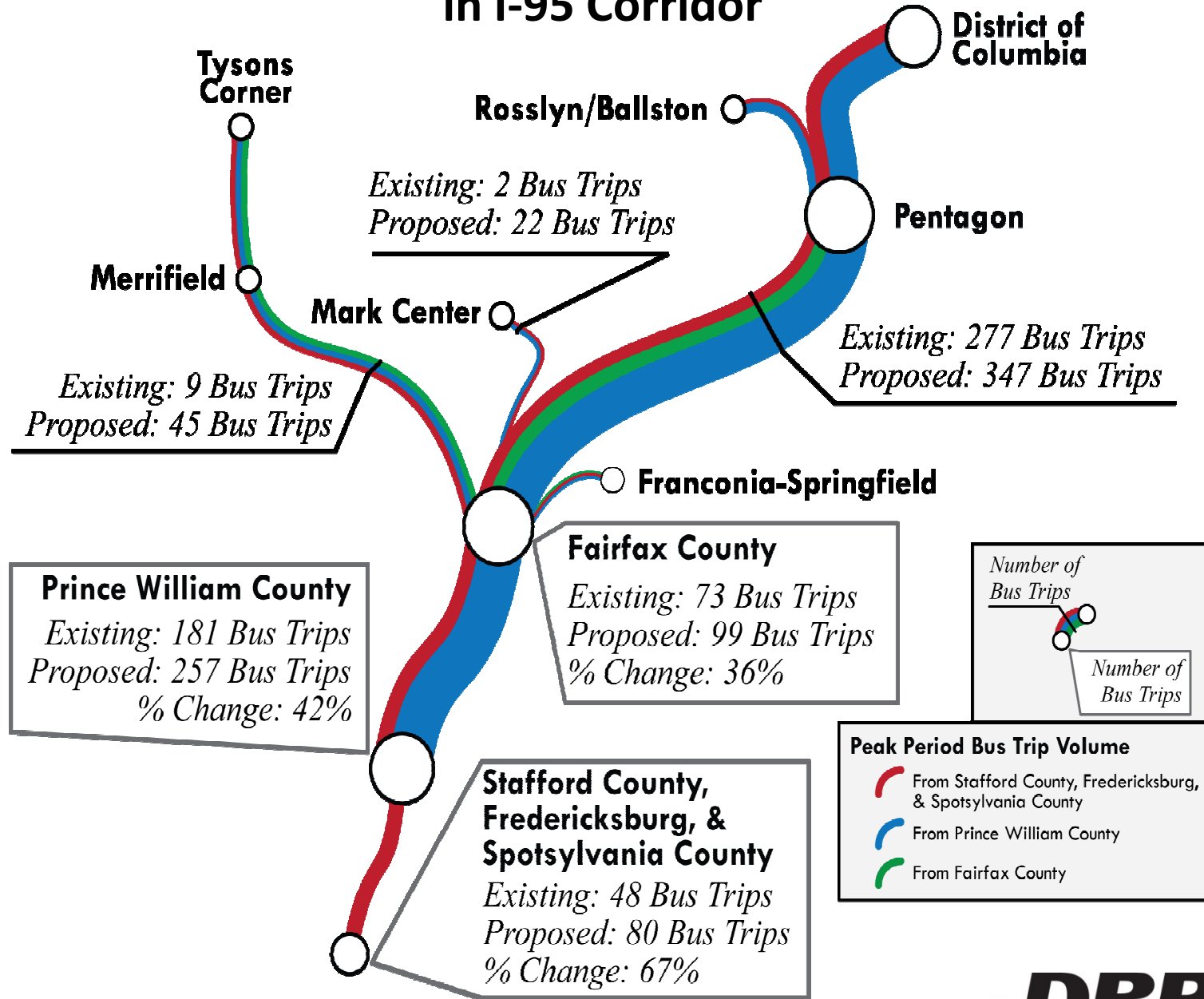
1. Expand commuter services from Fairfax & Prince William Counties
2. Expand commuter services from Spotsylvania and Stafford Counties
3. Expand destinations served by commuter services
 - ✓ Additional service to D.C., Pentagon area, Rosslyn
 - ✓ Mark Center
 - ✓ Tysons Corner
 - ✓ Fort Belvoir
 - ✓ Franconia-Springfield Metrorail

Increase in Bus Revenue-Hours by County



Total Increase in Annual Service-Hours = 47,940

Commuter Bus Service Expansion in I-95 Corridor



Commuter Bus Service Expansion: By County

Commuter Trip Origins:	AM Peak Period Trips			PM Peak Period Trips		
	Existing	Proposed	% Change	Existing	Proposed	% Change
Stafford/Spotsylvania Counties	24	40	67%	24	40	67%
Prince William County	82	118	44%	99	139	40%
Fairfax County	33	46	39%	40	53	33%
Total	139	204	47%	163	232	42%

Notes:

Fairfax Connector proposed trips include I-495 Tysons Express Routes

Prince William County trips include MetroDirect service to Franconia-Springfield

Commuter Bus Service Expansion: By Service Destination

Commuter Trip Destinations:	AM Peak Period Trips			PM Peak Period Trips		
	Existing	Proposed	% Change	Existing	Proposed	% Change
Central D.C. Area	127	160	26%	150	187	25%
Mark Center	1	11	1000%	1	11	1000%
Tysons	4	22	450%	5	23	360%
Other	7	11	57%	7	11	57%
Total	139	204	47%	163	232	42%

Notes:

Destinations included in "Other" are: Fort Belvoir, Franconia-Springfield

*Capacity constraints at Pentagon may necessitate the need for commuter trips to be routed to other destinations,
such as Franconia-Springfield*

Commuter Bus Service Expansion: Cost Requirements

- Increase in Annual O&M Costs over 20-years (after farebox revenues) = **\$39.0 million**
- Capital Costs for Add'l. Buses = **\$23.4 million**

Notes:

2. *Increase in O&M costs reflect estimated net cost after fare collection.*
3. *Farebox recovery varies based on operator and scenario.*
4. *O&M costs for south corridor private operators not included, since farebox revenues are assumed to cover expenses for those routes.*
5. *Bus fleet expansion does not take into consideration bus replacements during 20-year plan period.*

I-95 CORRIDOR TRANSIT & TDM NEEDS PLAN

BUS CAPITAL COST ESTIMATES FOR BUS SERVICE

			Costs in Year of Expenditure Dollars						
Geographic Area	Operator	Improvement Description	Capital Costs	2015	2020	2025	2030	2035	Total Costs
Fairfax County	WMATA	Route 18 G/H/J/P Restructuring	n/a						
	Fairfax	Restructure Tysons service to stop at Saratoga pnr	\$0						\$0
	Either	New: Saratoga-Pentagon Express - 5 a.m. and 5 p.m. trips	\$1,800,000	\$2,026,000					\$2,026,000
	Spares		\$450,000	\$506,000					\$506,000
	SubTotal			\$2,250,000	\$2,532,000	\$0	\$0	\$0	\$0
Prince William County	OmniRide	Replace 3 retired buses presently used for emerg. I-95 service	\$1,620,000	\$1,823,000					\$1,823,000
	OmniRide	Lake-Ridge-Washington, D.C. - add 3 a.m. and 4 pm. trips	\$1,620,000			\$2,450,000			\$2,450,000
	OmniRide	Lake Ridge-Pentagon/Crystal City - add 3 a.m. and 3 p.m. trips	\$1,620,000			\$2,450,000			\$2,450,000
	OmniRide	New Service - Lake Ridge to Mark Center - 4 a.m. and 4 p.m. trips	\$1,290,000	\$1,452,000					\$1,452,000
	OmniRide	Dale City/Potomac Mills-Washington, D.C. - add 4 a.m. and 5 p.m. trips	\$2,160,000		\$2,818,000				\$2,818,000
	OmniRide	Dale City/Potomac Mills-Pentagon/Crystal City - add 3 a.m. and 4 p.m. trips	\$1,080,000			\$1,634,000			\$1,634,000
	OmniRide	Dale City/Potomac Mills-Rosslyn/Balston - add 2 a.m. and 2 p.m. trips	\$1,080,000		\$1,409,000				\$1,409,000
	OmniRide	New Service: Dale City/Potomac Mills-Mark Center - 4 a.m. and 4 p.m. trips	\$1,290,000	\$1,452,000					\$1,452,000
	OmniRide	New Service: Dale City/Potomac Mills-Merrifield - 4 a.m. and 4 p.m. trips	\$2,160,000		\$2,818,000				\$2,818,000
	OmniRide	Monclair/Dumfries-Pentagon/DC - Add 2 a.m. and 3 p.m. trips	\$1,080,000		\$1,409,000				\$1,409,000
	OmniRide	New Service: Montclair/Dumfries-Tysons Corner - 4 a.m. and 4 p.m. trips	\$2,160,000		\$2,818,000				\$2,818,000
	MetroDirect	Prince William MetroDirect - Increase peak period frequencies to 20-min.	\$430,000		\$561,000				\$561,000
	Spares		\$3,560,000	\$1,145,000	\$1,991,000	\$1,538,000			\$4,674,000
SubTotal			\$21,150,000	\$5,872,000	\$13,824,000	\$8,072,000	\$0	\$0	\$27,768,000
TOTALS			\$23,400,000	\$8,404,000	\$13,824,000	\$8,072,000	\$0	\$0	\$30,300,000

Notes:

1. PRTC bus unit capital costs consistent with those used in the PRTC TDP.
2. Fairfax County bus unit costs assume average of \$450k/bus (standard coach).
3. Costs for Commuter Coaches for S. Corridor not included because of assumption of continued private operations.
4. Table reflects initial costs of buses for proposed new service, and does not include any additional bus replacement costs.
5. Annual inflation factor = 3%

I-95 CORRIDOR TRANSIT & TDM NEEDS PLAN
ANNUAL O&M COST ESTIMATES FOR BUS SERVICE

				<i>Costs in Year of Expenditure Dollars</i>						
Geographic Area	Impr. Status	Operator	Improvement Description	Annual O&M Cost	Potential Farebox	Net O&M Cost	Impl. Year	Total O&M thru 2035	Farebox thru 2035	Net Costs thru 2035
Fairfax County	Committed Service	Fairfax	I-495 HOT Lane Service - Lorton-Tysons	Service Plans currently under development			< 2015	Committed Project		
	Improvements	Fairfax	I-495 HOT Lane Service - Franconia/Springfield-Tysons	Service Plans currently under development			< 2015	Committed Project		
	Additional Service Needs	Fairfax	Restructure Tysons service to stop at Saratoga pnr	\$92,000	\$28,000	\$64,000	2015	\$2,782,000	\$847,000	\$1,935,000
		Fairfax or	New: Saratoga-Pentagon Express - 5 a.m. and 5 p.m. trips	\$230,000	\$69,000	\$161,000	2015	\$6,956,000	\$2,087,000	\$4,869,000
SubTotal				\$322,000	\$97,000	\$225,000		\$9,738,000	\$2,934,000	\$6,804,000
Prince William County	Committed Service	OmniRide	Permanently operate additional OmniRide trips that were recently implementd to address overcrowding issues	\$505,000	\$227,000	\$278,000	2015	\$15,273,000	\$6,865,000	\$8,408,000
	Additional I-95 Corridor Service Needs	OmniRide	Lake-Ridge-Washington, D.C. - add 3 a.m. and 4 pm. trips	\$321,000	\$144,000	\$177,000	2025	\$5,566,000	\$2,497,000	\$3,069,000
		OmniRide	Lake Ridge-Pentagon/Crystal City - add 3 a.m. and 3 p.m. trips	\$275,000	\$124,000	\$151,000	2025	\$4,769,000	\$2,150,000	\$2,619,000
		OmniRide	New Service - Lake Ridge to Mark Center - 4 a.m. and 4 p.m. trips	\$367,000	\$165,000	\$202,000	2015	\$11,099,000	\$4,990,000	\$6,109,000
		OmniRide	Dale City/Potomac Mills-Washington, D.C. - add 4 a.m. and 5 p.m. trips	\$413,000	\$186,000	\$227,000	2020	\$10,022,000	\$4,514,000	\$5,508,000
		OmniRide	Dale City/Potomac Mills-Pentagon/Crystal City - add 3 a.m. and 4 p.m. trips	\$321,000	\$144,000	\$177,000	2025	\$5,566,000	\$2,497,000	\$3,069,000
		OmniRide	Dale City/Potomac Mills-Rosslyn/Balston - add 2 a.m. and 2 p.m. trips	\$184,000	\$83,000	\$101,000	2020	\$4,465,000	\$2,014,000	\$2,451,000
		OmniRide	New Service: Dale City/Potomac Mills-Mark Center - 4 a.m. and 4 p.m. trips	\$367,000	\$165,000	\$202,000	2015	\$11,099,000	\$4,990,000	\$6,109,000
		OmniRide	New Service: Dale City/Potomac Mills-Merrifield - 4 a.m. and 4 p.m. trips	\$367,000	\$165,000	\$202,000	2020	\$8,906,000	\$4,004,000	\$4,902,000
		OmniRide	Monclair/Dumfries-Pentagon/DC - Add 2 a.m. and 3 p.m. trips	\$230,000	\$104,000	\$126,000	2030	\$2,141,000	\$968,000	\$1,173,000
		OmniRide	New Service: Montclair/Dumfries-Tysons Corner - 4 a.m. and 4 p.m. trips	\$367,000	\$165,000	\$202,000	2030	\$3,417,000	\$1,536,000	\$1,881,000
		MetroDirect	Prince William MetroDirect - Increase peak period frequencies to 20-min.	\$245,000	\$49,000	\$196,000	2020	\$5,946,000	\$1,189,000	\$4,757,000
SubTotal				\$3,962,000	\$1,721,000	\$2,241,000		\$88,269,000	\$38,214,000	\$50,055,000
Stafford and Spotsylvania Counties	Additional I-95 Corridor Service Needs	Private Op's.	Washington D.C. Service - add 6 trips each peak period	\$551,000	\$551,000	\$0	2020	\$13,371,000	\$13,371,000	\$0
		Private Op's.	Pentagon/Crystal City Service - add 2 trips each peak period	\$184,000	\$184,000	\$0	2020	\$4,465,000	\$4,465,000	\$0
		Private Op's.	Mark Center Service - add 2 trips each peak period	\$184,000	\$184,000	\$0	2020	\$4,465,000	\$4,465,000	\$0
		Private Op's.	Navy Yard/DOT Service - add 1 trip each peak period	\$92,000	\$92,000	\$0	2025	\$1,595,000	\$1,595,000	\$0
		Private Op's.	Rosslyn Service - add 2 trips each peak period	\$184,000	\$184,000	\$0	2025	\$3,191,000	\$3,191,000	\$0
		Private Op's.	Fort Belvoir Service - add 1 trip each peak period	\$92,000	\$92,000	\$0	2015	\$2,782,000	\$2,782,000	\$0
		Private Op's.	Tysons Corner Service - new service, 2 trips each peak period	\$184,000	\$184,000	\$0	2025	\$3,191,000	\$3,191,000	\$0
		SubTotal				\$1,471,000	\$1,471,000	\$0		\$33,060,000
TOTALS				\$5,755,000	\$3,289,000	\$2,466,000		\$131,067,000	\$74,208,000	\$56,859,000

Annual inflation factor = 3%

Weekdays per Year: 255

Cost per Hour Assumptions
 USE \$120.00

Farebox Recovery Ratios

Locals	20%	Assuming 20% farebox recovery/80% subsidy
Fairfax Express	30%	Assuming 30% farebox recovery/70% subsidy
PRTC	45%	Consistent with PRTC TDP assumptions
Stafford/Spotsy	100%	Assume 100% recovery under private operations

I-95 Transit and TDM Plan Implementation

Next Steps

- As per FY 13 and FY 14 Appropriations Acts, the CTB may allocate funding from the Commonwealth Mass Transit Trust Fund to implement the transit and TDM Improvements identified in I-95 Transit and TDM Technical Memorandum #3 for the I-95 corridor
- The DRPT Director will solicit proposals from public, municipal, and private passenger bus operators based on the I-95 Transit and TDM Plan Technical Memorandum #3
- The DRPT Director will include the recommended approach and grant or contract award in the DRPT FY 15 – FY 20 Six-Year Improvement Program