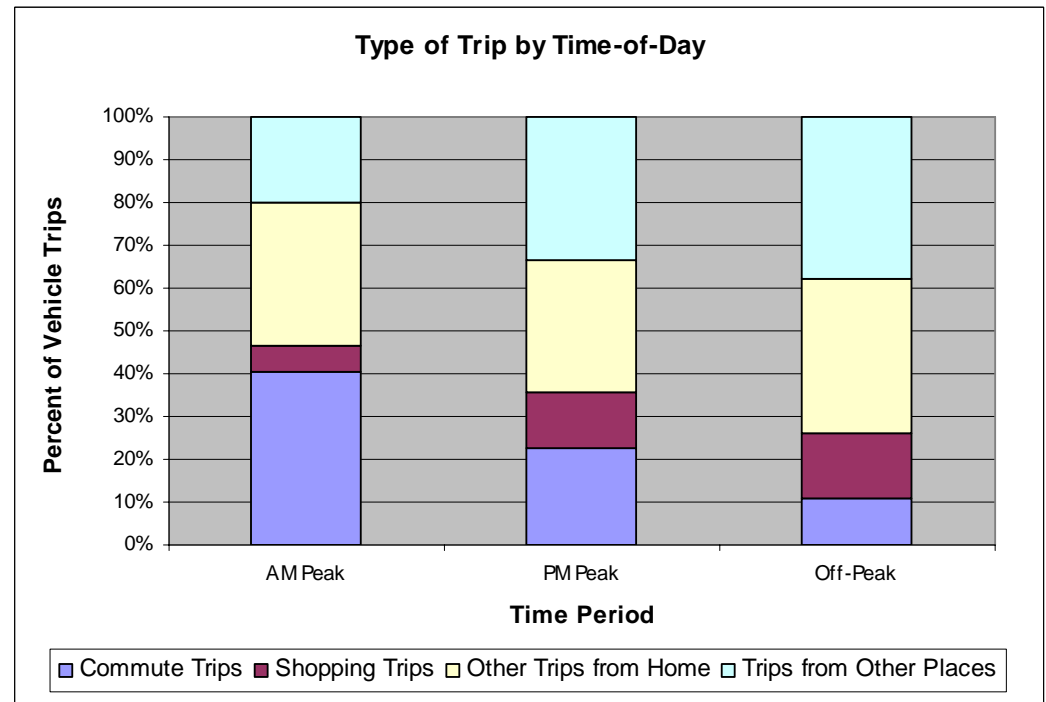# What is Transportation Demand Management?

- **Low-cost approach to relieving congestion and/or constrained parking**

- **Promotes more efficient use of the transportation system & delays widening streets by:**
  - Encouraging carpooling/carsharing
  - Enhancing alternate modes
  - Mixing land uses for shorter trips
  - Managing the parking system
  - Encouraging off-peak travel

- **TDM should address all trip types with:**
  - Infrastructure & services
  - Programs & promotions

- **Over time, TDM results in people changing travel behaviors**
  - Portland, OR
  - Arlington, VA
  - Boulder, CO offer relevant examples of success

Type of Trip by Time-of-Day

Percent of Vehicle Trips vs Time Period (AM Peak, PM Peak, Off-Peak)

□ Commute Trips ■ Shopping Trips □ Other Trips from Home □ Trips from Other Places

Based on 1995 NPTS Survey Data for Washington, D.C Region

Common TDM Infrastructure & Programs

Infrastructure
- HOV lanes
- Transit (Metrorail, Metrobus, DASH)
- Pedestrian facilities
- Bicycle facilities
- Shower, locker, storage facilities
- Vans
- "Flex Cars"

Programs
- Carpool / Vanpool matching
- Transit incentives
- Guaranteed ride home for non-auto commuters
- Parking Management (shared, unbundled, limited access)
- "Flex Car" access

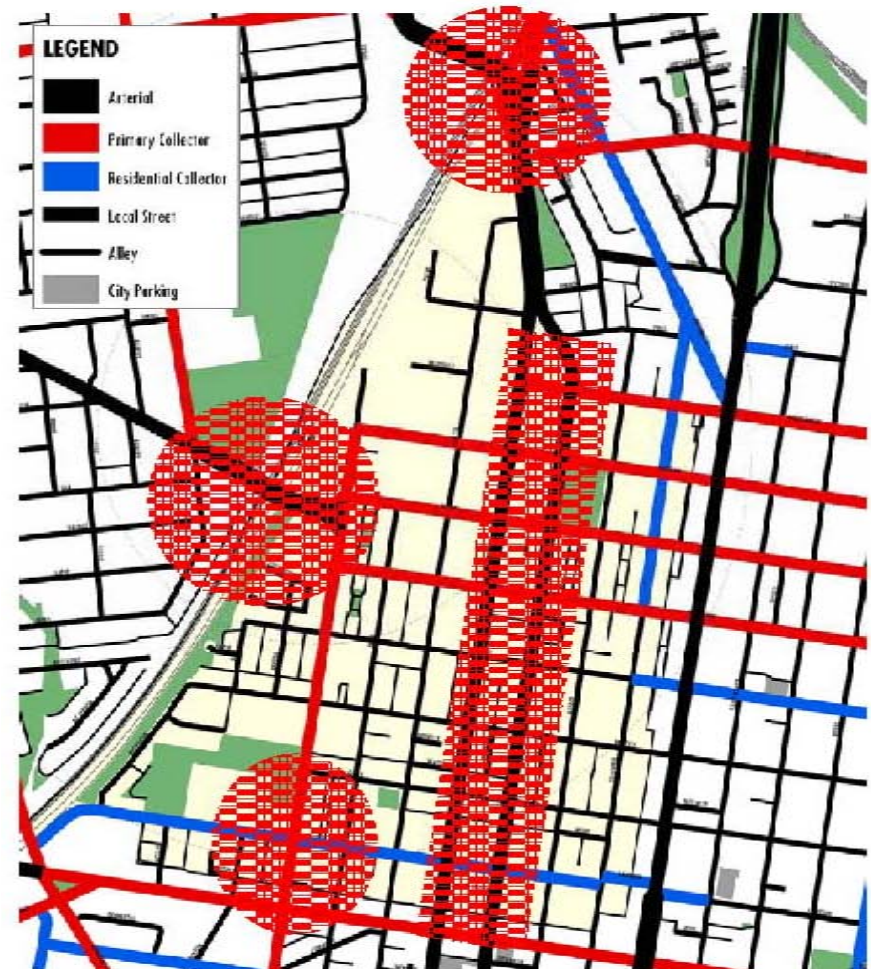**Initially focused on employee commutes, must be expanded**

Alexandria's Current TDM Toolbox of Programs

- **Transportation Management Plans (TMP)**
  - required for large-scale projects (commercial and residential)

- **Program Assistance**
  - "Carshare Alexandria!" (subsidy to residents and businesses)
    - **39% reduction in car ownership by program participants**
  - Public Transportation Subsidy Program (federally based)
  - Commuter Connections (ridematching & Guaranteed Ride Home)
  - Old Town Transit Shop
  - Telework Assistance
  - Bicycle Commuter Assistance & Bike Parking Improvements
  - Trip Planning Services
  - Local Motion web page & Transportation Alternatives eNewsletter

- **Results**
  - 58% of Alexandria residents drive alone to work, 80% is national average.
  - Increasing walking & bicycling to Metrorail stations
  - Driving and parking or dropped rates declined since 2002

Braddock Road Transportation Challenges

- **Congestion on commuter routes**

- **Neighborhood livability/vitality impacts from congestion & cut-through traffic**

- **Mixed pattern of one-way / two-way streets**

- **Bottlenecks and constraint points for access**

- **Neighborhood parking constraints**

- **Barriers to pedestrian mobility & transit access**

- **Basic retail needs not met within the area**

- **Local and regional growth may add to impacts**

LEGEND

- Arterial
- Primary Collector
- Residential Collector
- Local Street
- Alley
- City Parking

Addressing the Challenges

- **Lloyd District in Portland, Oregon**
- **Constraints:**
  - Limited points of access
  - Commuters using key corridors
  - Inability to widen roads
  - Mix of one-way / two-way streets
  - Limited transit
  - Limited parking
  - Anticipated local and regional growth
- **Conditions:**
  - Transit commute mode split @ 10%
  - Accessory parking provided at 3.5 stalls/1,000 SF
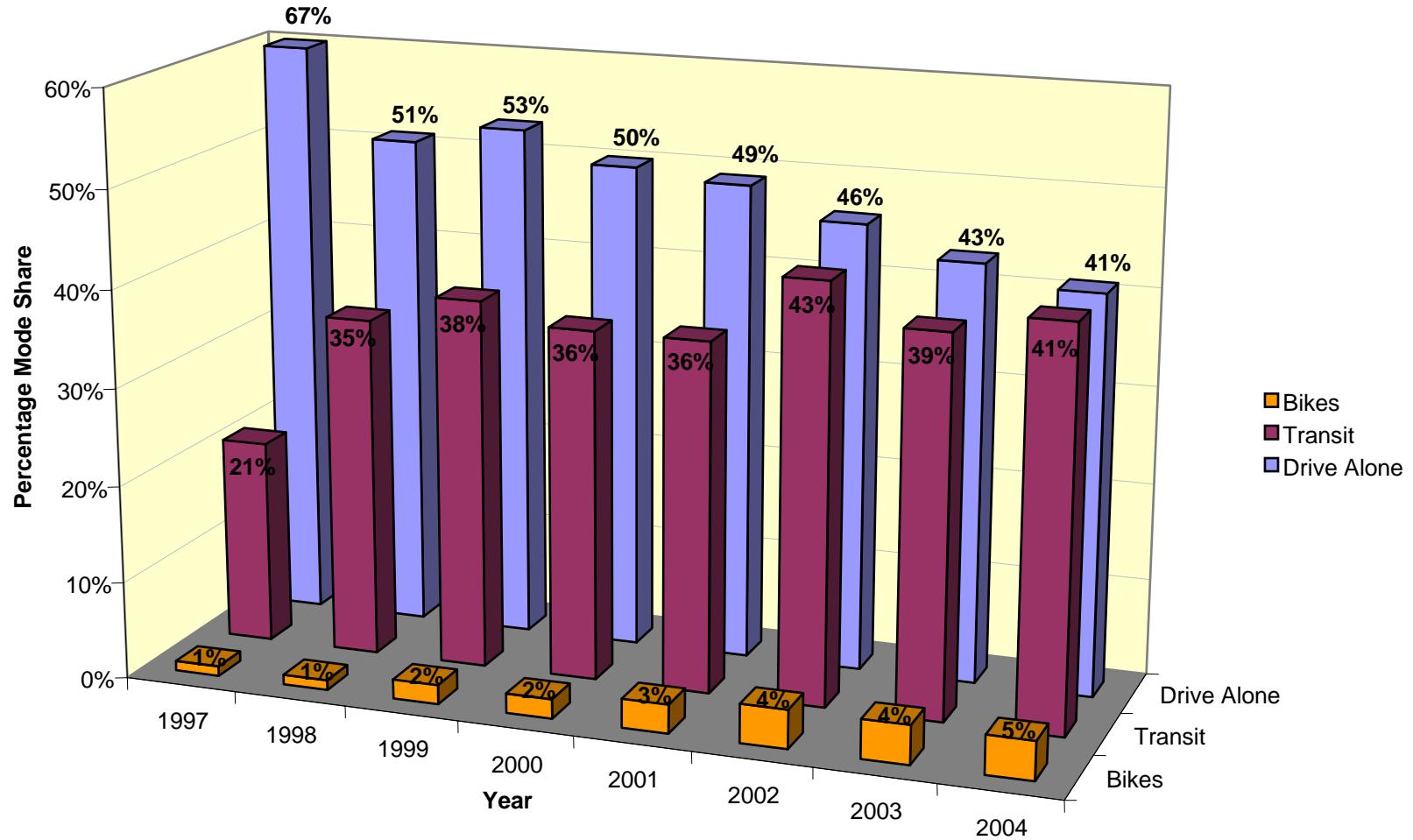 - No bike lanes or end-of-trip facilities
  - Only transit investments anticipated
- **Expected Growth in District:**
  - Near doubling of employment
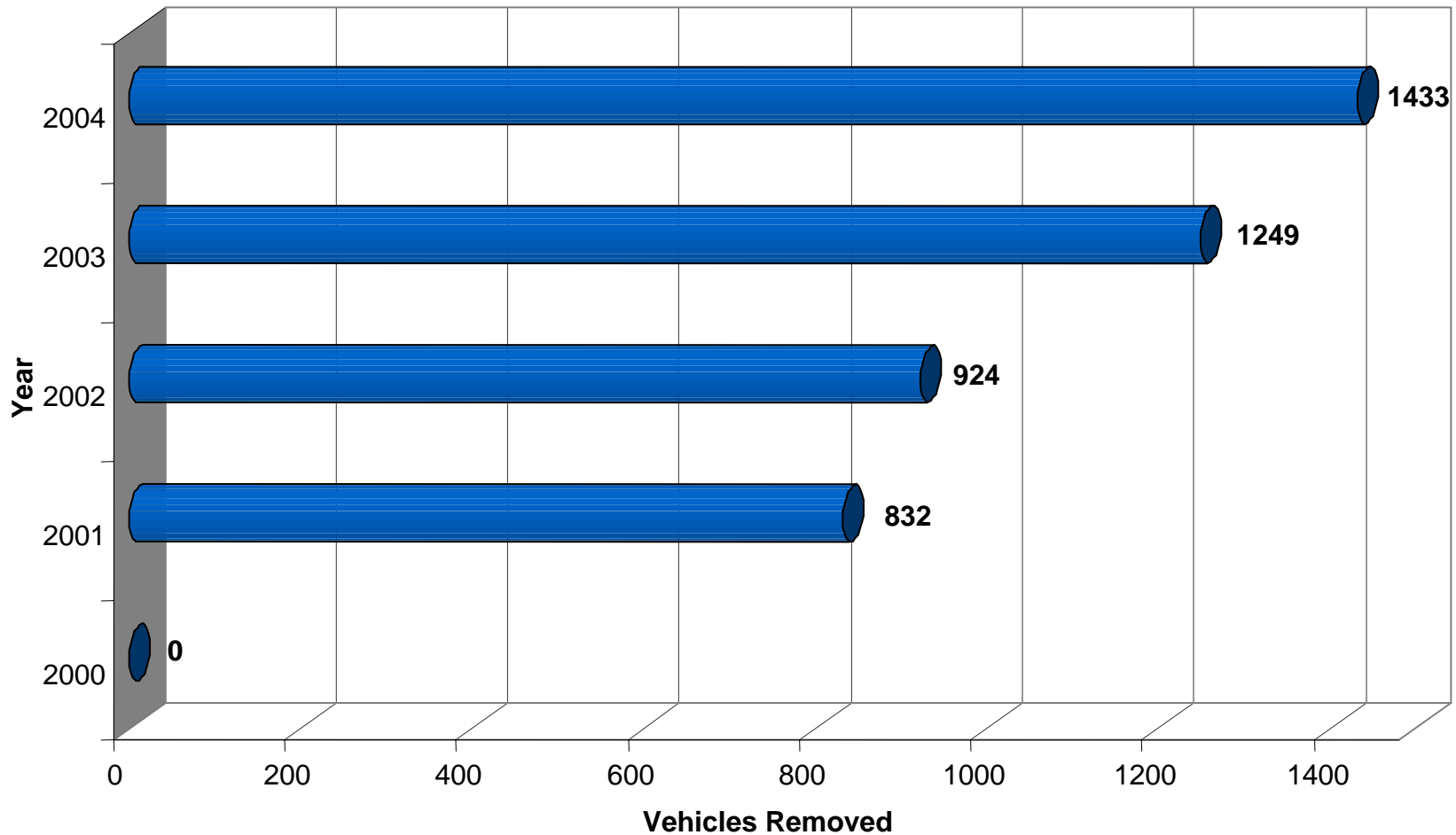 - 200% increase in residential

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Lloyd District TDM Successes

- **Resident/Employee commute modes since 1997:**

Lloyd District TDM Successes

- **Vehicles removed during commuter peak hour**

Chart: Vehicles Removed by Year

Year	Vehicles Removed
2004	1433
2003	1249
2002	924
2001	832
2000	0

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The Organizational Structure

- **Established a Transportation Management Association (TMA)**
  - All stakeholders included
  - Initially staffed and subsidized by City
  - Vision, Goals, & Leadership provided by District representatives

- **Partnership Goals for Transportation Providers:**
  - Expand District access through transit
  - Provide aggressive TDM to make transit work
  - Invest in ped/bike improvements to complement transit access

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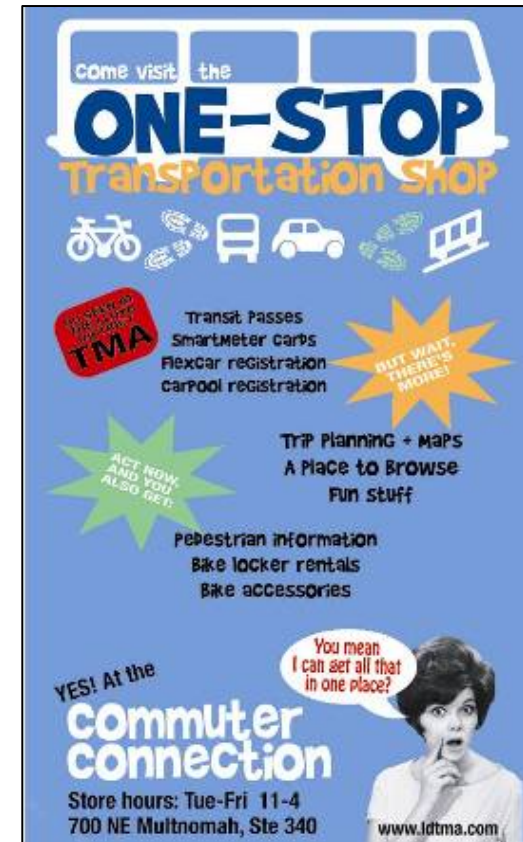
The Major TDM Tools Used

Transit Investments & Incentives

- Lightrail, stations, bus circulators
- Extension of "Fareless Square" from Downtown to Lloyd District
- Resident/Employee geo-coding for targeted bus routing
- Guaranteed ride home
- Volume discounts for monthly/annual transit passes

Pedestrian/Bicycle Improvements

- Bike lanes/boulevards, bike parking, shower/locker facilities, transit bike racks
- Streetscaping, illumination, crosswalk improvements, traffic calming

Parking

- Metered on-street system for better management
- Promoted shared-parking agreements among existing uses
- Converted to parking maximums from parking minimums
- Flexible standards to accommodate unique conditions

Using a TMA to Strengthen TDM in Braddock

- **Puts local residents and businesses in the lead**

- **Emphasizes the importance of partnerships**
  - Public-Private
  - Resident-Business
  - Developer-Tenant

- **Provides strength in numbers**

- **Produces tailored programs & services**

- **More responsive to changing needs**

# Suggested Additions to Existing TDM Programs

- **Expand Federal Public Transportation Subsidy (PTS) program to private sector**
  - Offers $105/month in commute benefits

- **Revise Alexandria Transportation Management Plan (TMP)**
  - Manage funds and programs through city-wide TMA
  - Enhance residential participation
  - Finance strategies to achieve Association goals:
    - **Discounted transit fare programs**
    - **Targeted shuttle bus service**
    - **Car sharing programs**
    - **Pedestrian facility improvements**
    - **Bicycle lockers and parking facilities**
    - **Administrative costs**

Right-Sizing Parking

- **On-street Spaces for residents & retail customers when needed**
- **Avoid over-supply**
- **Tailor supply to existing conditions**
  - Potomac Yards
  - Braddock Condos
  - Arlington
- **Results of Parking Studies**
  - Parker Gray Neighborhood with supply problems at some times of day - 85% full
  - Oversupply in on-site accessory parking
  - On-street restrictions are oriented to Metro riders and vary widely from street to street


Accessory Residential Parking

Accessory Commercial Parking

Shared Parking
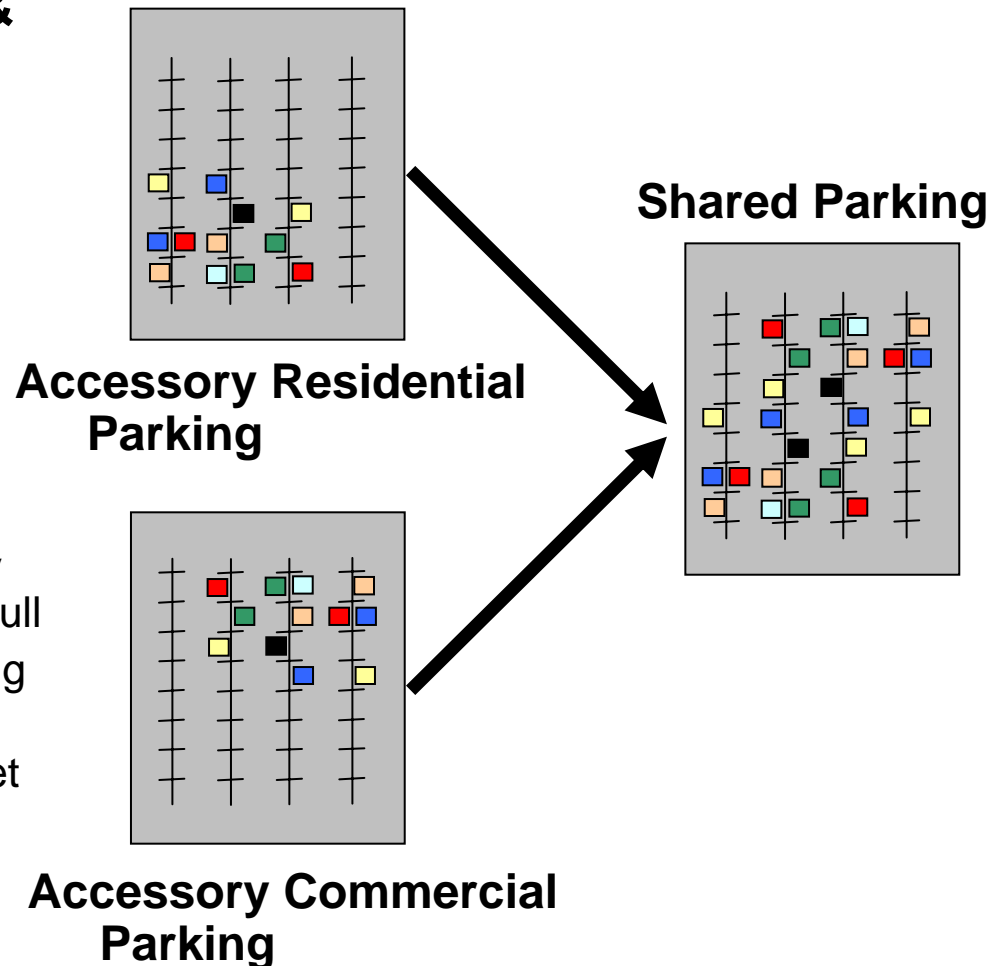
Easy, Efficient, Reliable Transit
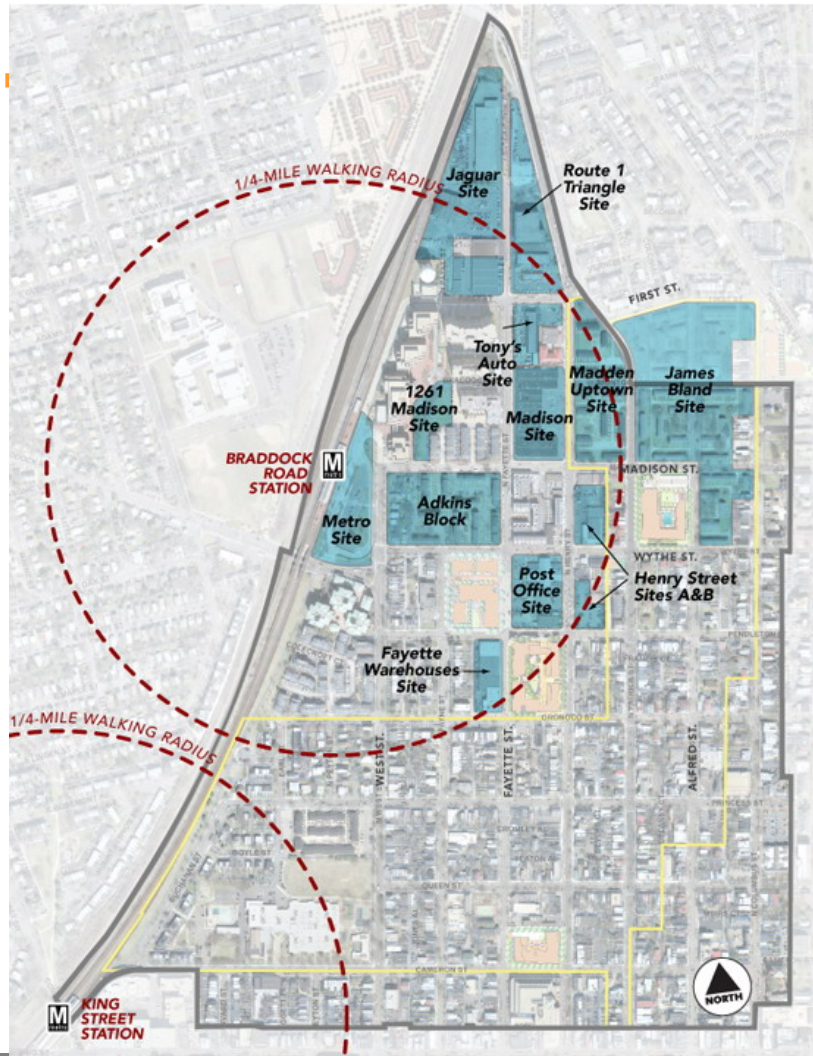
- **Metrorail ridership up in Alexandria 11.74% since 2002, 2nd highest (behind DC at 17.14%) for all Metro Washington**

- **Improve efficiency and frequency of connections to rail system and area destinations**

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TDM-13

Variety of Transit Options

- **Transit ridership is steadily increasing**
  - Metrobus up 30%
  - Dash reached 3,743,499 in FY2007
- **Frequent and convenient "loop" service for neighborhood trips**
- **Predictable and fast for longer trips**
- **Good information and time/cost competitive with the auto**
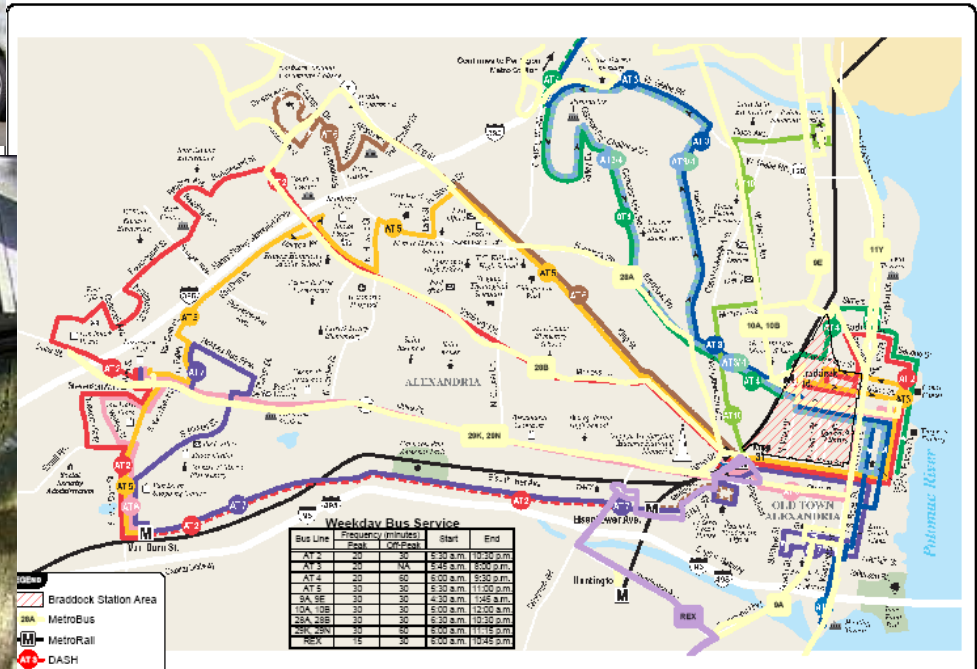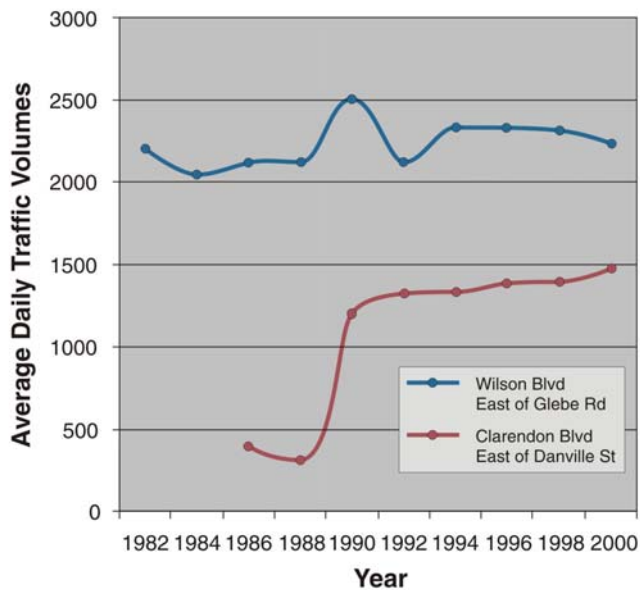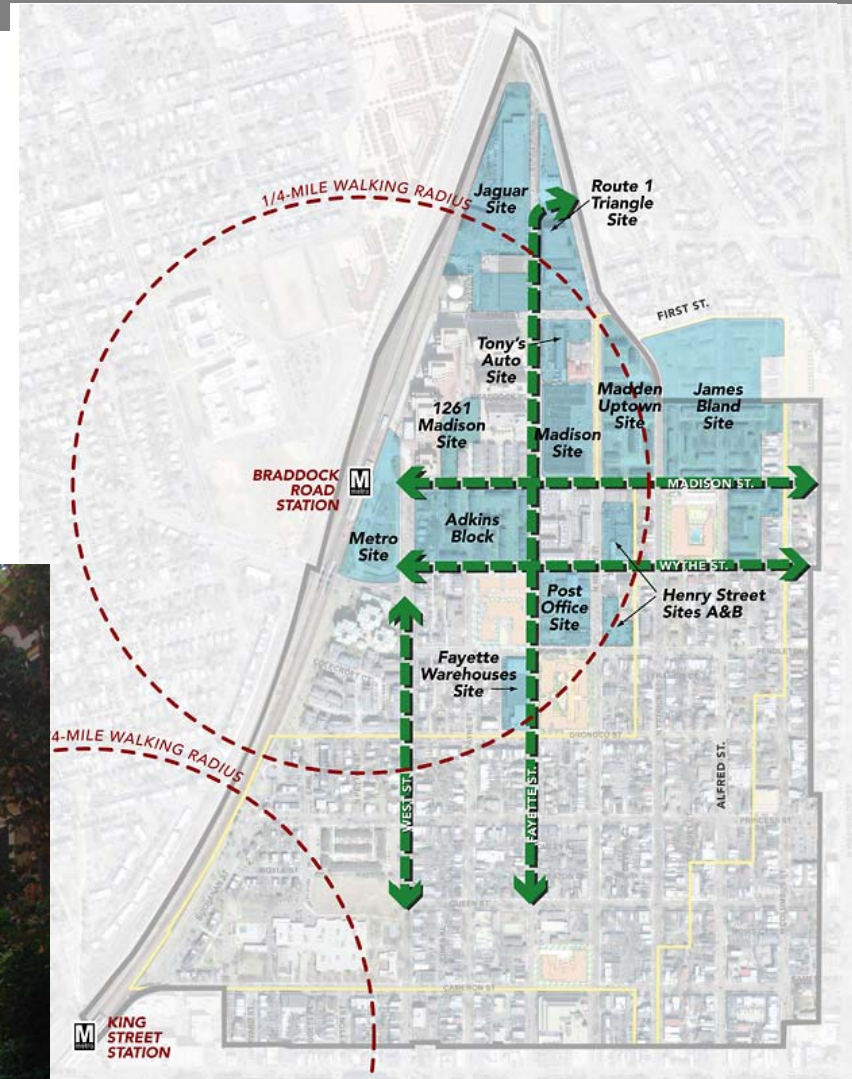
Rosslyn-Ballston Corridor, Arlington, VA Results

- **TDM Policy implemented in 1990**
  - Requires developers to implement and fund TDM
- **Non-auto mode share 50% higher in areas near Metro-rail (60% vs. 40%)**
- **Flat daily traffic growth on major streets**

Transit-Oriented Development in Arlington

http://en.wikipedia.org/wiki/Image:ArlingtonTODimage3.jpg

Expanding Braddock's Walkable Street Network

Enhancing street safety and "walkability"

Boulder, CO TDM Tools & Results

- **City-wide program began 1989**
    - Welcoming public realm
    - Ubiquitous bike accommodation
    - Frequent, comfortable transit service
    - Branded & marketed bus routes
    - Student Transit Pass
- **32% of all trips are non-motorized**
- **60% of residents own bus passes**
- **SOV trips down 17%**

Bicycle Routing and Network Building
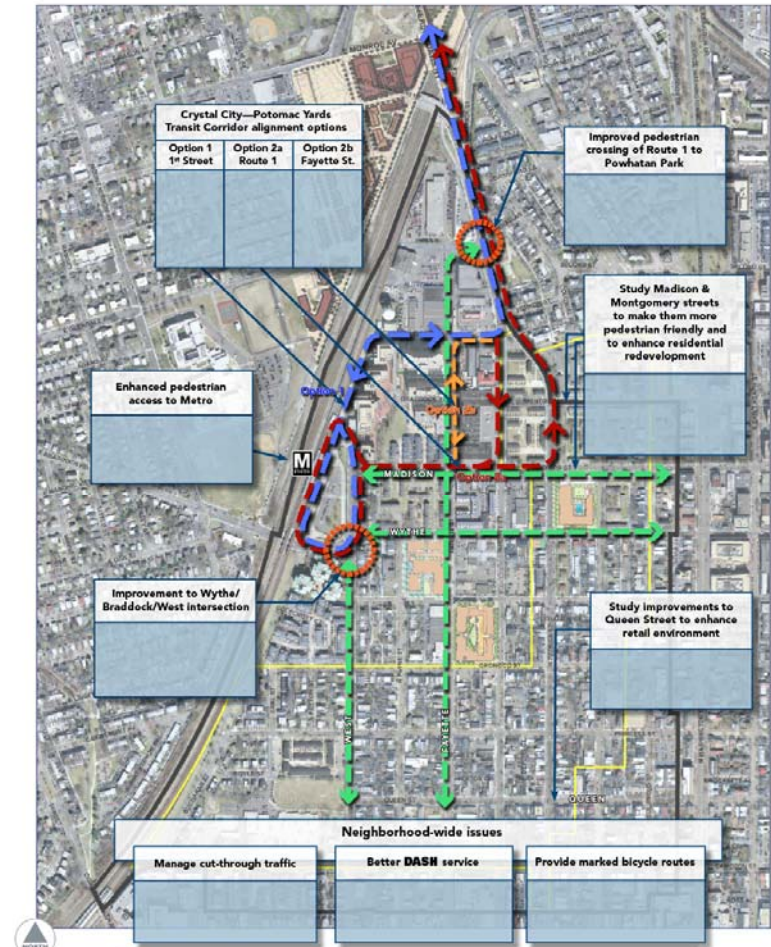
Expanding Bicycling Accommodation in Braddock

Transportation Improvement Opportunities

Transportation Improvement Options