ENVISION ROUTE 7

Capital and Operating Costs

CAPITAL COSTS

Capital costs are one-time, fixed costs associated with building the service line. Major capital costs for a new transit system include:

- **Physical construction of the alignment**: additional roadways, steel rails (LRT), and lane reconfiguration
- **Stations and stops**: structures, shelters, seats, and amenities
- **Right-of-way purchase**: buying land for the route, stations or stops
- **Site work**: demolition, road work, and utility relocation
- **Systems**: communications, signals, electrification (LRT), and fare collection
- **Vehicles**
- **Maintenance facilities**
- **Professional services**: engineers, architects, lawyers, and permitting fees

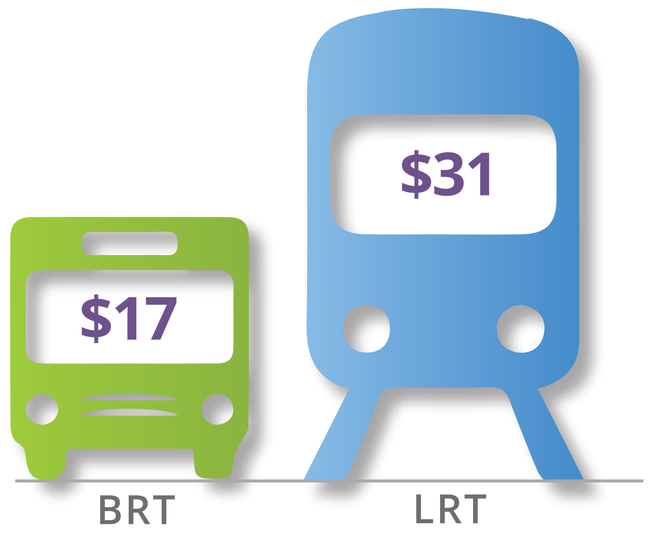
Downtown bus stop with off-board fare collection, shelter, and real-time information

BRT stop requiring significant roadway redesign in a downtown

Modern, high capacity vehicle

ANNUAL OPERATING COSTS (MILLIONS)

Projected annual operating costs are an important measure of the long-term viability of a high-capacity transit system. Comparable national systems were used to develop cost estimates for LRT and BRT.



ALIGNMENT CAPITAL COST ESTIMATES

The capital costs of the seven alignment/mode options have been estimated based on comparable systems nationally. The estimates below have been tailored to account for mode type, alignment length, and location.

	Route Miles	Stations	Capital Costs (millions)	Cost Per Mile (millions)
BRT - Tysons to Van Dorn Street Metrorail Station with EFC connection (Alt. 1)	15.2	24	$305.74	$20.10
BRT – Tysons to Mark Center with EFC connection (Alt. 2)	12.5	21	$266.28	$21.24
BRT – Tysons to Van Dorn Street Metrorail Station w/o EFC connection (Alt. 3)	13.1	22	$267.36	$20.41
BRT – Tysons to Mark Center w/o EFC connection (Alt. 4)	10.4	19	$227.90	$21.86
BRT – Tysons to King Street Metrorail Station with EFC connection (Alt. 5)	14.6	19	$295.27	$20.23
LRT At-grade – Tysons to Mark Center with EFC connection (Alt. 6)	12.6	21	$946.08	$75.25
LRT – Same as Alt. 6 above, but with two elevated rail sections near EFC (Alt. 7)	12.6	21	$997.44	$79.34

EFC – East Falls Church Metrorail Station

SIMILAR PROJECTS THROUGHOUT THE REGION

Various BRT and LRT projects have been proposed or constructed throughout the region. Below are several capital cost estimates, which include construction and real estate acquisition.

	Route Miles	Capital Costs (millions)	Cost Per Mile (millions)
LRT – Purple Line – Maryland	16.2	$2,448	$151
LRT – Virginia Beach Transit Extension – Virginia	3.1	$279	$90
BRT – Corridor Cities Transitway – Maryland	9.0	$545	$61
BRT – GRTC Pulse – Richmond, Virginia	7.6	$54	$7
BRT – Route 1 Metroway – Alexandria, Virginia	0.8	$23	$21
BRT – West End Transitway	5.3	$140	$26

WMATA's Metroway

MTA's Proposed Purple Line

NVTC
NORTHERN VIRGINIA TRANSPORTATION COMMISSION