Washington Metropolitan Area Transit Authority

LRT and Streetcar Interoperability Study Overview

TPB Regional Bus Subcommittee Meeting

January 22, 2013

Purpose

To brief the TPB Regional Bus Subcommittee on Metro's Light Rail Transit (LRT) and Streetcar Interoperability study underway to:

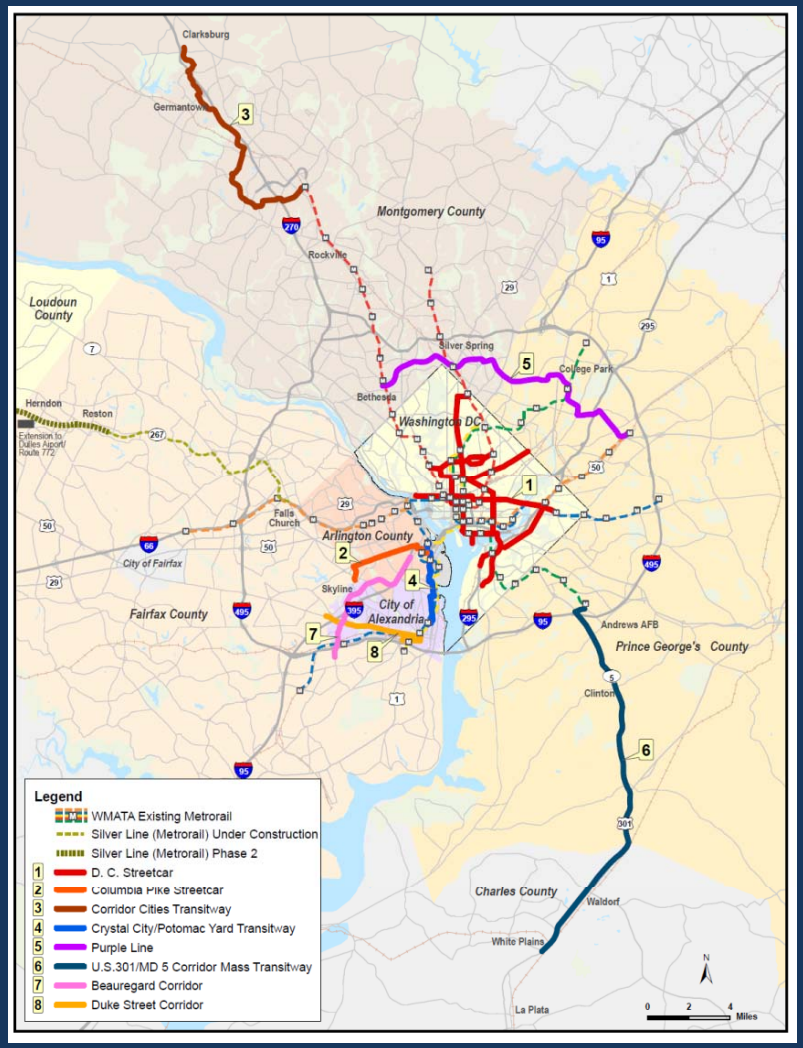
- Facilitate regional coordination on the surface transit projects being advanced around the region.
- Advance key findings of the LRT-Streetcar Interoperability study

Background

- Numerous surface transit projects are being advanced around the region
- Without coordination, these projects might miss opportunities to coordinate system designs, connections, and efficiencies
- Metro is facilitating regional coordination among project sponsors and stakeholders to maximize potential compatibility of the proposed systems
- Goal is to promote customer convenience and to identify potential cost savings; operating efficiencies; network connections; and fare and information systems integration
- First regional stakeholders workshop was held in October 2010 and focused on identifying opportunities for interface /integration

Regional LRT and Streetcar Projects

- District of Columbia is advancing streetcar starter lines and planning for a broader streetcar system
- Maryland is in preliminary engineering (PE) for Purple Line LRT and anticipates entering PE for the Corridor Cities Transitway in 2013
- Arlington and Fairfax Counties are completing NEPA and anticipate entering PE in 2013; other corridors are under study in the City of Alexandria



WMATA Roles in LRT and Streetcar Projects

- Project Development
  - District of Columbia streetcar feasibility and concept design
  - Columbia Pike (Arlington and Fairfax Counties) environmental documentation and concept design
- Design Coordination
  - Purple Line interface at existing Metrorail stations
  - District of Columbia streetcar vehicle procurement
  - Planning for operation of interlined and connecting rail and bus services

Benefits of Planning for Interoperability

1. Common design criteria elements maintains the potential for maximum degree of future interoperability.
2. Pooling on capital investments saves resources, especially where individual small projects cannot achieve economies of scale.
3. Collaboration on maintenance activities can reduce initial capital outlays on land and physical facilities, and ongoing expenditures on parts and maintenance.
4. Developing a skilled labor force in management, operation and maintenance of LRT/streetcar is a major investment for the region; collaborations save resources and promote safety and efficient operations

Efforts of the Interoperability "Working Group"

Regular coordination with key stakeholders:

- District of Columbia Department of Transportation (DDOT)
- Maryland Transit Administration (MTA)
- Montgomery County Department of Transportation (DOT)
- Prince George's County Department of Public Works and Transportation
- Fairfax County
- Arlington County
- City of Alexandria
- Metropolitan Washington Council of Governments (MWCOG)
- National Capital Planning Commission (NCPC)

Work products:

- "LRT and Streetcar Project Interface Technical Memorandum: Compatibility of Systems and Infrastructure"
- Field visits and work sessions on interoperability topics

Assessment of Interoperability

LRT and Streetcar Project Technical Memorandum is available at:
http://www.wmata.com/pdfs/planning/WMATA_LRT-Streetcar_Interface_May%202012.pdf

- Key interoperability categories:
  - Fare collection systems
  - Vehicle types and specifications
  - Operations and maintenance facilities
  - Power supply
  - Guideway design
  - Passenger information and user interface

- Survey of current design criteria (DDOT, WMATA) shows that sponsors are not explicitly considering interoperability

Key Recommendations

Topic	Interoperability Opportunity
Fare collection systems	Ability to seamlessly integrate collection systems; share maintenance and operational costs.
Vehicle types and specifications	Operate over other lines for non-revenue moves to reach shared maintenance facilities. For like modes, option to share vehicles to meet temporary demand. Use of common vehicle type or family to simplify maintenance and training.
Operations and maintenance facilities	Common vehicle types or families will make maintenance easier. Special capabilities (wheel truing, overhaul, major painting/accident repairs) could be performed in an existing or "specialized" facility.
Power supply	Use of common design practices and parts to lower costs and simplify maintenance and training. To include standardized pantograph dimensions and wire height range for all vehicles in region.
Guideway design	Design criteria should seek to strike balance between unnecessarily restrictive criteria and adherence to recommended limits as a means of limiting risk that features might be built into infrastructure which limit compatibility with standard vehicle designs.
Passenger information and user interface	Coordination (in some cases mode-specific) on policies and passenger communication.

Applying Study Recommendations

1. Customer convenience
   - NEPP
   - Placement and predictability of station elements
2. Flexible infrastructure
   - Guideway and systems design criteria do not preclude future interoperability
   - Relationship with vehicle width and characteristics
3. Operations and communications
   - Project sponsors may become project operators
   - Coordination among projects and with WMATA key to operational efficiency and safety