

# US 1 Corridor Study

No. CAMPO 2005-02

## Public Information Meeting

### Phase I Multimodal Alternatives

March 14, 2006

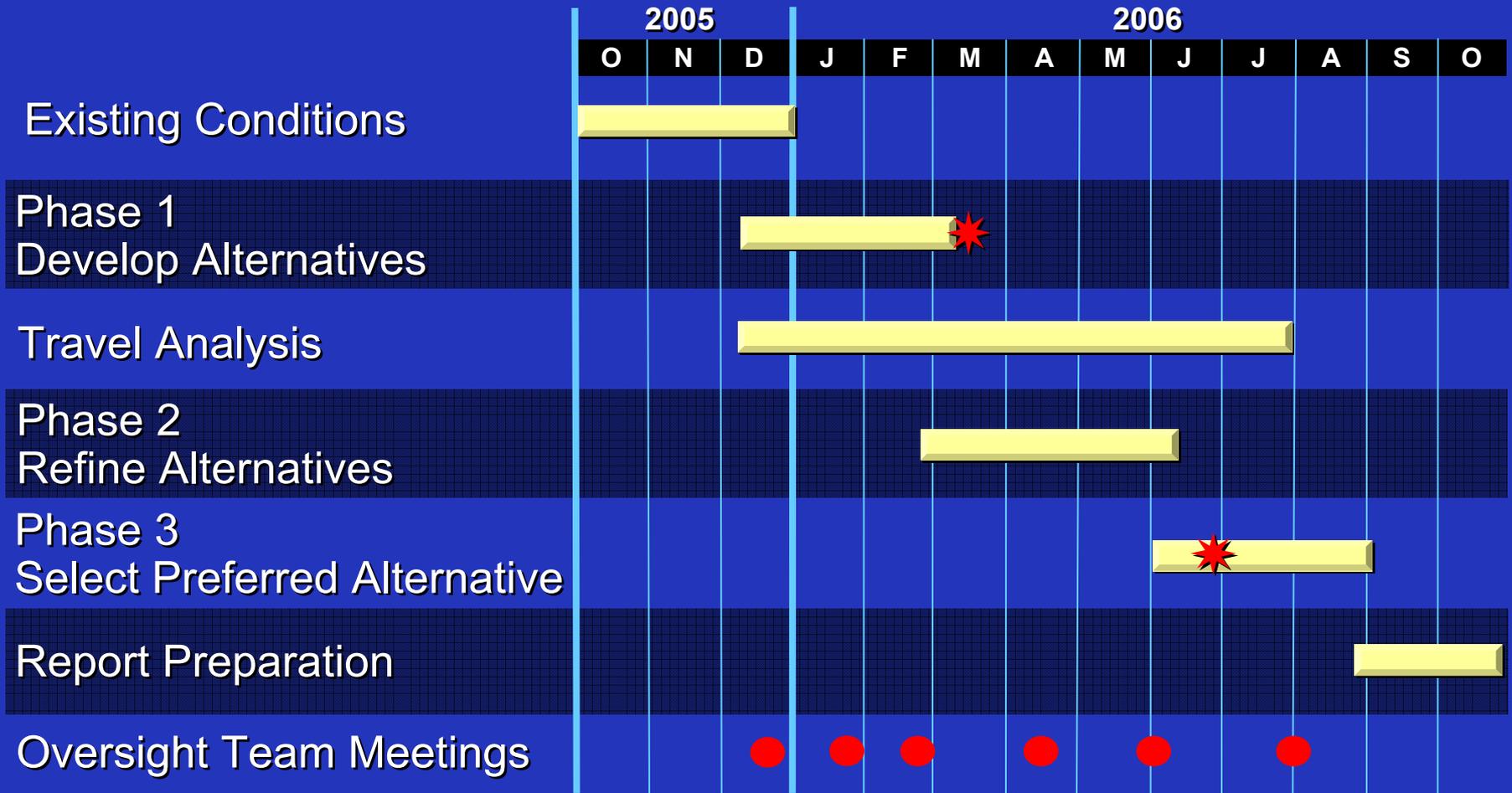
# Capital Area MPO



# Purpose & Need

- Develop a Comprehensive, Long-range Multimodal Transportation Plan that:
  - Improves Multimodal Access and Mobility
  - Encourages Economic Development
  - Increases Safety
  - Coordinates with Land Development
- Supports Economic Growth
  - Relieves Recurring Congestion
  - Improves Safety

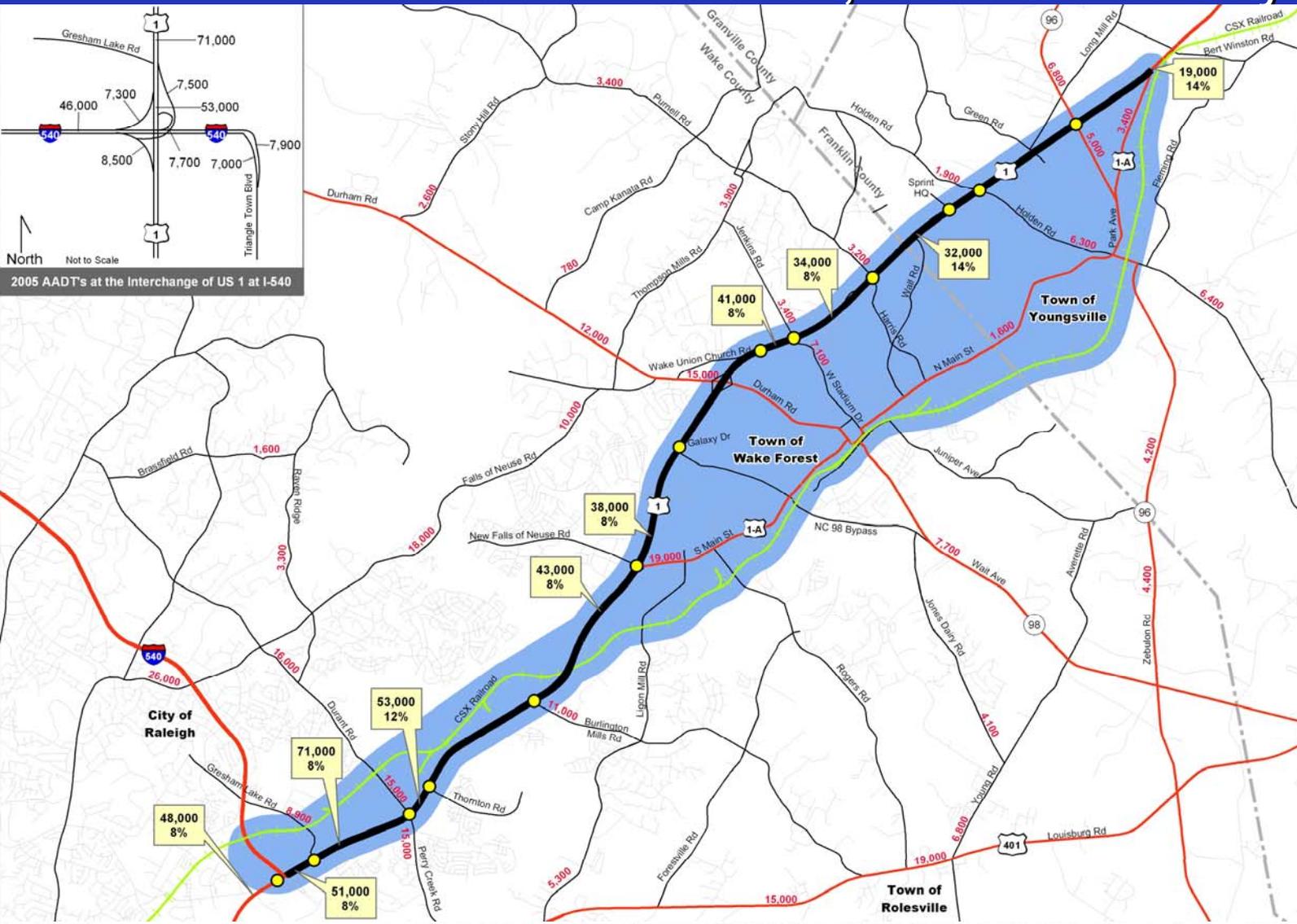
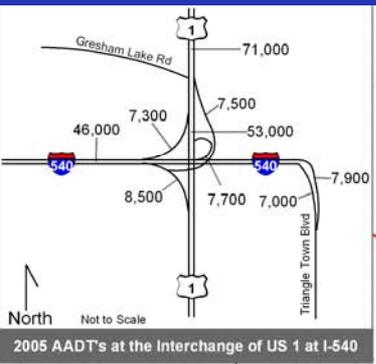
# Project Schedule



 Public Meetings

# US 1 Study Limits

## From I-540 To US 1A, Franklin County



**LEGEND**

- Study Area
- US 1 Study Corridor
- Primary Roads
- Secondary Roads
- CSX Railroad
- Signalized Intersections

2005 AADT  
2005 Truck %  
2003 AADT

0 0.5 1 2 Miles

Capital Area Metropolitan Planning Organization

**RS&H**  
Architects - Engineers - Planners, Inc. Team

EXISTING CONDITIONS

Traffic Volumes

US 1 CORRIDOR STUDY

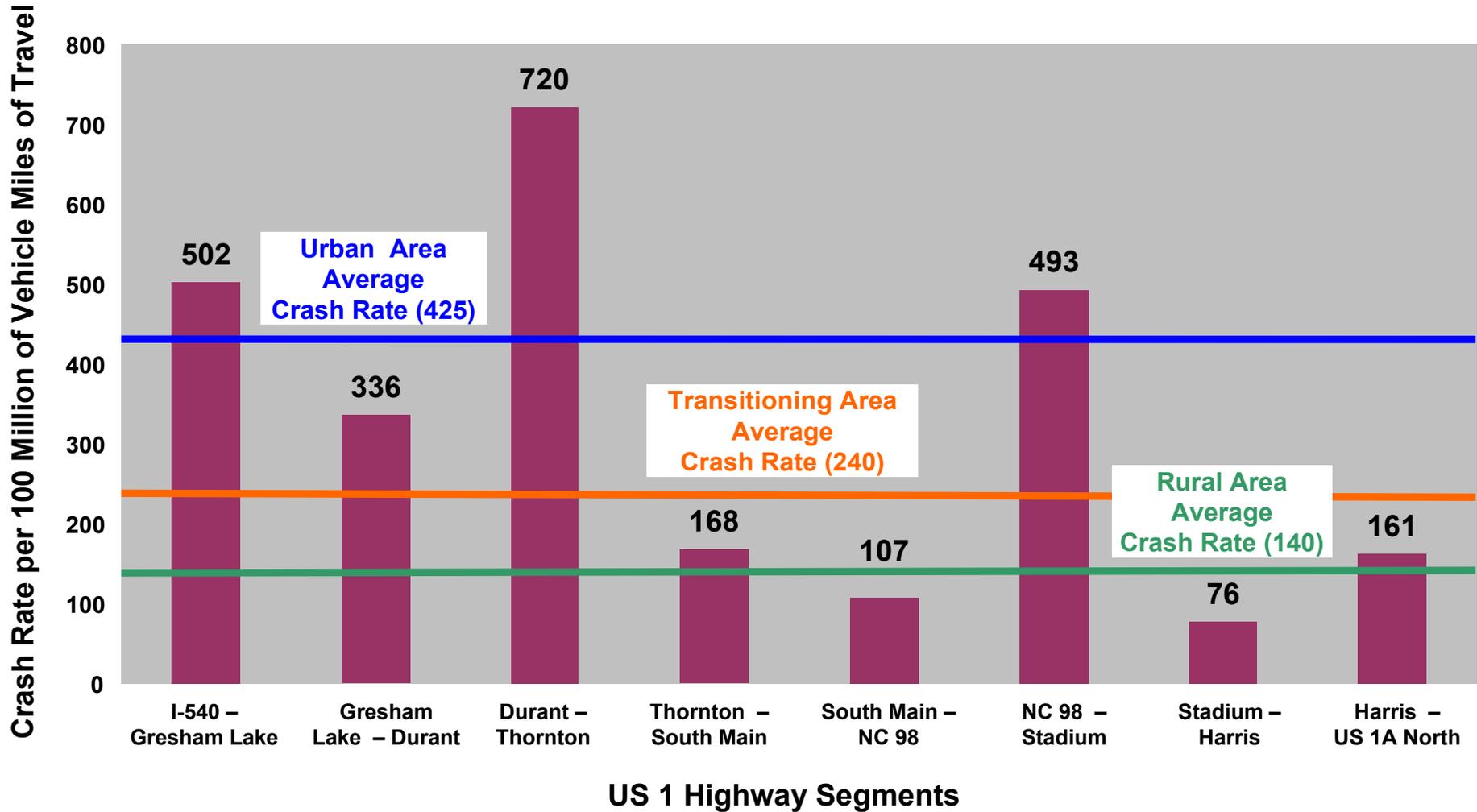
Figure 2.2  
Sheet 1 of 1

# Existing Travel Conditions

- Congestion
  - Over 71,000 AADT (2005)
  - Growth of 10% Per Year
  - 8 to 14% Truck Volumes
- High Crash Areas
  - Few Parallel Secondary Roads
  - Number of Access Points
- Access Points
  - 110 Driveways, Median Openings and Cross-Streets
  - 13 Signalized Intersections

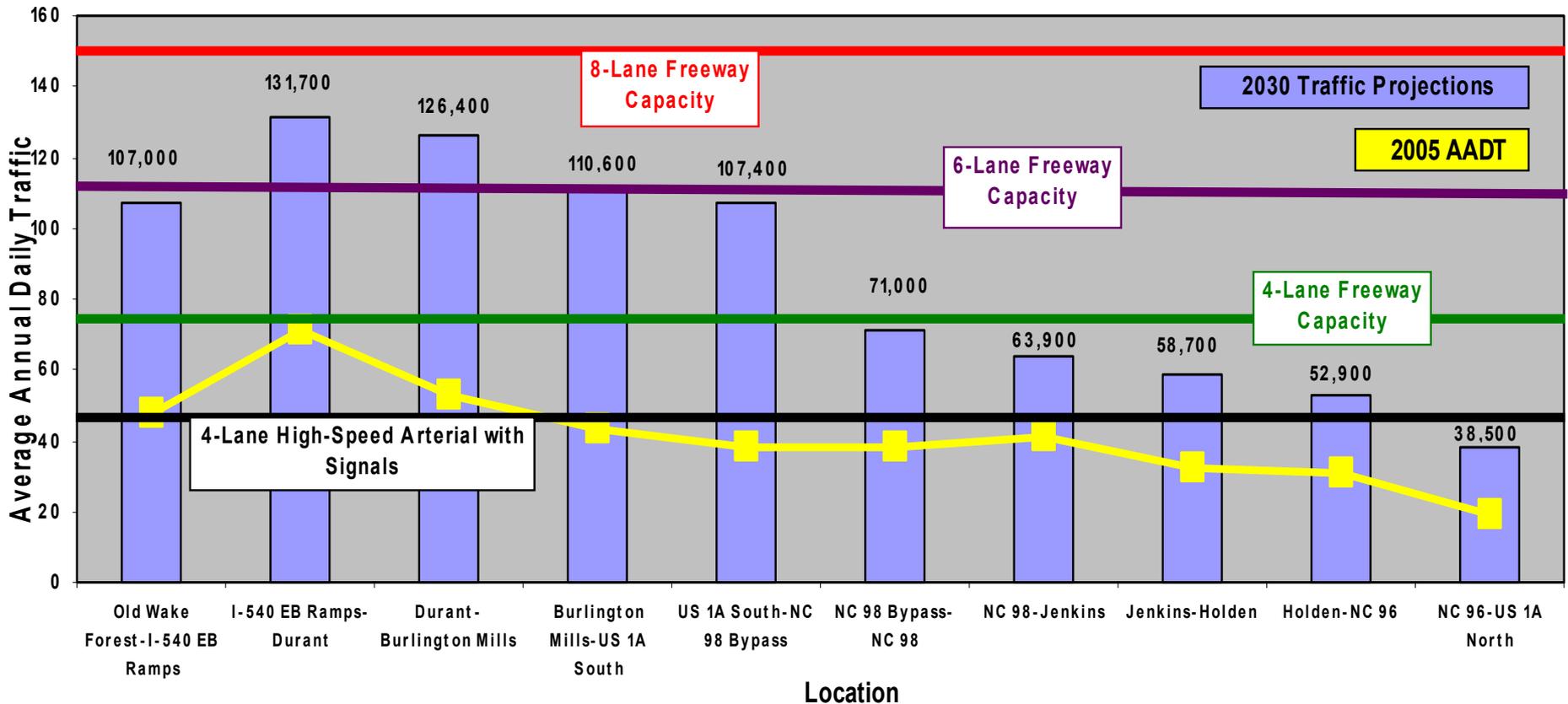


# 2001–2004 Crash Rates



Source: North Carolina Department of Transportation, November 2001 - October 2004

# 2030 Traffic Projections vs. Capacity



# Existing Transit Conditions

- No Bus Service Along US 1 North of I-540
- Closest North-South Bus Service – CAT #1 Route at Sumner Blvd. (South of I-540)
- CAT #25C Circulator Along Durant Road Crosses US 1

# Potential Transit Improvements Previously Identified

- Extension of US 1 Local Bus Service North to I-540
- Express Bus Service to Wake Forest via US 1 and SR 98 with Park-n-Ride Lots
- Regional Rail North to Durant Road
- Southeast High Speed Rail – Richmond to Charlotte

# Future Use of CSX Corridor

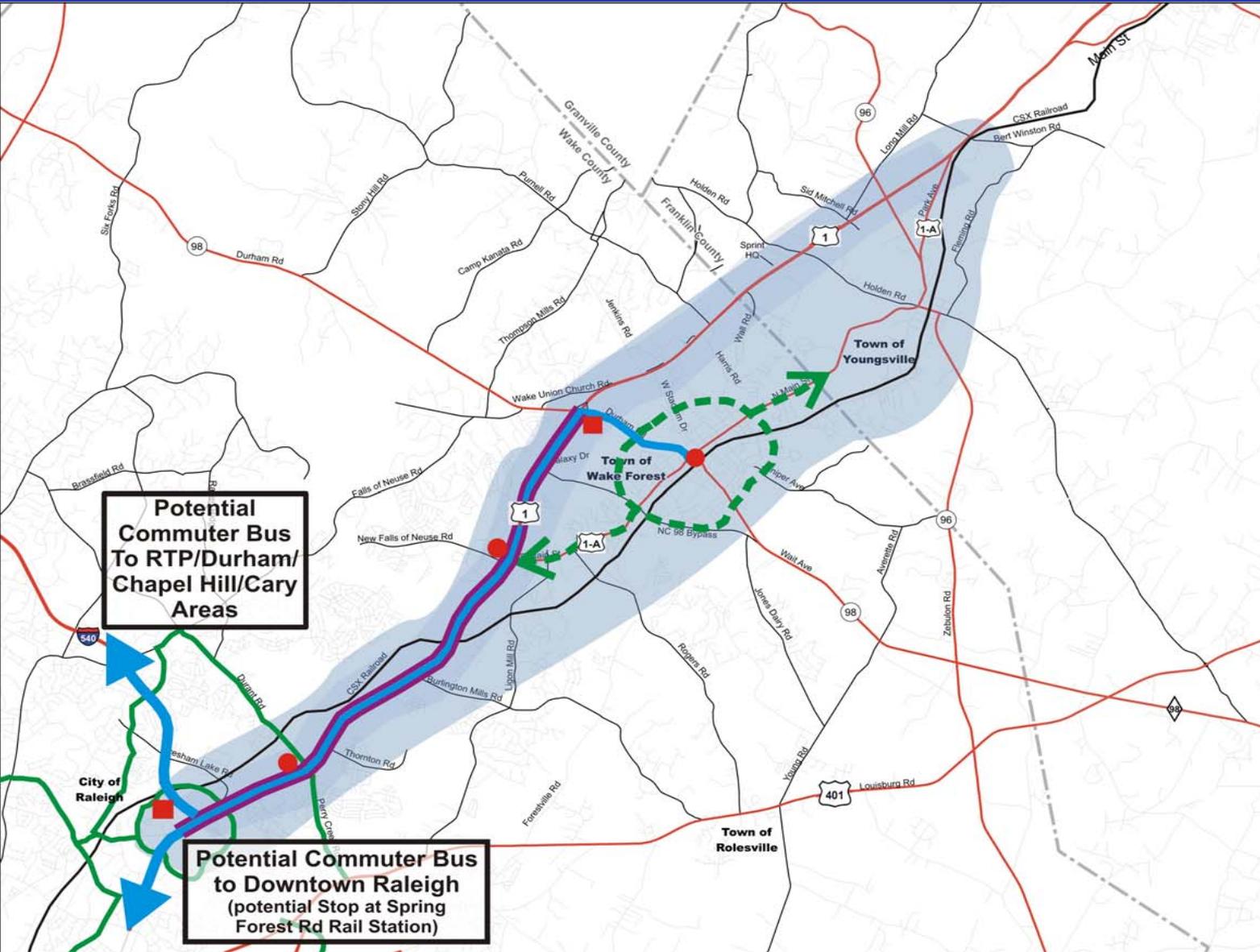
- Continued Freight Rail/Potential Intercity Passenger Rail Preclude Elimination of Other Rail Service
- Commuter Rail Considered, Not Recommended Under Current Projected Corridor Densities and Anchors
- However the CSX Corridor Should Be Preserved for Long-Range Multimodal Use



# Transit System Components for Further Evaluation

- Two Commuter Bus Routes – from Wake Forest
  - To Downtown Raleigh
  - To RTP / Durham / Chapel Hill Areas
- Circulator Bus Route in Wake Forest Area/Other Local Bus Improvements if Sufficient Development Occurs
- Two New Park-and-Ride Facilities:
  - US 1 / Durham Road (SR 98)
  - US 1 / I-540
- With vs. W/O Special Purpose Lanes (HOV) on US 1 South of NC 98

# Transit System Components for Further Evaluation



**LEGEND**

- Study Area
- Secondary Roads
- Primary Roads
- CSX Railroad
- Commuter Bus Route
- Potential HOV Lanes
- Local Bus Route (2025 Regional Bus Network)
- Local Bus Route (Routing to be Determined)
- Potential Bus Station
- Potential Bus Station w/Park & Ride

Capital Area Metropolitan Planning Organization

**K** **RS&H** Team  
 Kitchell & Associates, Inc. Architects - Engineers - Planners, Inc.

**PHASE 1 ANALYSIS**

Transit Alternatives

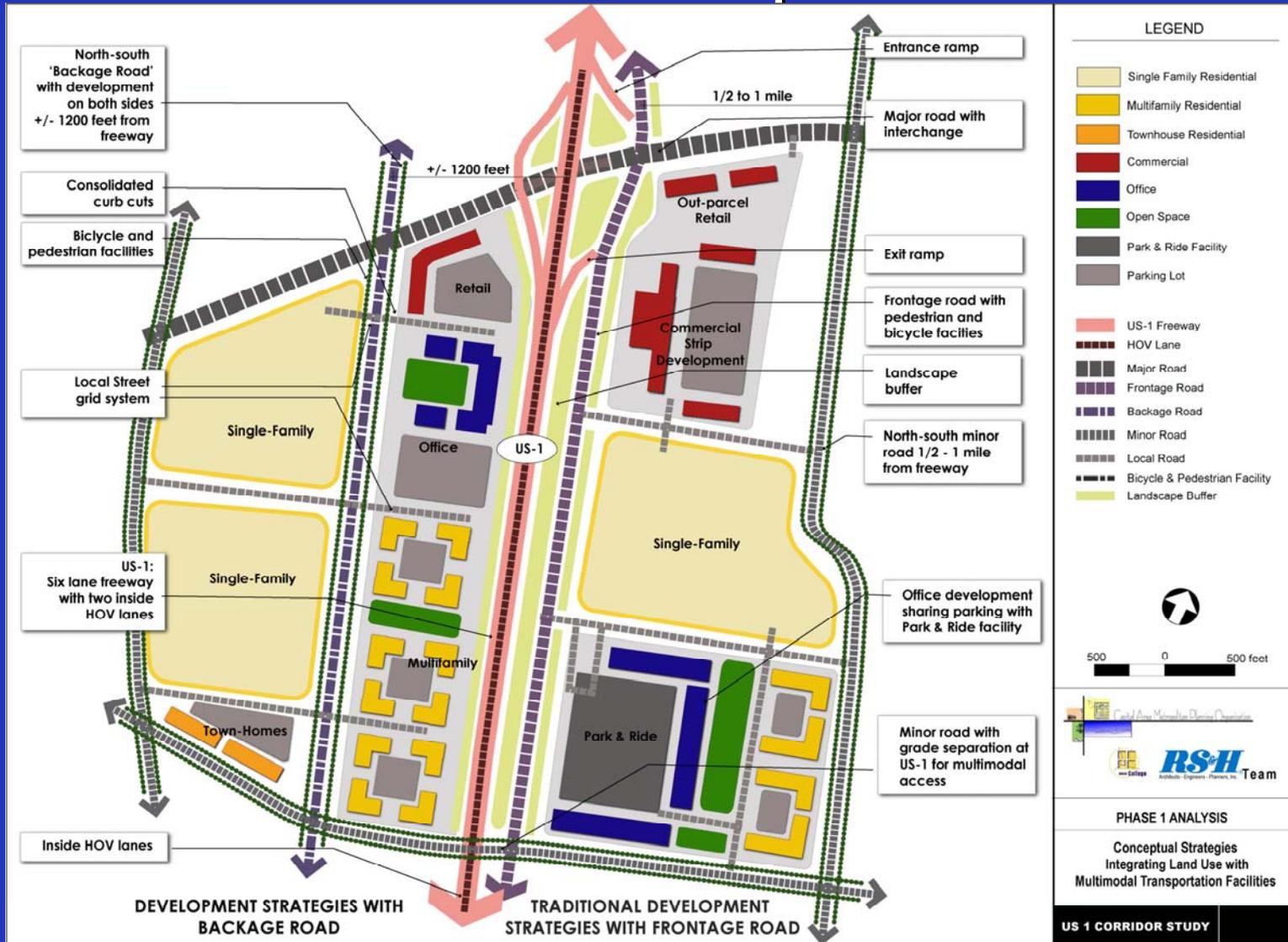
**US 1 CORRIDOR STUDY** February 2006

# Further Transit Assessment

- Transit Ridership Projections
- Size/Location of Stations and Park-and-Ride Facilities
- Refined Local Bus Assessment
- Placement and Connections to Special Purpose (HOV) Lanes Along US 1

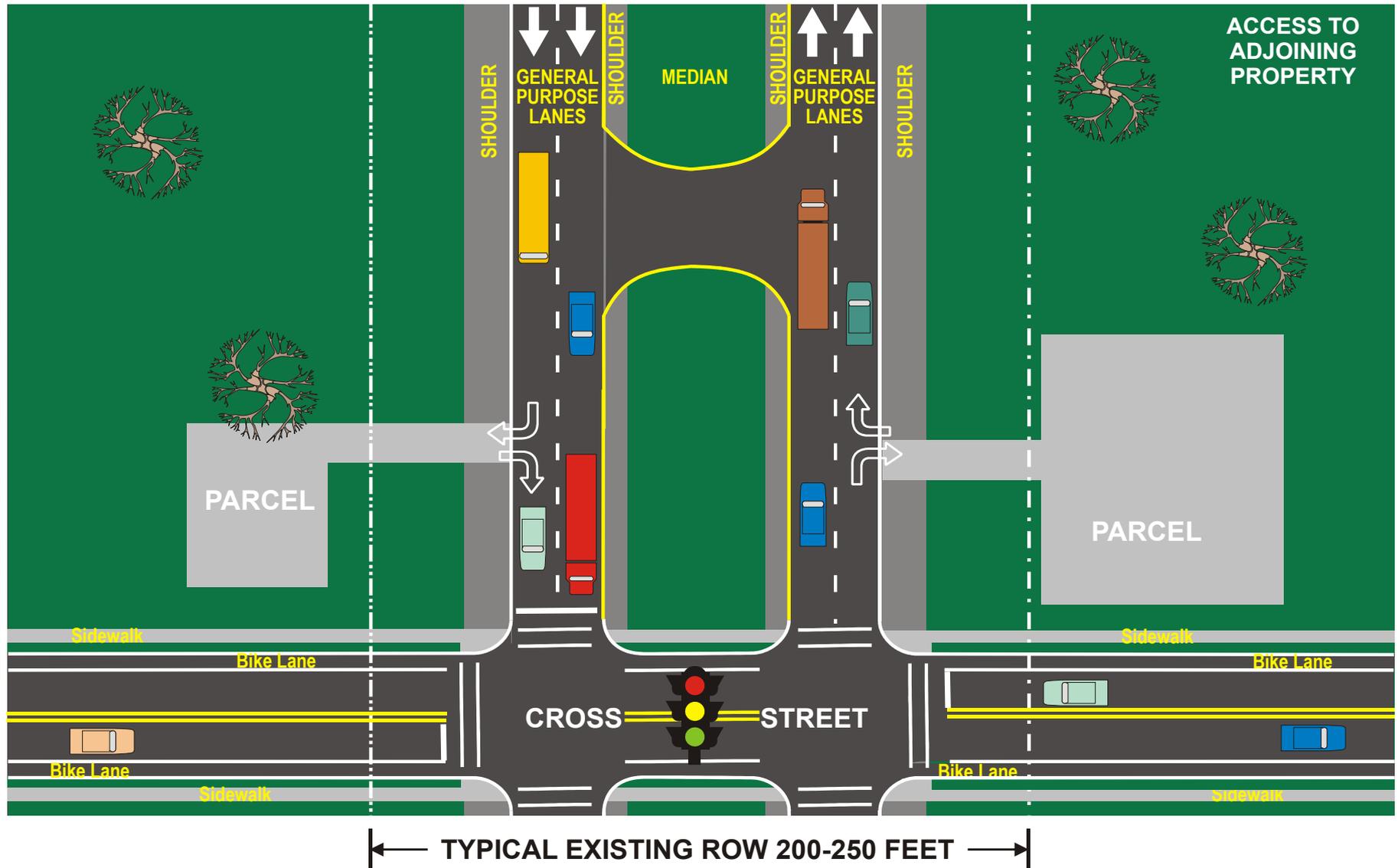


# Conceptual Strategies Integrating Land Use w/ Multimodal Transportation Facilities



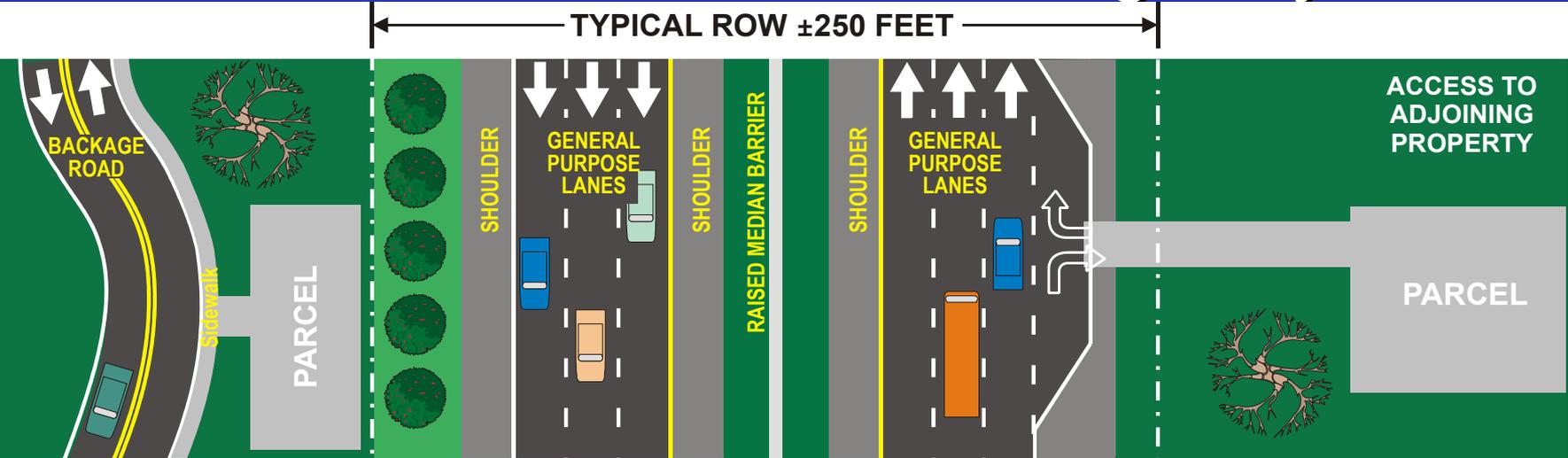
# Multimodal Alternative I – No Build

EXISTING ACCESS MANAGEMENT

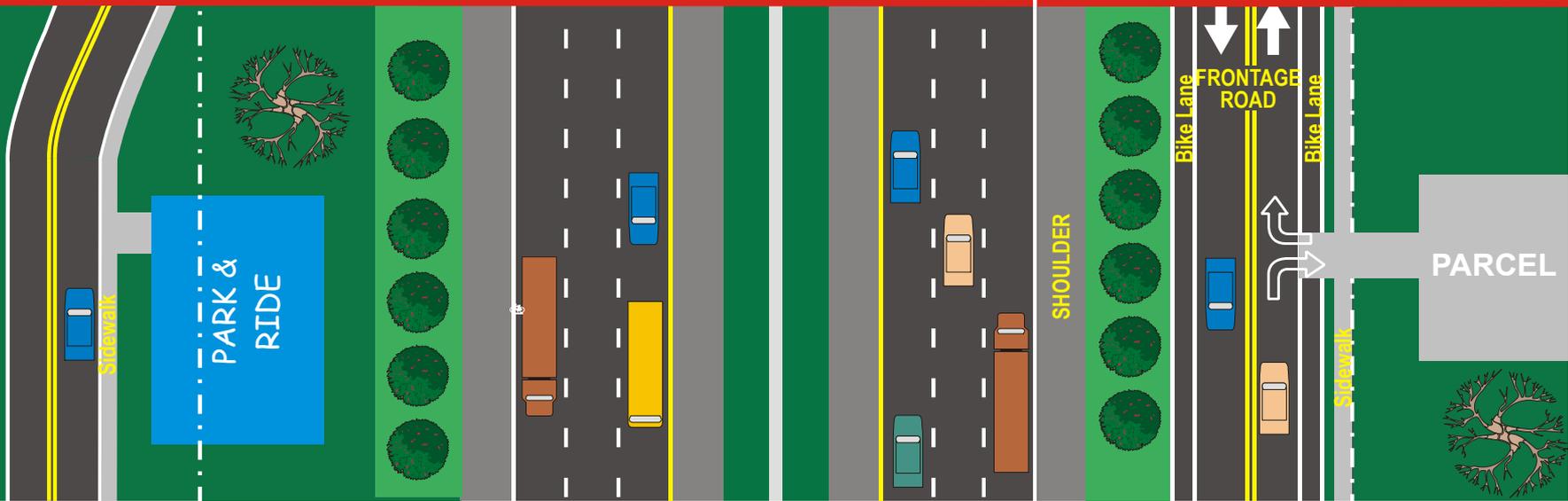


# Multimodal Alternative II - Highway

**PARTIAL  
ACCESS CONTROL**

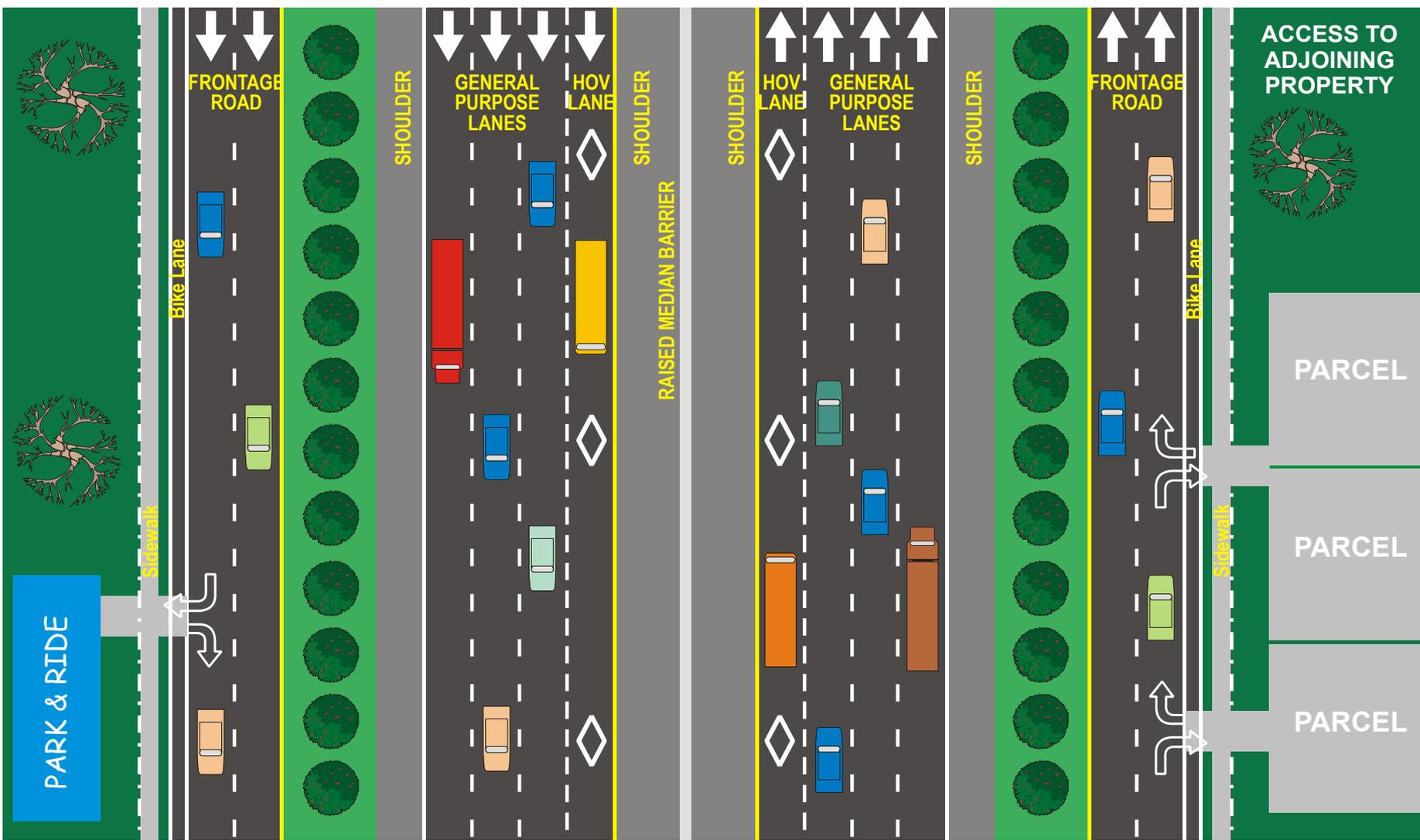


**FULL  
ACCESS CONTROL**



# Multimodal Alternative III – Freeway + Transit

**FULL ACCESS CONTROL**

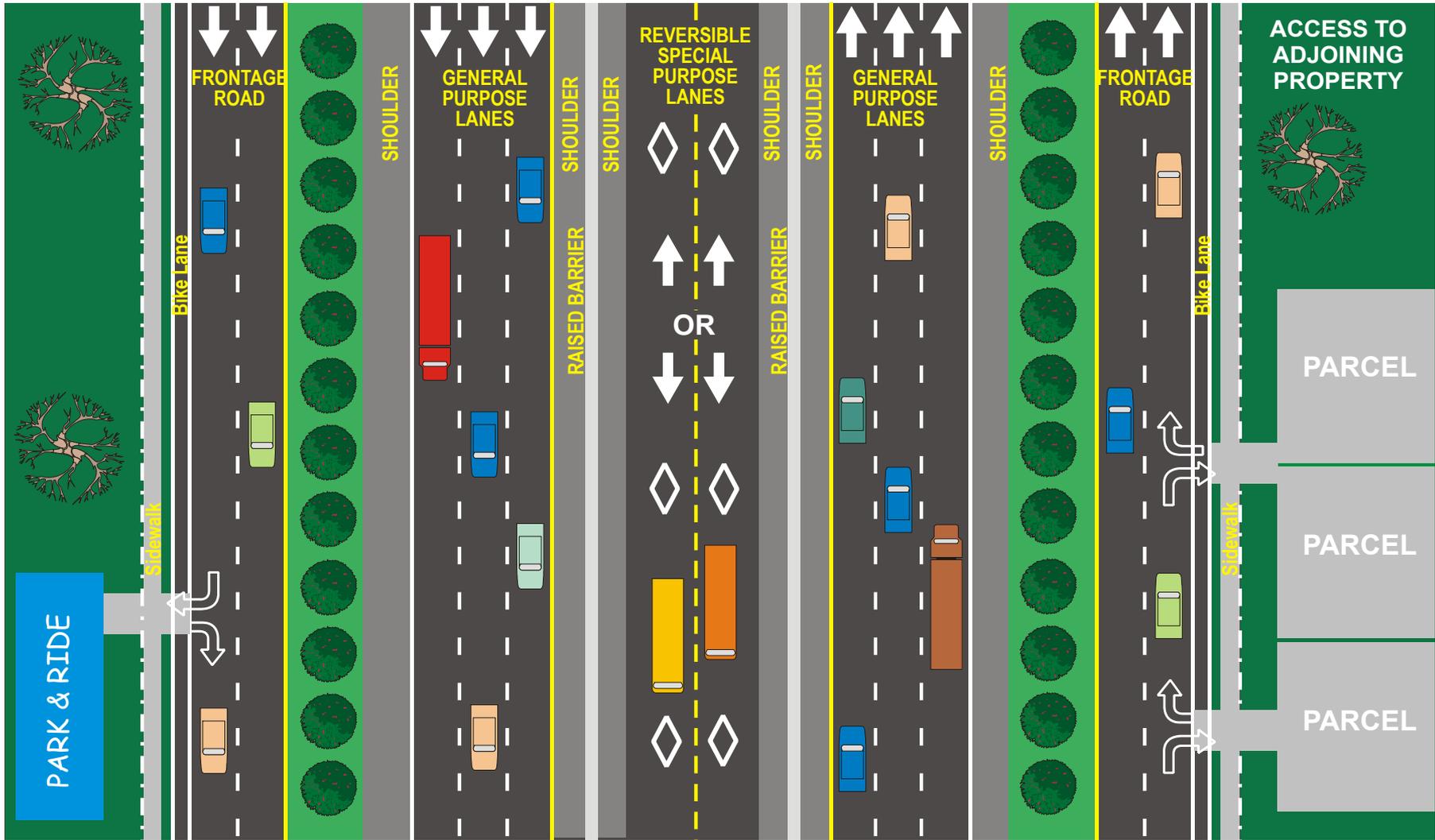


TYPICAL ROW ±350 FEET

# Multimodal Alternative IV – Freeway + Transit

(Reversible Special Use Lanes)

**FULL ACCESS CONTROL**



← ±47 FEET →

← TYPICAL ROW ±400 FEET →

# Next Steps....

- Incorporate Feedback from 1st Public Meeting
- Complete Traffic/Transit Modeling and Analysis
- Refine Multimodal Alternatives (Interchange Configurations, ROW Requirements, etc.)
- Next Public Meeting Summer 2006





***Feedback***

***Questions***

***Thank You***





# Community Involvement

- Website: [www.ncdot.org/~us1study](http://www.ncdot.org/~us1study)
- First Newsletter Being Mailed
- Third Oversight Team Meeting - Today
- First Public Meeting – Tuesday, March 14, 2006



# Existing Travel Conditions

- Access Points
    - Driveways
    - Cross-Streets
    - Median Openings
- } = Total of 110 or 8.5 per mile



# Commuter Bus Option

- Limited Stop Operation
- Serves Dispersed Trip Patterns – as in US 1 Corridor
- With Fewer Passengers in Bus than Train, Successful Operation in Lower-Density Areas
- Flexibility to Alter Routes to Increase Ridership
- Typically Over the Road Coaches



# Minimum Development Thresholds for Transit Modes

- DMU Rail
  - Typically Serves Strong Anchors at Both Ends – Not the Case in US 1 Corridor
  - Also Low Population Density
  - Conclusion: DMU Rail Not Recommended for US 1 Corridor Under Current Projected Corridor Densities and Anchors

