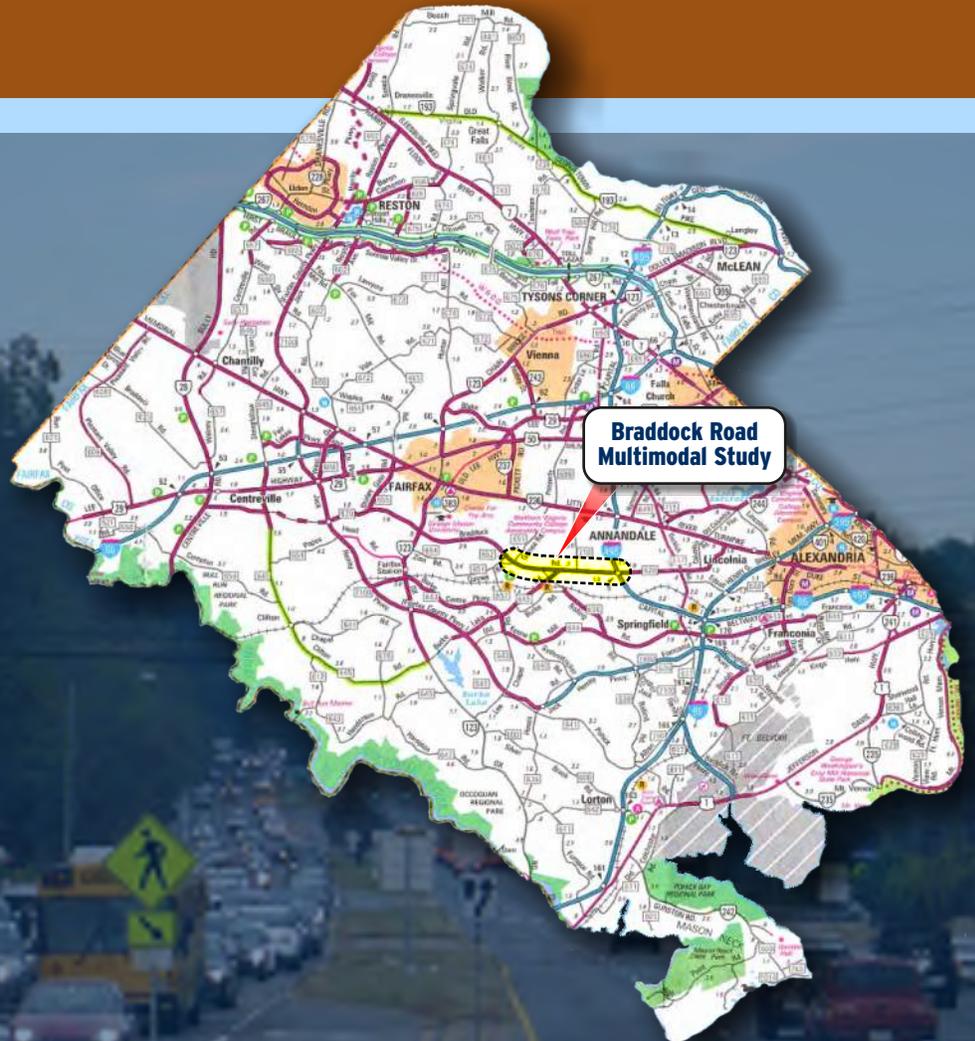




Braddock Road Multimodal Study

County of Fairfax, Virginia

Task Force Meeting Materials



Date: December 2, 2015



December 2, 2015

**Braddock Road Multimodal Study
Fairfax County, Virginia**

Task Force Meeting

- I. Introduction Kevin Morse, Chairman
- II. Progress Since Last Task Force Meeting (10 minutes)..... Tad Borkowski/Michael Guarino
 - a. Update on Property Value Impacts
- III. Discussion Items..... Tad Borkowski/John McDowell
 - a. Measures of Effectiveness Discussion (30 minutes) Tad Borkowski/John McDowell
 - i. Review of Performance Measure Weights
 - b. Roadway (40 minutes)John McDowell/Stuart Samberg
 - a. Access Management
 - b. Spot Improvements
 - c. HOV Alignments
 - c. Transit Center Options (30 minutes) John McDowell
 - a. Parking Demand Study Questions
 - b. Layout Options
 - c. Parking Garage rendering
- IV. Following Month's Activities (10 minutes) Tad Borkowski/John McDowell
 - a. Continue Travel Demand Modeling for Build conditions
 - b. Continue VISSIM preparation for Build Conditions
 - c. Continue evaluation of Transit Center site plans
 - d. Continue alignment option development
- V. Adjourn Meeting Kevin Morse, Chairman

November 4, 2015

**Braddock Road Multimodal Study
Fairfax County, Virginia**

Task Force Meeting Minutes

Action Items

Task Force Members

- Review the MOE Performance Measure information that will be provided and be prepared to discuss at the December Task Force meeting

FCDOT

- Distribute MOE Performance Measure Development to Task Force for review
- Distribute updated Spot Improvement list to Task Force for review

RK&K Team

- Prepare a list of Performance Measures and how each relates to MOEs
- Update Spot Improvement options based on Task Force comments
- Begin to develop alignment and roadway configurations
- Continue to advance analysis and transit center layouts
- Continue Traffic Analysis
- Begin development of Travel Demand Modeling and VISSIM simulations for Spot Improvements and HOV options.

Discussion

Tad Borkowski began the meeting by discussing the work completed over the last month. He noted that since the last meeting, the team developed spot improvements, the MOE tables were revised and that information was gathered to present to the task force on travel patterns.

The discussion turned to the Measures of Effectiveness (MOE). A question was asked what the improvement MOEs would be compared to, and it was responded that all alternatives will be compared to the 2040 No Build. It was asked whether an interim year could be performed and noted that no interim year analysis was in the scope for the consultant. It was also stated that 2040 represents twenty years from the project completion date, which is standard practice for this type of analysis.

During the discussion of MOEs, the following questions were posed:

- *Can an MOE for pedestrian safety be added?* Stuart Samberg noted that no expected crash rate for pedestrians exists in the HSM or other documentation.
- *Can pedestrian crash data be obtained?* Tad noted that this could be reviewed.
- *What impact the project would be expected to have on property values?* Michael Guarino noted that FCDOT will talk to the tax department to get some information to present to task force.
- *How would the transit center be expected to have on property values?* Michael noted that FCDOT will talk to the tax department to get some information to present to task force.
- *Can the MOEs be reorganized in order from most to least important?* John McDowell noted that the MOEs should be weighted in importance as determined by the task force.
- *Can an analysis of travel time deviation be performed?* Stuart noted yes.

During the discussion of MOEs, the following thoughts were raised in regards to the MOE development:

- A more differentiated set of weighted might be beneficial. The Task Force will bring their thoughts on weights to the next discussion.
- Rather than ranking system being 1, 2, 3, 4, 5 that a set of ranks -4, -2, 0, 2, 4 so that the moderate value is “average”, with 4 “much better than average” and -4 “much worse than average”.
- That all measures of cost (Construction Cost, Right-of-Way Cost, Engineering Cost) should be removed as cost is not an MOE. Cost can be evaluated and considered after the alternatives are evaluated and scored.
- It was requested that the MOE form be adjusted to include the weight and some background on the meaning of terms.

Tad and Michael noted that the team will meet and submit revised MOEs to the task force by 11/20/2015.

A question was asked about WMATA’s plan to change bus routes. It was noted that the Board of Supervisors can commit to provide additional service through WMATA since they do what is asked for by the County.

The discussion then turned to existing and future traffic patterns. Stuart noted what contributes to the travel patterns along Braddock Road. He noted the future year growth is less than half of the countywide on a percentage basis. Stuart noted that growth at George Mason University was a key driver in the growth of westbound traffic. A question was asked regarding whether the university would consider more on-campus housing to reduce traffic. County staff responded that virtually every decision regarding the university is made in Richmond. Stuart further noted that I-66 increases person trips but not vehicle trips and that adjacent projects such as the widening of Little River Turnpike may increase volumes along north-south streets such as Guinea Road. Stuart then presented a series of screenlines comparing the 2015 to 2040 growth rates along multiple facilities.

John then led the discussion to the spot improvement options contained in the handout. It was noted that the Guinea Road option of adding a free-flow right turn lane from northbound Guinea Road to eastbound Braddock Road would not be feasible since it would block access to the neighborhood adjacent to the neighborhood. With this information, the option will be removed from consideration. From there, the discussion turned to Burke Lake Road and concern regarding blocking the through movements to Woodland Way and access to the church/school. It was noted that during school times and on Sunday traffic is heavy and cutting off access might be difficult. As a result of this and other similar concepts, an access management discussion will be added to the December meeting.

Planned Activities for November 2015

- Continue refinement of transit center sites
- Travel Demand Modeling efforts will continue, begin focusing on modeling of future build conditions
- Continue VISSIM modeling of build conditions.
- Refinement of MOEs for presentation to task force.

Other items:

- The next Task Force meeting will be on December 2, 2015.

Should any revisions to these meeting minutes be required, please advise Tad Borkowski at tad.borkowski@fairfaxcounty.gov or John McDowell, PE at jmcdowell@rkk.com.

December 2, 2015
Braddock Road Multimodal Study
Fairfax County, Virginia

Roadway Center Performance Measures

Performance Measure	Unit of Measurement	Definition
Construction Cost	Dollars (\$)	The cost associated with building the project.
Right-of-Way Cost	Dollars (\$)	The cost associated with purchasing land required for the project, including admin. Costs, land acquisitions and value “damages”.
Engineering Cost	Dollars (\$)	The cost associated with the design of the project.
Total area of Right-of-Way Taken	Acres	The physical area of land needing to be purchased for the project, including fee takings and easements.
Number of Parcels Impacts	Each	The number of individual parcels with impacts from the project.
Vehicular Travel Time	Minutes	The average time it takes a single vehicle to travel the length of the project corridor. (each direction is computed separately)
Pedestrian Travel Time	Minutes	The average time it takes a single pedestrian to traverse a chosen path.
Transit Travel Time	Minutes	The average time it takes a single bus to traverse a chosen path.
Bicycle Travel Time	Minutes	The average time it takes a single bicyclist to traverse a chosen path.
Corridor Wide Conflict Points	Each	The total number of points where vehicle paths conflict with one another across the entire corridor.
HSM Computed Expected Crash Rate	Crashes/Year	The crash rate expected after construction as determined by computations from Part B of the <i>Highway Safety Manual</i>
Intersection Delay by Movement	Seconds/vehicle	The average delay in seconds that a single vehicle making a particular movement would experience at an intersection.
Overall Intersection Delay	Seconds/vehicle	The weighted average delay, in seconds, that all vehicles at an intersection would experience.
Maximum Queue Length	Feet	The computed maximum length of a line of vehicles stopped, anticipated for a time period.
95 th -Percentile Queue Length	Feet	The length of queue computed as only having a 5-percent probability of being exceeded during the analysis time period
Emissions of CO2	Kilogram	The amount of CO2 emissions computed by <i>VISSIM</i> to be emitted
Emissions of Particulates	Kilogram	The amount of particulates emissions computed by <i>VISSIM</i> to be emitted
Fuel Consumption	Kilogram	The amount of gasoline computed by <i>VISSIM</i> to be utilized
Latent Demand	Vehicles	The number of vehicles that are attempting to access the study network but unable due to congestion
Vehicle Miles Traveled	VMT	The total number of miles traveled by all vehicles within the study area.
Travel Time	Hours	The total time spent traveling a defined area by all vehicles.
Average Speed	Miles/Hour	The average speed of all vehicles within the network or along a select link.
Expected Number of Tree Plantings	Each	The expected number of tree to be planted along a corridor.

Transit Center Performance Measures

Performance Measure	Unit of Measurement	Definition
Construction Cost	Dollars (\$)	The cost associated with building the project.
Right-of-Way Cost	Dollars (\$)	The cost associated with purchasing land required for the project, including admin. Costs, land acquisitions and value “damages”.
Engineering Cost	Dollars (\$)	The cost associated with the design of the project.
Total area of Right-of-Way Taken	Acres	The physical area of land needing to be purchased for the project, including fee takings and easements.
Number of Parcels Impacts	Each	The number of individual parcels with impacts from the project.
Vehicular Travel Time	Minutes	The average time it takes a single vehicle to travel the length of the project corridor. (each direction is computed separately)
Pedestrian Travel Time	Minutes	The average time it takes a single pedestrian to traverse a chosen path.
Transit Travel Time	Minutes	The average time it takes a single bus to traverse a chosen path.
Bicycle Travel Time	Minutes	The average time it takes a single bicyclist to travel the length of the project corridor. (each direction is computed separately)
Trips diverted from Passenger Cars	Each	The number of passengers who change their commute pattern to utilize transit
Site Access Safety – Pedestrians and Bicycles	Conflict Points	The number of potential locations where a pedestrian or bicyclist has to cross traffic to access the transit center from the centroid of the study area.
Site Access Safety – Passenger Cars	Conflict Points	The number of potential locations where a passenger car has to cross traffic to access the transit center from the centroid of the study area.
Site Access Safety – Transit Vehicles	Conflict Points	The number of potential locations where a transit vehicle has to cross traffic to access the transit center from the centroid of the study area.
Emissions of CO2	Kilogram	The amount of CO2 emissions computed by <i>VISSIM</i> to be emitted
Emissions of Particulates	Kilogram	The amount of particulates emissions computed by <i>VISSIM</i> to be emitted
Fuel Consumption	Kilogram	The amount of gasoline computed by <i>VISSIM</i> to be utilized
Average Speed	Miles/Hour	The average speed of all vehicles within the network or along a select link.
Bus / Automobile Friction	Ratio	The number of times a bus has to enter or cross the traffic flow as part of its regular route
Signalized Left Turn Movements	Each	The number of left turn movements required by buses to ingress and egress the transit center.
Routes Served	Routes	The number of transit routes served along the corridor.
Projected Ridership	Passengers	The number of projected passengers using the routes along the corridor as determined by FCDOT.
Conformity to Community Aesthetics	Subjective	A measure of how the proposed plans mesh with the desired aesthetic of the community.
Transit System Operating Efficiency	Subjective	A measure of whether the proposed transit improvements along the corridor will operate efficiently.

December 2, 2015

**Braddock Road Multimodal Study
Fairfax County, Virginia**

**Roadway Measures of Effectiveness (MOE) Summary
Based on 9 responses**

What you care about/MOE	Description of MOE	Performance Measures - Metrics	How is this important to you	Most Frequent	Times Rated 6	Times Rated 3	Times Rated 0
Environment	<ul style="list-style-type: none"> Availability for screening or landscaping enhancements Will the alternative enhance or erode the quality of the community? Does the alternative have the potential to improve or degrade the noise levels and air quality experienced by those adjacent to the corridor? 	<ul style="list-style-type: none"> Emissions of CO2 (kilograms) Emissions of Particulates (kilograms) Fuel Consumption (gallons) 	<ul style="list-style-type: none"> Screening and landscaping makes the corridor more attractive Noise and air quality levels could have a negative impact on the community 	6	5	3	1
Mobility	<ul style="list-style-type: none"> Does the alternative facilitate community access to the road? Will the alternative provide better access and circulation for pedestrians and bicycles 	<ul style="list-style-type: none"> Intersection delay by movement (seconds/vehicle) Overall Intersection delay (seconds/vehicle) Latent demand (vehicles) Vehicle Miles Traveled (miles) Average speed (mph) 	<ul style="list-style-type: none"> Access from the neighborhoods to the community is important for livability of the community Better pedestrian and bicycle circulation provides additional travel options and promotes health by encouraging physical activity 	6	8	1	0
Safety	<ul style="list-style-type: none"> Is it likely that existing conflict areas improved? Is it likely that the suggested improvements will lower or increase potential crashes? Are safe movements provided to pedestrians and bicycles? 	<ul style="list-style-type: none"> Corridor-wide conflict points (each) Highway Safety Manual Computed Expected Crash Rate (crashes/year) Maximum or 95th-Percentile Queue Length (feet) 	<ul style="list-style-type: none"> Improving/eliminating conflict areas will reduce the potential for diverted or cut-through traffic Safety improvements will reduce crash potential and will make the corridor safer for travel Safe pedestrian and bicycle movements will make those travel modes more attractive. 	6	5	4	0
Travel Time	<ul style="list-style-type: none"> Option that creates the least aggregate travel time Travel time represented by critical movements Pedestrian/Bicycle travel time Corridor Travel Times 	<ul style="list-style-type: none"> Vehicular travel time (minutes) Pedestrian Travel time (minutes) Transit Travel time (minutes) Bicycle Travel time (minutes) 	<ul style="list-style-type: none"> Less time will be spent in traffic Accessibility by pedestrians/bicyclists Better traffic flow could have positive impact on the community. 	3	2	5	2
Right-of-Way Impacts	<ul style="list-style-type: none"> Total area of right-of-way taken Number of parcels impacted Park land versus residential 	<ul style="list-style-type: none"> Area of right-of-way taken (square feet or acres) Number of impacted parcels (each) Area of park land impacted (square feet or acres) 	<ul style="list-style-type: none"> More right-of-way taken will have a direct impact to individual property owners and may have negative impact on the neighborhood. 	6	5	3	1

Importance Score: If the MOE is the most important, enter 6 in Importance Score column
 If the MOE is important, but not the most important, enter 3 in Importance Score column
 If the MOE should not be a concern for this study, enter 0 (zero) in Importance Score column

December 2, 2015

**Braddock Road Multimodal Study
Fairfax County, Virginia**

**Transit Measures of Effectiveness (MOE) Summary
Based on 9 responses**

What you care about/MOE	Description of MOE	Performance Measures - Metrics	How is this important to you	Most Frequent	Times Rated 6	Times Rated 3	Times Rated 0
Environment	<ul style="list-style-type: none"> Does the proposed site complement the adjacent land uses? Is the proposed site compliant with zoning codes Does the alternative have the potential to improve or degrade the noise levels and air quality experienced by those adjacent to the corridor? Will site lighting impact adjacent lands in a negative way? 	<ul style="list-style-type: none"> Emissions of CO2 (kilograms) Emissions of Particulates (kilograms) Fuel Consumption (gallons) Conformity to community aesthetics (community defined) 	<ul style="list-style-type: none"> The proposed site needs to be located where it serves complementary land use Conformance to zoning codes is important to help preserve current land use in the community and character of the neighborhood. Noise levels and air quality could have a negative impact on the community. Site lighting spilling into residential communities is undesirable 	6	7	2	0
Mobility	<ul style="list-style-type: none"> Ease of access in/out for commuter and transit vehicles Ease and convenience of access for pedestrians & bicycles Ease of access for transit routes? 	<ul style="list-style-type: none"> Average speed (mph) Bus/Automobile friction (ratio of conflicts) Signalized left turn movements (each) Routes served (number of routes) Passenger ridership (number of passengers) Transit system operating efficiency (subjective) 	<ul style="list-style-type: none"> Ease of access is important for the site to be used, and therefore provide the planned trip diversion from single occupant vehicles Access by pedestrians and bicycles becomes an asset to the community Transit access is important as better access improves traffic flow and reduces noise and air pollution 	6	8	1	0
Safety	<ul style="list-style-type: none"> Will vehicular access in/out of facility be safe? Are safe movements provided to pedestrians and bicycles? 	<ul style="list-style-type: none"> Site Access Safety – Pedestrians and Bicycles Site Access Safety – Passenger Cars Site Access Safety – Transit Vehicles 	<ul style="list-style-type: none"> Improved safety for all mode choices makes the mode more desirable and improves safety of the community 	6	6	3	0
Roadway Travel Time	<ul style="list-style-type: none"> Braddock Road travel time Pedestrian/Bicycle travel time 	<ul style="list-style-type: none"> Vehicular travel time (minutes) Pedestrian Travel time (minutes) Transit Travel time (minutes) Bicycle Travel time (minutes) 	<ul style="list-style-type: none"> Less time spent in traffic will give users more discretionary time Reduced travel time can induce more transit trips and help relieve congestion 	3	1	6	2
Trip Diversions	<ul style="list-style-type: none"> Number of Braddock Road trips converted to transit Transit headways between vehicles Number of routes served 	<ul style="list-style-type: none"> Trips diverted from passenger cars (Each) 	<ul style="list-style-type: none"> More trips diverted to transit means fewer vehicles on the road and lowered congestion Number of routes served means more options for the transit users 	3	1	6	2

Importance Score: If the MOE is the most important, enter 6 in Importance Score column
 If the MOE is important, but not the most important, enter 3 in Importance Score column
 If the MOE should not be a concern for this study, enter 0 (zero) in Importance Score column



What is Access Management

- “Access Management is the process that provides access to land development while simultaneously preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed”. (Federal Highway Administration)
- Systematic Control of Location, Spacing, Design and Operation of intersections



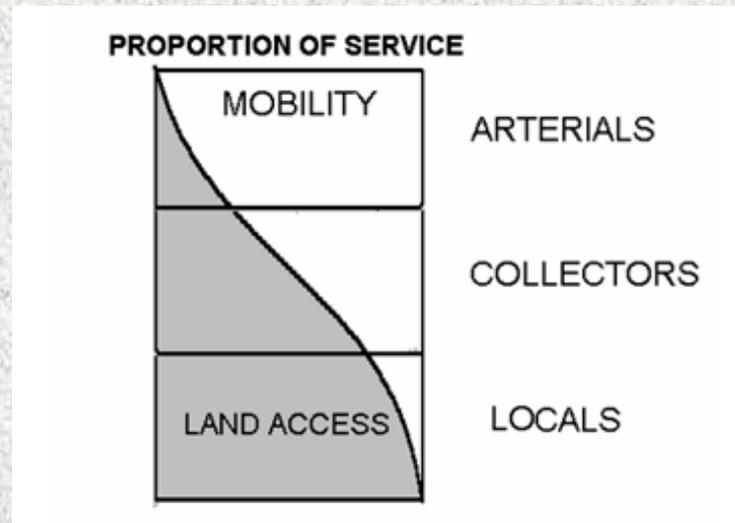
10 Principles of Access Management

1. Provide a specialized roadway system
2. Limit direct access to major roadways
3. Promote intersection hierarchy
4. Locate signals to favor through movements
5. Preserve the functional area of intersections and interchanges
6. Limit the number of conflict points
7. Separate conflict areas
8. Remove turning vehicles from through traffic lanes
9. Use non-traversable medians to manage left turn movements
10. Provide a supporting street and circulatory system



Functional Integrity

- Maintain a “hierarchy” of roads
- Balance traffic movement and access to adjacent land by providing land access compatible with the roadway classification
- Braddock Road: Urban Minor Arterial





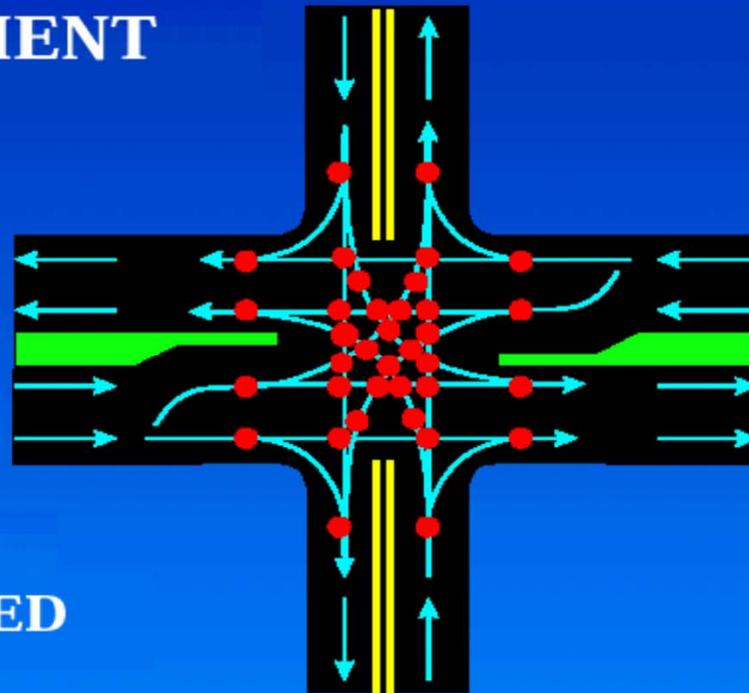
Benefits of Access Management

- Improved Safety (Reduction in Accidents and Accident Rates)
- Better Traffic Operations (increased Level-of-Service, capacity and speed)
- Other Public Benefits (Pedestrians, Bicyclists, Public Transit, Taxpayers, Environment)
- Potentially, a better environment in which to live and conduct business



Safety: Conflict Points

FULL MOVEMENT

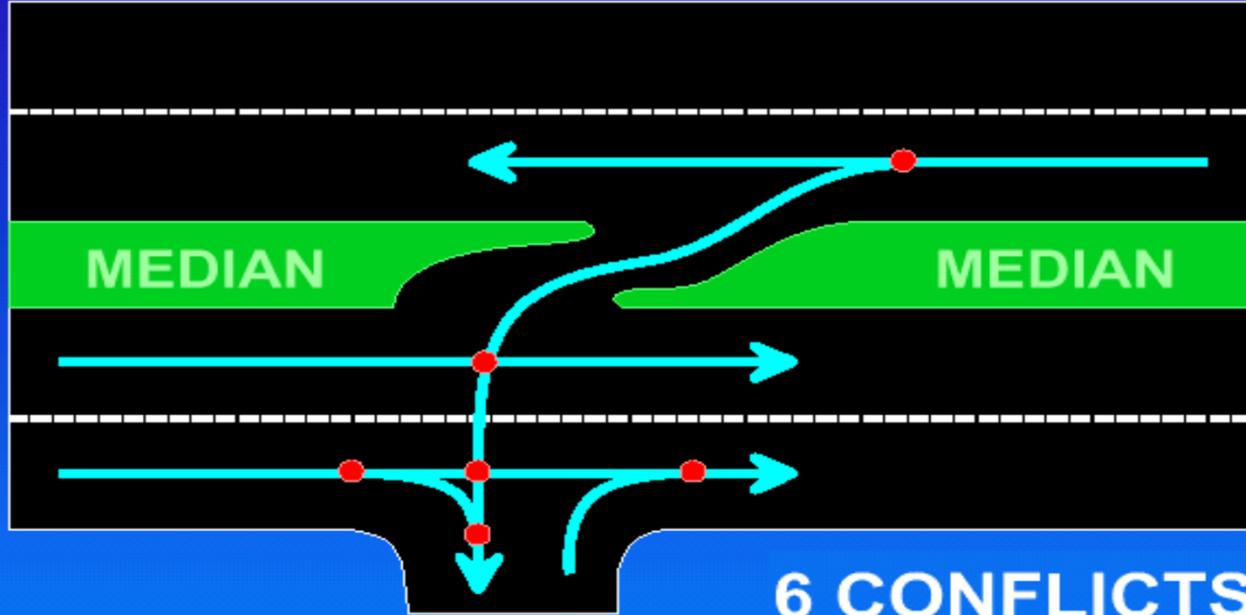


**36 CONFLICTS
22 IF SIGNALIZED**



Safety: Conflict Points

RIGHT-IN/RIGHT-OUT/LEFT-IN



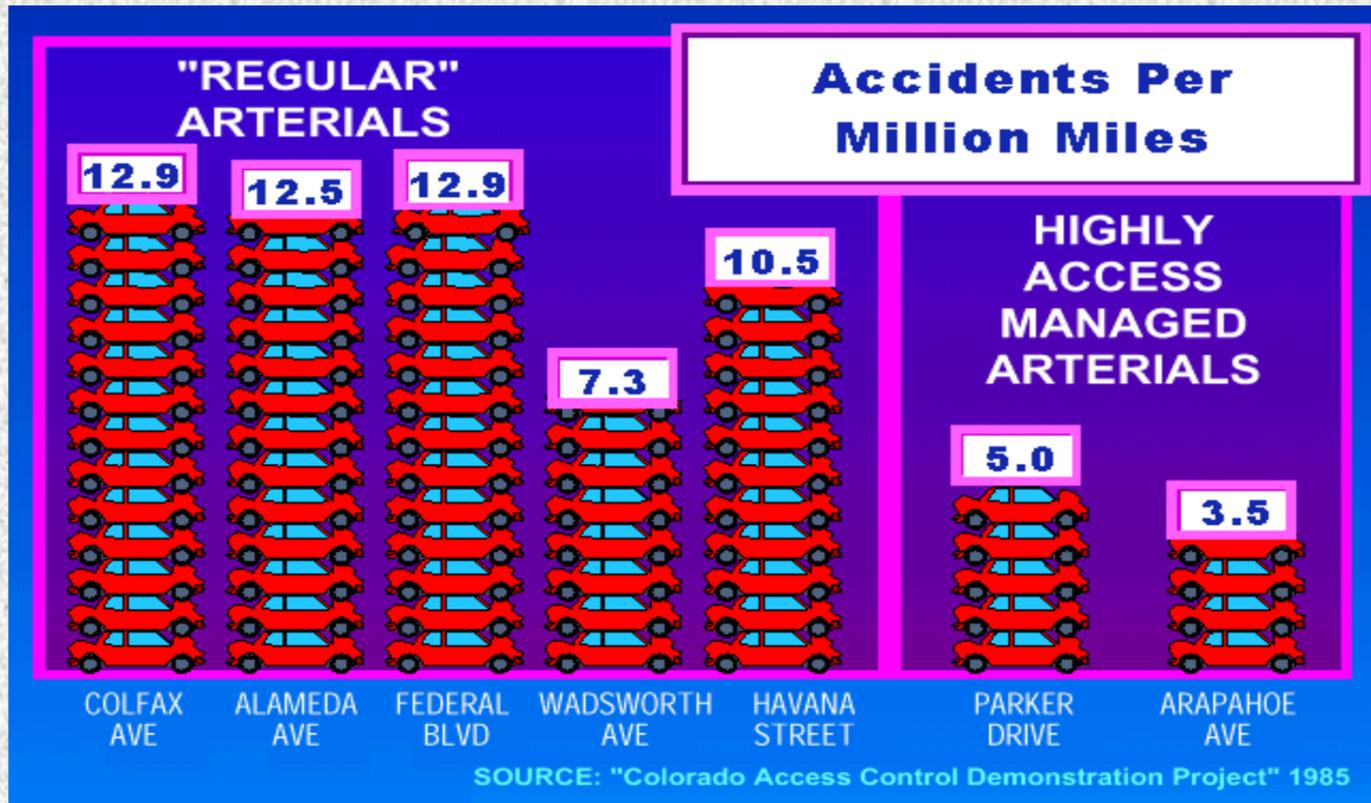


Safety: Why Separate Conflict Points

- Drivers can only mentally process one conflict point at a time
- Separation also provides enough time and space for drivers to react to the unexpected
- Conflict points represent opportunities for accidents, congestion, and delay

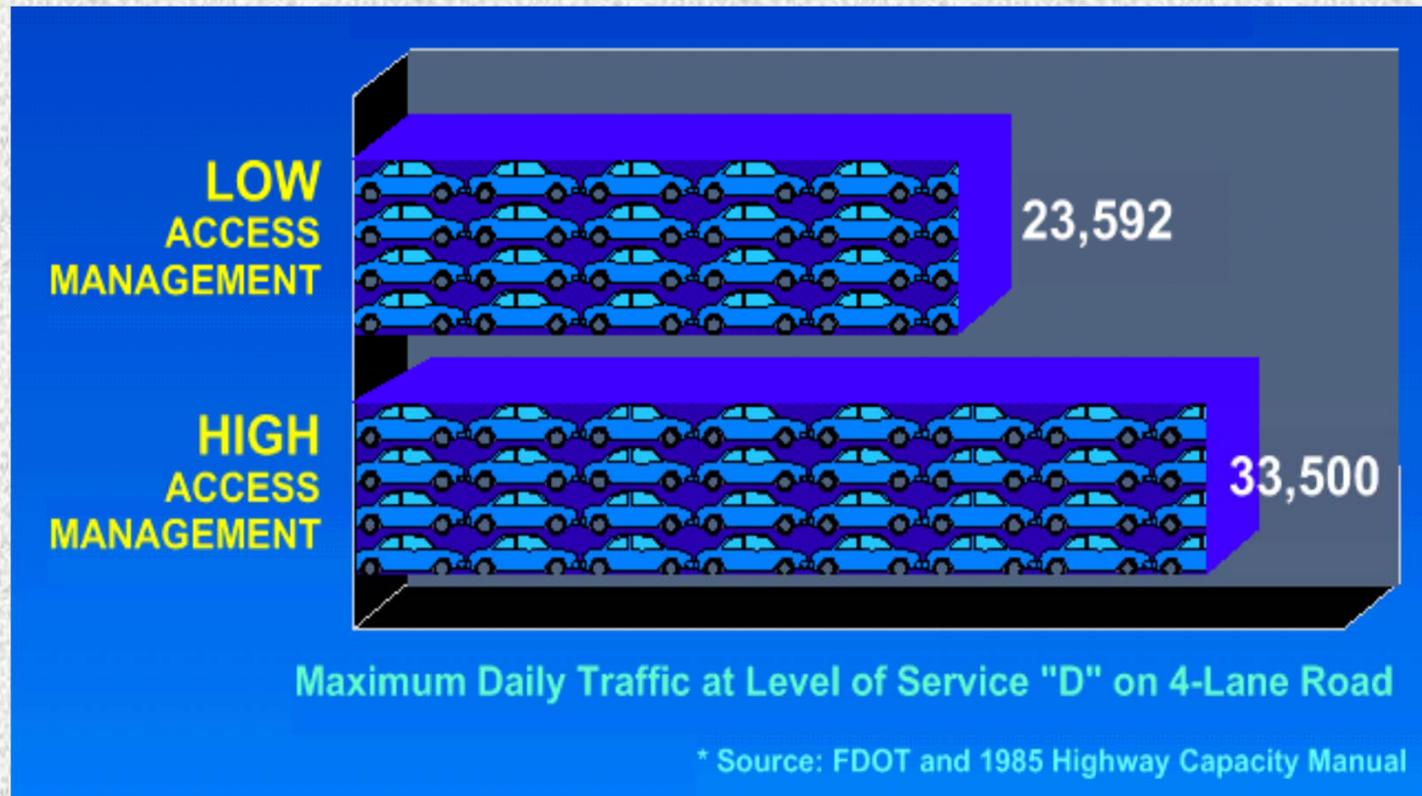


Safety: Accident Rates





Operations: Higher Capacity

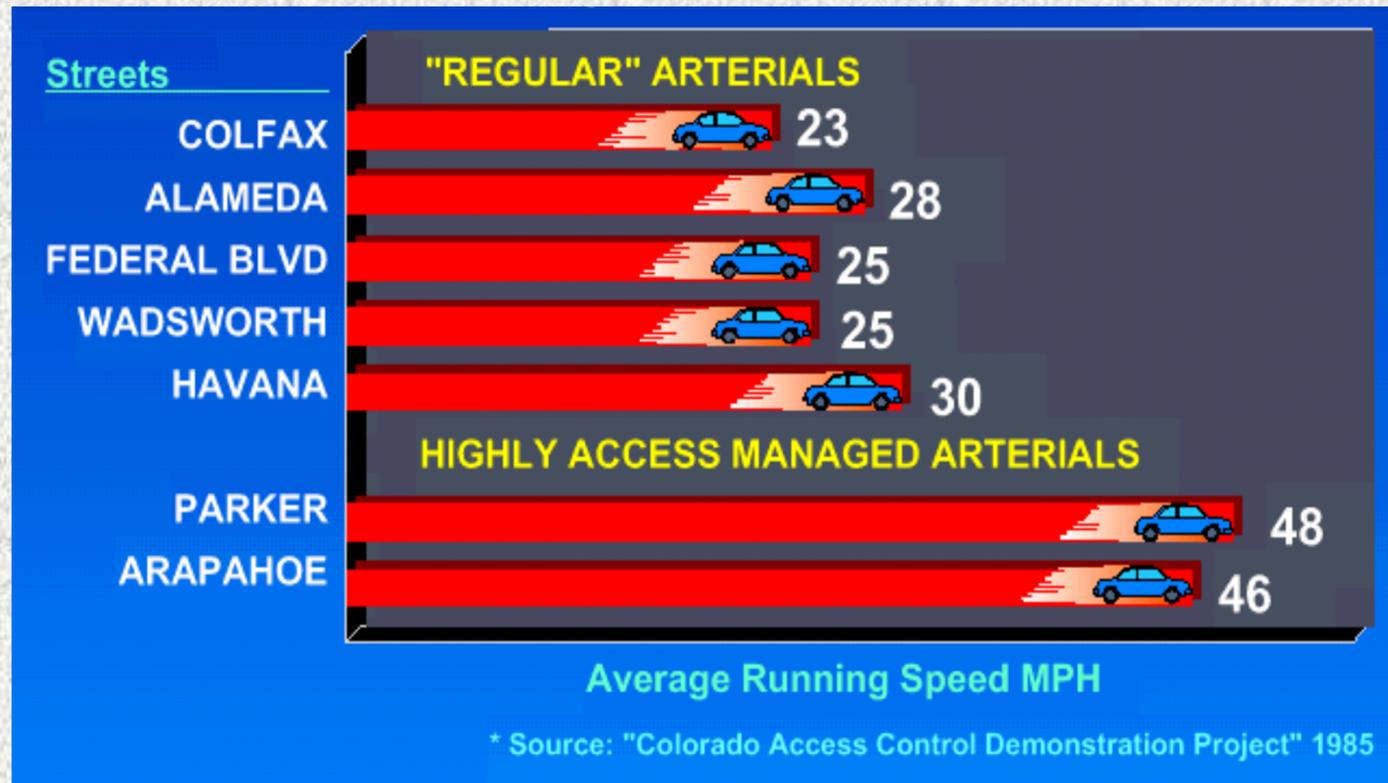


**FDOT = Florida DOT





Operations: Reduced Travel Time





Business Vitality

- Business owners often oppose access changes
- Overall impacts on businesses are neutral to positive
- Multiple studies show:
 - Lower Business Failure Rates
 - Improved Retail Sales Levels
 - 94% of studied corridors reported sales gains

December 2, 2015
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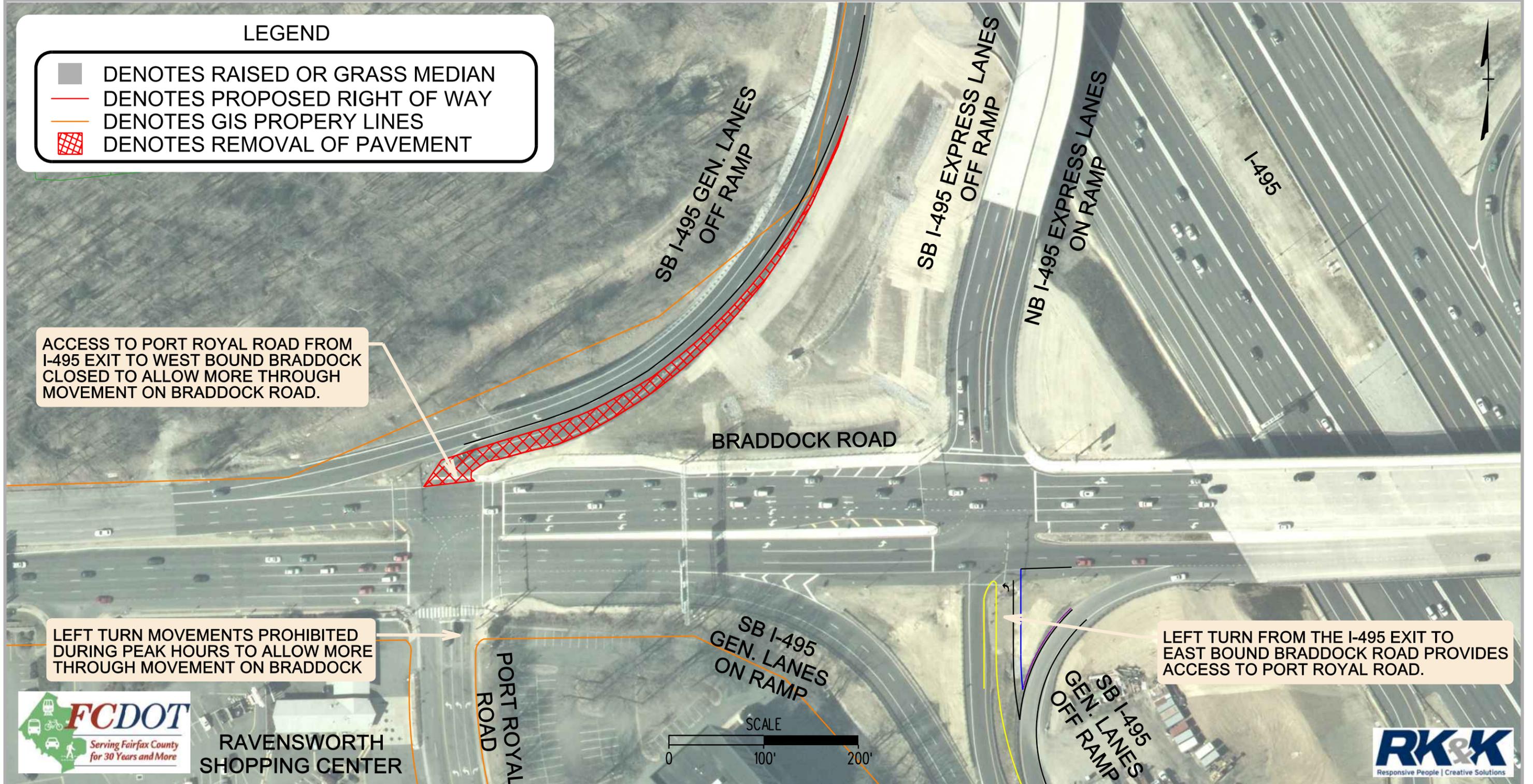
Spot Improvement Options

- **Guinea Road:** Construct a WB right turn lane. Convert the intersection signal phasing to split for the Guinea Road approaches. Convert one thru lane northbound to a shared thru-right lane. (*Note: Split Phasing means only one direction of Guinea Road will get a green light at any time*)
- **Burke Lake Road:** Convert NB movement to triple right, not allowing any through or left turn movements. Traffic bound for WB Braddock Road or for Woodland Way would use Rolling Road (**attached**)
- **Kings Park Drive:** Reduce to right in/right out movements only.
- **Stone Haven Drive:** Right in/Right out only
- **Southampton Drive:** preserve current configuration
- **Danbury Forest Drive/Wakefield Chapel Road:** Realign Danbury Forest to Wakefield Chapel, leaving the existing Danbury Forest Drive as a jug handle for EB and WB left turn movements. Configure traffic signal at Wakefield Forest Drive as three phase: one phases serve EB & WB movements, NB and SB movements are split phase. (**attached**)
- **Glen Park Drive:** Right in/Right out only.
- **Inverchapel Road:** Right in/right out only
- **Queensbury Avenue/Wakefield Park Drive:** preserve current configuration
- **Port Royal Road and I-495 ramps:** Close the existing connection from SB I-495 to Port Royal Road; relocating that movement to the loop in the SW quadrant. This would line that movement up with the SB I-495 Express Lanes ramp. (**attached**)
- **NB I-495 to EB Braddock Ramp:** Realign the ramp to make it more of a right turn, and providing more weave space to Ravensworth.
- **Ravensworth:** No improvements proposed. VDOT installed a flashing left turn yellow indication in September 2014 to improve safety at this intersection

BRADDOCK ROAD AND PORT ROYAL ROAD WITH I-495 RAMPS SPOT IMPROVEMENTS

LEGEND

-  DENOTES RAISED OR GRASS MEDIAN
-  DENOTES PROPOSED RIGHT OF WAY
-  DENOTES GIS PROPERTY LINES
-  DENOTES REMOVAL OF PAVEMENT



ACCESS TO PORT ROYAL ROAD FROM I-495 EXIT TO WEST BOUND BRADDOCK CLOSED TO ALLOW MORE THROUGH MOVEMENT ON BRADDOCK ROAD.

LEFT TURN MOVEMENTS PROHIBITED DURING PEAK HOURS TO ALLOW MORE THROUGH MOVEMENT ON BRADDOCK

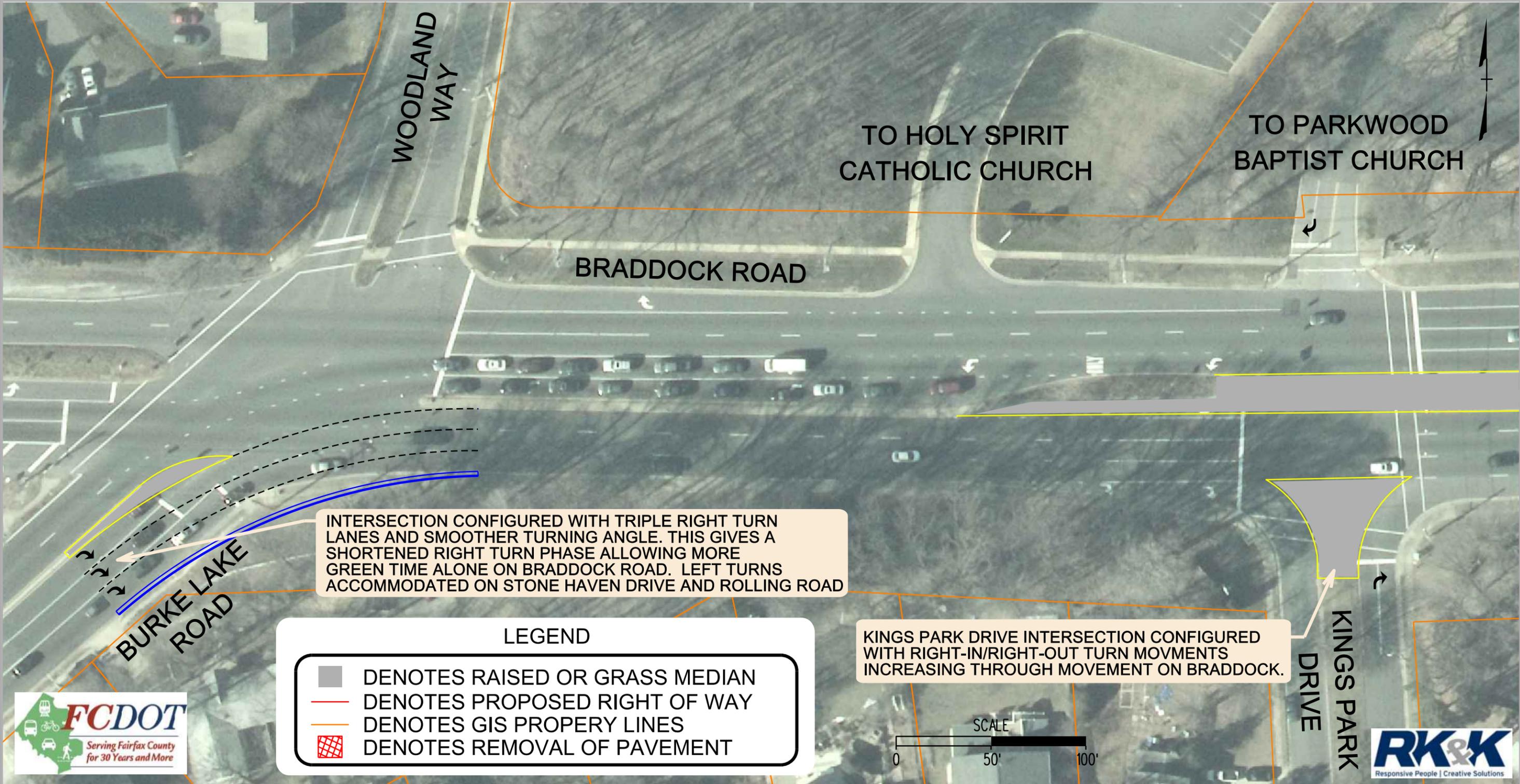
LEFT TURN FROM THE I-495 EXIT TO EAST BOUND BRADDOCK ROAD PROVIDES ACCESS TO PORT ROYAL ROAD.



RAVENSWORTH SHOPPING CENTER



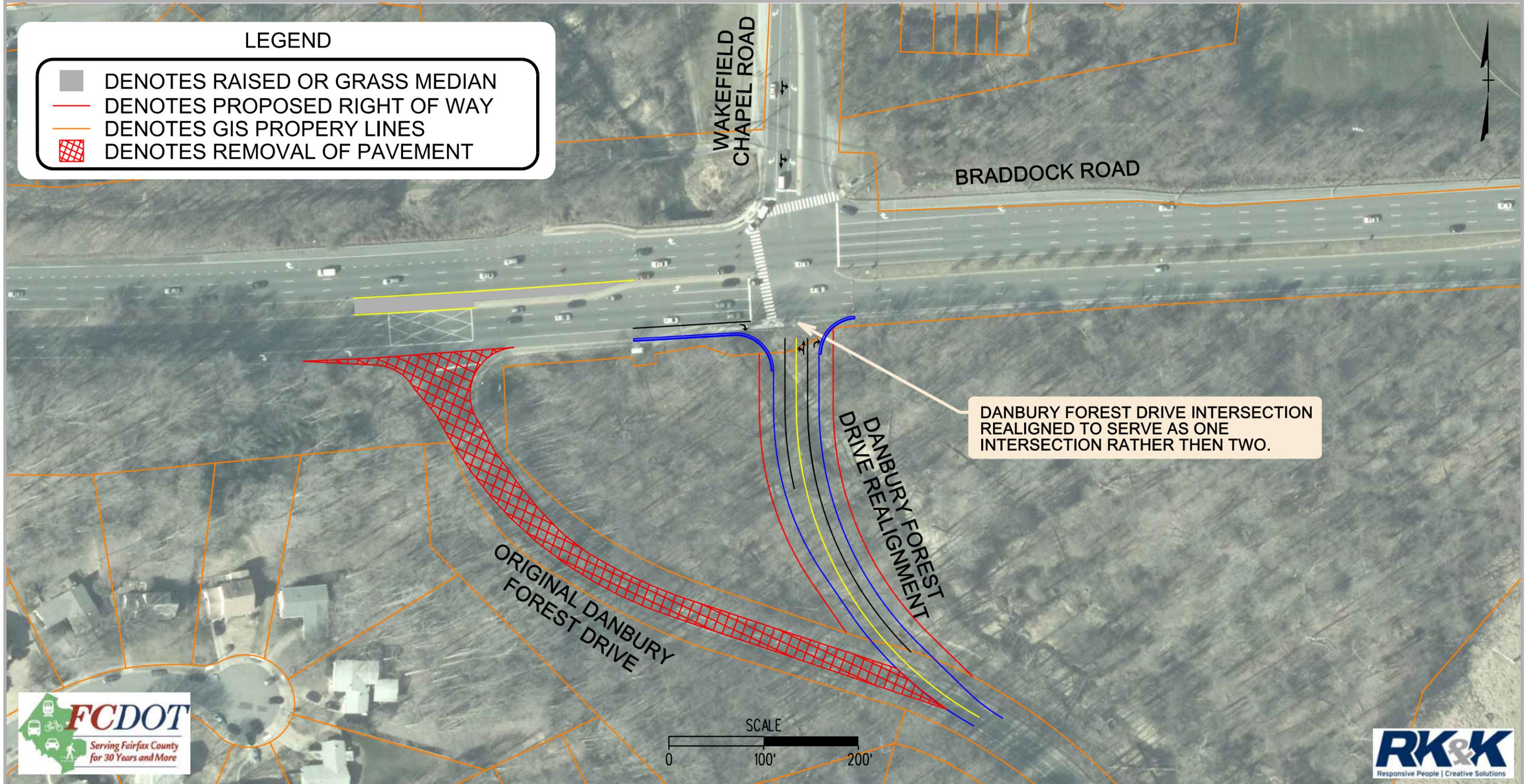
BRADDOCK ROAD AND BURKE LAKE ROAD WITH KINDS PARK DRIVE SPOT IMPROVEMENTS



BRADDOCK ROAD AND WAKEFIELD CHAPEL ROAD SPOT IMPROVEMENTS OPTION 1

LEGEND

- DENOTES RAISED OR GRASS MEDIAN
- DENOTES PROPOSED RIGHT OF WAY
- DENOTES GIS PROPERTY LINES
- DENOTES REMOVAL OF PAVEMENT



BRADDOCK ROAD AND WAKEFIELD CHAPEL ROAD SPOT IMPROVEMENTS OPTION 2

LEGEND

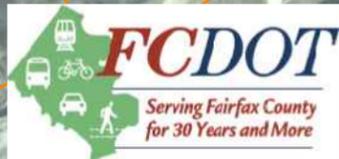
-  DENOTES RAISED OR GRASS MEDIAN
-  DENOTES PROPOSED RIGHT OF WAY
-  DENOTES GIS PROPERTY LINES
-  DENOTES REMOVAL OF PAVEMENT

ORIGINAL DANBURY FOREST DRIVE INTERSECTION KEPT TO SERVE AS A JUGHANDEL FOR TURNING MOVEMENTS

DANBURY FOREST DRIVE INTERSECTION REALIGNED USING A SPLIT PHASE SIGNAL. NEW SIGNAL ALLOWS FOR A LONGER GREEN LIGHT FOR BRADDOCK THROUGH MOVEMENTS.

ORIGINAL DANBURY FOREST DRIVE

DANBURY FOREST DRIVE REALIGNMENT





Burke Lake Road and Kings Park Drive Traffic Volumes

Average Weekday AM Peak Hour

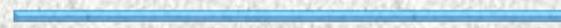
Average Weekday AM Peak Hour																
Woodland Way						Church										
			R							R						
			102							1	0	1	1			
			984							1,466						
			399							7						
			L							L						
48	76	59	R							R						
R	T	L							R	T	L					
Burke Lake Road						Kings Park Drive										
Average Weekday PM Peak Hour																
Woodland Way						Church										
			R							R						
			30							2						
			1,930							3,303						
			1,363							25						
			L							L						
25	119	37	R							R						
R	T	L							R	T	L					
Burke Lake Road						Kings Park Drive										
Average Highest Sunday Hour (11:00 - 12:00)																
Woodland Way						Church										
			R							R						
			39							10						
			877							1,429						
			628							46						
			L							L						
42	83	57	R							R						
R	T	L							R	T	L					
Burke Lake Road						Kings Park Drive										
Average Highest Sunday Hour (11:00 - 12:00)																
Woodland Way						Church										
			R							R						
			39							10						
			877							1,429						
			628							46						
			L							L						
42	83	57	R							R						
R	T	L							R	T	L					
Burke Lake Road						Kings Park Drive										

Average Weekday PM Peak Hour

Average Weekday PM Peak Hour														
Woodland Way						Church								
			R							R				
			30							2				
			1,930							3,303				
			1,363							25				
			L							L				
25	119	37	R							R				
R	T	L							R	T	L			
Burke Lake Road						Kings Park Drive								

Average Highest Sunday Hour (11:00 - 12:00)

Average Highest Sunday Hour (11:00 - 12:00)														
Woodland Way						Church								
			R							R				
			39							10				
			877							1,429				
			628							46				
			L							L				
42	83	57	R							R				
R	T	L							R	T	L			
Burke Lake Road						Kings Park Drive								





Kings Park Drive / Church – Assumed Diversions for Spot Improvement

- EB Left (from Braddock into church): U-turn at Southampton, Right into church off Braddock
- WB Left (from Braddock to Kings Park): Left at Burke Lake, Left at Rolling, Left at Parliament OR Left at Grantham Street
- NB Left (from Kings Park to Braddock): Right on Braddock, U-turn at Southampton
- NB Thru (from Kings Park into church): Right on Braddock, U-turn at Southampton, Right into church off Braddock
- SB Left (from church onto Braddock): Right on Braddock, U-turn at Rolling Road
- SB Thru (from church onto Kings Park): Right on Braddock, Left at Rolling Road, Left at Parliament

DIVERSIONS FOR KINGS PARK DRIVE



NOVEMBER 24, 2015





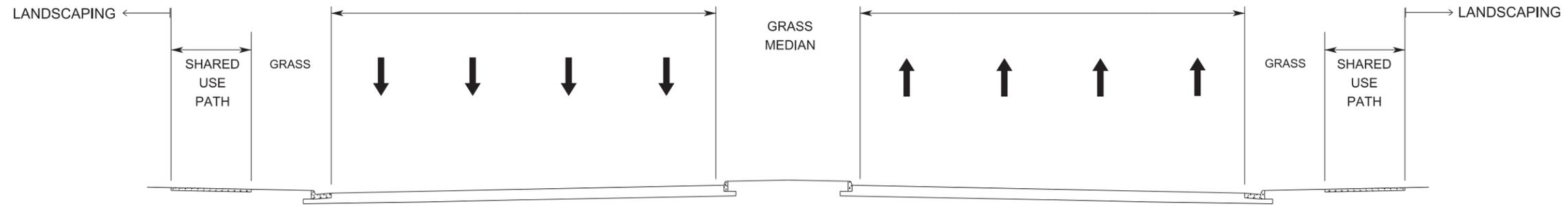
Burke Lake / Kings Park Sunday Traffic Analysis Results

Intersection	Existing						Spot Improvements (Existing)					
	AM Peak		PM Peak		Sunday Peak		AM Peak		PM Peak		Sunday Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Kings Park Dr & Braddock Rd	3.7	A	3.1	A	14.0	B	Not Signalized: Right-In / Right-Out					
Burke Lake Rd/Woodland Way & Braddock Rd	133.5	F	90.9	F	57.1	E	91.6	F	120.3	F	57.3	E

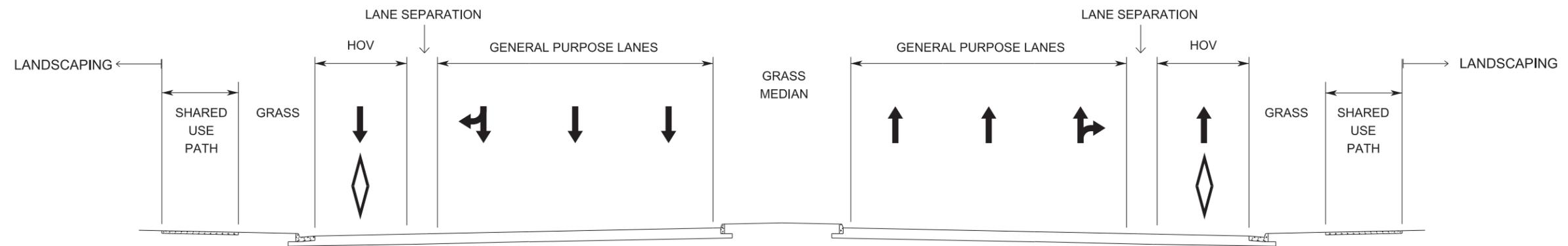
Note: For Traffic wishing to make a left from Burke Lake Road to Braddock Road, a left would have to be made at Rolling Road and then a left at Braddock Road.

Note: Wayfinding signage could assist in directing drivers for the churches to the appropriate locations

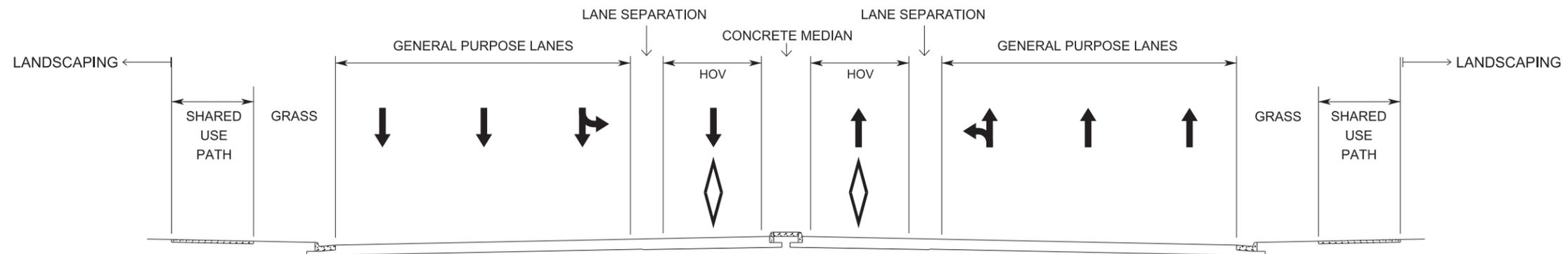
TYPICAL SECTIONS TOOL BOX



GENERAL PURPOSE LANES



HOV/HOT LANES OUTSIDE WIDENING



HOV/HOT LANES INSIDE WIDENING

THIS EXHIBIT SHOWS GENERAL TYPICAL SECTIONS THAT MAY BE CONSIDERED FOR THE WIDENING OF BRADDOCK ROAD.

NOT TO SCALE



NOVEMBER 18, 2015





Transit Center Parking Demand

- A parking demand estimate was developed for each of the two Transit Center site locations:
 - North Virginia Training Center
 - Kings Park Shopping Center

- The demand is based on the County's estimated future bus service at each Transit Center site location.
 - The number of buses utilizing each Transit Center per hour during the morning peak hours was used in estimating the commuter parking demand at each Transit Center site location.
 - Parking demand is inclusive of observed commuter parking in the area.

- Allowances provided for:
 - Handicap parking
 - Slugging/carpooling



Transit Center Parking Demand

Estimated Total Parking Spaces Required

North Virginia Training Center	Kings Park Shopping Center
250	285

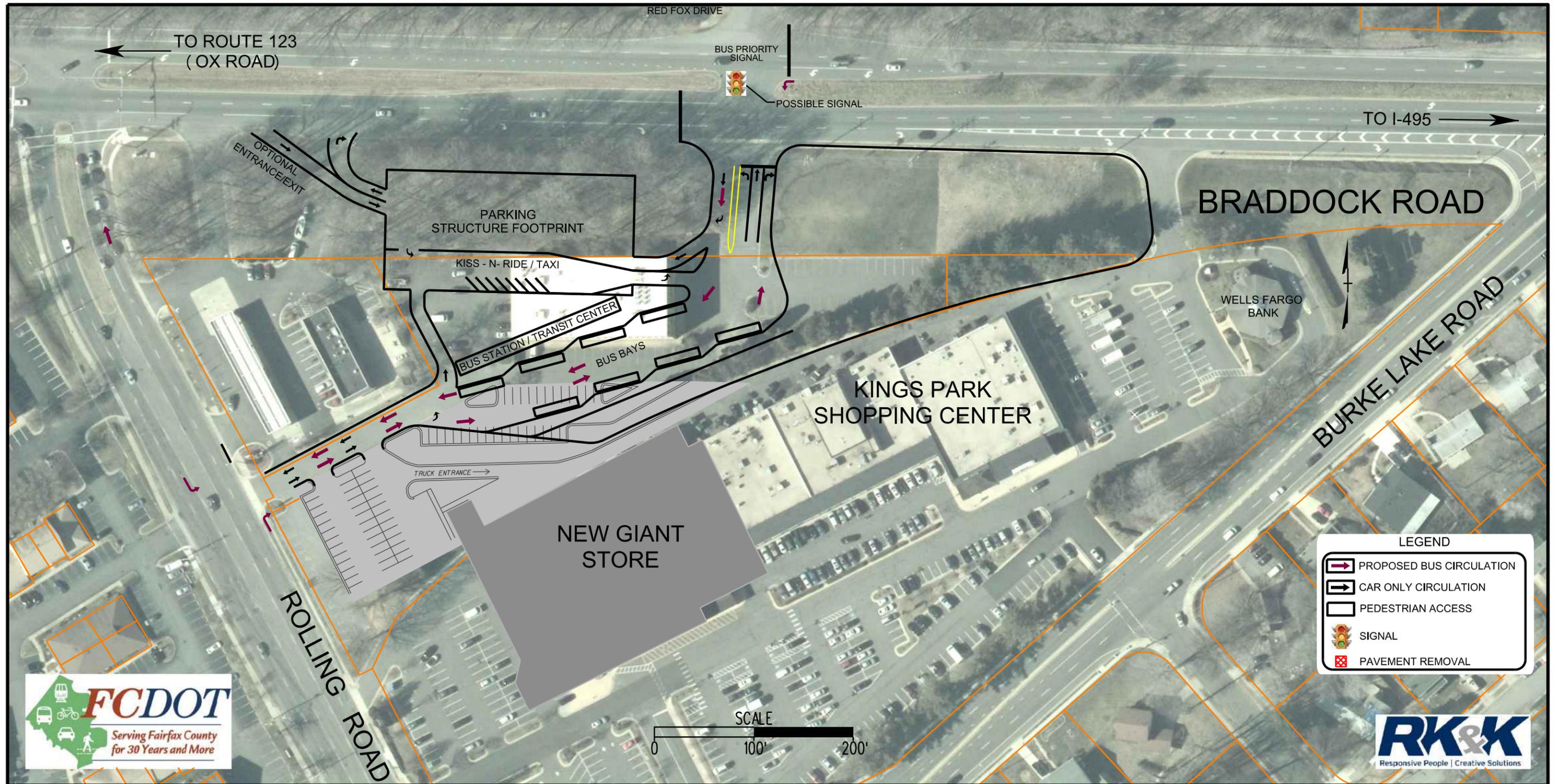
- The North Virginia Training Center will have the surface parking capacity to meet the estimated demand.
- The Kings Park Shopping Center will require a parking garage in order to meet the estimated demand.
 - The parking garage will require four levels of parking:
 - One level of parking could be located underground.
 - The ground level of the parking garage will include a Kiss-N-Ride and handicap parking.

TRANSIT CENTER LAYOUT - LOCATION 3De

DRAFT

BRADDOCK ROAD - FAIRFAX COUNTY, VA

Parking Garage Option



LEGEND

- PROPOSED BUS CIRCULATION
- CAR ONLY CIRCULATION
- PEDESTRIAN ACCESS
- SIGNAL
- PAVEMENT REMOVAL



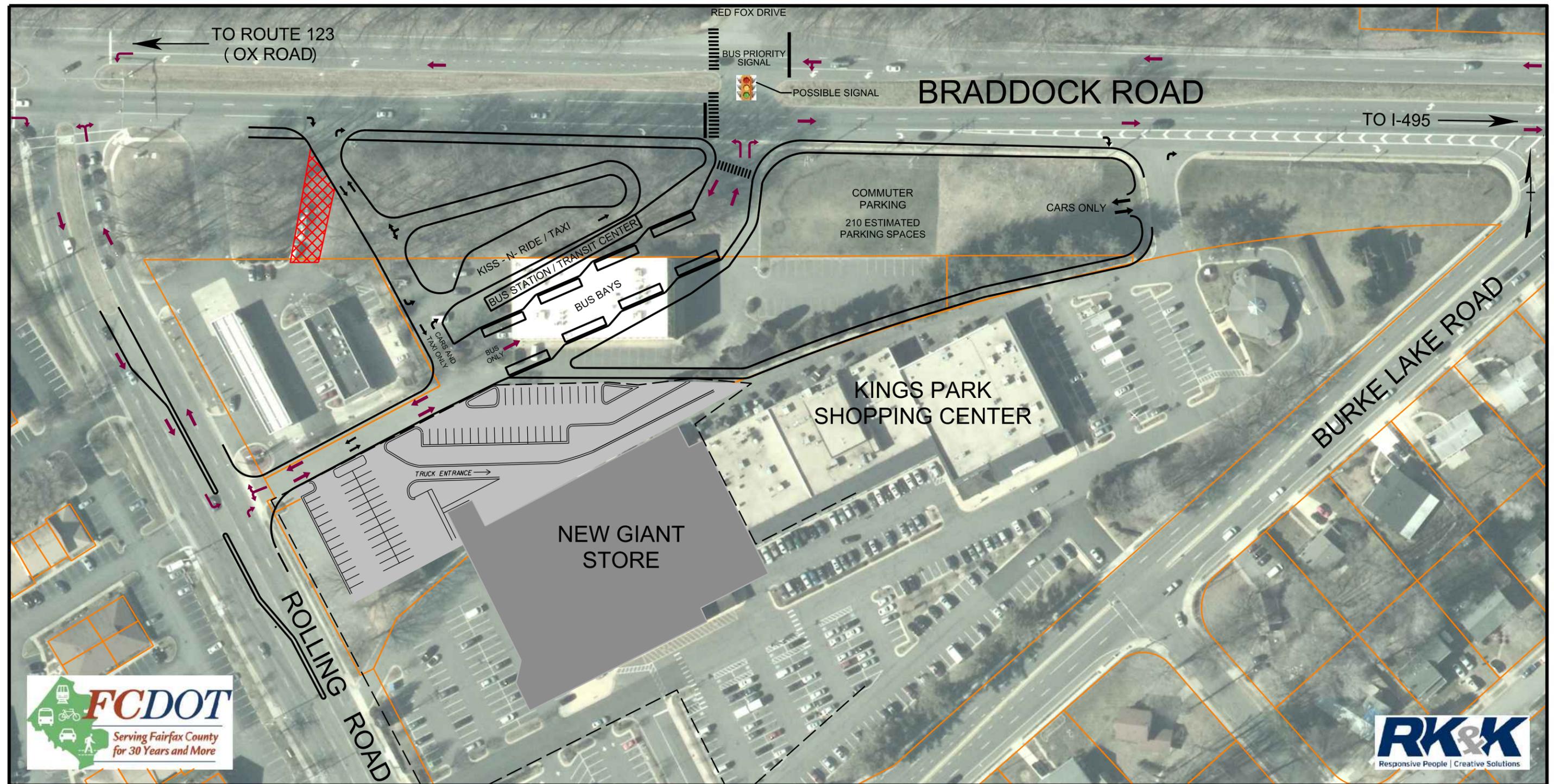
September 17, 2015

TRANSIT CENTER LAYOUT - LOCATION 3C

DRAFT

BRADDOCK ROAD - FAIRFAX COUNTY, VA

Surface Parking Option



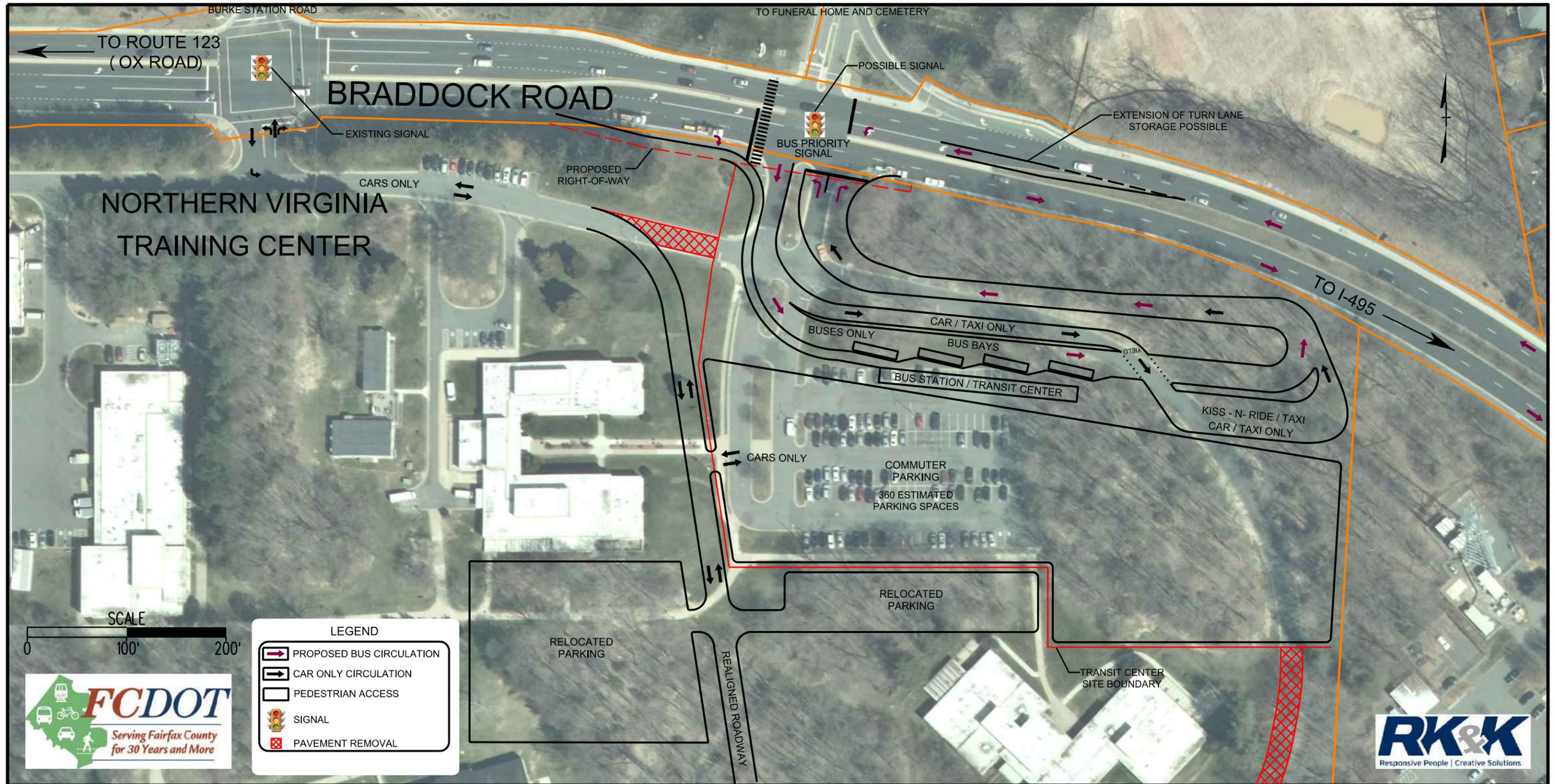
JUNE 05, 2015

TRANSIT CENTER LAYOUT - LOCATION 2

DRAFT

BRADDOCK ROAD - FAIRFAX COUNTY, VA

NOVA East Site Option



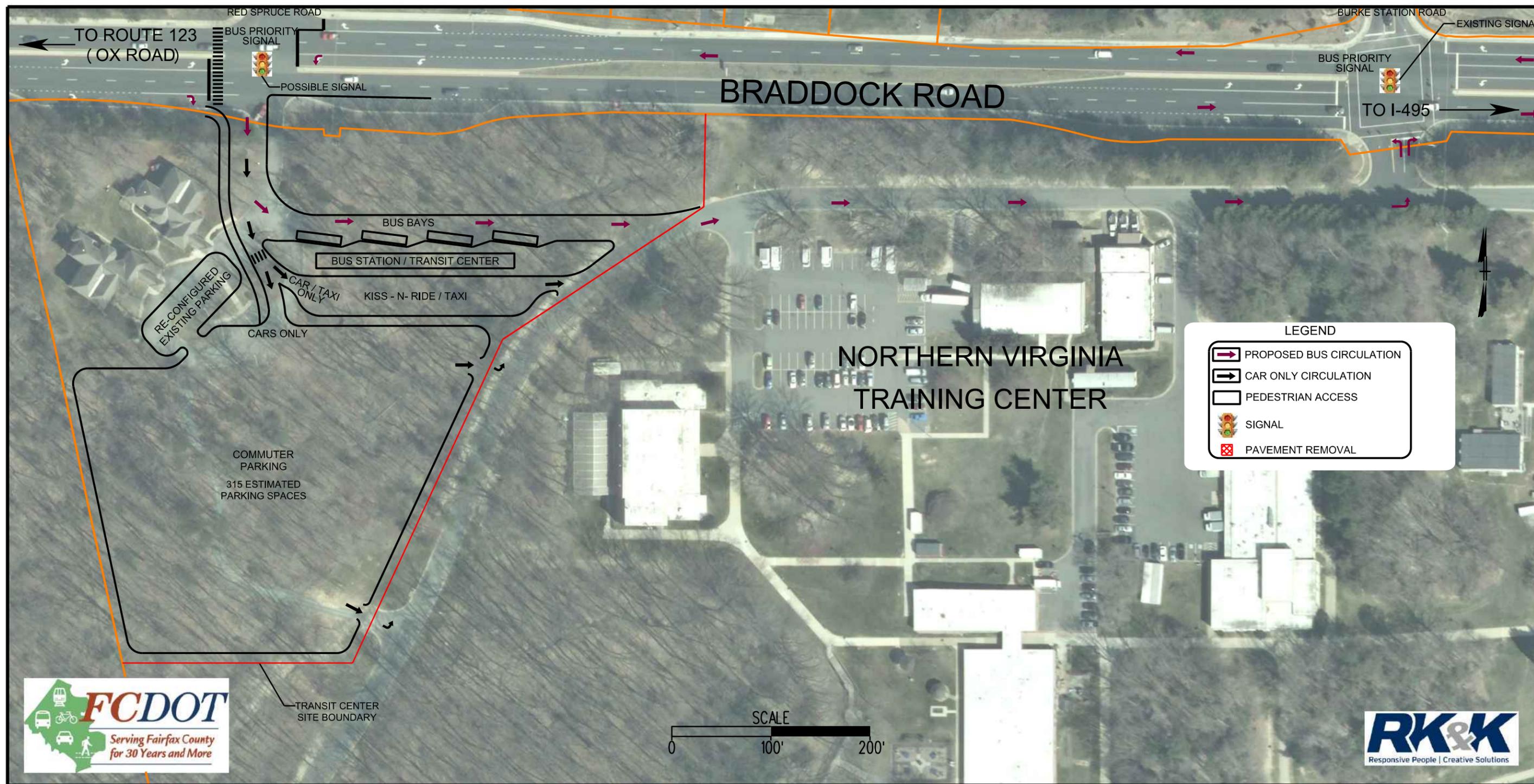
MAY 19, 2015

TRANSIT CENTER LAYOUT - LOCATION 1

DRAFT

BRADDOCK ROAD - FAIRFAX COUNTY, VA

NOVA West Site Option



MAY 19, 2015

