



County of Fairfax, Virginia

Richmond Highway BRT Executive Subcommittee

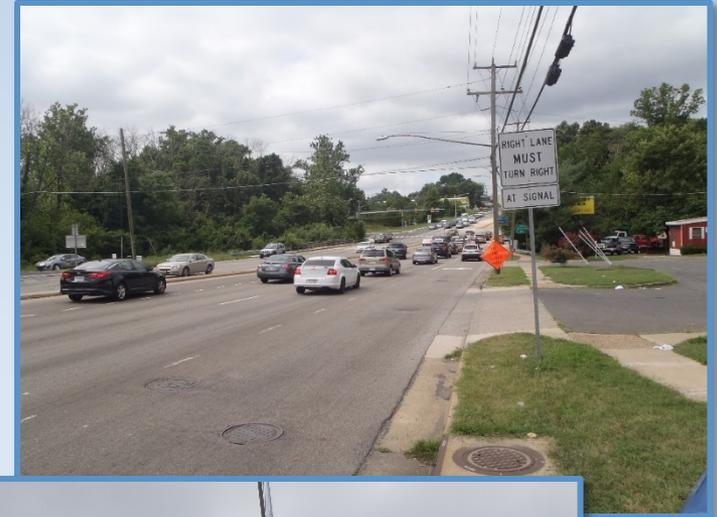
September 6, 2017





Agenda

- **Introductions**
- **Richmond Highway Corridor Overview and Projects**
- **BRT Project Governance Structure**
- **FTA Funding Processes and Requirements**
- **Preview of Next Meeting Topics**
- **Other Topics/Requests for Information**
- **Adjourn**

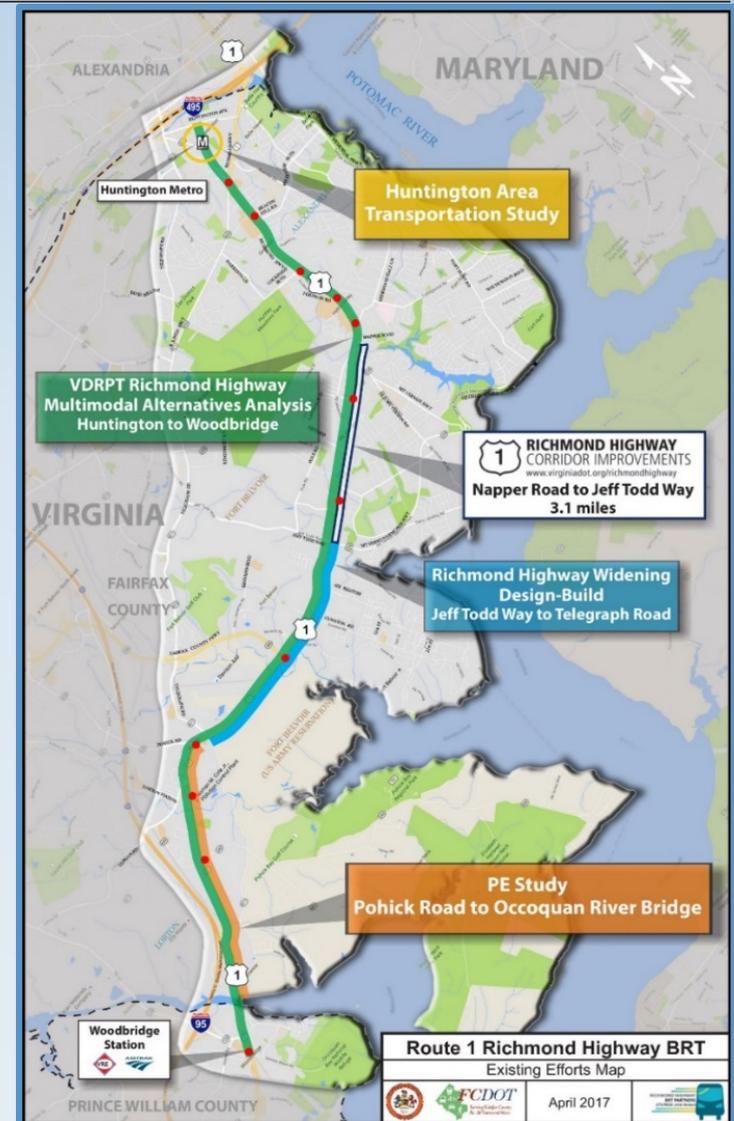




Richmond Highway Corridor

Active Projects on Corridor:

- **Route 1 Multimodal Alternative Analysis, DRPT**
- **Embark Comprehensive Plan Amendment, FCDPZ/FCDOT/FCOCR**
- **Route 1 Improvements Design-Build Project (Telegraph to Mt. Vernon Hwy), FHWA/EFLHD**
- **Richmond Highway Corridor Improvements Project (Mt. Vernon Hwy to Napper), VDOT/FCDOT**
- **Richmond Highway BRT Program (Ft. Belvoir to Huntington Metro), FCDOT**





Route 1 Multimodal Alternatives Analysis

- **DRPT completed the study and analysis in February 2015**
- **Included 16-mile segment of Route 1 from I-495/ Huntington Metro to Woodbridge**
- **Recommended phased construction of BRT along Route 1 with a long term plan to extend the Metro Yellow Line three miles to Hybla Valley**





County of Fairfax, Virginia



Embark Richmond Highway

- **Led by Fairfax County Department of Planning and Zoning**
- **Focus on developing a walkable, bikeable, transit-oriented Richmond Highway**
- **Developing a Comprehensive Plan Amendment to encourage opportunities for revitalization and transit oriented development, especially around the potential BRT Stations**
- **Comprehensive Plan Amendment will include:**
 - Planning goals and objectives for the corridor
 - Land use density and mix for the areas in the vicinity of the potential BRT stations between Huntington and Fort Belvoir.
 - Corridor-wide transportation systems, urban design, public facilities



Route 1 Improvement Projects

- **Undertaken by FHWA EFLHD**
- **Telegraph Road to Mt. Vernon Highway**
- **Goals:**
 - Provide better access to a new Army hospital on Fort Belvoir
 - Roadway widening from 4 to 6 lanes
 - Provide enhanced bicycle and pedestrian accommodations
- **Status:**
 - Substantially completed Summer 2017





Richmond Highway Corridor Improvements Project

- Undertaken by VDOT in coordination with FCDOT
- Construction of an additional lane with multimodal bicycle and pedestrian improvements from Mt. Vernon Highway to Napper Road (3.1 miles)
- Includes accommodations for future BRT and BRT stations
- Currently in environmental study and preliminary design
- Anticipated construction from 2023 to 2026 (Overlaps BRT Program Schedule)
- Projected Cost = \$215M
 - Current Available Funding: \$27.1M RSTP Revenue Sharing \$15.9M, NVTA/70% \$1M



CONCEPTUAL ROADWAY CROSS SECTION





Richmond Highway Existing Bus Service

• Richmond Highway Express

- King Street Metrorail Station to Ft. Belvoir
- Operated by Metro
- Limited stop service
- Weekdays
 - 5:30 AM to 10:55 PM
 - 15-20 minute headways
- Weekends
 - 5 AM to 10:10 PM
 - 30 min. headways Saturday, 60 min. Sunday



• Fairfax Connector Route 171

- Huntington Metrorail Station to Lorton
- Weekdays
 - 3:20 AM to 1:40 AM
 - 20-30 minute headways
- Weekends
 - 5:27 AM to 2:45 AM
 - 30 minute headways





What is Bus Rapid Transit (BRT)?

- **BRT is a high quality bus-based system that delivers fast, comfortable, frequent and cost effective services at metro-level frequencies.**
- **Utilizes advanced technologies to improve customer convenience and reduce delays.**
- **Key elements of BRT:**
 - Running Ways
 - BRT Vehicles
 - Stations
 - Service and Operations
 - Advanced Technology
 - Branding





Integrated System of Elements

Running Ways

- Mixed traffic
- Dedicated lanes
- Median or curb lanes
- Queue jumps/bypasses



BRT Vehicles

- Specialized bus - 60-foot length
- Higher capacity through use of articulated buses
- Low-floors
- Multiple doors on both sides of bus
- Bicycle provisions
- Strong brand identity
- Advanced propulsion: hybrid-electric, CNG, etc.
- Guided or unguided





Integrated System of Elements

Stations

- Platforms and level bus boarding
- Passenger shelters
- Canopies
- Real-time bus arrival information
- Off-board fare collection
- Site treatments such as landscaping, lighting, artwork



Service Plan

- Headways
- Schedule
- Service limits
- Operations and Maintenance



Integrated System of Elements

Technology

- Traffic signal priority
- Off-board fare collection
- Real-time Passenger info
- Wi-fi
- Vehicle guidance
- Vehicle locator



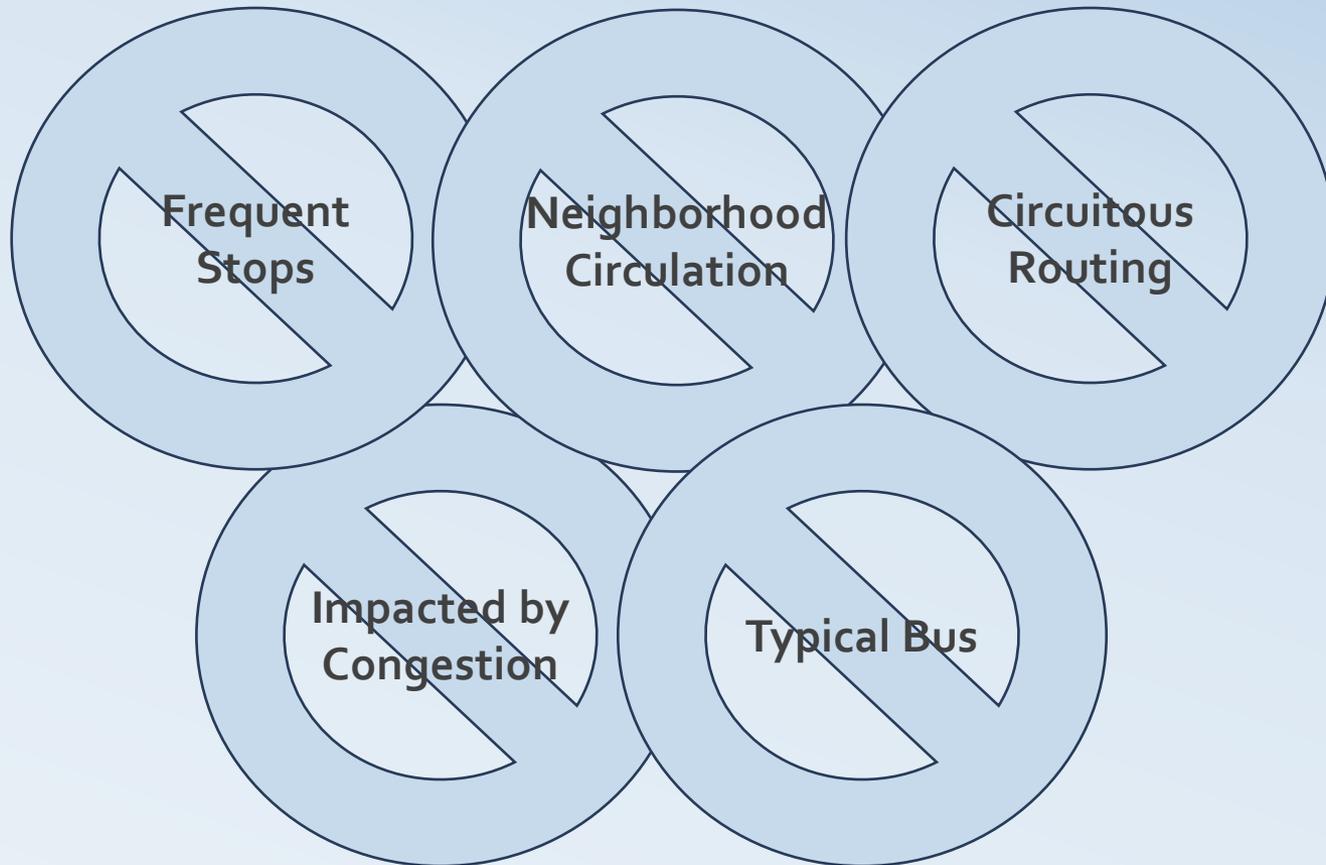
Branding

- Conveying a recognizable, consistent, and unique system identity and image
- **Vehicles** – use design, color, graphics, signage
- **Stations** – use design, colors, graphics, signage, materials
- **Runningways** – use barriers, pavement markings/materials/colors, graphics, signage, landscaping





BRT is NOT local bus service.





BRT Examples: "Metroway" Alexandria, VA

Opened August 2014:

- 0.8-mile bus-only corridor (Phase I)
- Premium bus service between Crystal City and Braddock Rd Metrorail stations
- Part of economic development along Jefferson Davis Highway



Results:

- Steady growth in ridership
- Increased reliability of bus service
- Rapid land development along Jefferson Davis Highway
- Supports new Metrorail station at Potomac Yards development
- Phase II bus-only corridor extension to Crystal City opened in 2015



BRT Examples: Cleveland Health Line

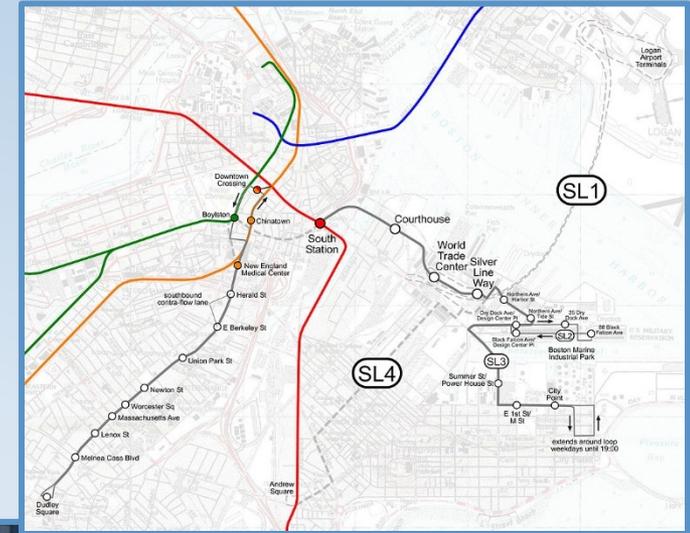
- **Operated by the Greater Cleveland Regional Transit Authority**
- **Connects downtown to major hospitals and universities**
- **Began operation on October 24, 2008**
- **Within downtown Cleveland, the line has two "bus only" lanes closest to the inner median**
- **Operates with 21 articulated BRT vehicles manufactured by New Flyer**
- **Daily ridership: 15,000**
- **Project included complete reconstruction of urban roadway and extensive landscaping**





BRT Examples: Boston Silver Line

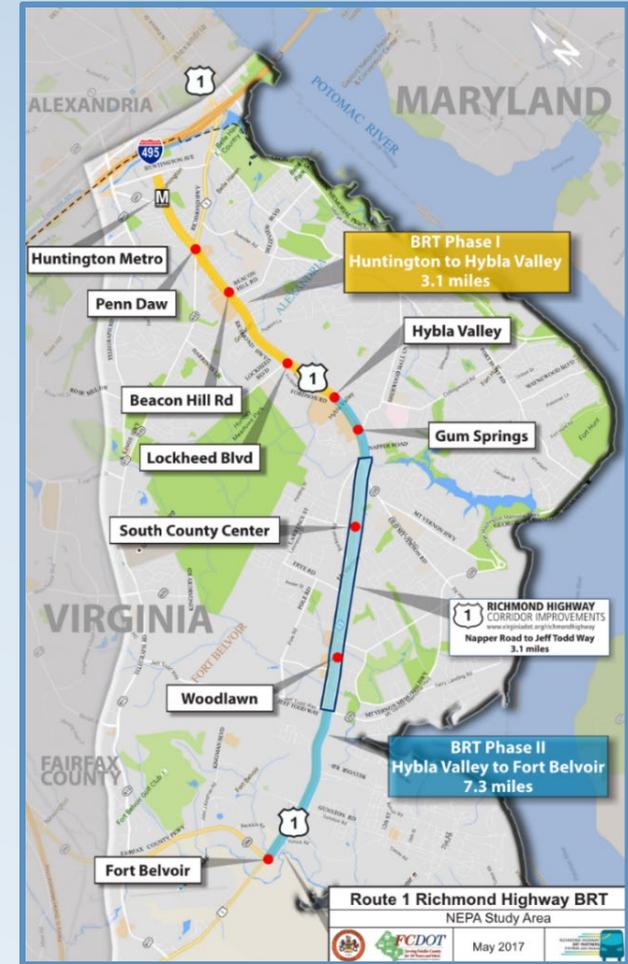
- **Operated by the Massachusetts Bay Transportation Authority**
- **Connects to Airport**
- **Initial phase began operation in 2002; airport extension opened in 2004**
- **Street running within Boston, then utilizes a dedicated tunnel to airport**
- **Operates with 56 articulated BRT vehicles manufactured by Neoplan (a portion of fleet is dual powered with both diesel and overhead wires)**
- **Daily ridership: 34,000**





Richmond Highway BRT Program (Phase I & II)

- **Limits: Huntington Station to Fort Belvoir**
- **Two dedicated lanes in median**
- **Nine potential stations**
- **Two Phases:**
 - **Phase I: Huntington to Hybla Valley**
 - 3 miles
 - 5 stations*:
 - Huntington Metro
 - Penn Daw
 - Beacon Hill Rd
 - Lockheed Blvd
 - Hybla Valley
 - **Phase II: Hybla Valley to Fort Belvoir**
 - 7.3 miles
 - 4 stations*:
 - Gum Springs
 - South County Center
 - Woodlawn
 - Fort Belvoir



*Actual station names still to be determined

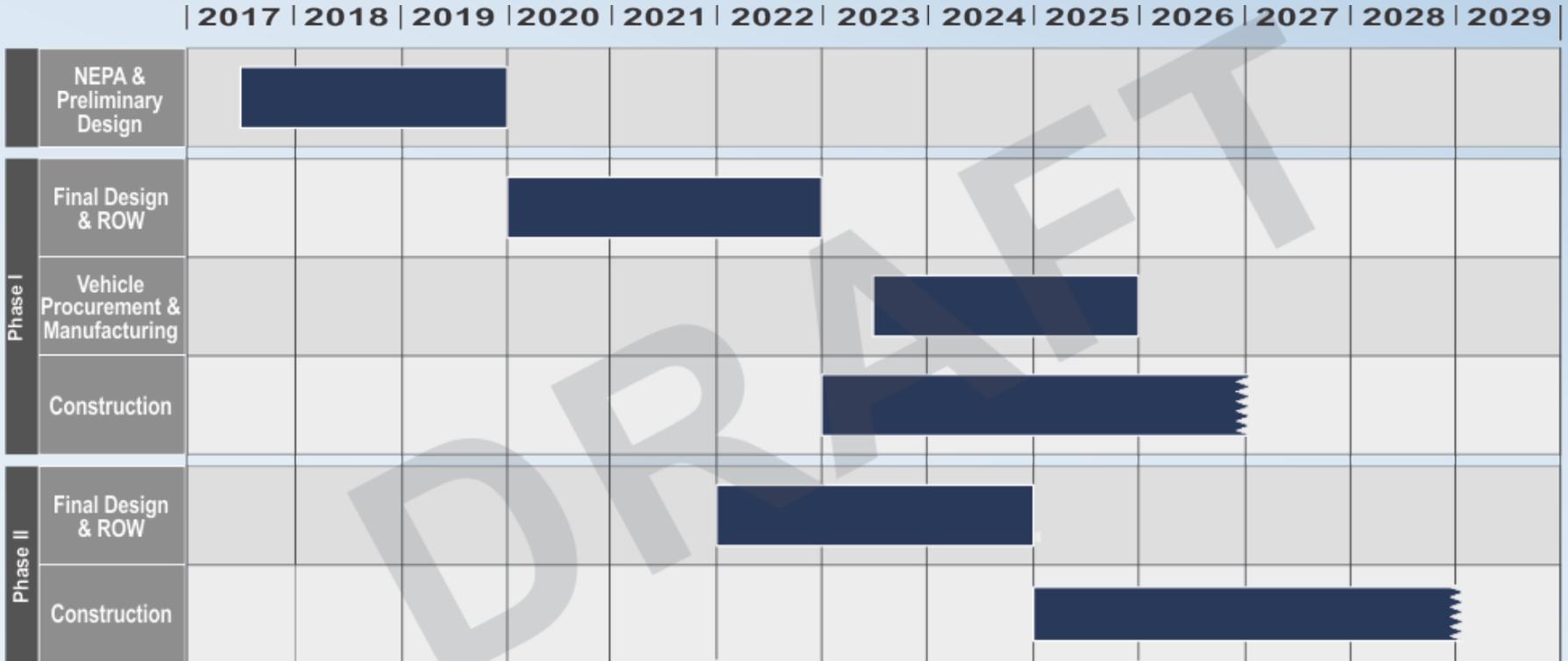


Current Status/Schedule of BRT Project

- **January 2017: Program Management Consultant underway**
- **Through the end of 2017: Performing preliminary planning tasks**
 - Conceptual horizontal layout
 - Conceptual station locations and layout
 - Preliminary traffic data collection and analysis
 - Preliminary operating plan to support ridership forecast and fleet sizing
 - Governance Meetings: Executive Committee & Technical Committees
 - FTA coordination
- **Early Spring 2018: Initiating NEPA, environmental document, and preliminary engineering**



Status/Schedule



Note: Timeframes and durations for design, utilities, ROW, vehicle procurement, and construction will vary depending on the project delivery method.



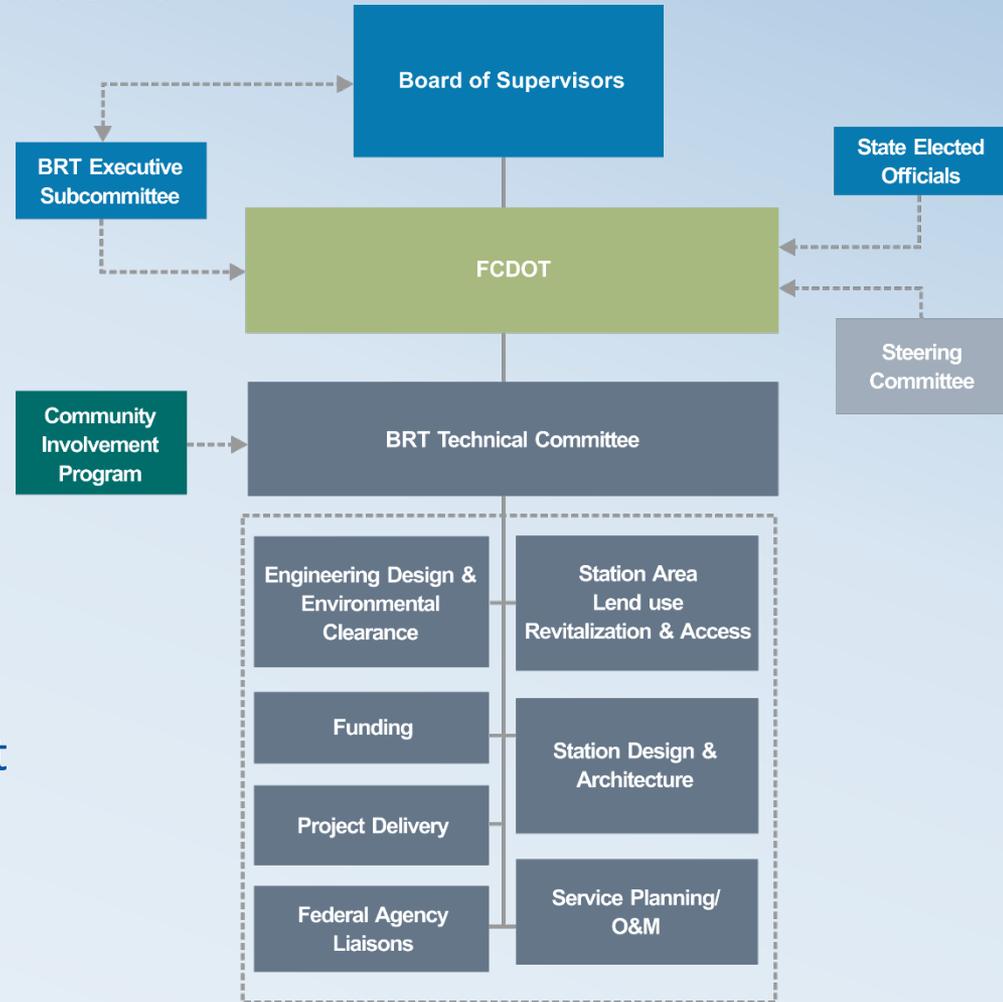
Project Governance Structure

• Purpose

- Assure coordination with county initiatives
- Maximize land use potential and achieve re-development goals
- Resolve financial and technical issues

• Committees

- BRT Executive Subcommittee comprised of Supervisors, key state agencies, key department heads
- BRT Technical Committee and ad hoc workgroups





BRT Executive Subcommittee

- **Inform the Board of Supervisor's decision making**
- **Provide guidance and input on key project elements:**
 - Milestone schedule
 - Financial planning
 - Program delivery
 - Right of way acquisition
 - Coordination with other county initiatives
 - Branding
- **Oversee public involvement and convey constituent issues to project team**
- **Next Meeting: September 27 at 9:00 AM**
- **Future quarterly meetings – Starting in March 2018**



Community Advisory Group (CAG)

- **Function as advisors to the Technical Advisory Committee**
- **Provide input on BRT issues such as community impacts, station concepts, and desired branding**
- **PMC and FCDOT will work to accommodate input received**
- **FTA public involvement requires that all groups within a corridor be represented and allowed to participate in community involvement**
- **Existing Embark Advisory Group will need to be modified to meet FTA requirements**





Community Advisory Group (CAG)

- **PMC and FCDOT will work to accommodate input received provided that the schedule is not impacted**
- **Will meet quarterly**
- **First meeting in Spring of 2018 prior to public meeting**
- **Meeting locations may vary, with locations up and down the corridor in the evenings**



Cost Estimate – Phases I & II

- **Source is 2015 DRPT Multimodal Alternatives Analysis Project**
- **DRPT Planning Estimate \$524M**
- **Elements of Estimate include**
 - Transitway & Roadway
 - Stations
 - Operations and Maintenance Facility
 - Systems and Signals
 - Right of Way
 - BRT Vehicles
 - Professional Services including Engineering
 - Project Contingencies
- **FCDOT and PMC will be reviewing and refining estimate and inflating it to current year numbers**

DRPT assumed use of existing facility.
Subject to confirmation. If standalone
facility needed, cost will be higher



BRT Program Funding Today

RTE 1 BRT (\$ in Mils)	Need	Available	Request	
Phase I Project Estimate ¹	\$324.6			
CMAQ ² /RSTP (Federal)		\$26.4	\$9.0	
DRPT ³ Grant (State)		\$4.0		-FY16 grant.
Local		\$6.0	\$43.5	
Funding Gap			\$515.1	-Addressing the \$288.5M gap: NVTa regional, additional CMAQ/RSTP, Smart Scale, New Starts (~40-50%), local/developer contributions. -Requested \$100M through CTB Smart Scale program (FY18-23). Not awarded
Total	\$324.6	\$36.1	\$288.5	

1) Planning level estimate based from VDRPT MM AA Study, subject to change as project moves into preliminary design

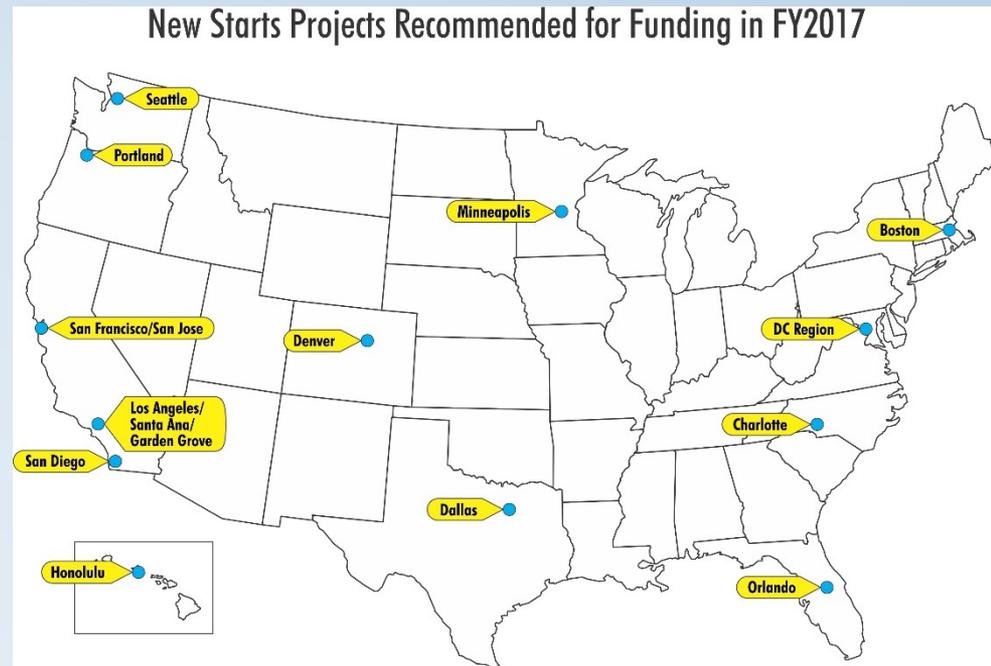
2) Congestion Mitigation Air Quality

3) Virginia Department of Rail and Public Transportation



FTA Processes and Requirements

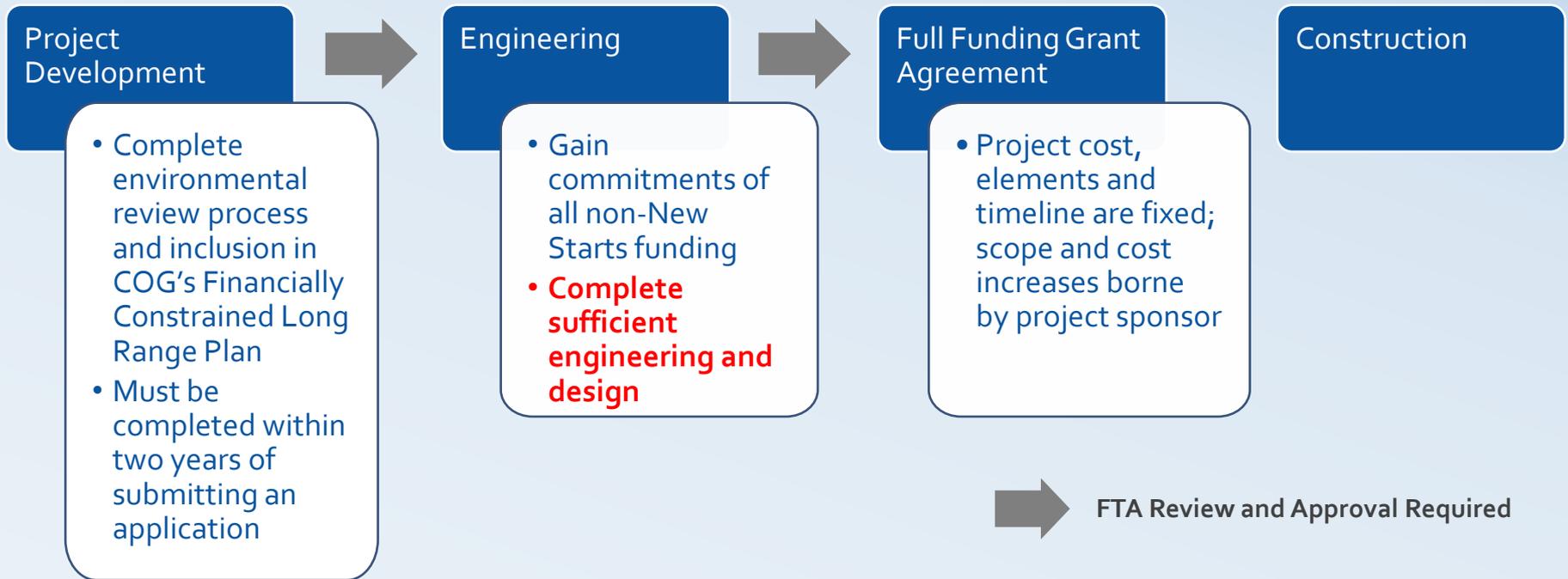
- **Current federal transportation authorization (FAST Act) continues longstanding Capital Investment Grant (New Starts) program**
- **New Starts are projects...**
 - ...“using or occupying mostly separate right of way for the exclusive use of public transportation,” e.g., heavy rail, light rail, streetcars, Bus Rapid Transit
 - Capital cost greater than \$300M and/or requesting federal funds in excess of \$100M





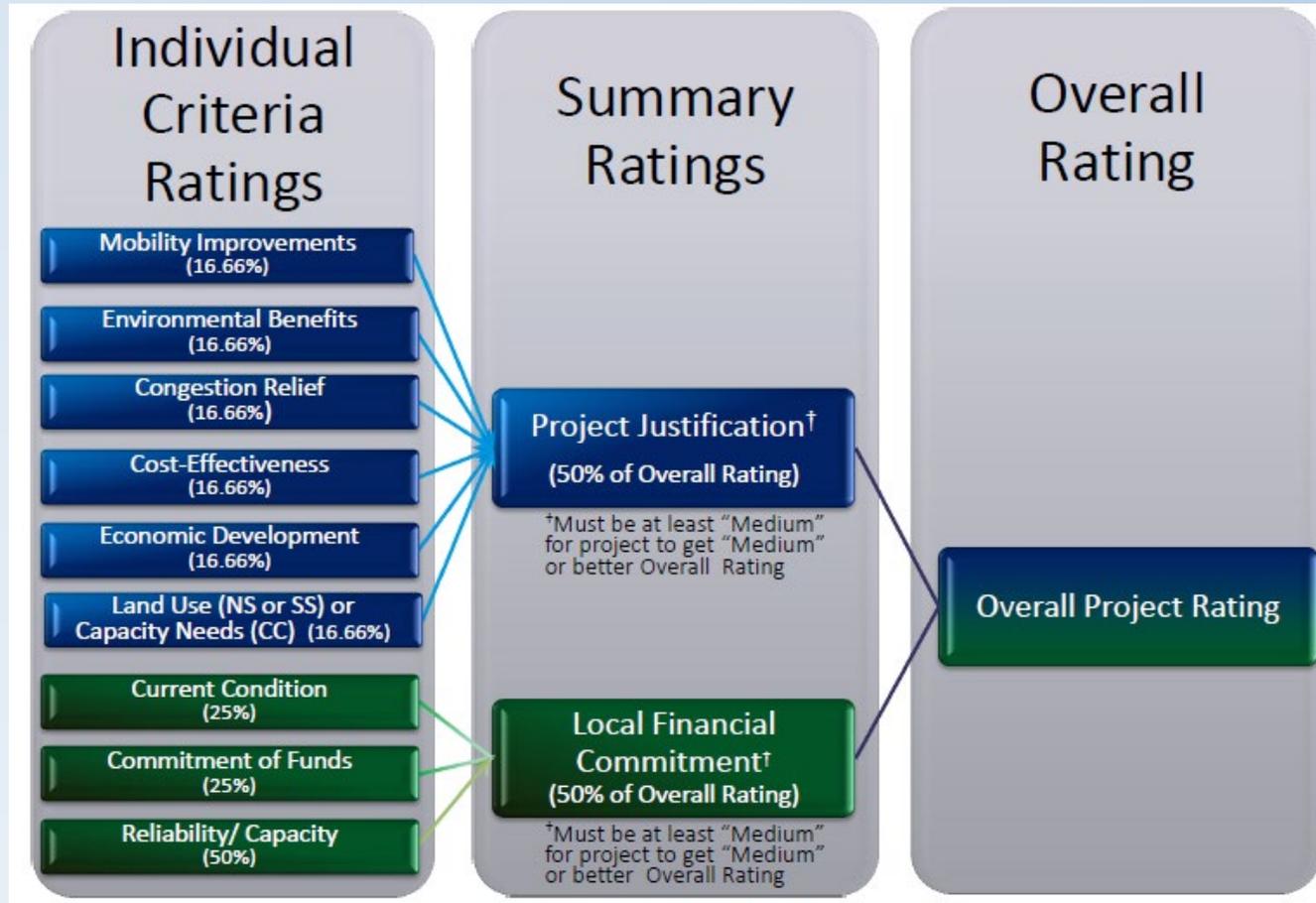
Multi-Step Application Process

- **Grants are discretionary, i.e., based on a competitive application**
- **Funding award based on availability of funds and a project rating of at least Medium**
 - Rating includes project justification and local financial commitment





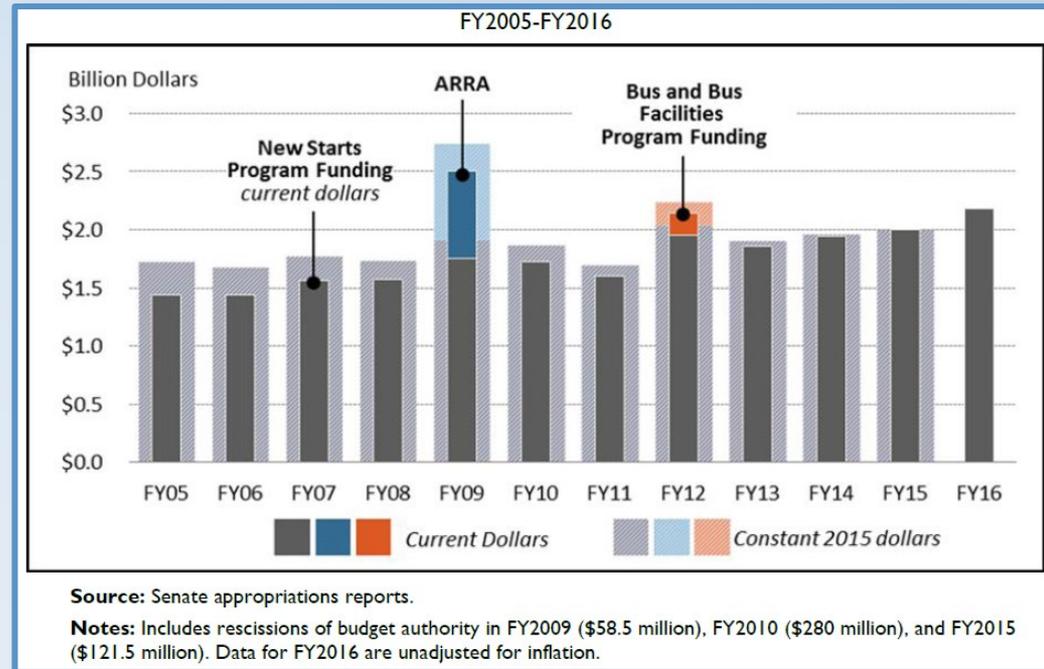
CIG Project Evaluation and Rating





Outlook for New Starts

- Funding stable from FY2005 to FY2011
- In FY 2009, appropriation supplemented with \$750 million from ARRA
- In FY 2012, Congress funded New Starts BRT projects from the Bus and Bus Facilities discretionary grant program instead
- Funding levels have been rising since FY 2014
- Currently authorized; strong support in Congress
- Administration is not required to expend authorized fund; President's budget proposed to eliminate program
- Congress has yet to act on FY2018 Federal Budget





Fixing America's Surface Transportation Act (FAST)

FIXED GUIDEWAY CAPITAL INVESTMENT GRANTS

Chapter 53 Section 5309

	FY15 /MAP-21	FY16 (millions)	FY17 (millions)	FY18 (millions)	FY19 (millions)	FY20 (millions)
Section 5309	\$2,120.0	\$2,301.8	\$2,301.8	\$2,301.8	\$2,301.8	\$2,301.8

FY17 Funding Recommendations for CIG Program

Project	Rating	Mode	Total Project Cost	5309 Request	5309 Share	5309 Funds Appropriated/ Allocated Through FY 2016	Remaining 5309 Funding Needs: After FY 2016	FY 2017 Budget Recommendations
Existing New Starts FFGA Commitments								\$ 1,382,808,931
New Starts Not Yet Under Construction Grant								\$ 950,000,000
Small Starts Not Yet Under Construction Grant								\$ 598,843,238
Core Capacity Not Yet Under Construction Grant								\$ 457,847,831
Expedited Delivery Pilot Program								\$ 75,500,000
Overnight takedown								\$ 35,000,000
GRAND TOTAL								\$ 3,500,000,000

TOTAL FOR FY 2017 SECTION 5309 FIXED GUIDEWAY CAPITAL INVESTMENT GRANTS (CIG) ALLOCATIONS = \$2,505,470,000



FY18 Funding Recommendations for CIG Program

Mode	Total Project Cost	Section 5309 CIG Request	Section 5309 CIG Share	Section 5309 CIG Funds Appropriated/Allocated Through FY 2017	Remaining Section 5309 CIG Funding Needs After FY 2017	FY 2018 Section 5309 CIG Funding Recommendations		
Existing New Starts Full Funding Grant Agreements (FFGAs)						\$ 1,007,929,851		
Existing Core Capacity Full Funding Grant Agreement						\$ 100,000,000		
Other Projects						\$ 111,750,149		
Expedited Delivery Pilot Program						\$ -		
Oversight - 1% takedown by statute						\$ 12,320,000		
Total						\$ 1,232,000,000		
Existing New Starts FFGAs								
CA	Los Angeles, Regional Connector	LRT	\$ 1,402,932,490	\$ 669,900,000	47.7%	\$ 365,000,000	\$ 304,900,000	\$ 100,000,000
CA	Los Angeles, Westside Subway Section 1	HR	\$ 2,821,957,153	\$ 1,250,000,000	44.3%	\$ 365,000,000	\$ 885,000,000	\$ 100,000,000
CA	Los Angeles, Westside Subway Section 2	HR	\$ 2,499,239,536	\$ 1,187,000,000	47.5%	\$ 250,000,000	\$ 937,000,000	\$ 100,000,000
CA	San Diego, Mid-Coast Corridor Transit Project	LRT	\$ 2,171,200,545	\$ 1,043,380,000	48.1%	\$ 150,000,000	\$ 893,380,000	\$ 100,000,000
* CA	San Francisco, Third Street Light Rail Phase 2 - Central Subway	LRT	\$ 1,578,300,000	\$ 942,200,000	59.7%	\$ 919,181,899	\$ 23,018,101	\$ 23,018,101
* CA	San Jose, Silicon Valley Berryessa Extension Project	HR	\$ 2,330,021,971	\$ 900,000,000	38.6%	\$ 802,585,423	\$ 97,414,577	\$ 97,414,577
* CO	Denver, Eagle Commuter Rail	CR	\$ 2,043,143,000	\$ 1,030,449,000	50.4%	\$ 967,186,415	\$ 63,262,585	\$ 63,262,585
MA	Boston Green Line Extension	LRT	\$ 2,297,618,856	\$ 996,121,000	43.4%	\$ 400,000,000	\$ 596,121,000	\$ 150,000,000
* NC	Charlotte, LYNX Blue Line Extension - Northeast Corridor	LRT	\$ 1,160,084,496	\$ 580,042,248	50.0%	\$ 505,807,660	\$ 74,234,588	\$ 74,234,588
OR	Portland, Portland-Milwaukie Light Rail Project	LRT	\$ 1,490,350,173	\$ 745,175,087	50.0%	\$ 579,510,943	\$ 165,664,144	\$ 100,000,000
TX	Fort Worth, TEX Rail	CR	\$ 1,034,411,932	\$ 499,390,221	48.3%	\$ 254,000,000	\$ 245,390,221	\$ 100,000,000
Subtotal			\$ 20,829,260,152	\$ 9,843,657,556		\$ 5,558,272,340	\$ 4,285,385,216	\$ 1,007,929,851
Existing Core Capacity FFGAs								
IL	Chicago, Red and Purple Line Modernization Project Phase One	HR	\$ 2,066,702,783	\$ 956,607,772	46.3%	\$ 291,131,640	\$ 665,476,132	\$ 100,000,000
Subtotal								\$ 100,000,000
Other Projects That May Become Ready for Funding +						\$ 111,750,149		

LRT = light rail transit, HR = heavy rail, CR = commuter rail

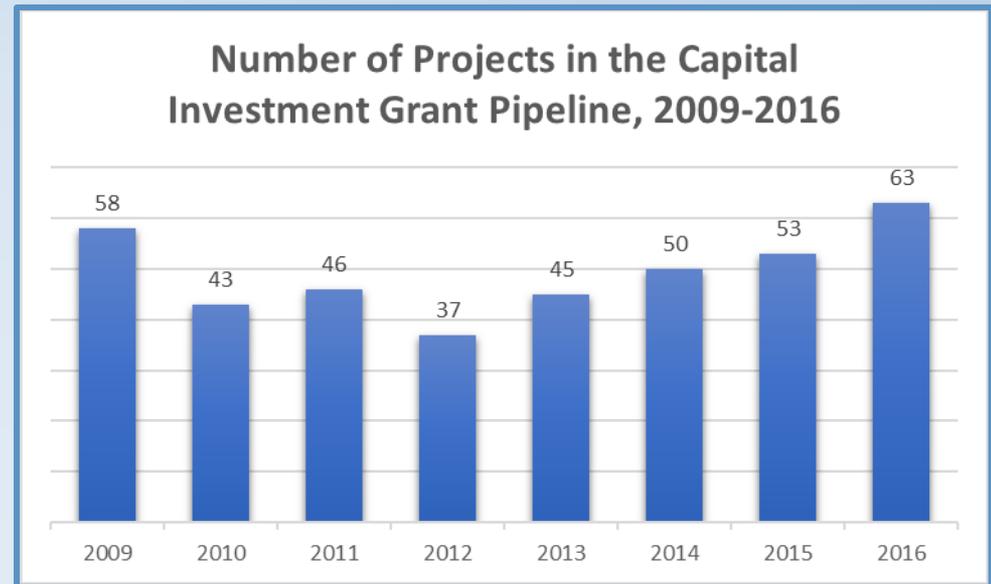
* CIG payout completed with FY 2018 recommendation

+ The FFGA for the Caltrain Peninsula Corridor Electrification Project is planned to be signed shortly and the Maryland National Capital Purple Line FFGA remains under review due to pending litigation.



New Starts Pipeline

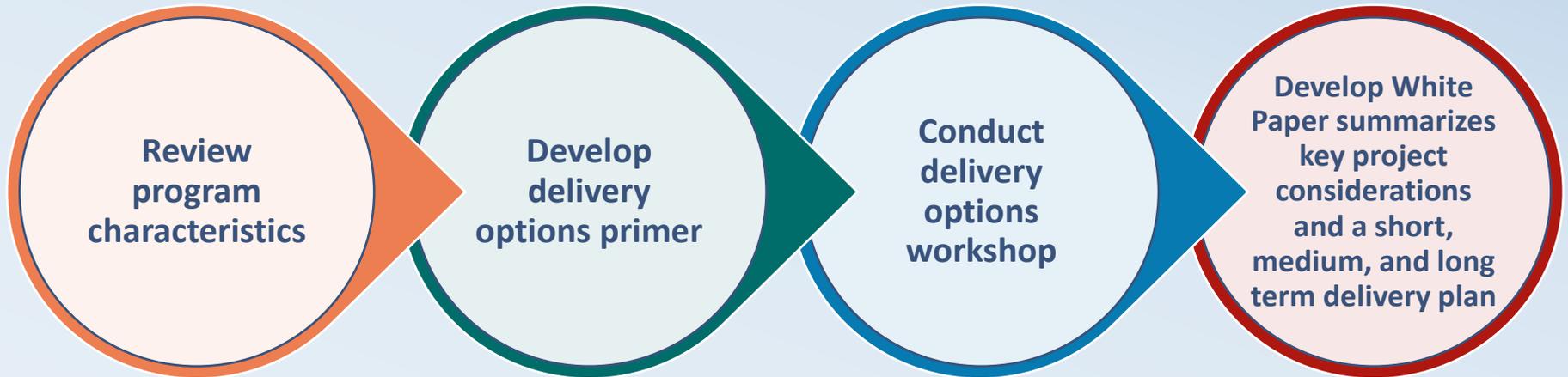
- **Projects in the pipeline increased by 70 percent from 2012 to 2016**
 - Program funding and FTA's resources to review and evaluate projects have largely remained flat
- **Bottom line for Fairfax County**
 - Maximize opportunity for FTA funding by submitting project with strong justification
 - Committed local funding and adoption of new comprehensive plan are crucial
 - Request entry into New Starts competitive process while considering an alternate plan for funding and financing the program
 - Be prepared to front-fund project development process



Numbers shown are in 2015 dollars



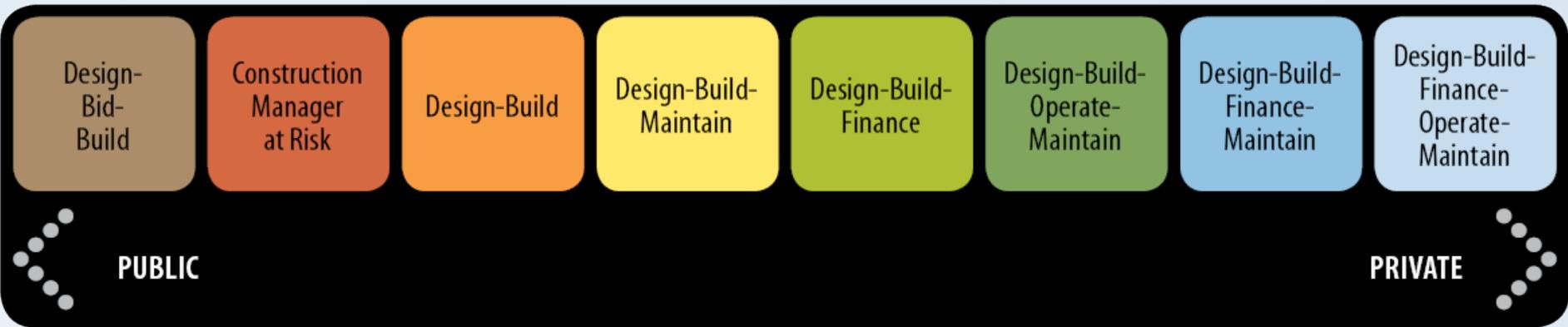
Next Meeting Preview: Project Delivery Work Process Through End of 2017





Project Delivery Options

- **BRT involves both construction of capital improvements as well as long term operating and maintenance**
 - Creates the opportunity to procure everything in one package, i.e., alternative delivery methods
- **Project team will compare and evaluate implementation through traditional and alternative delivery methods**
- **Identifying a procurement strategy requires clear identification of:**
 - Policy and procurement goals
 - Project risks
 - County resources
 - County risk preferences
- **These influences will be matched with likely risk allocation available under various delivery options**
- **September 27 meeting will focus on options for project delivery and path to decision**





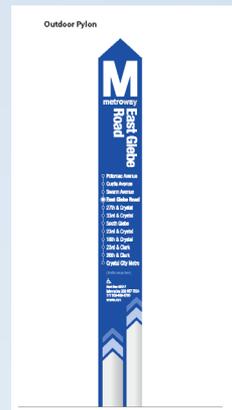
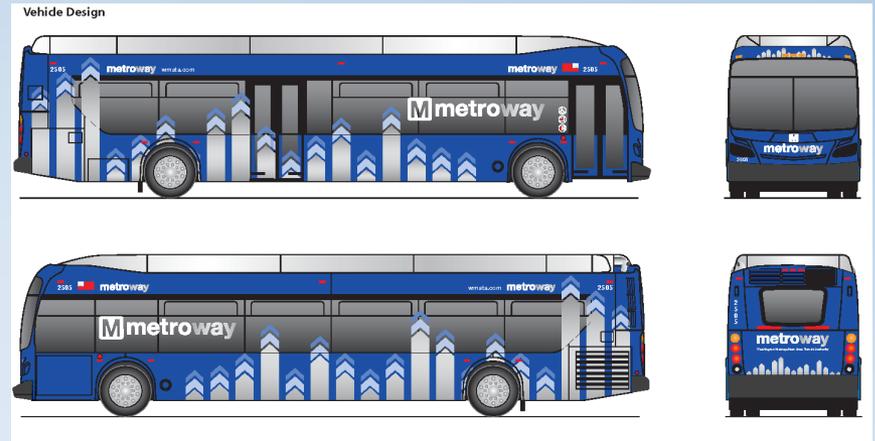
Next Meeting Preview: BRT Branding

- **Successful branding**

- Marketing/communications and customer-first process
- Engages all target audiences and stakeholders
- Experience shows earlier is better
- Makes it “real”, builds excitement
- All audiences must feel heard

- **Branding approach**

- Project vision developed
- Commit to communicate
- Build equity in the relationships





Questions/Comments



**Next meeting:
September 27, 2017
9-11:30 AM**

Proposed Topics:

- **Project Delivery**
- **CAG Membership**
- **Branding**

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