



Tysons Corner Circulator Study: Preliminary Results Summary

April 24, 2012

Study Purpose

- LONG RANGE Planning study to support Tysons Corner redevelopment and rezoning process
 - Design circulator system to support goal of maximizing transit trips/minimizing auto trips
- Identify needed transit preferential treatments
 - Support a reliable and effective circulator system
 - Identify required expansion of right of way – may require additional adjacent land

Planning Process

- Peer analysis of circulator systems in other cities
- Project goals and objectives
- Network development process
- Long range ridership forecasts
- Transit preferential treatments
- Mode options
- Operating and capital costs
- Finalize recommendations



Network Development Process

- Five preliminary networks developed initially
 - Long range design based on 2050 forecasted conditions
 - Individual routes developed – combined into networks



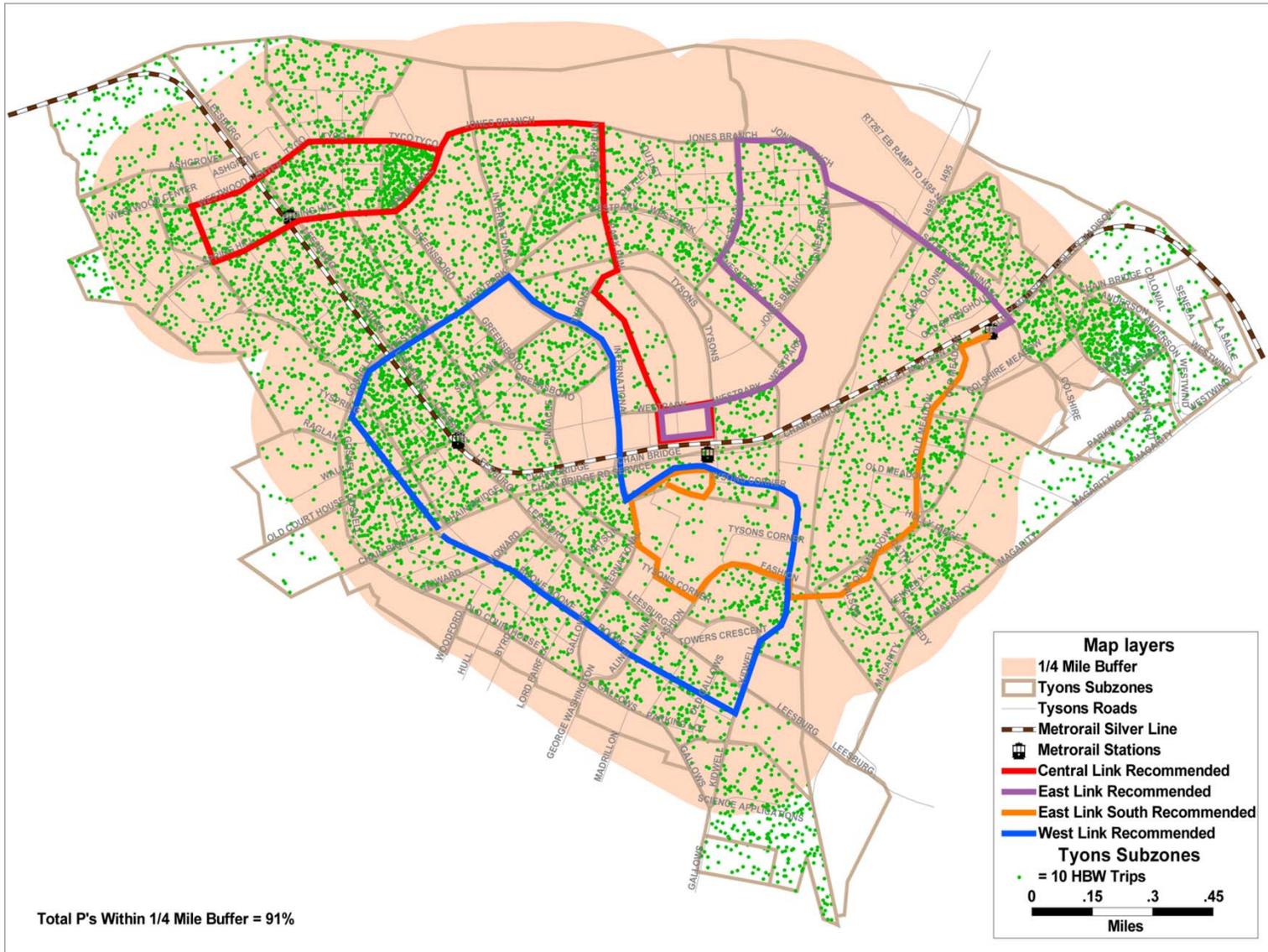
Network Development Process (cont.)

- Evaluation of Five Preliminary Networks
 - Evaluation Framework
 - Total trips beginning/ending in Tysons Corner within $\frac{1}{4}$ mile of each network
 - Percent of trips beginning/ending in Tysons Corner within $\frac{1}{4}$ mile of each network
 - Total trips beginning/ending in Tysons Corner per mile of circulator network
 - Network #1 and Network #2 selected for more detailed evaluation



Trips Beginning in Tysons Corner- Network #1

Year 2050 Tysons Corner Home-Based Work Trips Beginning in Tysons By Subzone - 1/4 Mile Buffer Around Rail Stations And All Links



Ridership Forecasts

- Utilize regional forecasting model – reflect 2050 conditions
- Four key variables impact ridership
 - Service frequency
 - Circulator fare
 - Parking cost
 - Travel time (speeds)

Ridership Forecasts

- Two ridership scenarios

	Scenario #1	Scenario #2
Frequency	6 minutes peak, 10 minutes off-peak	4 minutes peak, 6 minutes off-peak
Fare	\$1.00	No fare
Parking Costs	Higher than Tysons currently – reflects costs in Wilson Boulevard Corridor	Higher than Tysons currently – reflects costs in Wilson Boulevard Corridor
Travel Speeds	Based on Lower Level of Dedicated Transit Lanes	Based on Higher Level of Dedicated Transit Lanes

Ridership Forecasts

- Scenario #1

Network	Total Ridership	Transfer from Metrorail	Non-Metrorail Riders
Network #1	17,575	6,195	11,380
Network #2	16,643	7,355	9,108

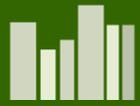
- Scenario #2

Network	Total Ridership	Transfer from Metrorail	Non-Metrorail Riders
Network #1	33,746	12,323	19,423
Network #2	33,310	14,362	18,948



Detailed Network Evaluation

- Evaluation criteria
 - Daily ridership
 - Boardings per revenue hour
 - Operating cost per rider
 - Capital cost per rider
 - Circulator travel time between select origins/destinations
 - Change in transit mode share
 - Run time variability – congestion



Transit Preferential Treatments

- Types
 - Dedicated transit lanes
 - Queue jumps
 - Transit signal priority
- Factors considered
 - Level of congestion (speed)
 - Queue length at intersections
 - Transit vehicle volumes
 - Person carrying capacity

Next Steps

- Select final network
- Finalize transit preferential treatment recommendations
- Recommend modes
- Calculate costs
- Refine ridership forecasts – final network
- Complete final report in Spring 2012