Conceptual Design and Engineering Assessment
Boone Boulevard and Greensboro Drive

Tysons Corner, Virginia

Fairfax County Planning Commission

Tysons Corner Subcommittee

February 5, 2009

Boone Blvd/Greensboro Dr

- Purpose of presentation
  - Provide an overview of study underway to develop conceptual designs and engineering of extending Boone Blvd and Greensboro Dr
- Why conduct the study
  - Extension of these roadways is included in the Comp Plan
  - Both roadways can play an integral role in providing north/south access within Tysons Corner as a complement to Rte 7
  - Landowners need to be aware of future roadway requirements as Tysons Corner redevelops

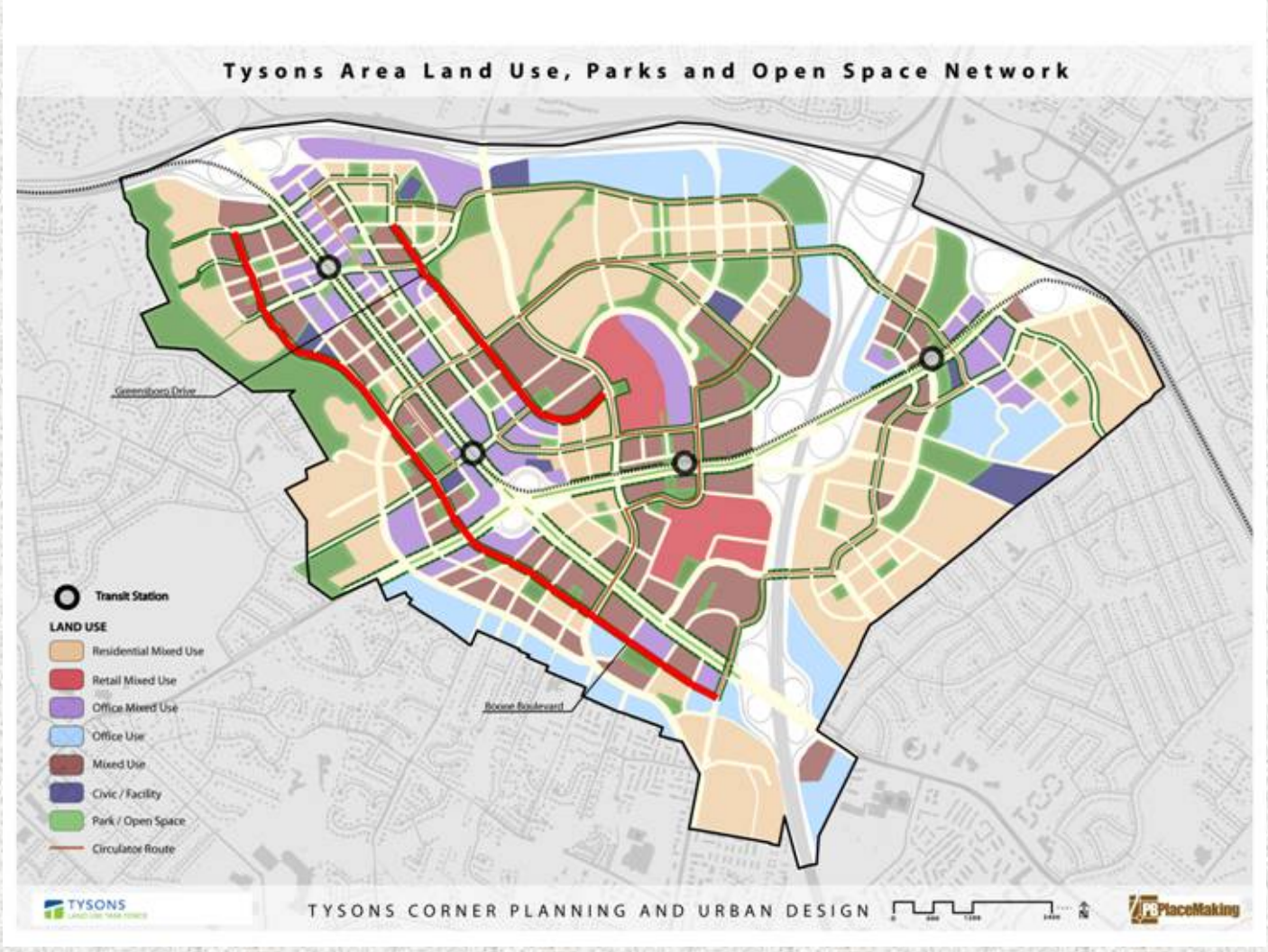
Boone Blvd/Greensboro Dr

- Project composed of 8 tasks:
  - Progress Meetings
  - Landowner and Developer Meetings
  - Prepare Cross Sections
  - Utility Inventory and Assessment
  - Environmental Screening
  - Centerline Analysis
  - Evaluate Alternative Alignments
  - Final Report
- Project schedule
  - 15 month schedule
  - Project approximately 50% complete

Study Area

267
Dulles Access Road
Dulles Access Toll Road
Jones Branch Drive
Westwood Center Drive/Tysons Road
Spring Hill Road
Greensboro Drive
Higdon Drive
7
Leesburg Pike
Tysons Corner
International Drive
Old Courthouse Road
Howard Avenue
Tysons Boulevard
Gallows Road
Horse Shoe Drive
Westbriar Drive/Northeast
123
Chain Bridge Road
Gables Lane
Hull Road
Byrd Road
Kensington Lane
2807 ft

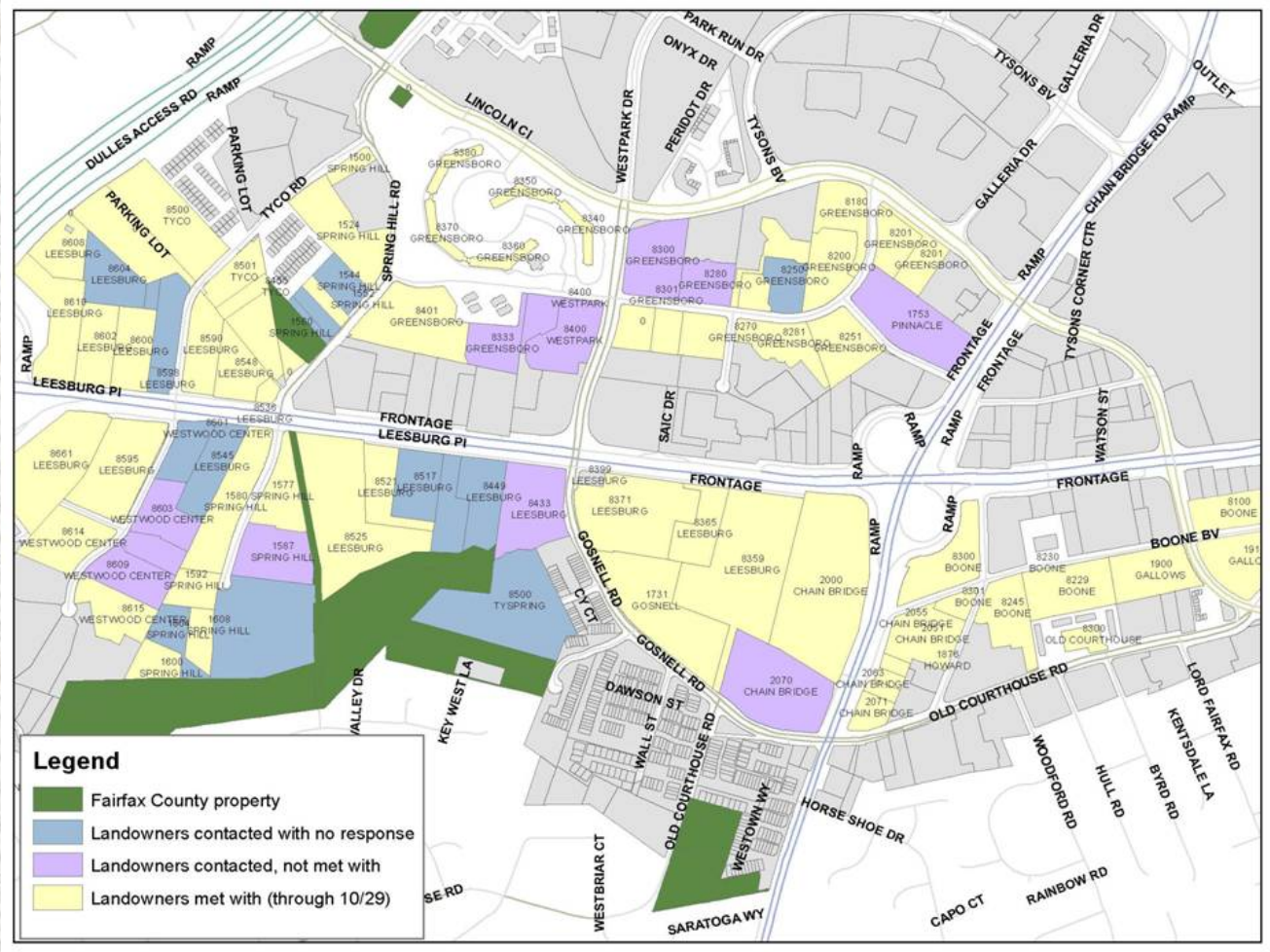
Plan Area


Tysons Area Land Use, Parks and Open Space Network
Greensboro Drive
Boone Boulevard
Transit Station
LAND USE
Residential Mixed Use
Retail Mixed Use
Office Mixed Use
Office Use
Mixed Use
Civic / Facility
Park / Open Space
Circulator Route
TYSONS
TYSONS CORNER PLANNING AND URBAN DESIGN
PlaceMaking

Landowner Meetings

Purpose of Meetings

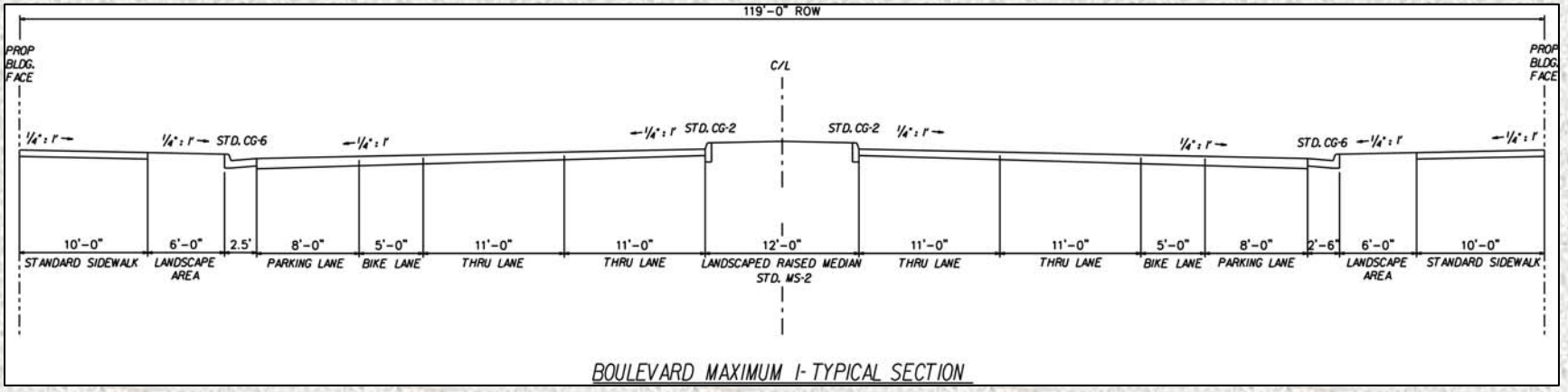
- Obtain understanding of current and proposed development
- Determine impact of proposed corridors on development
- 14 meetings held between May and October 2008



Consensus Points - Boone Blvd Meetings

- **General**
  - A “walkable”, pedestrian friendly corridor is desired
  - Access to Route 7 traffic circulation in general is a concern
  - The extension should support a future street grid
- **Roadway Section**
  - 2-lane or possibly 4-lane section
  - Retail uses fronting on the street
  - Speed limit of 25 to 35 mph
  - 15 to 20-foot wide sidewalks (narrower in residential areas)
  - On-street parking is desirable
  - Redeveloping properties would like minimum VDOT right-of-way behind the curb and the rest of the sidewalk area in an access easement maintained by the owners
- **Connection to the Dulles Toll Road**
  - Many of the redeveloping landowners see a connection to the DTR as necessary to handle future traffic.
  - Some landowners are against this connection.

Proposed Boone Blvd Cross-Section

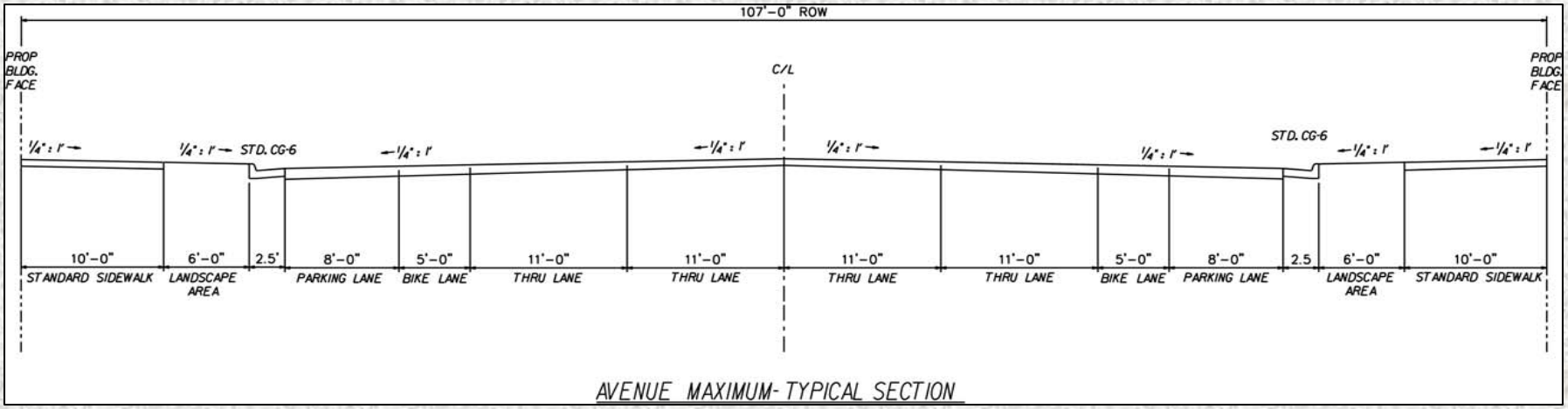


- **Assumptions**
  - Minor arterial, with high traffic volumes
  - Low travel speeds (signed at 35 mph)
  - Pedestrian friendly
- **Components**
  - 12’ wide landscaped median (or single-left turn lanes as needed)
  - Two 11’ travel lanes in each direction
  - 5’ wide bike lane in each direction
  - 8’ wide parking lane in each direction
  - 6’ wide landscaped buffer
  - 10’ wide sidewalk

Consensus Points - Greensboro Dr Meetings

- **General**
  - Concern with developable parcels remaining after the right-of-way is taken
  - Traffic information should include the increased densities per the Tysons Task Force recommendations and a connection to the Dulles Toll Road
  - A “walkable”, pedestrian friendly corridor is desired
  - The extension should support a future street grid
- **Roadway Section**
  - 4-lane roadway section
  - 15 to 20-foot wide sidewalks (narrower in residential areas)
  - A 104’ maximum total section width was suggested by redeveloping property owners as the maximum that would result in developable parcels
  - On-street parking is desirable if it does not result in excessive right-of-way width
  - A divided section is not seen as desirable due to the additional required right-of-way
- **Connection to the Dulles Toll Road**
  - Many of the redeveloping landowners see a connection to the DTR as necessary to handle future traffic.
  - The northernmost landowners fronting do not support this connection.

Proposed Greensboro Dr Cross-Section



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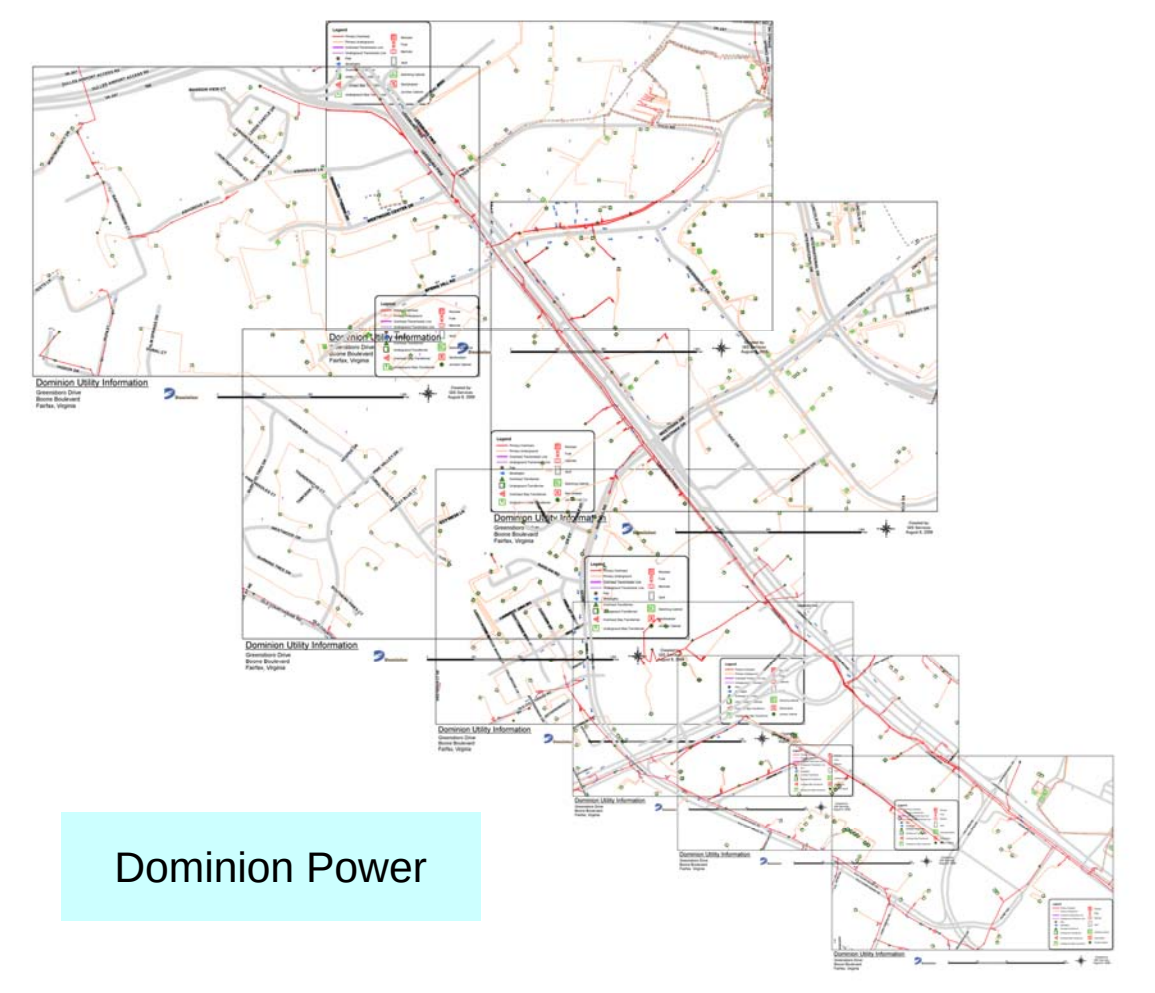
Existing Utility Constraints

- Dominion Power
- Fairfax Water
- Falls Church Water
- Washington Gas
- Fiber Optic Facilities
- Sanitary Sewer
- Major Drainage Facilities



Potential Environmental Considerations

- **Natural Environmental Resources**
- **Parks and Recreational Resources**
- **Storm Water Management**
  - Impervious surfaces
  - Piecemeal vs. Comprehensive Approach
  - Resource Protection Areas
- **Effective Traffic Dispersion**
- **Consistency with Private Development Plans and Fairfax County's Comprehensive Plan**
- **Business Displacements**
- **Neighborhood Impacts**
  - Traffic Noise
  - Traffic Safety

Screening Alignment Alternatives

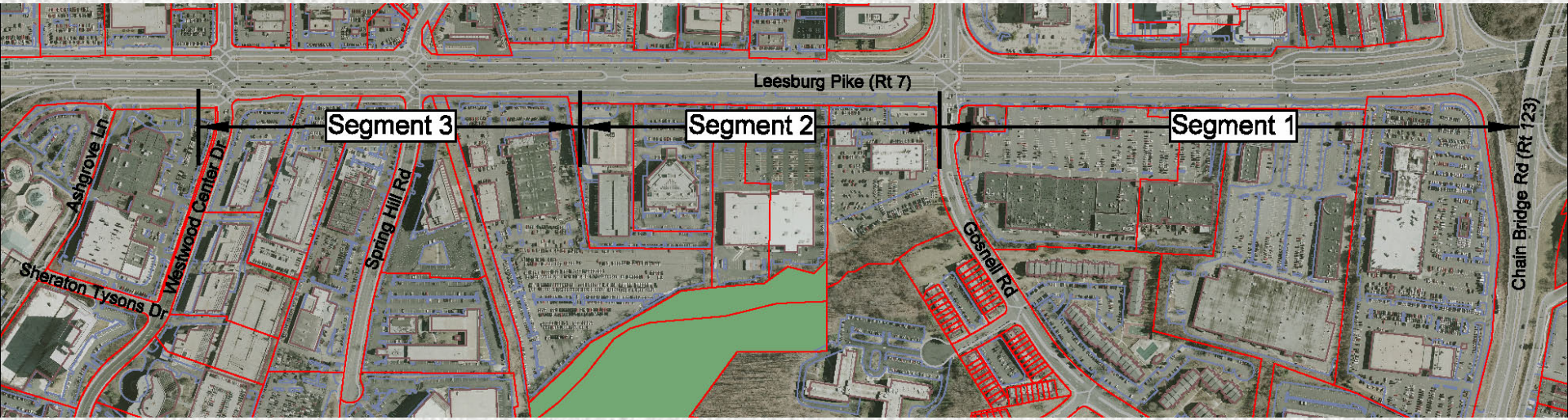
- **Roadway Functionality**
  - Parallel Roadway
  - Accommodates Grid Concept
- **Intersection Geometry**
- **Roadway Geometry**
- **Impacts to Existing**
  - Parking
  - Buildings
  - Parcel Access
- **Impacts to Proposed Development**
- **Environmental Impacts**
  - Land Use
  - Socio-economic conditions
  - Parks and Recreational Resources
  - Water and Natural Resources
- **Major Utility Impacts**

Screening Analysis

Does the Alternative Meet the Objectives and Criteria?

Best	Partially	Least
●	○	○

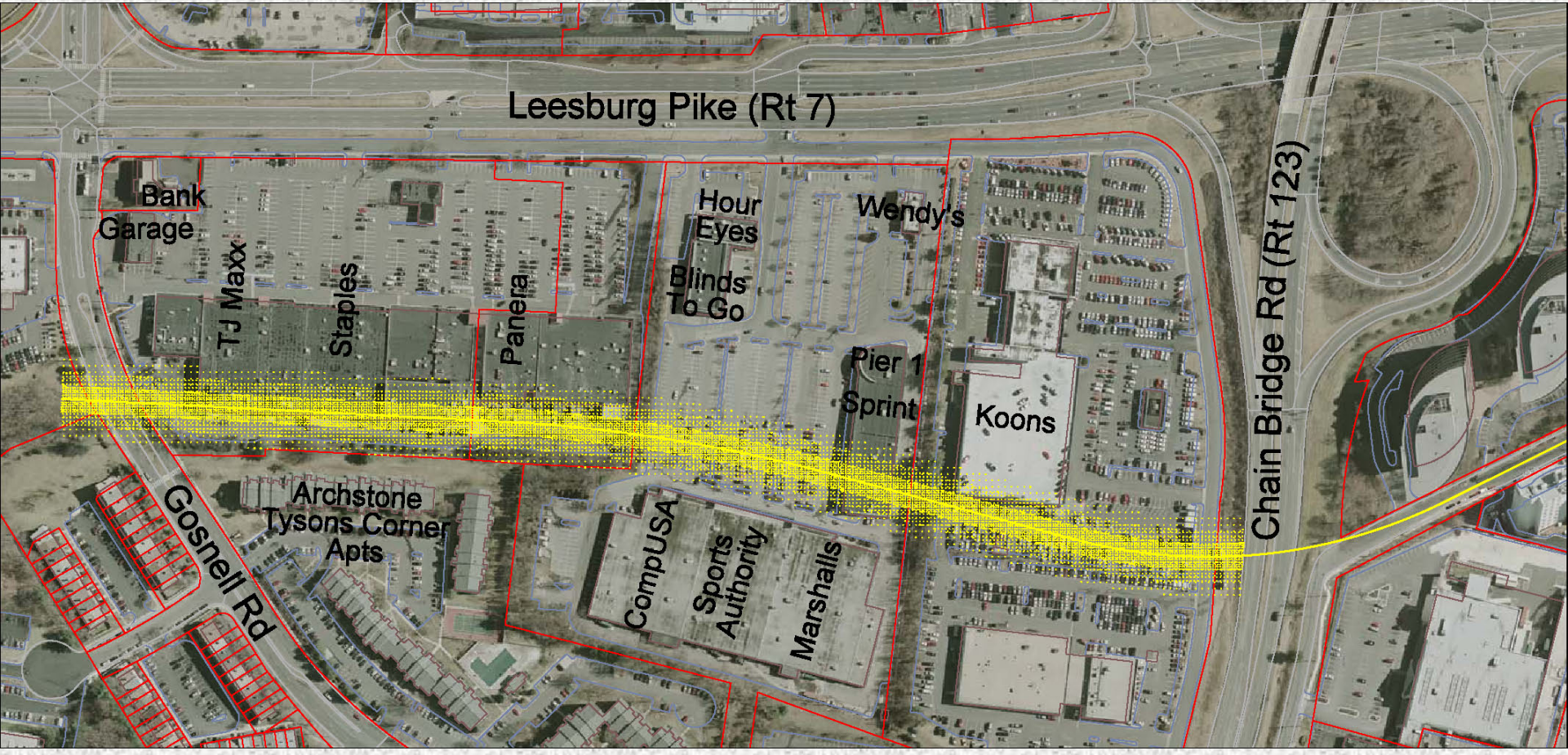
Boone Boulevard



Three Segments

1. Chain Bridge Rd to Gosnell Rd
2. Gosnell Rd to Spring Hill Rd
3. Spring Hill Rd to Westwood Center Dr

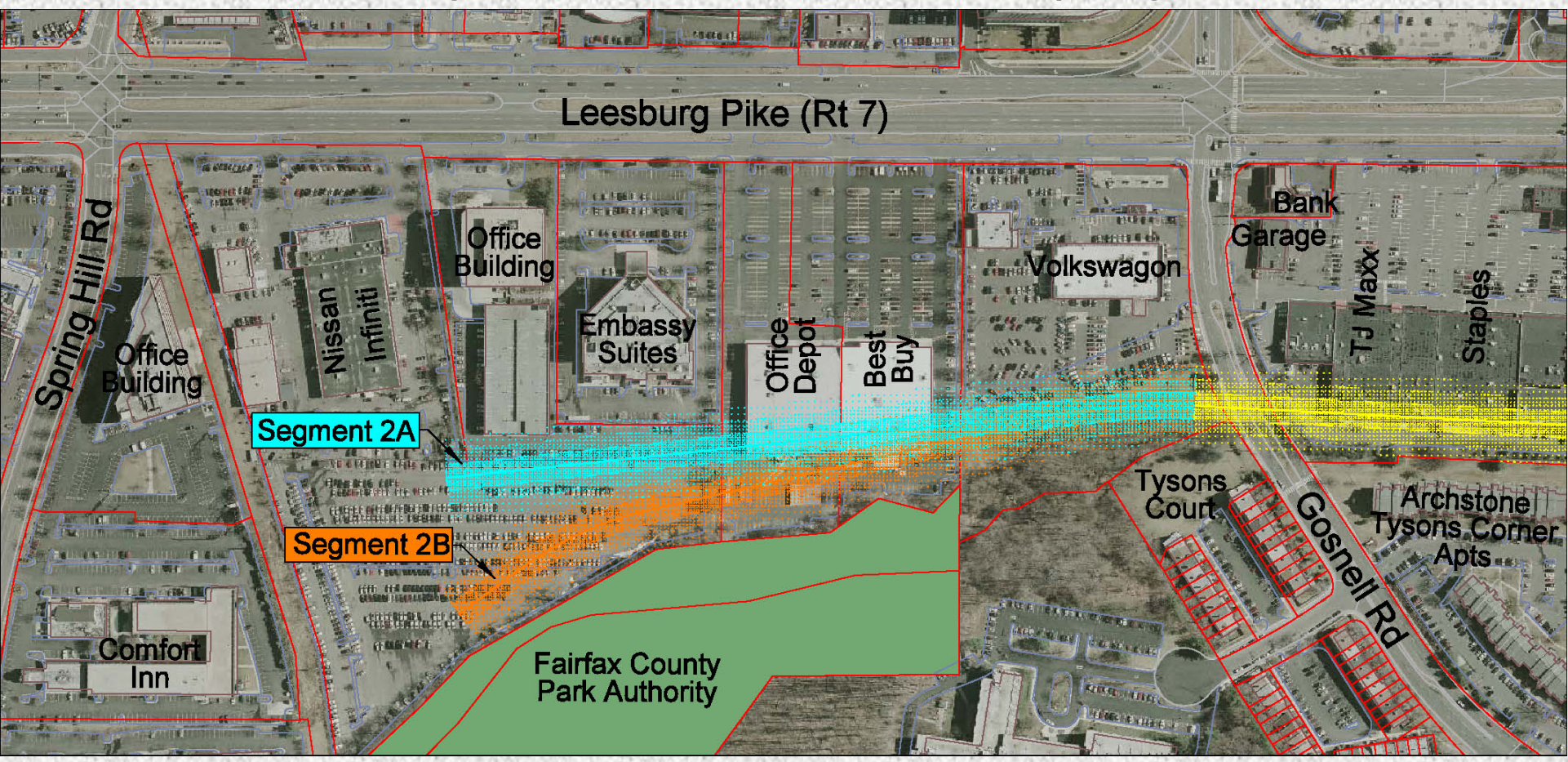
Boone Blvd Segment 1 – Chain Bridge Rd to Gosnell Rd



Screening Analysis

Segment	Roadway Functionality	Intersection Geometry	Roadway Geometry	Impacts to Existing Development	Impacts to Proposed Development	Environmental Impacts	Major Utility Impacts
1	●	o	●	●	●	●	●

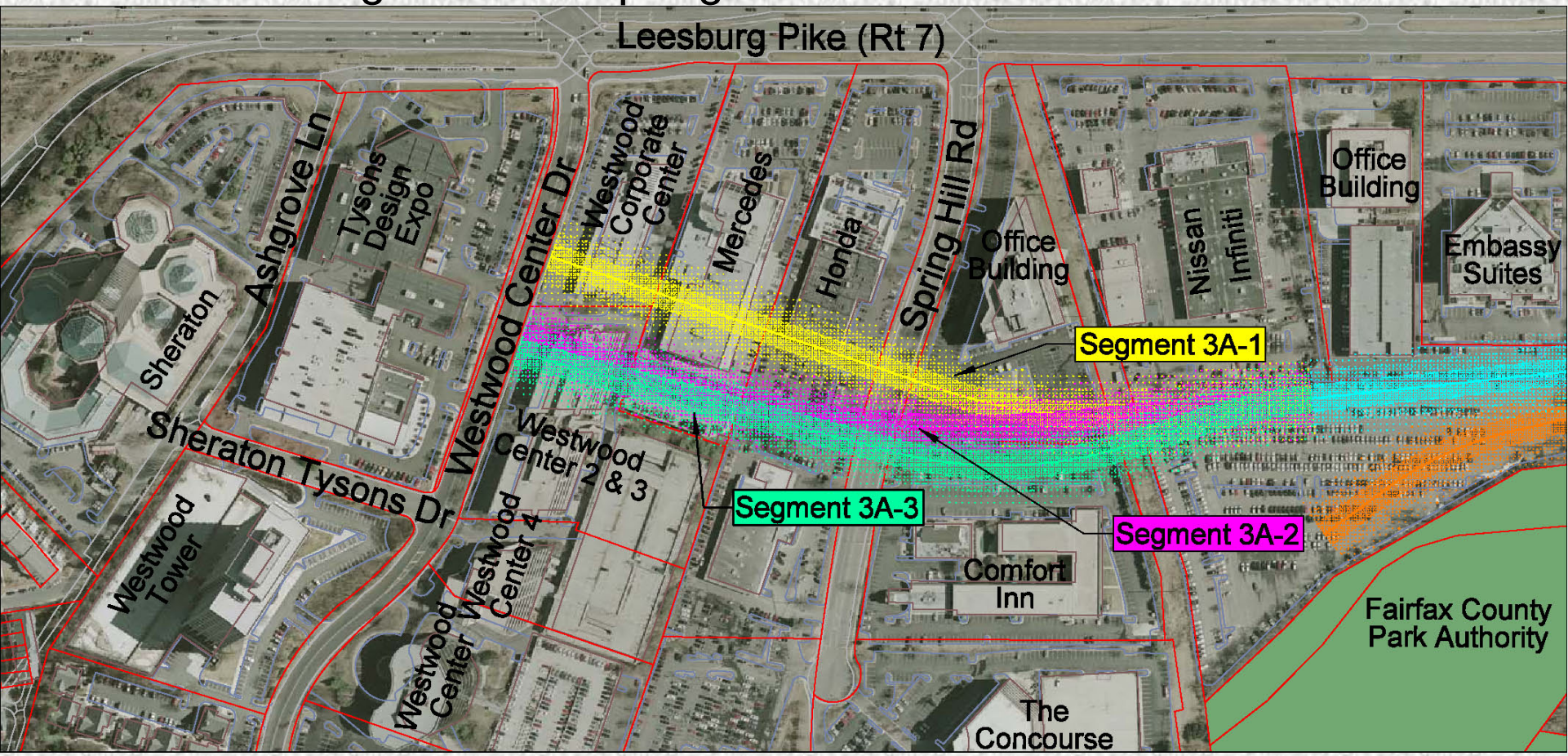
Boone Blvd Segment 2 – Gosnell Rd to Spring Hill Rd



Screening Analysis

Segment	Roadway Functionality	Intersection Geometry	Roadway Geometry	Impacts to Existing Development	Impacts to Proposed Development	Environmental Impacts	Major Utility Impacts
2A	●	●	●	○	●	●	●
2B	●	●	○	●	○	●	●

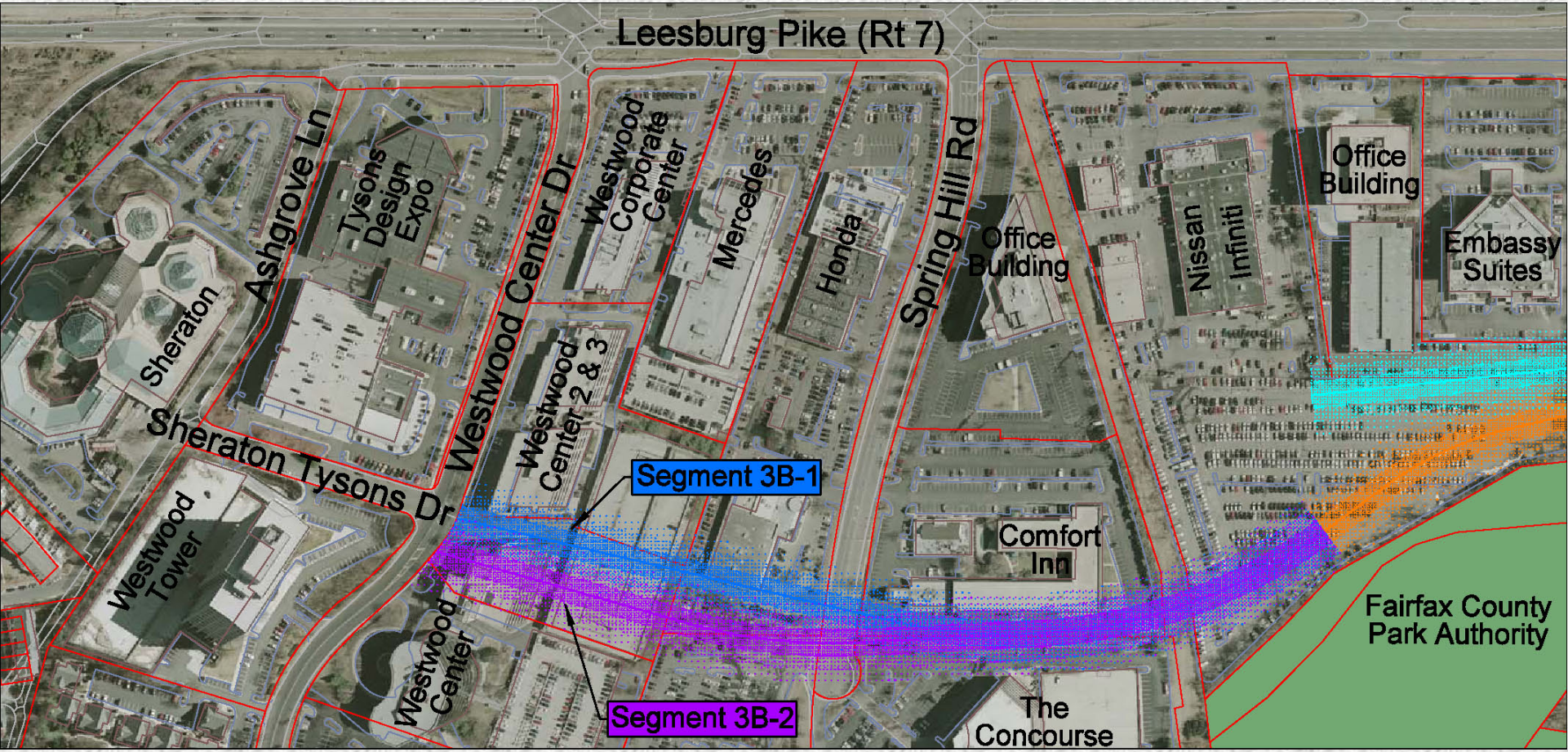
Boone Blvd Segment 3 – Spring Hill Rd to Westwood Center Dr



Screening Analysis

Segment	Roadway Functionality	Intersection Geometry	Roadway Geometry	Impacts to Existing Development	Impacts to Proposed Development	Environmental Impacts	Major Utility Impacts
3A-1	●	●	●	●	●	●	●
3A-2	●	○	●	○	●	●	●
3A-3	●	●	●	○	●	●	●

Boone Blvd Segment 3 – Spring Hill Rd to Westwood Center Dr



Screening Analysis

Segment	Roadway Functionality	Intersection Geometry	Roadway Geometry	Impacts to Existing Development	Impacts to Proposed Development	Environmental Impacts	Major Utility Impacts
3B-1	●	○	●	○	●	●	●
3B-2	●	○	●	○	●	●	●

Boone Blvd – End to End Alternatives

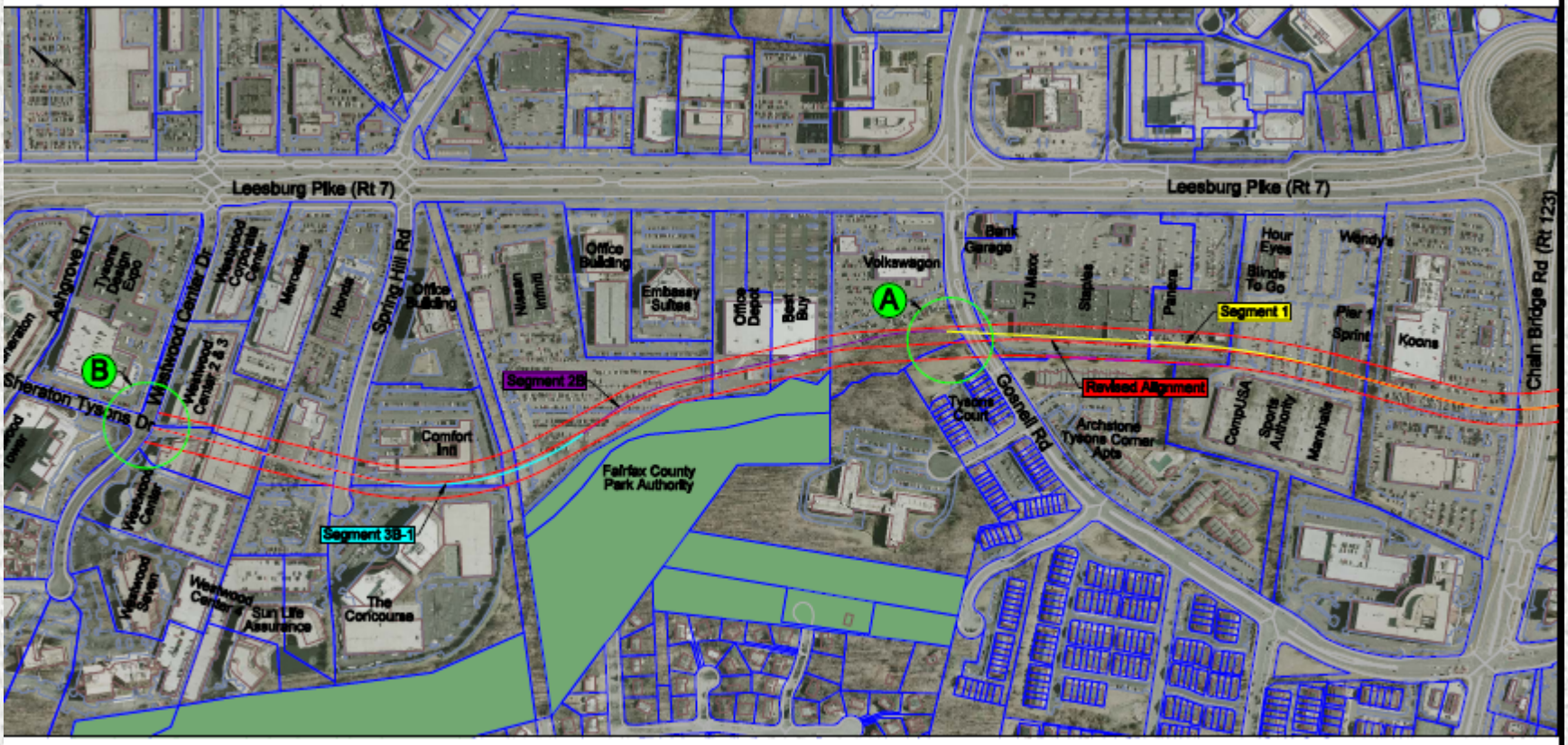
Screening Analysis

End to End Alternative	Roadway Functionality			Intersection Geometry			Roadway Geometry			Impacts to Existing Development			Impacts to Proposed Development			Environmental Impacts			Major Utility Impacts		
Segment	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
1 & 2A & 3A-1	●	●	●	○	●	●	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●
1 & 2A & 3A-2	●	●	●	○	●	○	●	●	●	●	○	○	●	●	●	●	●	●	●	●	●
1 & 2A & 3A-3	●	●	●	○	●	●	●	●	●	●	○	○	●	●	●	●	●	●	●	●	●
1 & 2B & 3B-1	●	●	●	○	●	○	●	○	●	●	●	○	●	○	●	●	●	●	●	●	●
1 & 2B & 3B-2	●	●	●	○	●	○	●	○	●	●	●	○	●	○	●	●	●	●	●	●	●

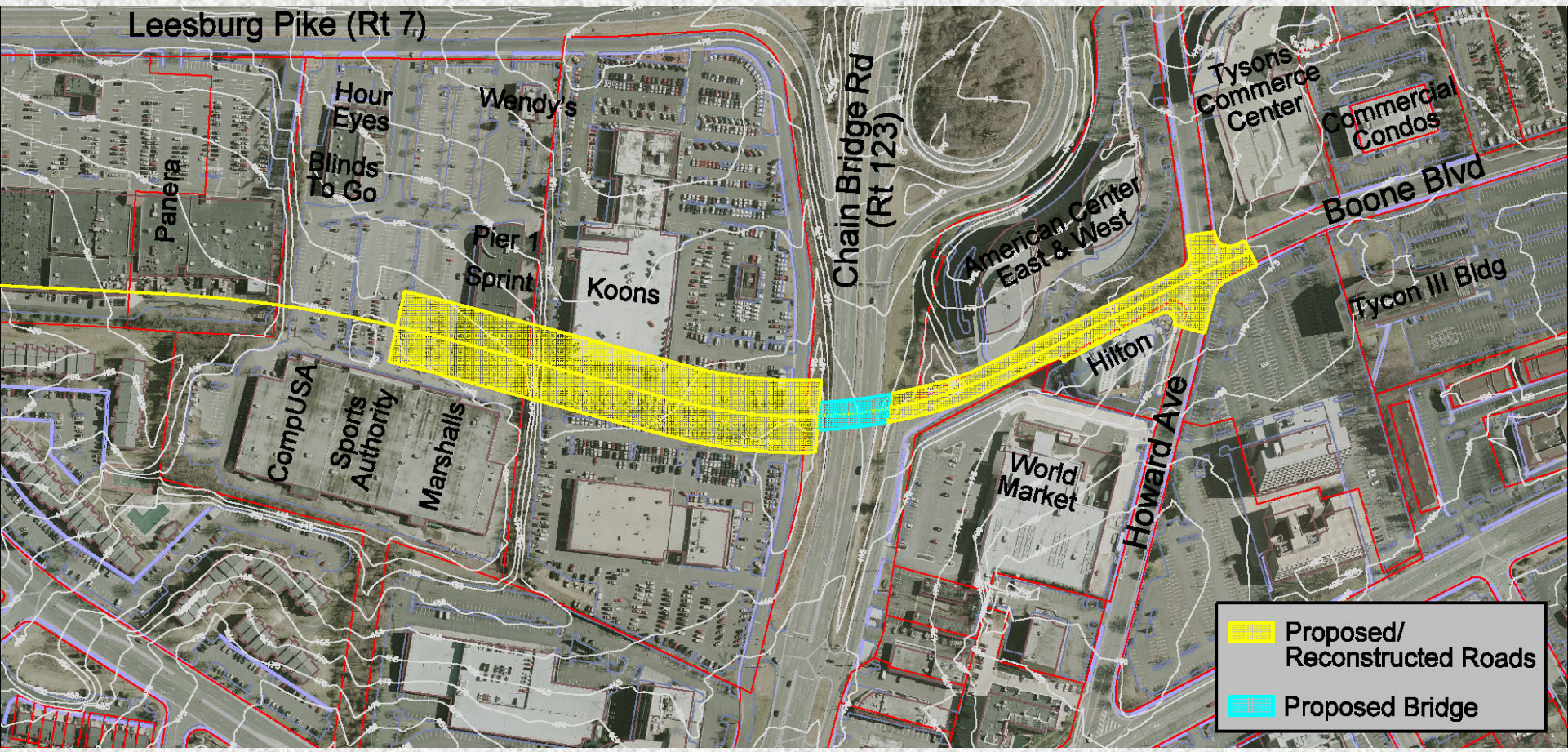
Summary

- *Roadway Functionality, Environmental Impacts and Major Utility Impacts* are best met in all of the alignments
- *Intersection Geometry* is partially met in all of the alignments
- *Roadway Geometry* is best met in 3 of the alignments and is partially met in the other 2 alignments
- *Impacts to Proposed Development* is best met in 3 of the alignments and is partially met in the other 2 alignments
- *Impacts to Existing Development* is only partially met in all of the alignments and one alignments includes a segment that least meets the criteria

Proposed Boone Blvd Alignment



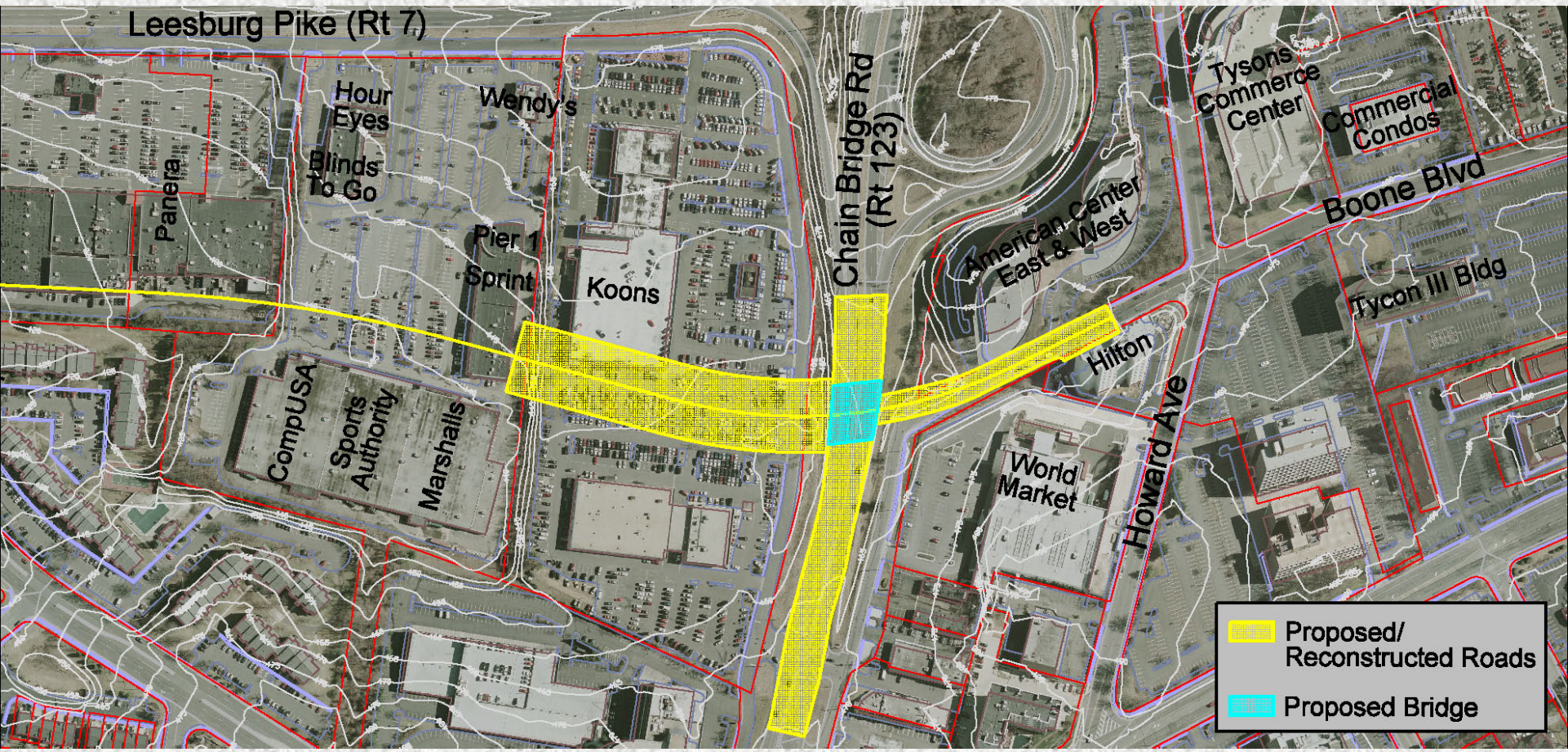
Boone Blvd Crossing Over Route 123



Screening Analysis

Alternative	Reconstruction Requirements	Access to Existing Parcels	Traffic Impacts
Boone Blvd Over Route 123	○	○	●

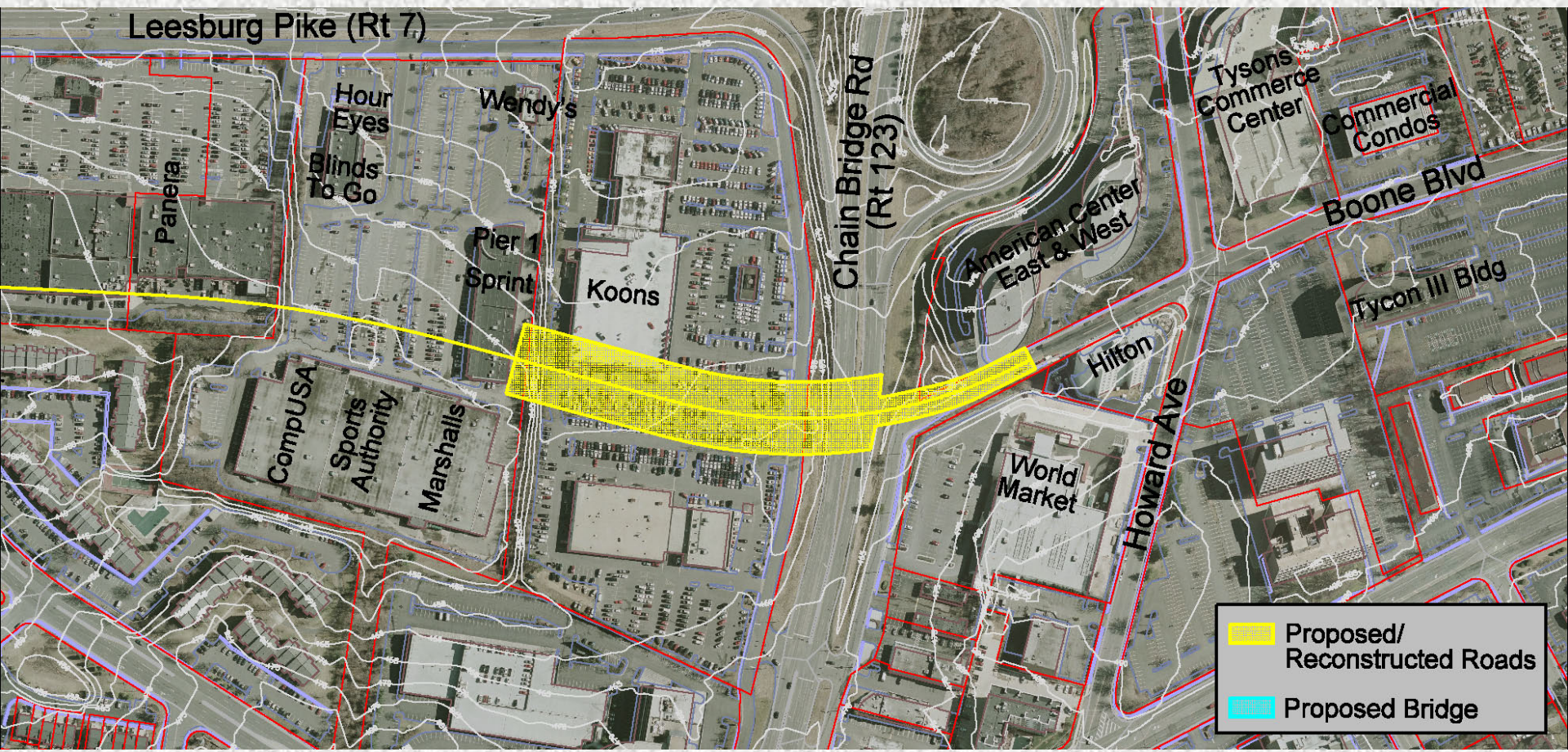
Boone Blvd Crossing Under Route 123



Screening Analysis

Alternative	Reconstruction Requirements	Access to Existing Parcels	Traffic Impacts
Boone Blvd Under Route 123	○	○	●

Boone Blvd & Route 123 – At-Grade Intersection



Screening Analysis

Alternative	Reconstruction Requirements	Access to Existing Parcels	Traffic Impacts
At-Grade Intersection	●	●	○

Crossing Summary

Screening Analysis

Alternative	Construction Requirements	Access to Existing Parcels	Traffic Impacts
Boone Blvd Over Route 123	○	○	●
Boone Blvd Under Route 123	○	○	●
At-Grade Intersection	●	●	○

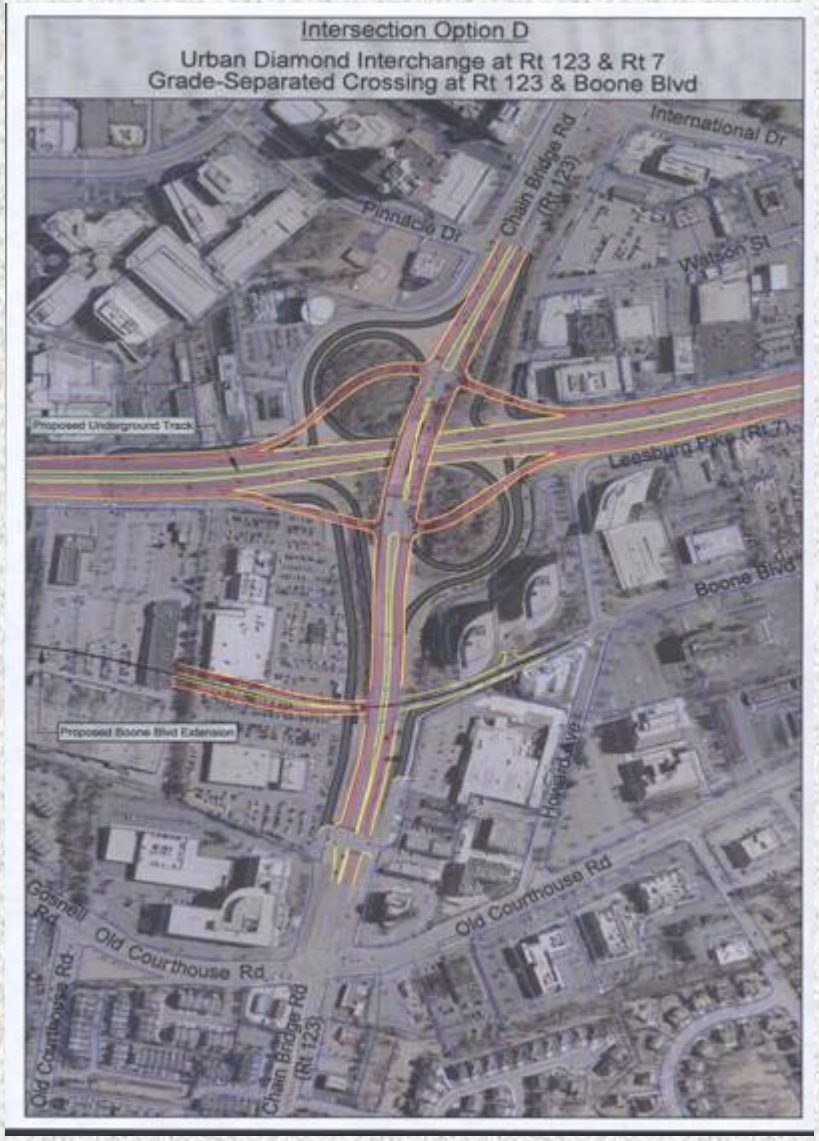
Community Support

- Per Fairfax County Comprehensive Plan, crossing is grade-separated
- Adjacent landowners support an at-grade crossing

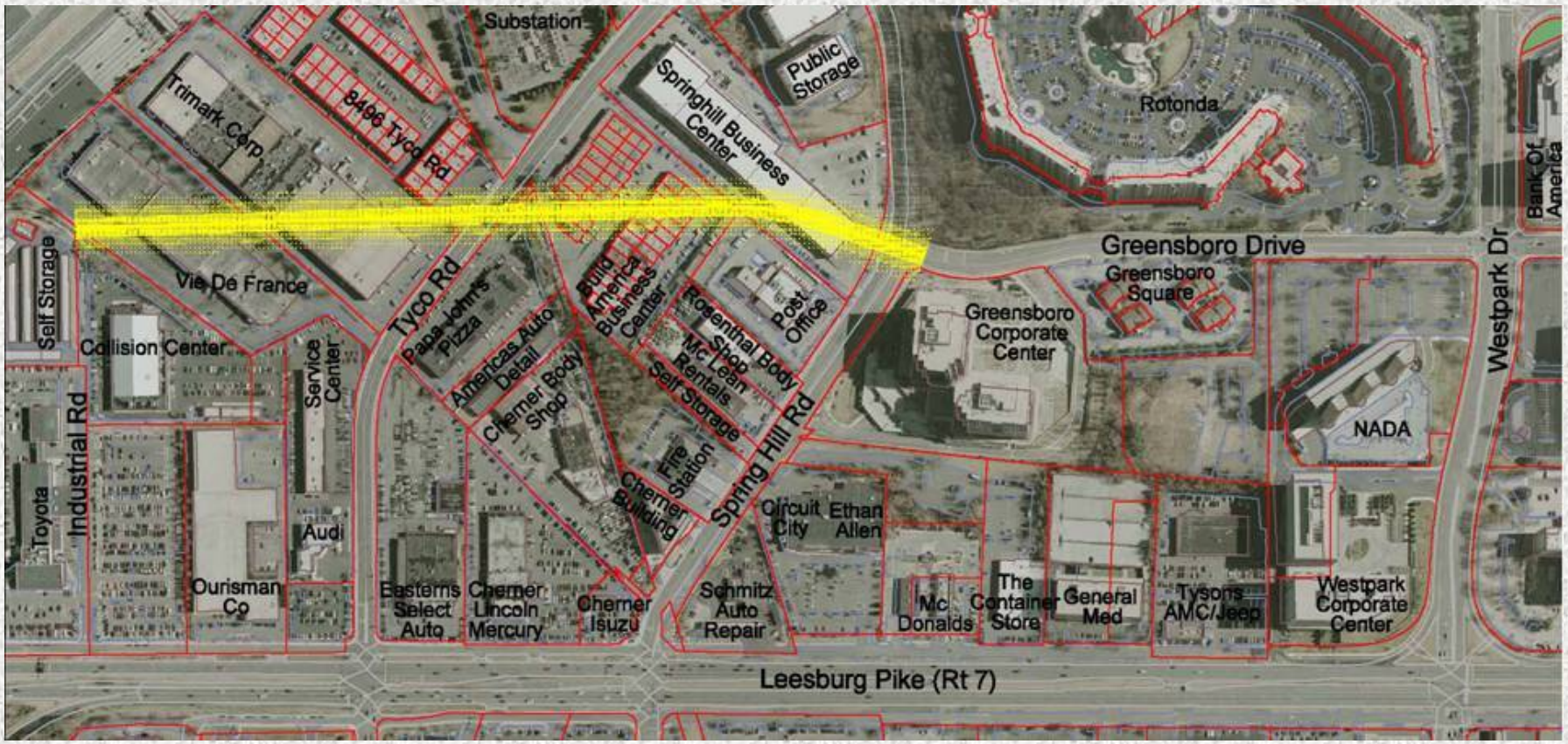
Pedestrians

- At-grade intersection could pose safety concerns for pedestrians crossing Route 123
- An underpass could create a corridor that is not pedestrian friendly

Possible Realignment of Rte 123 and Boone Blvd



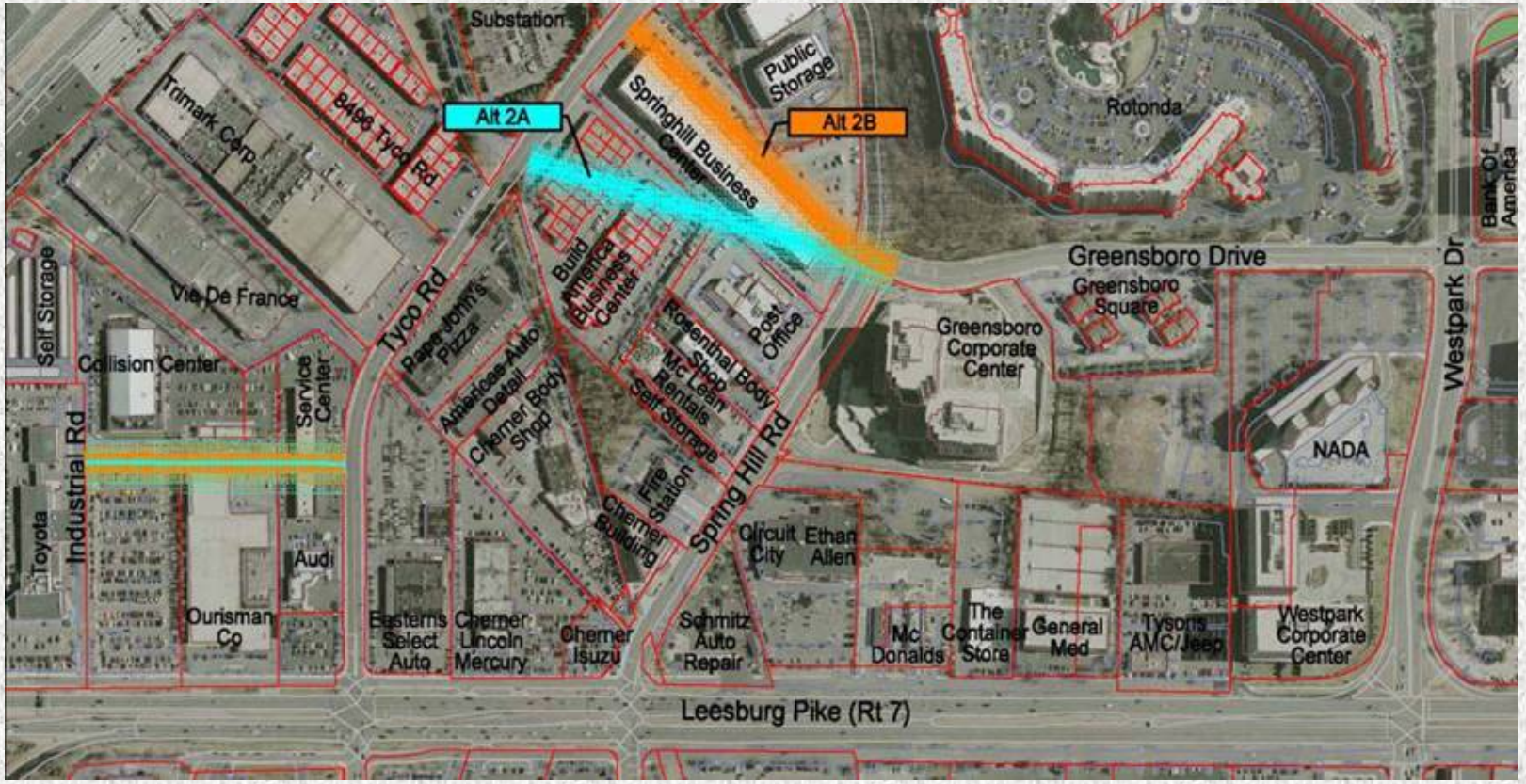
Greensboro Drive – Alternative 1



Screening Analysis

Alternative	Roadway Functionality	Intersection Geometry	Roadway Geometry	Impacts to Existing Development	Impacts to Proposed Development	Environmental Impacts	Major Utility Impacts
1	●	o	●	o	●	●	●

Greensboro Drive – Alternatives 2A & 2B



Screening Analysis

Alternative	Roadway Functionality	Intersection Geometry	Roadway Geometry	Impacts to Existing Development	Impacts to Proposed Development	Environmental Impacts	Major Utility Impacts
2A	○	○	●	○	●	●	●
2B	○	●	○	●	●	●	●

Greensboro Drive – Alternative 3

Screening Analysis

Alternative	Roadway Functionality	Intersection Geometry	Roadway Geometry	Impacts to Existing Development	Impacts to Proposed Development	Environmental Impacts	Major Utility Impacts
3	○	○	●	○	●	●	●

Greensboro Drive Summary

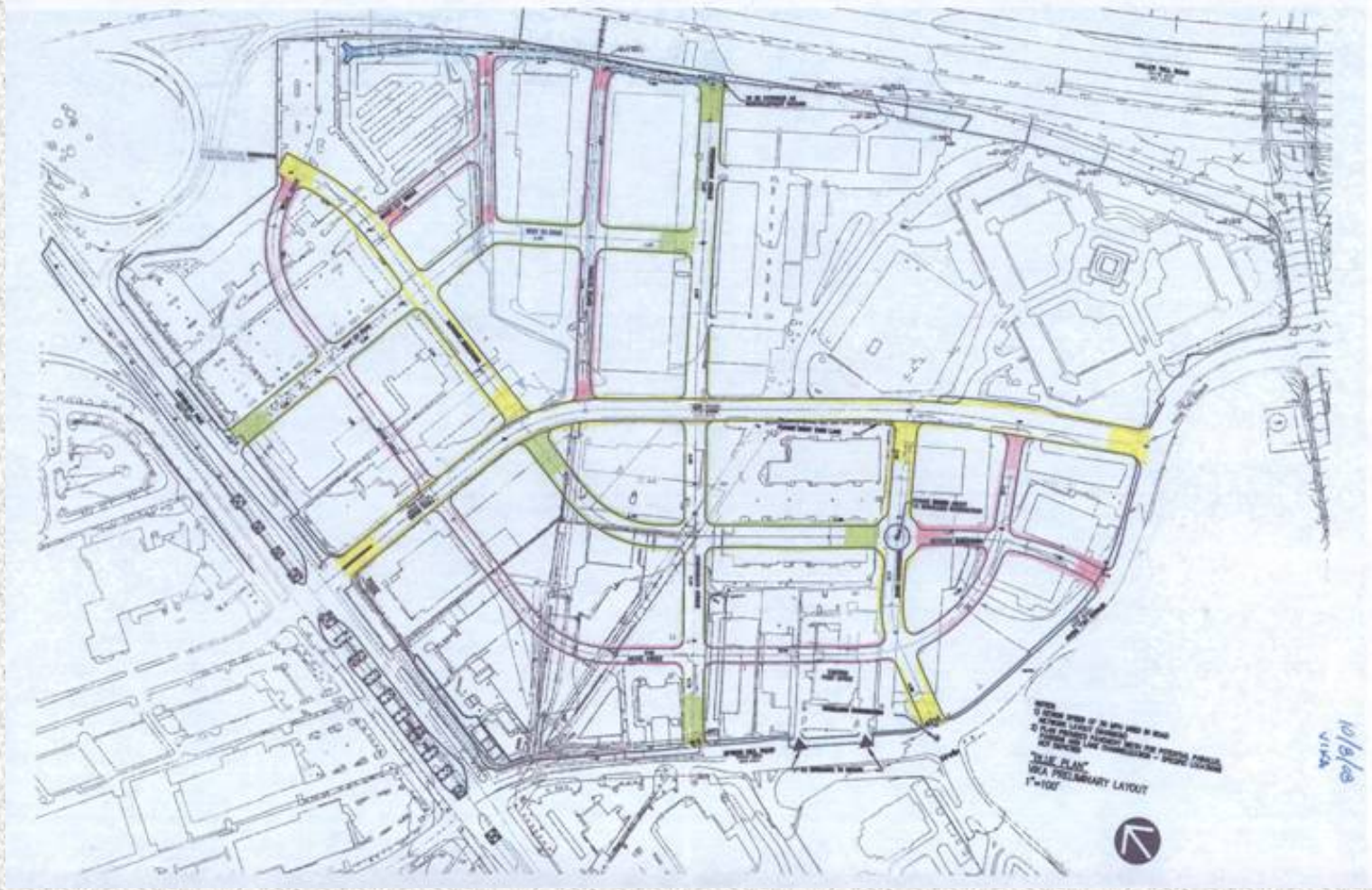
Screening Analysis

Alternative	Roadway Functionality	Intersection Geometry	Roadway Geometry	Impacts to Existing Development	Impacts to Proposed Development	Environmental Impacts	Major Utility Impacts
1	●	○	●	○	●	●	●
2A	○	○	●	○	●	●	●
2B	○	●	○	●	●	●	●
3	○	○	●	○	●	●	●

Summary

- *Impacts to Proposed Development, Environmental Impacts and Major Utility Impacts* are best met in all of the alternatives
- *Roadway Geometry* is best met in 3 of the alternatives and is partially met in 1 of the alternatives
- *Roadway Functionality, Intersection Geometry and Impacts to Existing Development* are best met in 1 of the alternatives and is partially met in 3 of the alternatives

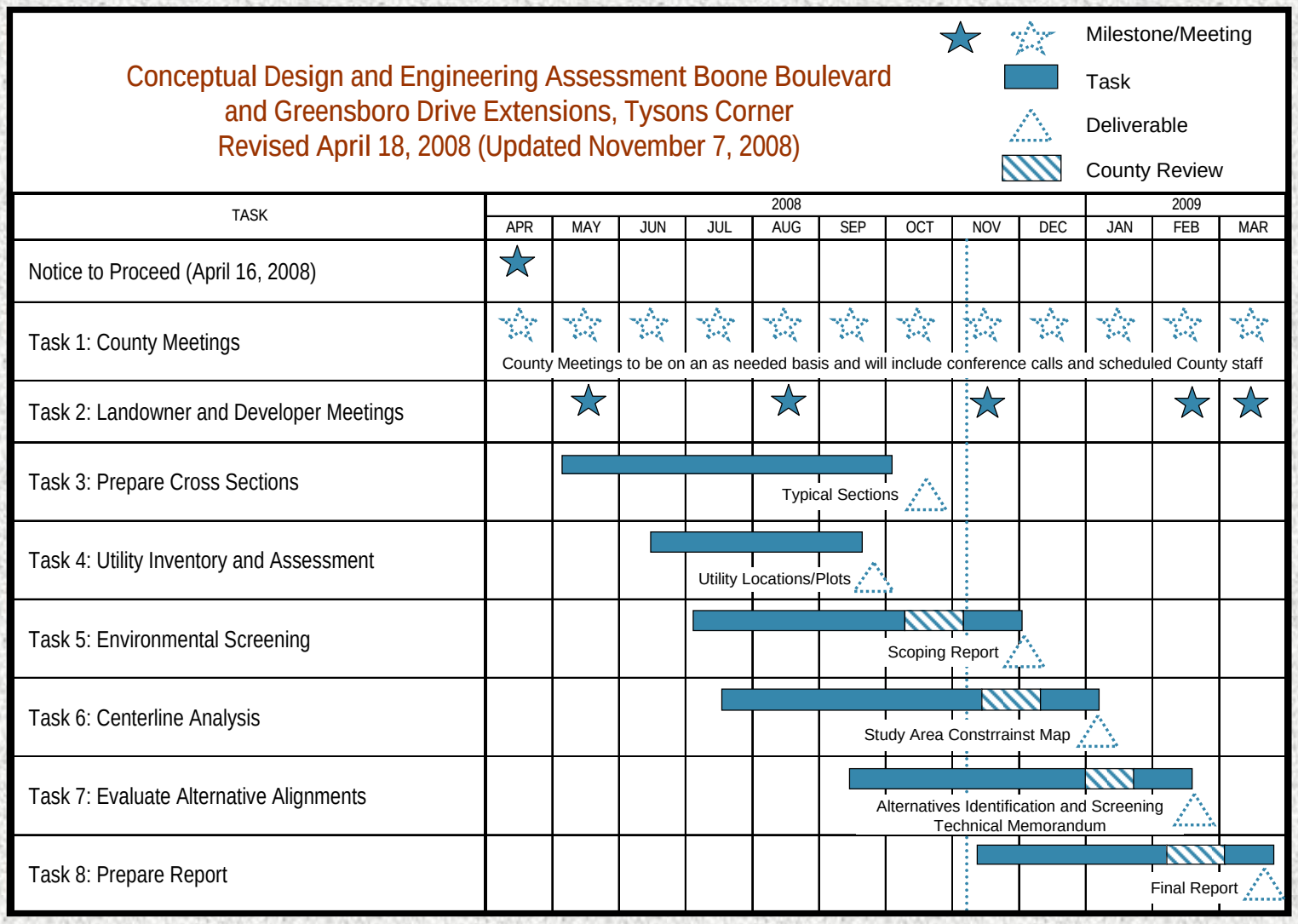
Landowner Proposal for Greensboro Dr



Next Steps

- Modifications to
  - Screened Alternatives
  - Typical Sections
- Further Definition of the Alternative Carried Forward
- Additional Environmental and Utility Analysis
- Additional Meetings with Landowners after Refinement of the Alternatives and Typical Cross Sections

Schedule


Conceptual Design and Engineering Assessment Boone Boulevard
and Greensboro Drive Extensions, Tysons Corner
Revised April 18, 2008 (Updated November 7, 2008)
Milestone/Meeting
Task
Deliverable
County Review
TASK
2008
2009
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
JAN
FEB
MAR
Notice to Proceed (April 16, 2008)
Task 1: County Meetings
County Meetings to be on an as needed basis and will include conference calls and scheduled County staff
Task 2: Landowner and Developer Meetings
Task 3: Prepare Cross Sections
Typical Sections
Task 4: Utility Inventory and Assessment
Utility Locations/Plots
Task 5: Environmental Screening
Scoping Report
Task 6: Centerline Analysis
Study Area Constrrainst Map
Task 7: Evaluate Alternative Alignments
Alternatives Identification and Screening
Technical Memorandum
Task 8: Prepare Report
Final Report