Braddock Road Multimodal Study

County of Fairfax, Virginia

Task Force Meeting Materials

RK&K

Date: February 3, 2016

February 3, 2016
Braddock Road Multimodal Study
Fairfax County, Virginia

Task Force Meeting

I. Introduction ..... Kevin Morse, Chairman

II. Progress Since Last Task Force Meeting (5 minutes)..... Tad Borkowski/John McDowell

   a. VISSIM Development

   b. Tour of Transit Center sites on January 16, 2016

   c. Schedule Community Meeting for April 25, 2016

   d. Property Value Impacts Research Update

III. Discussion Items..... Tad Borkowski/John McDowell

   a. Roadway (60 minutes) .....John McDowell/Neelima Ghanta

      i. VISSIM Spot Improvements
      ii. VISSIM HOV2 "Inside" Improvements
      iii. VISSIM HOV2 "Outside" Improvements

   b. Transit Center Options (20 minutes) ..... John McDowell

      i. Summary of Transit Center Bus Tour (01/16/2016 field trip)..... Craig Taylor
      ii. Discussion of transit center options
      iii. Parking Garage renderings

   c. Bicycle/Pedestrian Connections, Overhead Crossings (15 minutes)..... John McDowell

IV. Following Month's Activities (20 minutes) ..... Tad Borkowski/John McDowell

   a. Additional VISSIM simulations – General Use Lane widening

   b. Cost analysis of options

   c. Development of evaluation parameters

   d. Preparation for Spring 2016 Community meeting

   e. Task Force Review Materials

      i. Roadway Classifications
      ii. Crash Map
      iii. Jug handles
      iv. RIRO Alternatives
      v. Measures of Effectiveness (distributed at meeting)

V. Adjourn Meeting ..... Kevin Morse, Chairman

December 2, 2015

Braddock Road Multimodal Study
Fairfax County, Virginia

Task Force Meeting Minutes

Discussion

Kevin Morse began the meeting noting some new ground rules. Michael Guarino stated the new rules which are designed to get through the agenda and not discourage dialogue:

1. "Parking lot" – instead of fielding questions off-topic, they will be jotted down and then added to the agenda for next meeting or answered via email distribution prior to the next meeting;
2. "No backtracking rule" – not rehashing previously presented material or decisions made unless the entire task force agrees to review this information.

Michael offered individual meetings to review information if missed or new to the task force (and review past minutes, etc.). Michael then talked briefly about the schedule. He noted that the community meeting will be held in March 2016. We will not have a Task Force meeting in January 2016. He also noted that for this schedule to be met, we needed to get through the spot improvements and HOV options discussion at this meeting.

Tad Borkowski then discussed the work completed over the last month. He noted the following activities since the last meeting

- Parcels along Braddock Road were sent to Tax Administration to review before and after values when the road was widened from 4 to 6 lanes;
- Ratings were received for the MOEs from 9 members of the group;
- Additional information for the transit center was developed;
- A transit center rendering was produced; and
- The designs for sport improvements and HOV options were also advanced.

The discussion turned to the Measures of Effectiveness (MOE). John McDowell first mentioned that Pages 5 and 6 were definitions of Performance Measures and while they will not be discussed in detail, they should feel free to reach out between meetings with any questions. John introduced the group to the tables and results from the surveys received. He noted that in some cases, a plurality was noted but if the outlier wishes to speak up that is encouraged, and Michael added that a goal for the evening was to establish a relative importance for each MOE. A question was posed from the task force noting that it was difficult to match up the MOE to performance measures. An open dialogue on this issue continued:

- Michael noted that environment is a good one to discuss because it will be qualitative in nature to score;
- It was noted that the way it is to be assessed should be added to understand the value, i.e. if chosen by community in qualitative measure, that should be noted as such;
- Question was then asked whether the metrics were tied to the limitations of the model. Michael responded yes and followed-up with noise as an example;
- Michael noted that we started with qualitative and quantitative but pared those down. He noted that the table was meant to provide performance measures that could be measured. He asked John to update the table with more qualitative measures as was presented in some of the older documentation;
- Michael noted that, when you look at the distributions, this can help facilitate the discussion of relative importance;

The following open discussion was held when the question was posed regarding confusion in how to score these measures and concern that current scores should be thrown out and re-vote allowed:

- A suggestion was made to remove the performance measures column;
- Asked if we could cover at the next meeting to re-discuss the goals of the projects;
- Comment made that the task force goals may not mimic the project goals;
- It was reiterated by John that the goals of the project are to increase person throughput;
- A comment was made that the proposed improvements noted do not seem to help communities along the corridor. It was responded that the job of the task force was to evaluate the alternatives as representative of the community so that the County goals of increased person-throughput and communities goals for the corridor can come to agreement.

A question was asked whether descriptions could be reviewed and re-voted on during the meeting. A vote was held using a 0, 3, 6 scale of importance and the following results were tabulated for the roadway measures:

Measure	**0**	**3**	**6**
Environment	0	7	7
Mobility	1	4	9
Safety	0	6	8
Travel Time	2	12	0
Right-of-Way	0	14	0

The following results were tabulated for the transit center measures:

Measure	**0**	**3**	**6**
Environment	0	7	7
Mobility	1	4	9
Safety	0	6	8
Travel Time	2	12	0
Trip Diversions	5	9	0

A question was posed as to whether trip diversions should be removed in favor of Right-of-Way for the transit center MOEs. Also, it was proposed to change Right-of-Way to "ROW / Property Values". It was also noted that trip diversions could remain and Right-of-Way could be added if that was the consensus opinion.

At this time, Stuart Samberg began presenting the material on Access Management contained within the slides. It was decided that the number of conflict points will be used as a performance measure. Following this presentation, John began discussing the spot improvements. The following discussion was held on these proposed improvements:

- Burke Lake – Noted that last meeting brought forward concern for the church traffic; Stuart discussed the traffic count collected.
- Question asked about time restricting turn restrictions – it was noted that this could lead to driver confusion and drivers making incorrect movements at prohibited times, which could result in more crashes.
- John noted the concern of Kings Park proximity and blocking effect at Burke Lake; a discussion ensued regarding the impacts of closing the Kings Park. A question was asked if the Right In/Right Out (RIRO) would eliminate traffic signal at Kings Park, and it was answered yes.
- A question was asked if a RIRO could be evaluated at Grantham given that one task force member noted a lot of accidents at this location.

- Presentation of Wakefield Chapel / Danbury Forest
    - A concern was noted about the WBL at Danbury Forest backing up today. The task force wanted to assure that the storage lengths were long enough to handle queue;
    - John asked if the task force was okay with modeling Option 2. Some concern was raised about spending money for Danbury when it's being used as a cut thru. It appeared that some confusion existed around how the turns off of Braddock to access Wakefield Chapel and Danbury Forest would occur.
- The task force asked for clarification of RIRO proposals for diversions.
- For the Port Royal spot improvement, it was noted that a similar proposal was raised during the Beltway widening project, specifically to address the concern of the EB to SB movement.
- Question was asked about providing direct access ramp to Port Royal Road; John noted that there may be a geometric solution; but it would be very costly since improvements would be required along a significant length of I-495. Federal review and approval processes would also provide a lot of scrutiny to the proposal and would have to be evaluated against a large number of other proposals.
- It was noted that the NB off-ramp from 495 to Port Royal Road truck movement is a concern today and then adding more traffic to left turn lane could exacerbate the problem.

John then turned the attention of the meeting to the HOV/ HOT Options. The following discussion was held:

- John presented the typical sections for the inside and outside HOV options;
- A question was asked about how turns are accommodated in the HOV scenario. It was responded that turning traffic would need to cross the HOV lane and that it would become an enforcement issue;
- A question was asked about enforcement. Michael noted it makes enforcement harder; another option is to restrict more turning movements;
- A question was asked about HOT; Michael noted that HOV2 might not generate enough traffic and if so, HOT might be considered to assist in making the lanes function;
- Question asked about how HOV2 input is computed and Michael responded that this information comes from the Travel Demand Model, in which the HOV2 volumes are currently being developed;
- A concern was raised that enforcement is an issue on I-66 today and how will it be better on Braddock Road – the concern was acknowledged;
- A thought was given to whether jug handles could be used to help the inside HOV – John noted that existing homes are a concern, as a significant amount of land will be needed for the jug handles;
- A concern about not using HOV for a short distance for those living along the community was raised;
- A question was asked regarding the connection between the transit center and HOV – Michael noted that they are related, i.e. a transit center provides a park and ride lot but they are not directly tied to each other;
- A question was asked about buses – how will they stop at each intersection; Michael noted that if Inside HOV is chosen, express would use HOV, local buses would use the general use lanes;
- A question was asked about park and ride to pick up slugs? Michael noted that one idea of transit center would be to provide parking for park and ride users.

Michael noted that Agenda Item C will would be deferred to the next meeting. John did a quick review of the Agenda C items. Michael asked the Task Force to take items home and review, ask questions if desired and that they would be discussed after the New Year. Michael noted that some photos of existing transit centers will be provided to the Task Force. He also offered a bus tour of transit centers in the area if enough interest. The following questions were raised:

- Zoning for building heights.

- A traffic signal at the Transit Center is adding another signal to Braddock Road.
- The additional pedestrian bridges along the corridor – Michael said some are being considered. Michael wants to show ped/bike improvements at or before the February meeting.

Topics for next time ("parking lot"):

1. Roadway classifications – Classifications examples in the local area will be provided
2. Example pictures of classifications – pictures will be provided
3. Accident map – a crash map will be provided
4. Info on jug handles – information will be provided
5. More info for where RIRO where turn – alternative routes will be diagrammed for the Task Force

Planned Activities for December 2015/January 2016:

- Continue refinement of transit center sites
- Continue VISSIM modeling of build conditions for Spot Improvements and HOV2 options.
- Refinement of MOEs for presentation to task force.

Other items:

- The next Task Force meeting will be on February 3, 2016.

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.

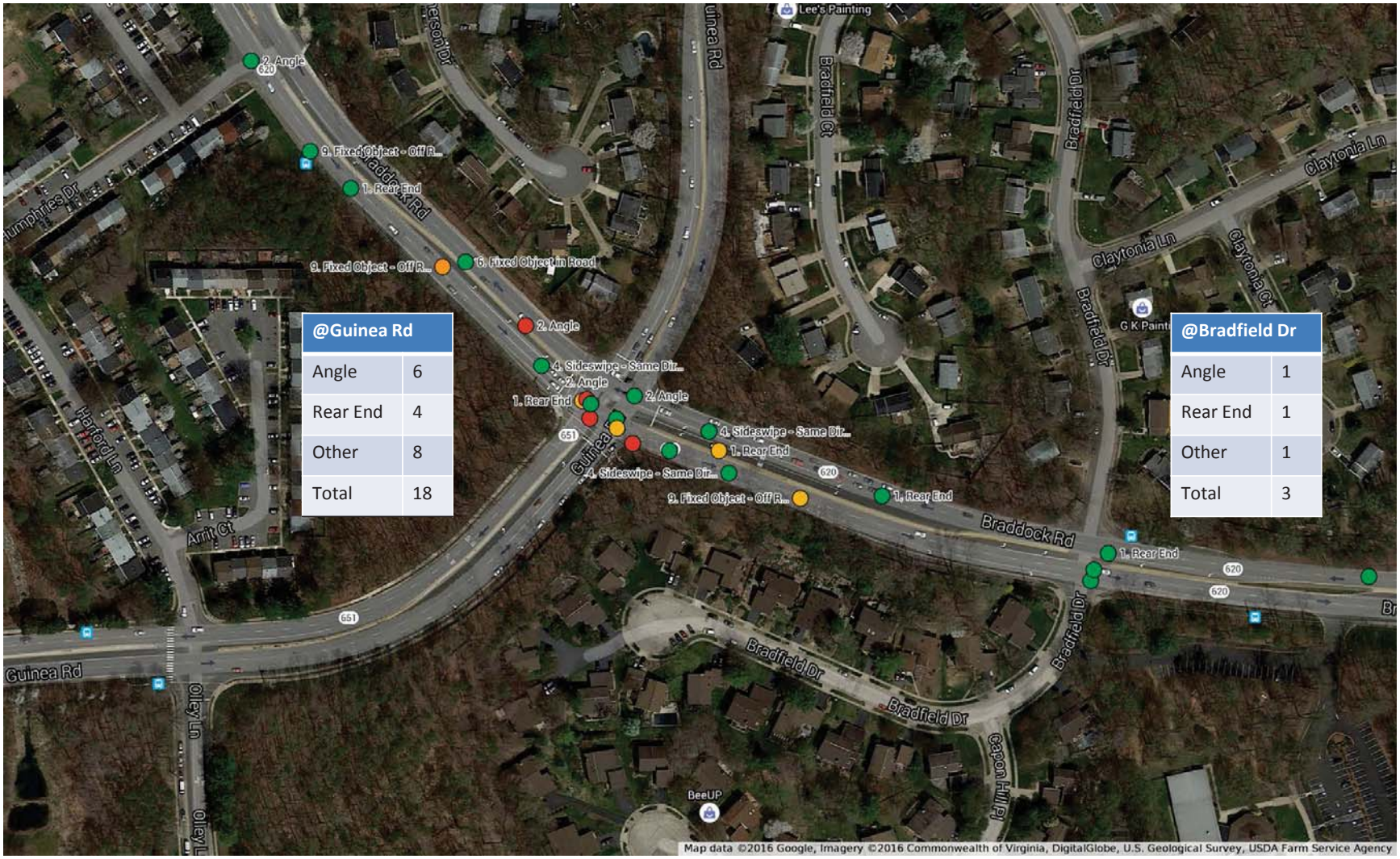
Roadway Classifications

	Local Street *Inverchapel Road shown* • Primary Purpose is access • Low volume, low speed • Parking permitted • Intended for neighborhoods • No traffic signals
	Collector Road *Southampton Drive shown* • Balances access and through movements • moderate volume, low speed • Parking may be permitted • Primarily connects local streets to higher level streets • Traffic signals only at connections to arterials
	Urban Minor Arterial *Braddock Road shown* • Primarily serves local commuters • Moderate volume, moderate speed • Parking prohibited • Primarily connections between collector streets and higher level streets • Traffic signals at cross roads
	Urban Major Arterial *Route 50 at Gallows Road shown* • Primarily serves regional commuters • Moderate volume, higher speeds • Parking prohibited • Primarily connection between lower level streets and freeways • Traffic signals at cross roads • Portions may be limited access
	Freeway *I-495 Capital Beltway shown* • Highest capacity, highest speeds • Limited access from connecting streets at interchanges • Parking prohibited • High speed intercommunity access • No traffic signals

Braddock Crashes - Guinea Road (1/1/12 to 12/31/14)

Severity

- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury



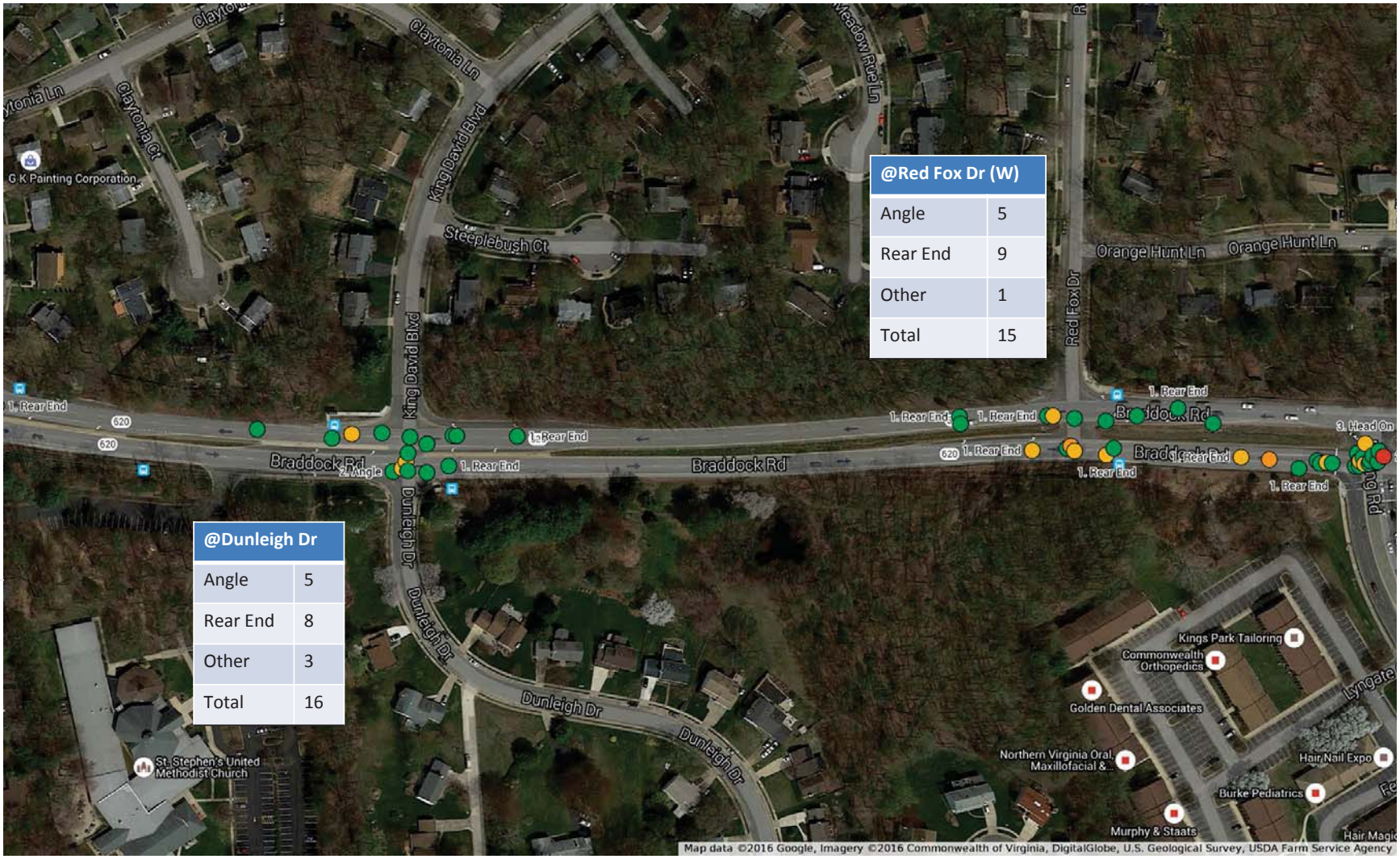
@Guinea Rd	
Angle	6
Rear End	4
Other	8
Total	18

@Bradfield Dr	
Angle	1
Rear End	1
Other	1
Total	3

Braddock Crashes - Dunleigh Drive and Red Fox Drive (West)
1/1/12 to 12/31/14

Severity

- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury



@Red Fox Dr (W)	
Angle	5
Rear End	9
Other	1
Total	15

@Dunleigh Dr	
Angle	5
Rear End	8
Other	3
Total	16

Braddock Crashes - Rolling Road (1/1/12 – 12/31/14)

Severity

- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury

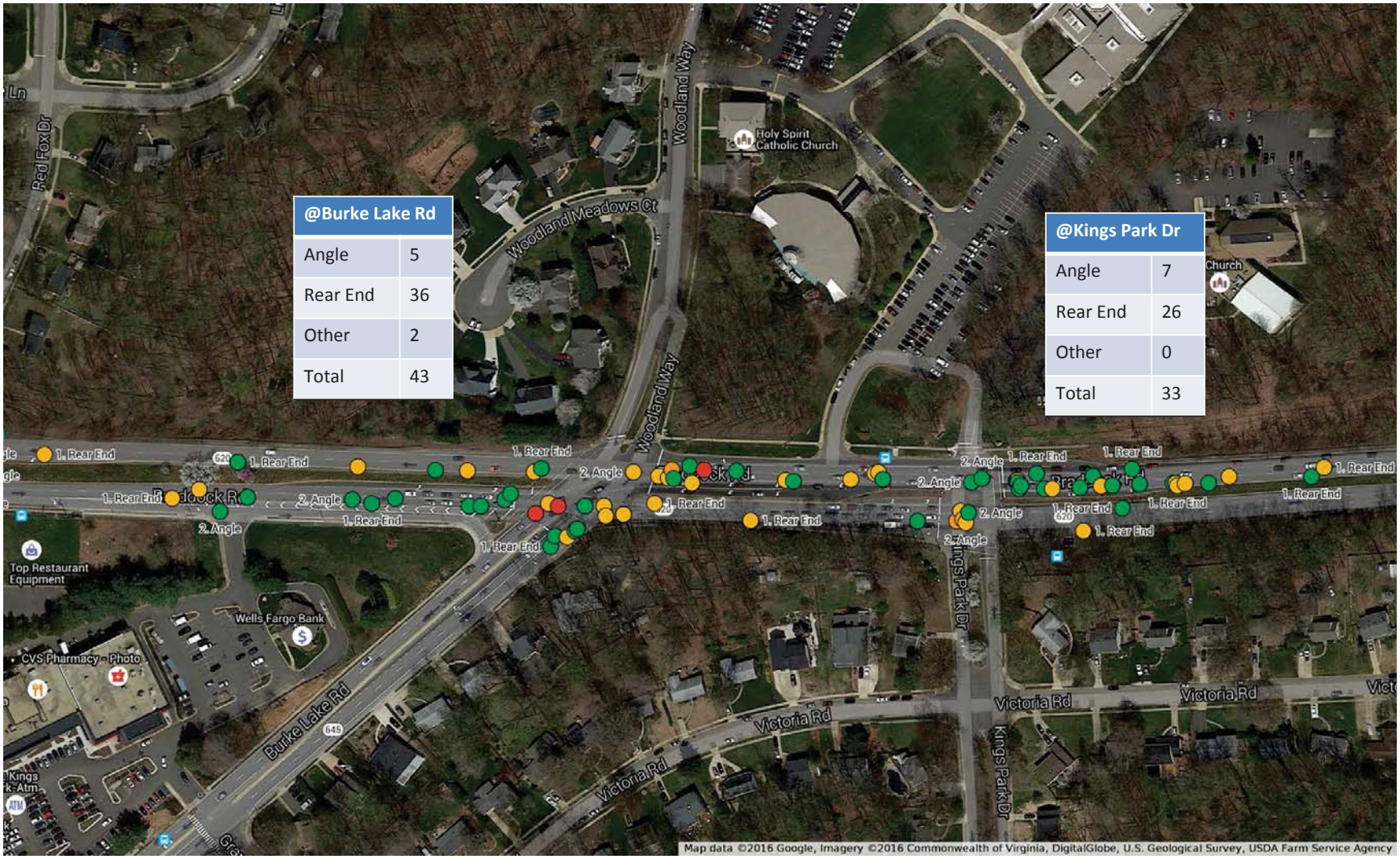
@Rolling Rd	
Angle	10
Rear End	12
Other	1
Total	23

@Red Fox Dr E	
Angle	9
Rear End	3
Other	0
Total	12

Braddock Crashes - Burke Lake Road and Kings Park Drive
1/1/12 to 12/31/14

Severity

- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury



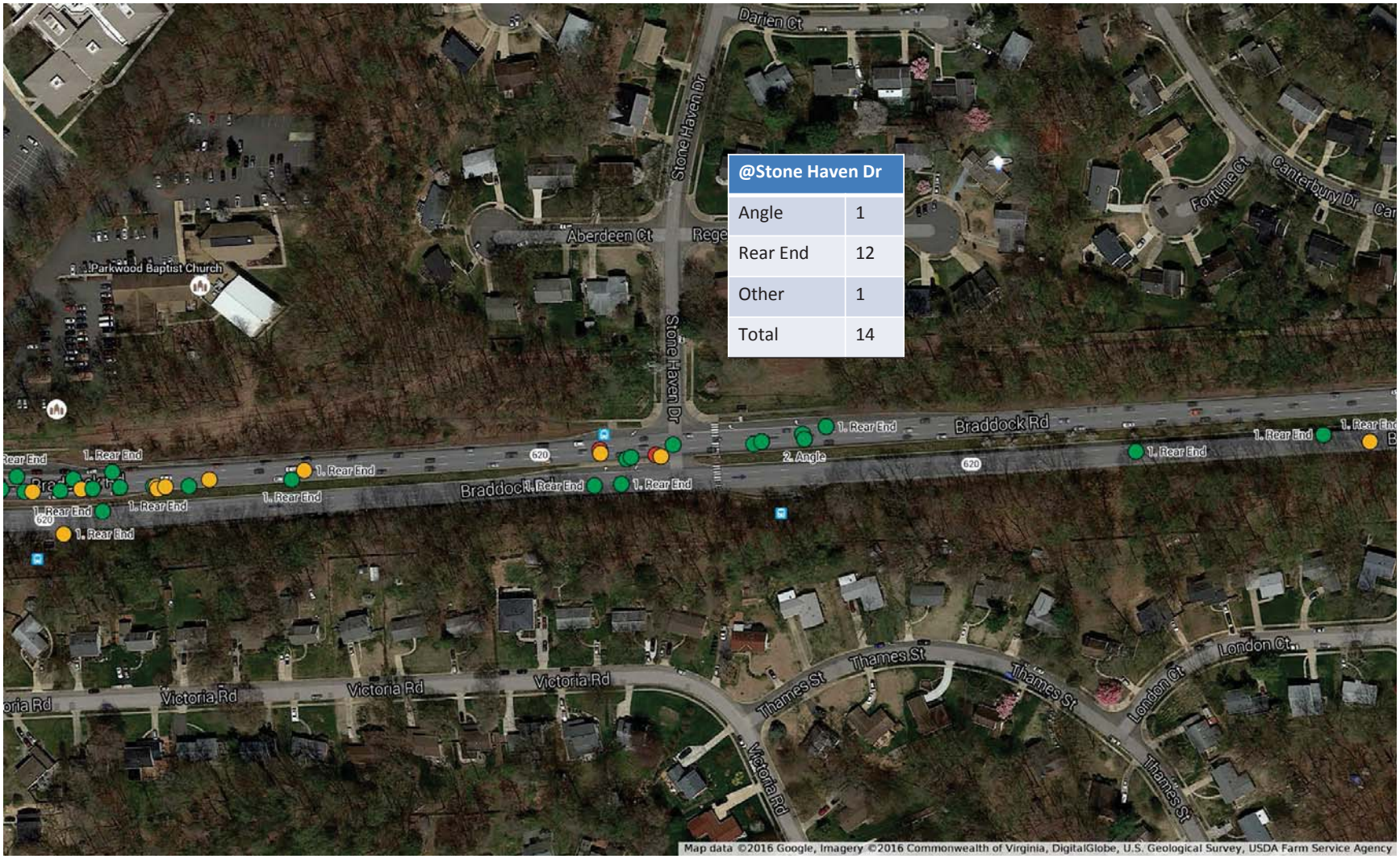
@Burke Lake Rd	
Angle	5
Rear End	36
Other	2
Total	43

@Kings Park Dr	
Angle	7
Rear End	26
Other	0
Total	33

Braddock Crashes - Stone Haven Drive (1/1/12 to 12/31/14)

Severity

- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury

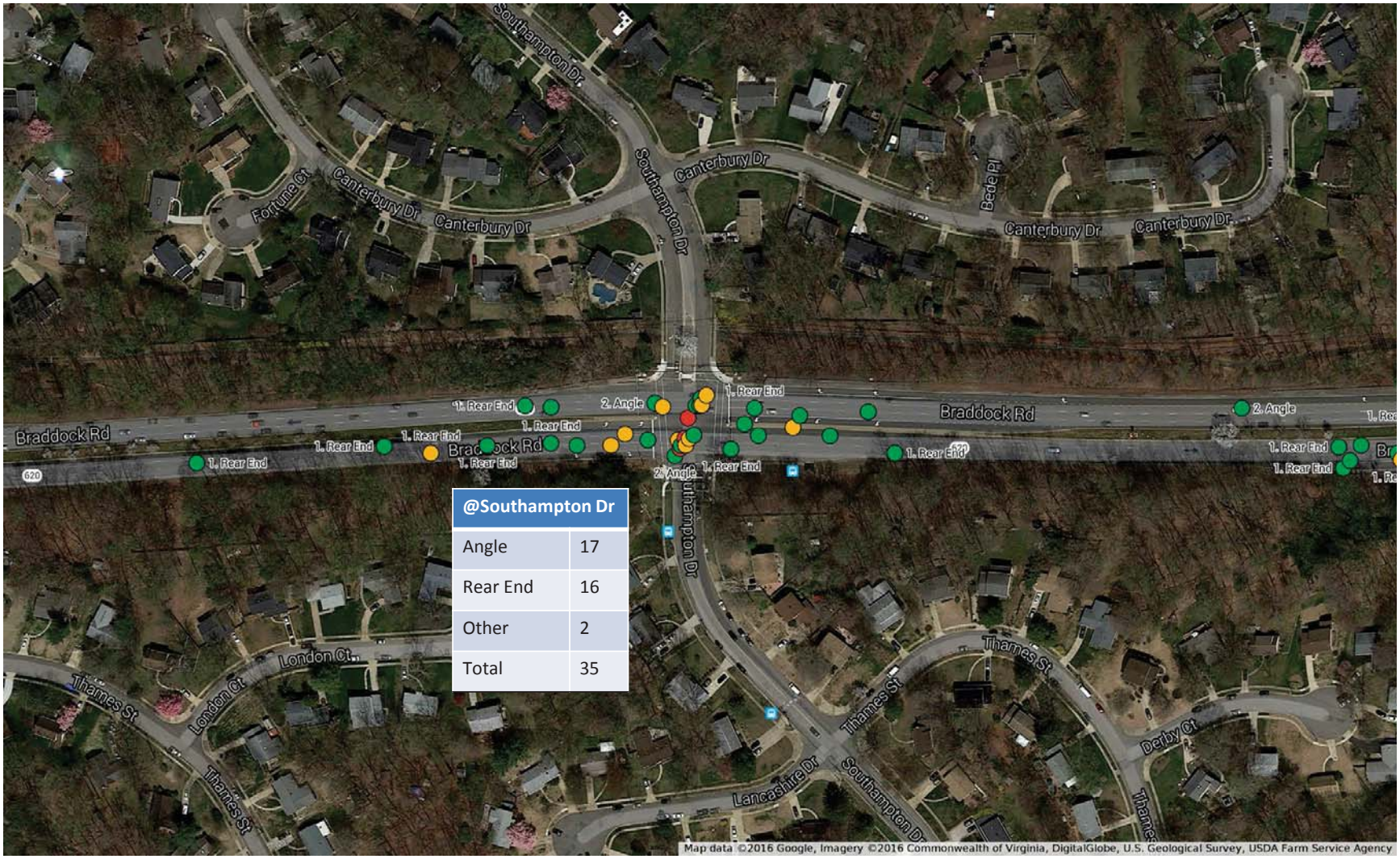


@Stone Haven Dr	
Angle	1
Rear End	12
Other	1
Total	14

Braddock Crashes - Southampton Drive (1/1/12 to 12/31/14)

Severity

- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury

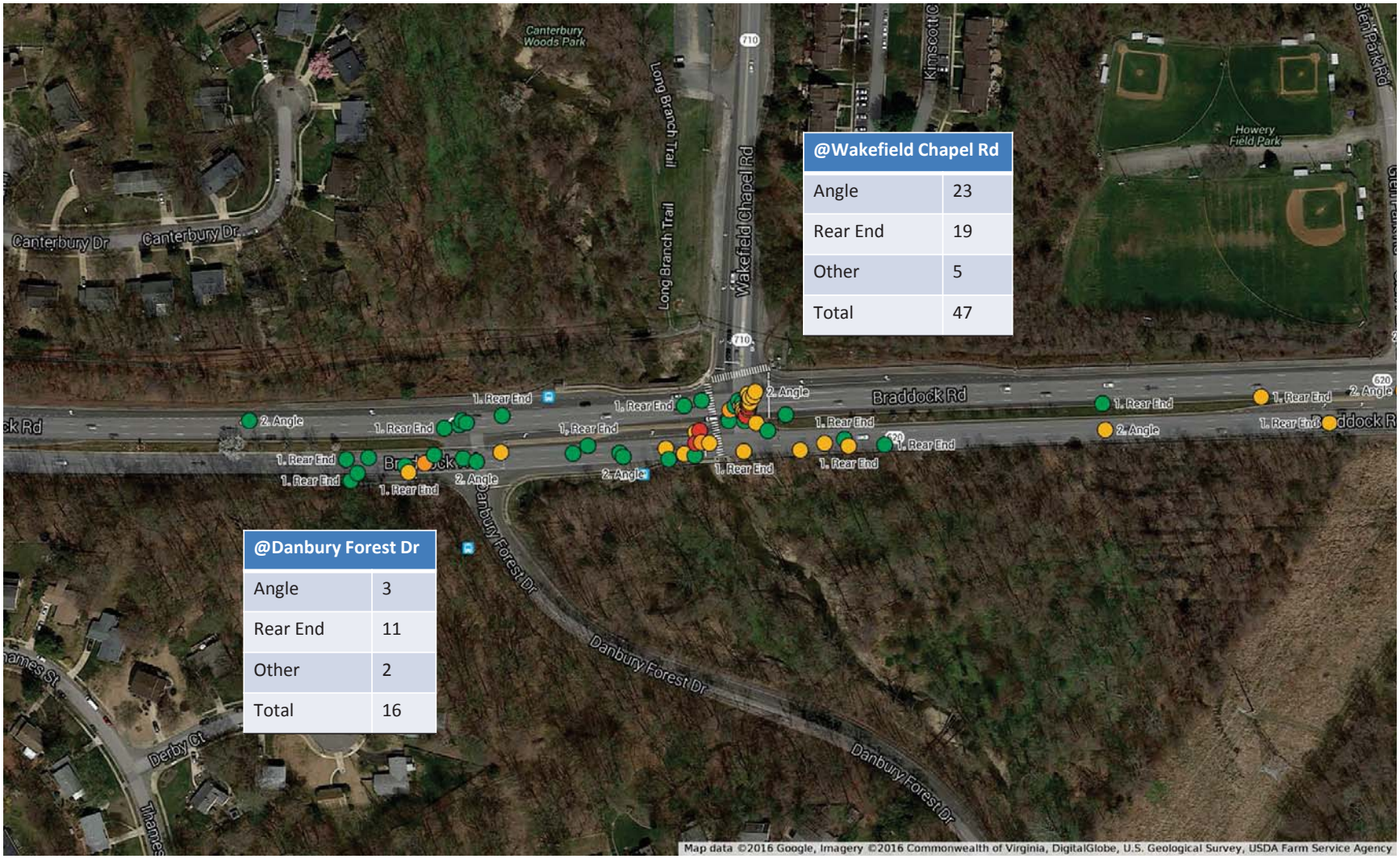


@Southampton Dr	
Angle	17
Rear End	16
Other	2
Total	35

Braddock Crashes - Wakefield Chapel Road (1/1/12 to 12/31/14)

Severity

- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury



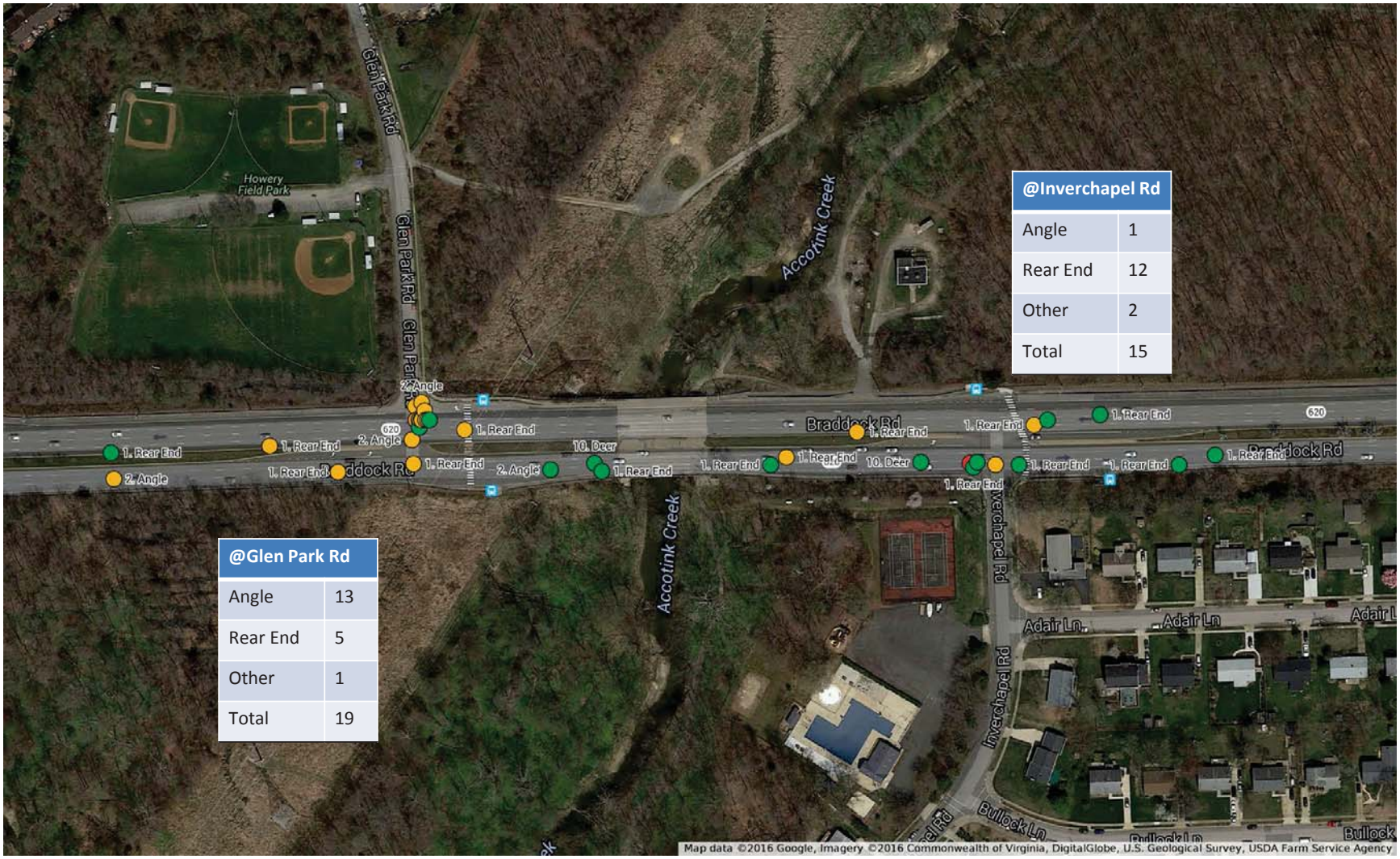
@Wakefield Chapel Rd	
Angle	23
Rear End	19
Other	5
Total	47

@Danbury Forest Dr	
Angle	3
Rear End	11
Other	2
Total	16

Braddock Crashes - Glen Park Road and Inverchapel Road (1/1/12 to 12/31/14)

Severity

- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury



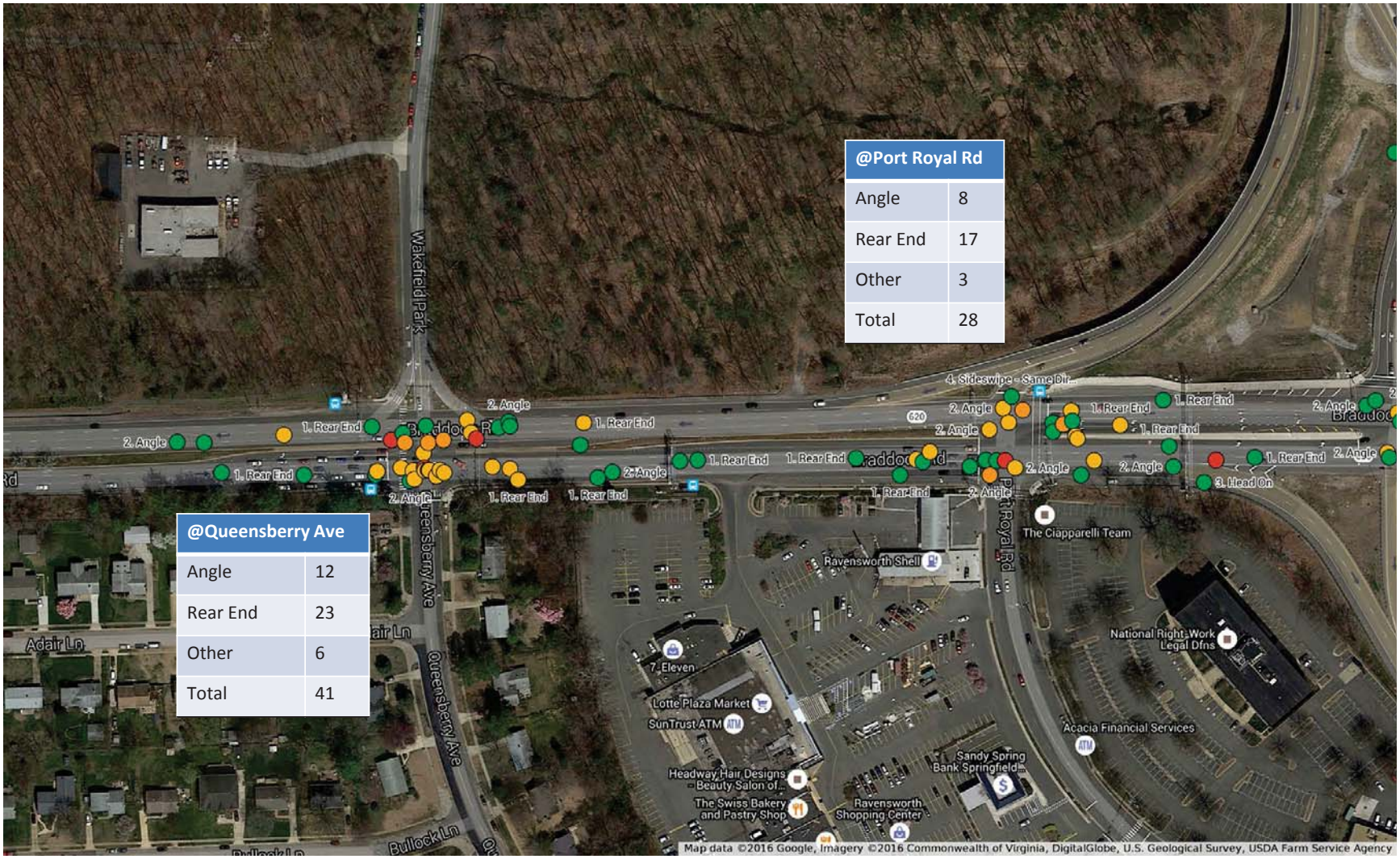
@Inverchapel Rd	
Angle	1
Rear End	12
Other	2
Total	15

@Glen Park Rd	
Angle	13
Rear End	5
Other	1
Total	19

Braddock Crashes - Queensberry Ave (1/1/12 to 12/31/14)

Severity

- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury



@Port Royal Rd	
Angle	8
Rear End	17
Other	3
Total	28

@Queensberry Ave	
Angle	12
Rear End	23
Other	6
Total	41

Braddock Crashes - I-495 Interchange Area (1/1/12 to 12/31/14)

Severity

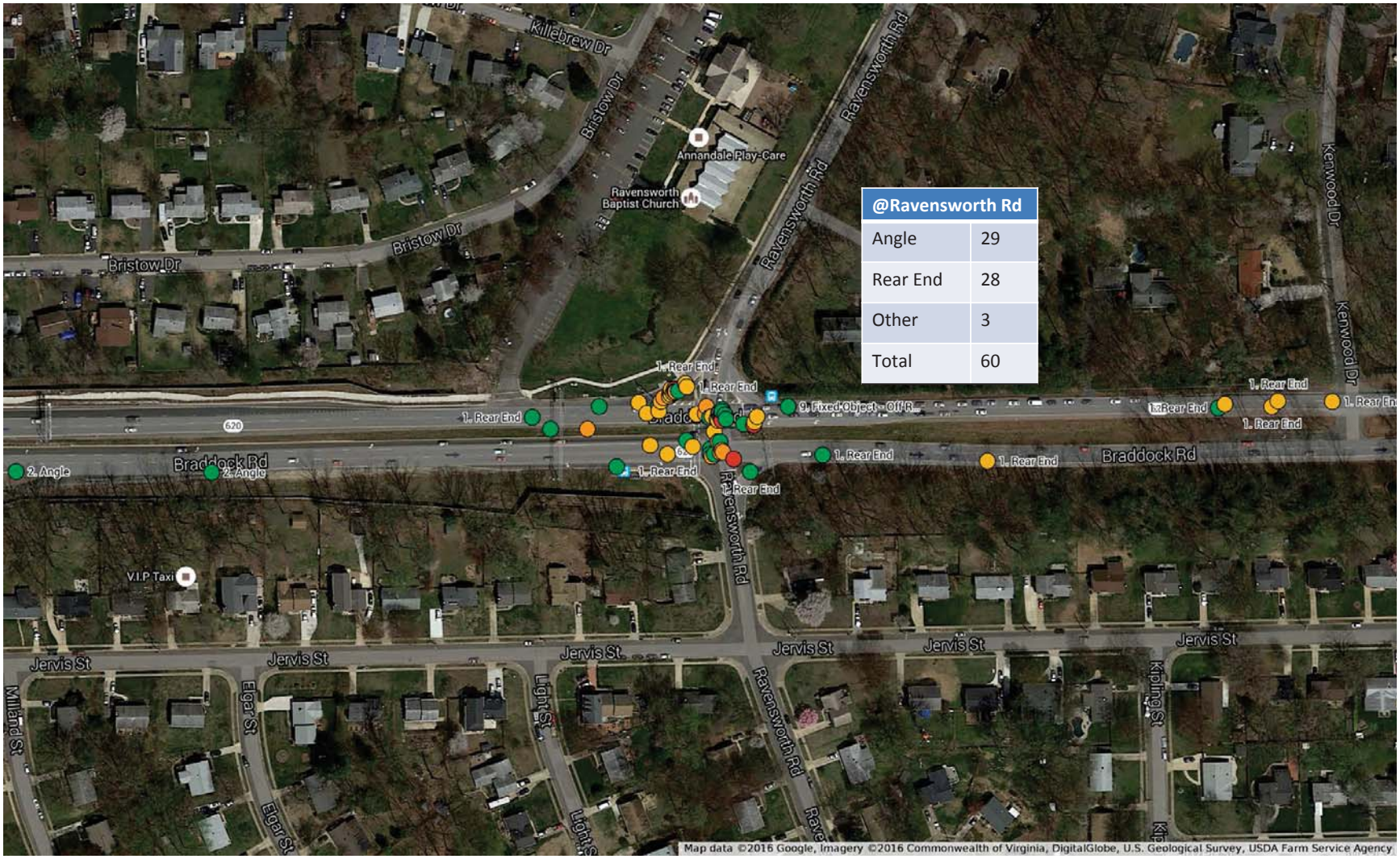
- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury

@I-495 Ramps	
Angle	9
Rear End	7
Other	0
Total	16

Braddock Crashes - Ravensworth Road (1/1/12 to 12/31/14)

Severity

- PDO.Property Damage Only
- C.Non-Visible Injury
- B.Non-Incapacitating Injury
- A.Incapacitating Injury



@Ravensworth Rd	
Angle	29
Rear End	28
Other	3
Total	60

Jughandle Considerations

Jughandle Intersections Pros/Cons

Advantages:

- Reduce delays to through traffic by reducing speed differentials
- Fewer conflict points at intersection and spread them over a larger area
- Reduce potential of left turn and rear end crashes
- Decrease median width given that U-turn and left turns are not allowed
- Reducing crossing distance for minor street traffic and pedestrians
- Easier U-turns for commercial vehicles
- Fewer conflict between vehicles and pedestrians at the main intersection
- Improved traffic operations at signalized intersections due to the elimination of left-turn signal phases on the major street

Disadvantages:

- Potential increase in right angle crashes
- Potentially creates driver confusion; therefore, clear signage is required
- Potential increase for delay of major street left turns if blocked by minor street queues
- Difficult to enforce left turn prohibitions from major road at the intersection
- Navigation of the intersection for pedestrians requires unsignalized crossings

"Near-Side" Jughandle intersection:

Advantages:

- Right turning and left turning traffic both exit at same location
- Left turning traffic passes through intersection only once
- Improves sight distance at the intersection due to the ramp
- Reduce total conflict points from 42 to 28

Disadvantages:

- Potential increase for delay of major street left turns if blocked by minor street queues

"Far-Side" Jughandle intersection:

Advantages:

- Reduces total conflict points from 42 to 26

Disadvantages:

- Two decision points instead of one for right and left turning vehicles from the major street
- Left turning traffic passes through the intersection twice
- Longer travel distance/time due to the longer nature of the ramp
- Additional right-of-way needed to accommodate the loop ramp

Jughandles

Sample Locations of Jughandle intersections:

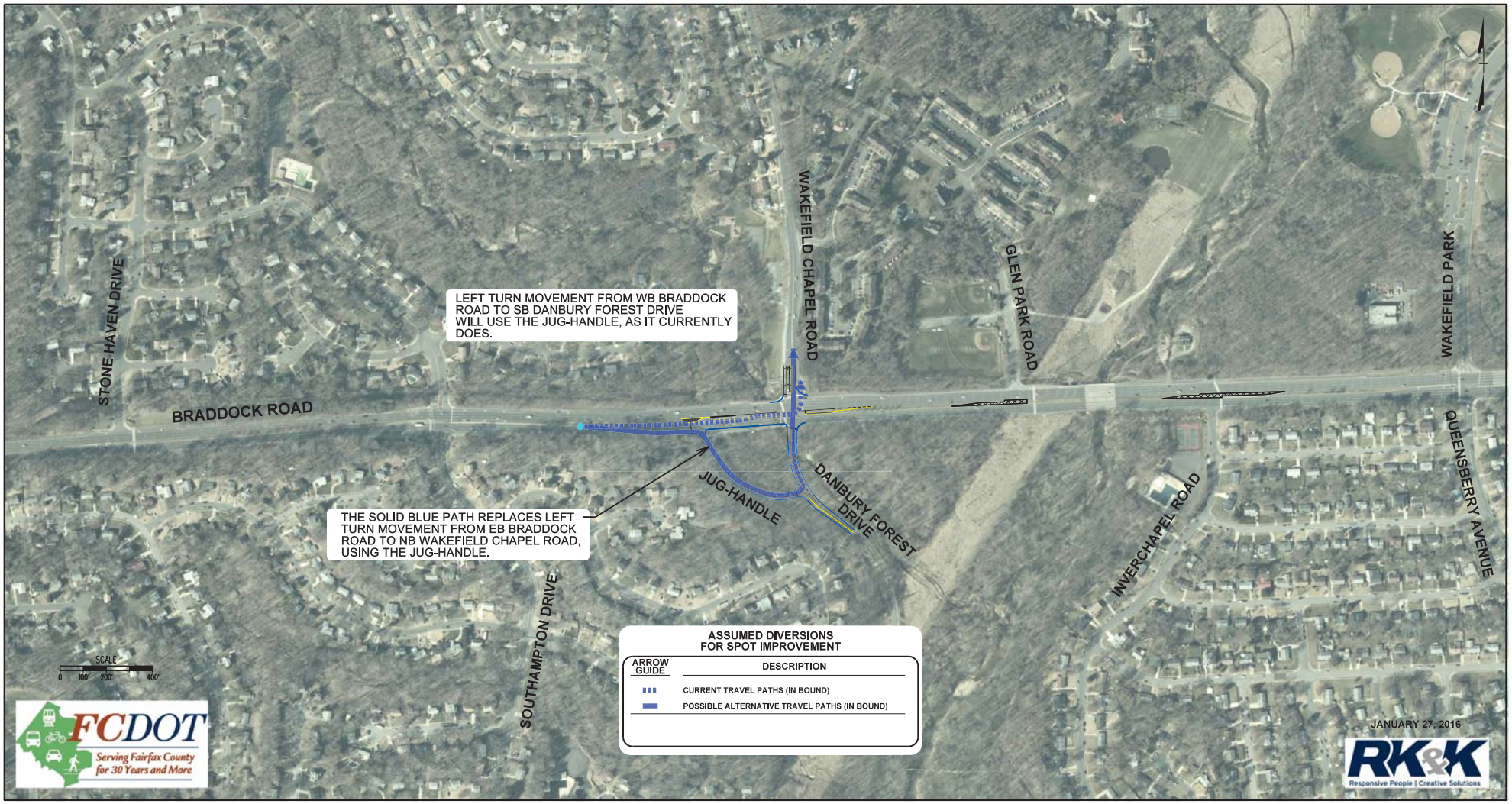
- US 24 / N Telegraph Rd at Elizabeth Lake Rd, Pontiac, MI

- Hooper Ave at Indian Hill Road, Toms River, NJ

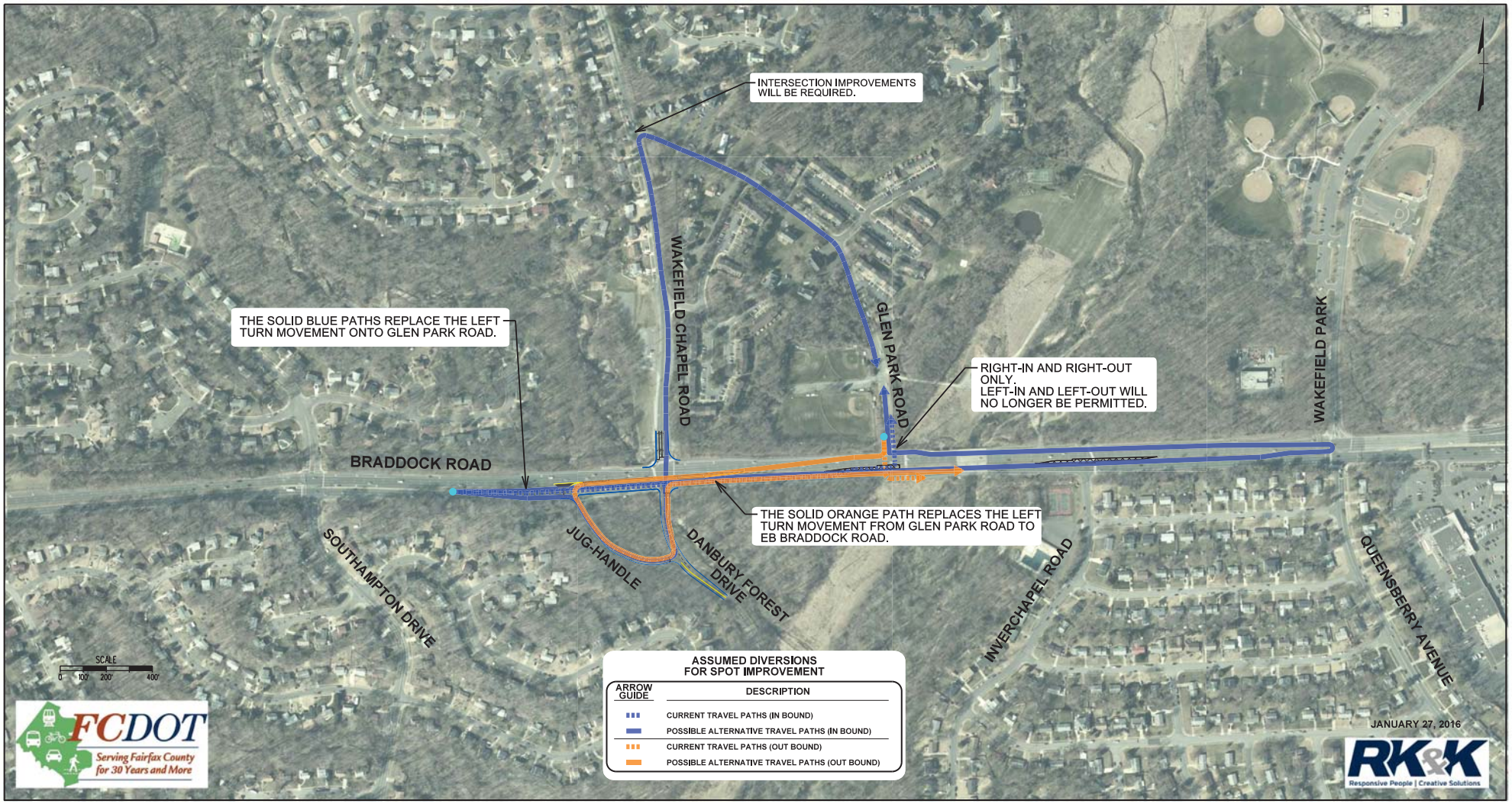
Jughandles

- Route 37 at Peter Avenue, Toms River, NJ

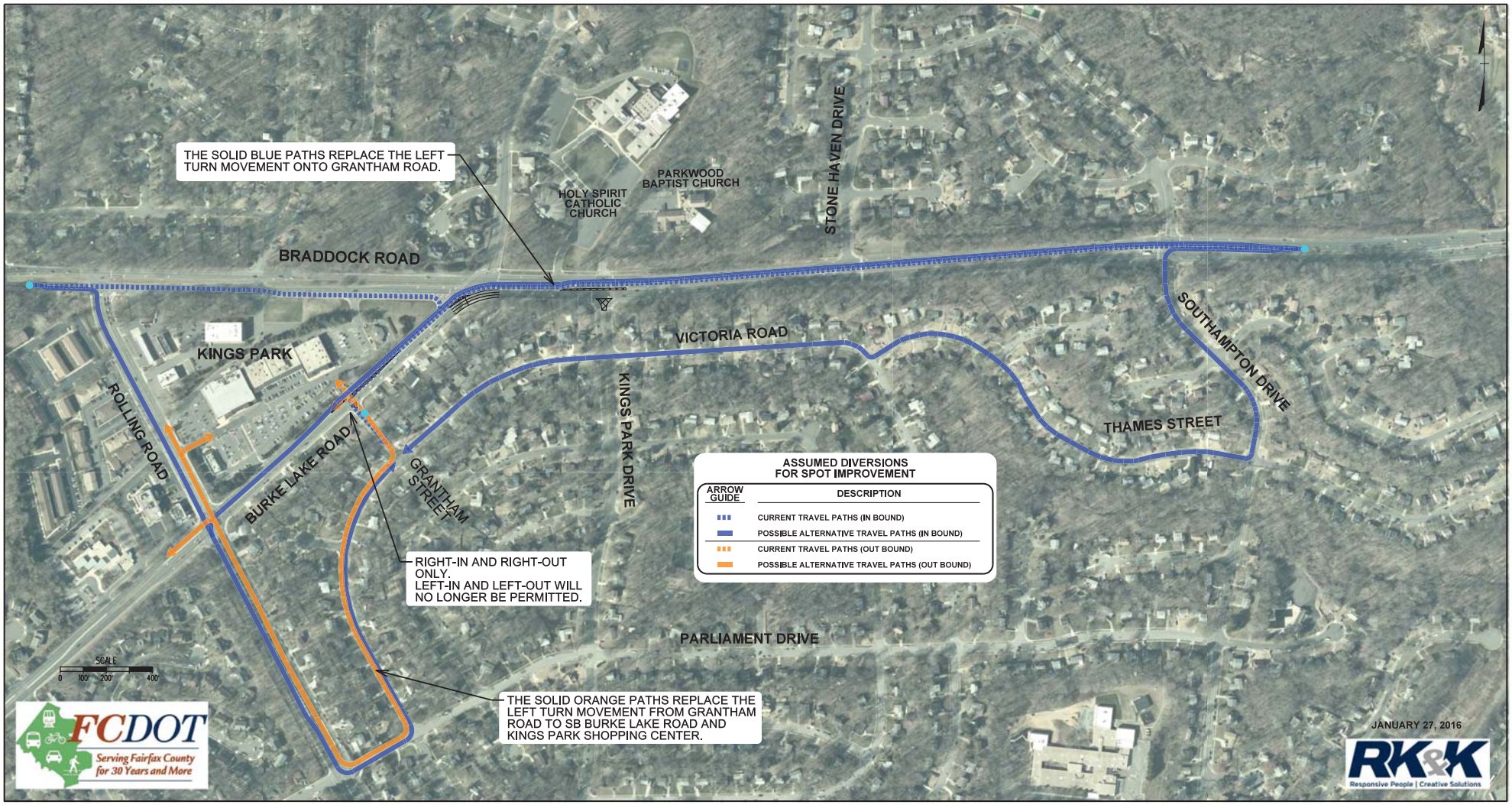
ALTERNATIVE PATHS FOR MOVEMENT CLOSURES
DANBURY FOREST DRIVE AND WAKEFIELD CHAPEL ROAD



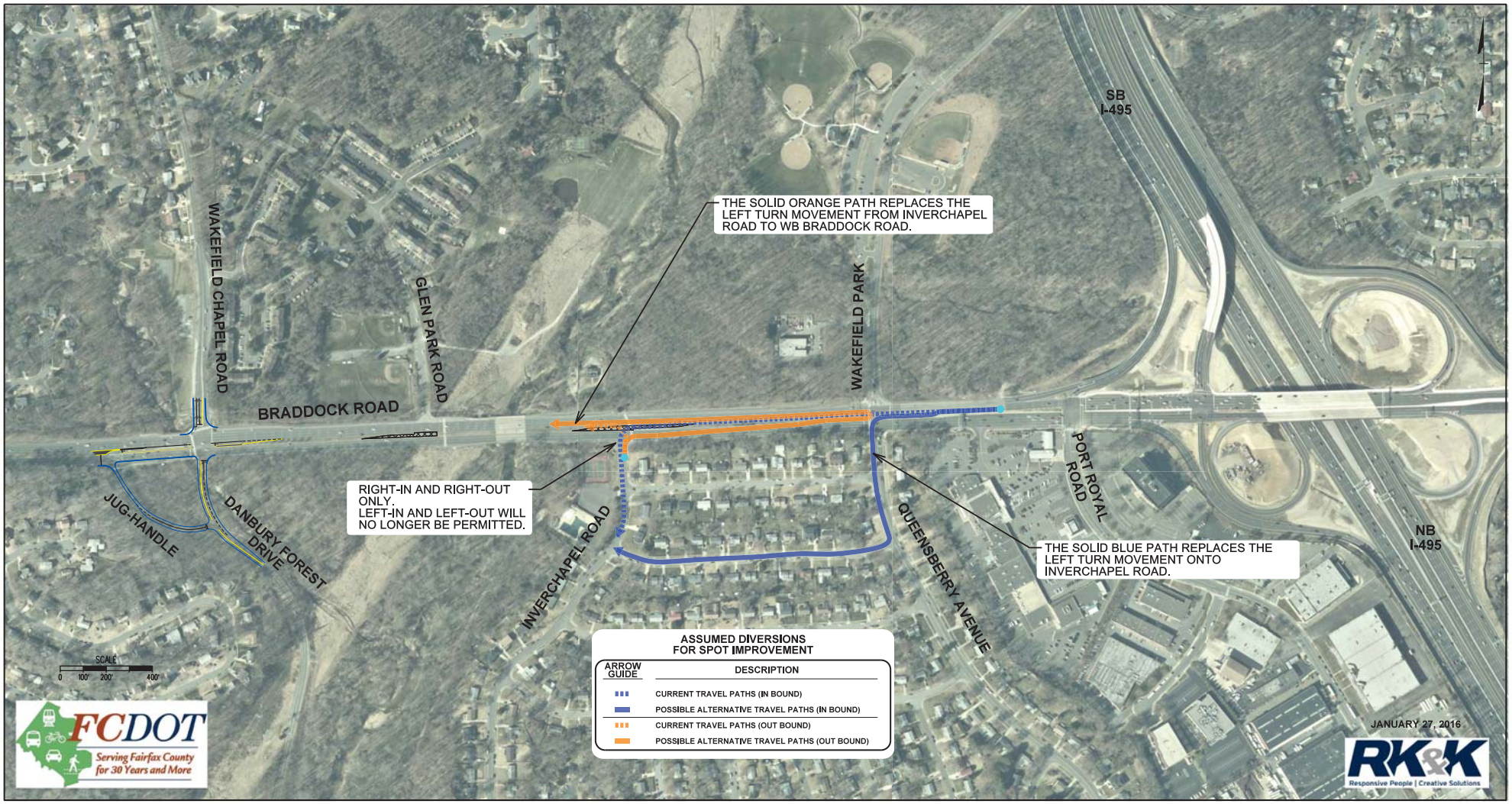
ALTERNATIVE PATHS FOR MOVEMENT CLOSURES
GLEN PARK ROAD



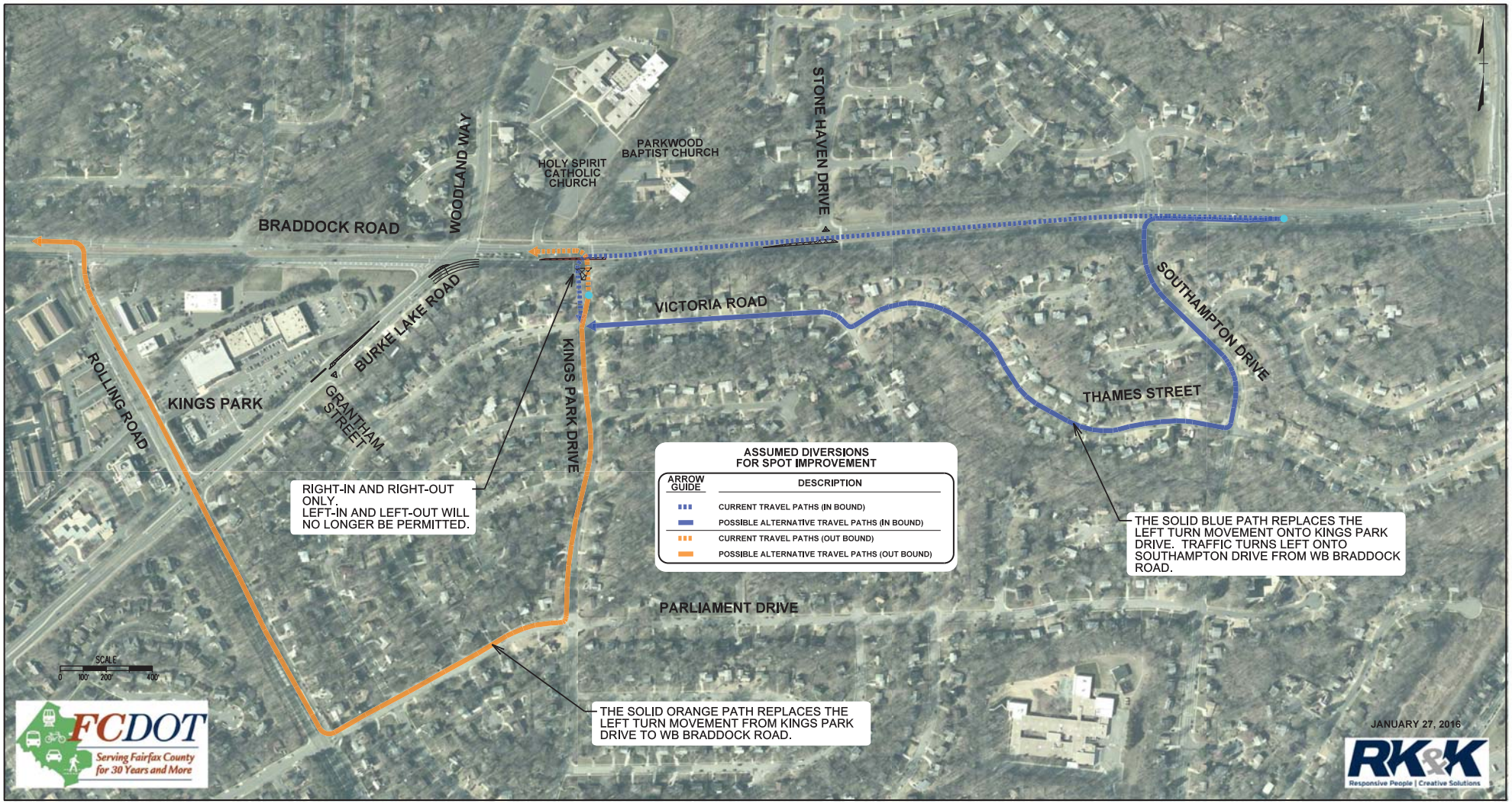
ALTERNATIVE PATHS FOR MOVEMENT CLOSURES
GRANTHAM STREET



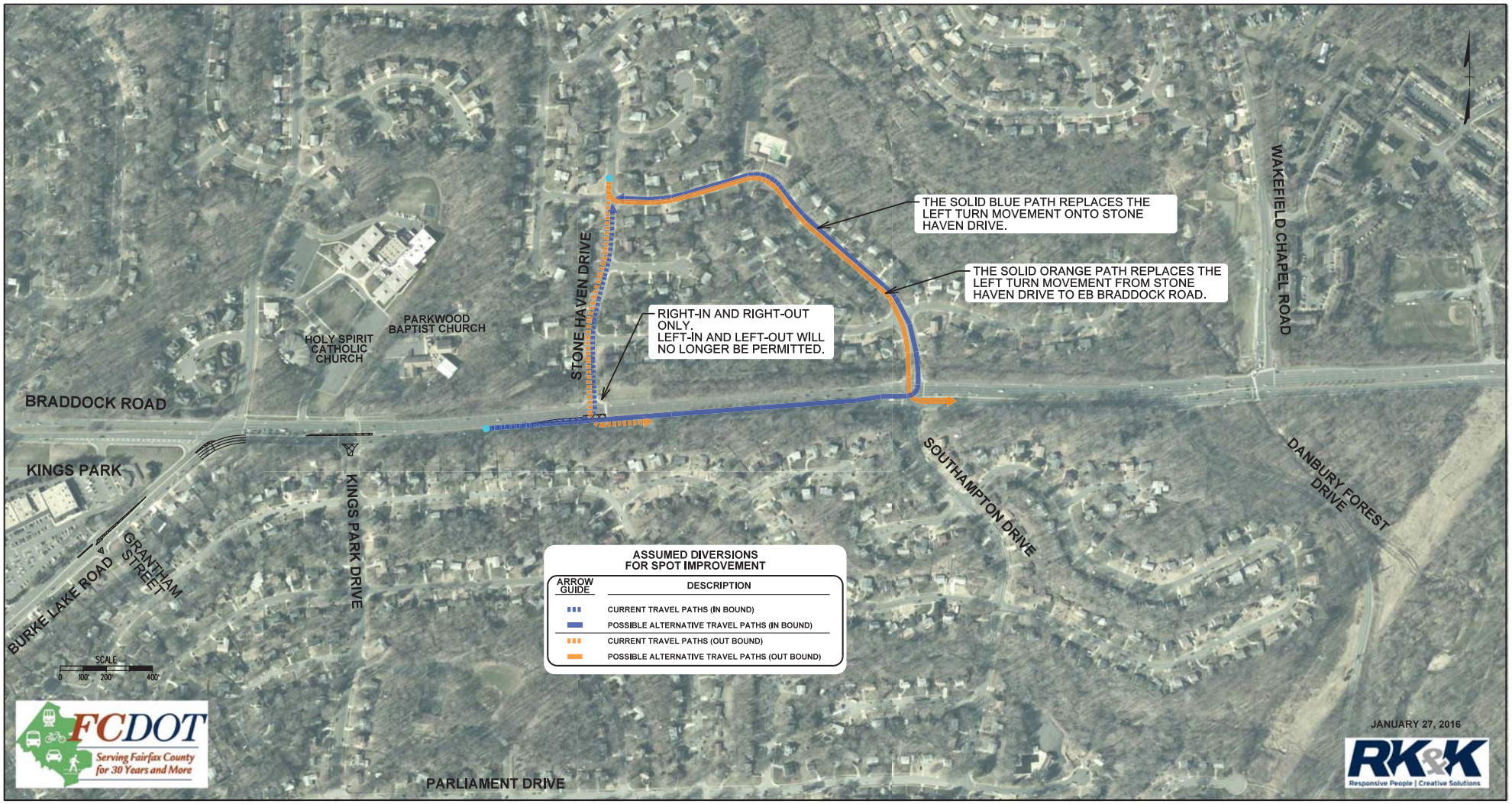
ALTERNATIVE PATHS FOR MOVEMENT CLOSURES
INVERCHAPEL ROAD



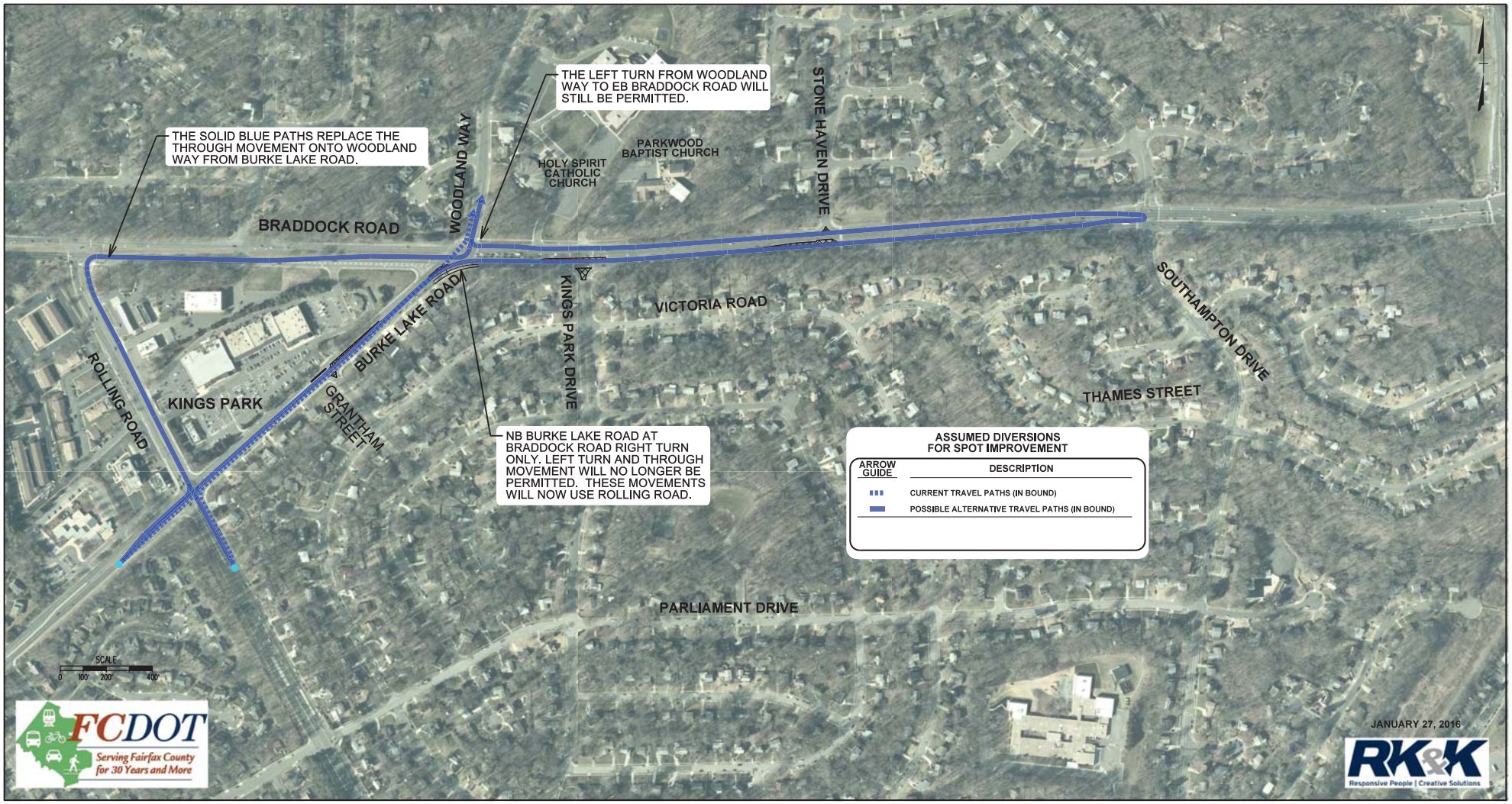
ALTERNATIVE PATHS FOR MOVEMENT CLOSURES
KINGS PARK DRIVE



ALTERNATIVE PATHS FOR MOVEMENT CLOSURES
STONE HAVEN DRIVE



ALTERNATIVE PATHS FOR MOVEMENT CLOSURES
WOODLAND WAY



ROLLING ROAD
BRADDOCK ROAD
RED FOX DRIVE