

Tall Cedars Parkway and Elk Lick Road Intersection Improvement Project

Dulles District Town Hall

February 26, 2019



Agenda:

- Project Timeline
- Safety Improvement Projects
 - Implemented and Programmed
- Project Intersection - Crash Summary
- Intersection Improvement Solutions
 - Interim Improvements
 - Long-term Improvements
- Next Steps



Project Timeline:

- June 2015 – Supervisor Letourneau brought forward Board Member Initiative
 - Removal of stop signs on Tall Cedars Parkway/Elk Lick Road intersection
 - Removal of the median break on Route 50 at Elk Lick Road
- March 2017 – BOS approved \$600,000 for improvements
 - Close median on Route 50 at Elk Lick Road, right-in/right-out on Elk Lick Road approach
 - Change lane configuration on Defender Drive to 3-lane cross section
- March 2018 – County implemented safety improvements
 - Closed Route 50 median at Elk Lick Road
 - Installed pavement markings and signing along Defender Drive for new lane configuration



Project Timeline:




- May/October 2018 – County performed post-improvement study
 - Collected traffic data at Tall Cedars Parkway/Elk Lick Road intersection
 - Performed intersection analysis
 - Signal warrant analysis
 - Evaluation of alternative intersection configurations
- February 2019 – BOS approved \$902,000 for interim intersection improvements
 - Design, implementation, and maintenance of the interim safety improvements at Tall Cedars Parkway/Elk Lick Road intersection



Safety Improvement Projects:

1. Defender Dr restriping
2. Route 50 median closure at Elk Lick Rd
3. Elk Lick Rd and Tall Cedars Pkwy Intersection Improvements

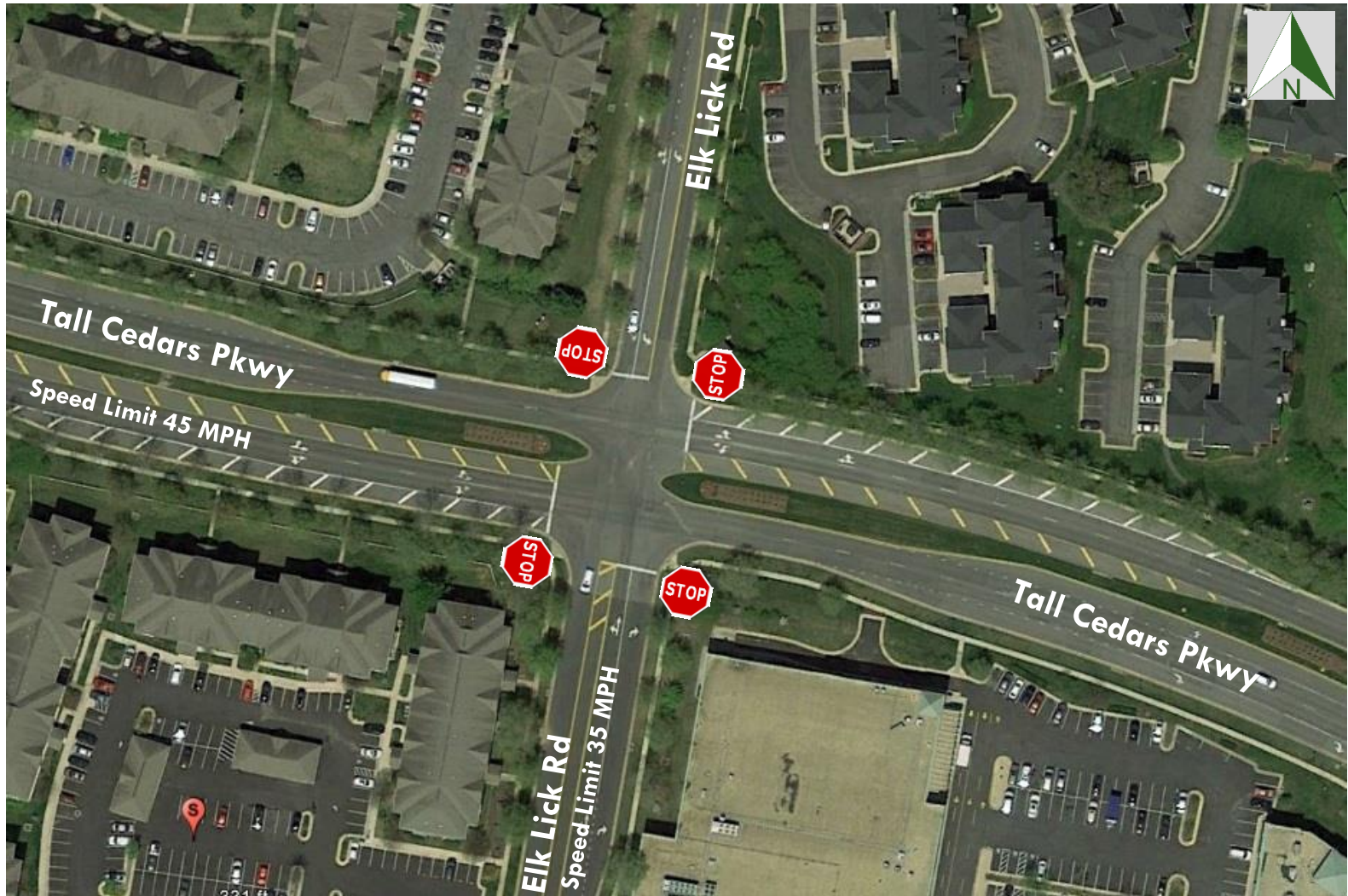
LEGEND

-  - Completed
-  - Ongoing
-  - Proposed



Project Intersection:




Existing
Conditions

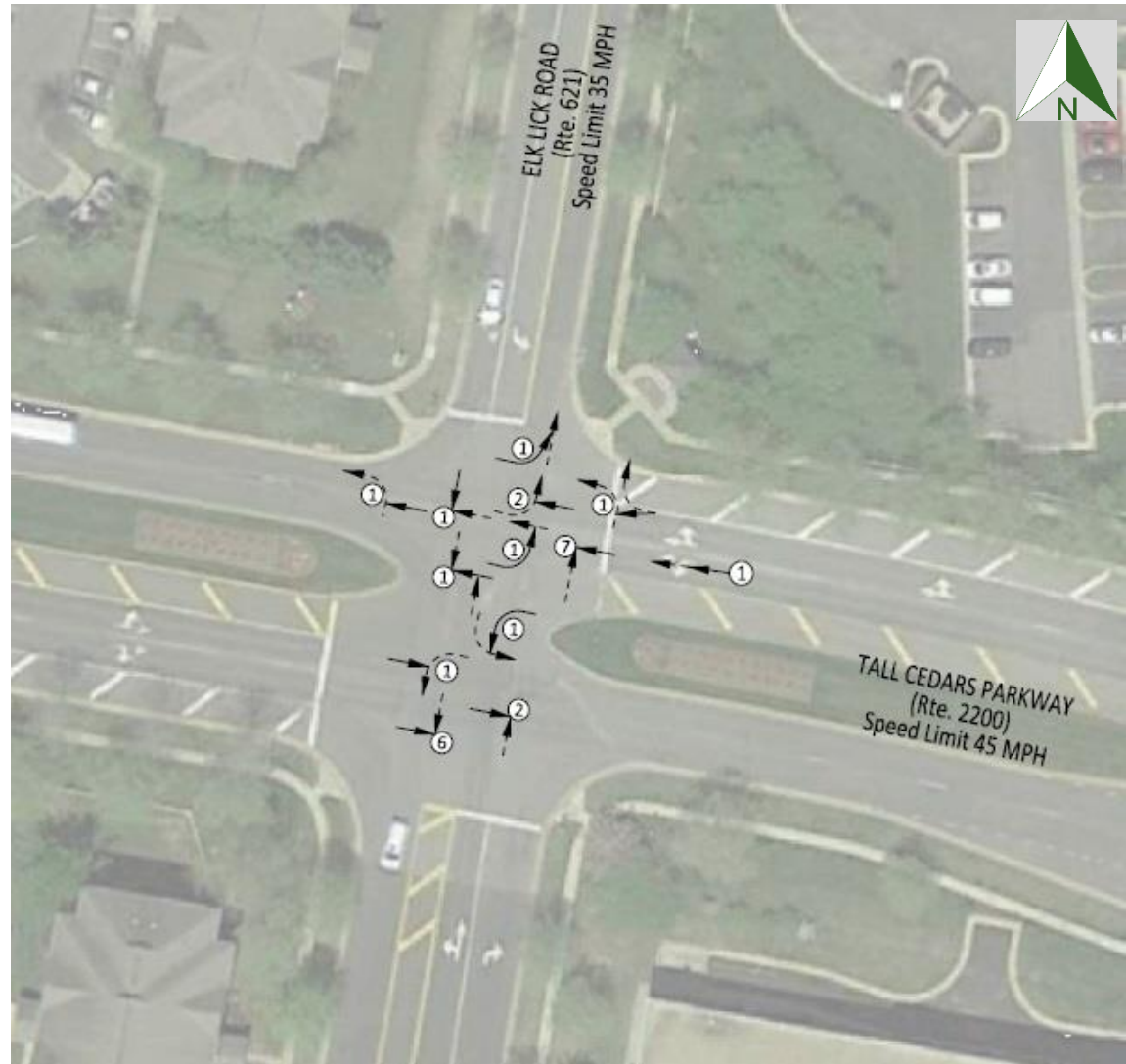


Intersection Crash Summary

- Last 3 Years (Jan 2016 – Nov 2018) ~ **25** angle crashes
- **11** angle crashes after Route 50 Median closure
- Sept 2018 - Oct 2018 – **5** injuries
- Average 1 crash every 35 days

Legend

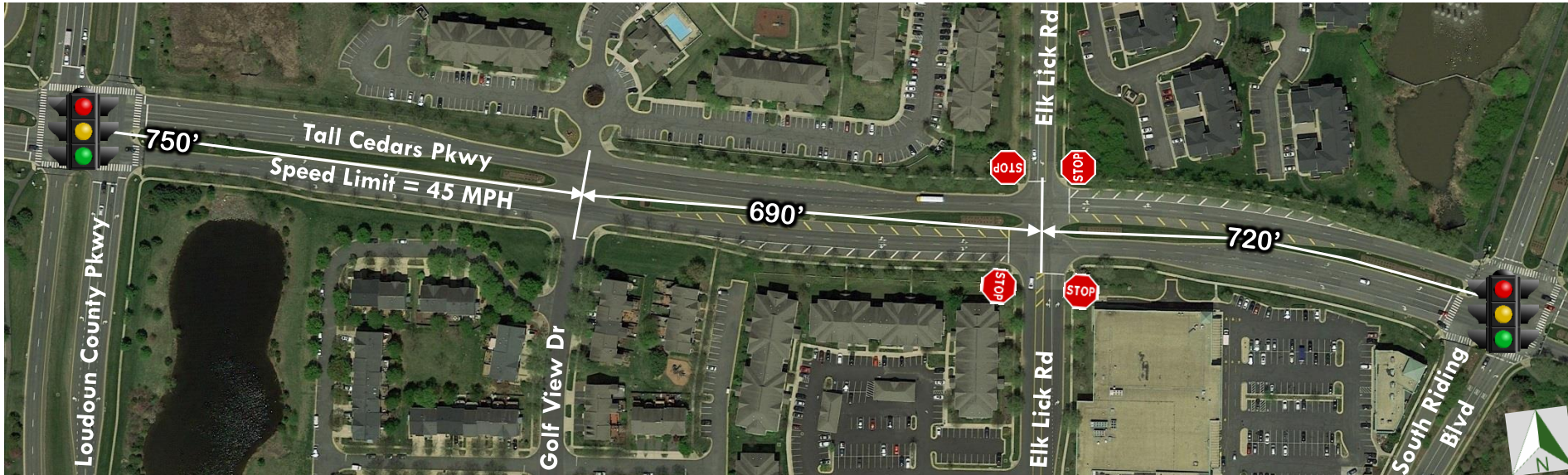
-  Number of Angle Crashes
-  Number of Rear End Crashes
-  Vehicle at Fault



Proposed Improvement: Right-in, Right-out, Left-in



Why is a Traffic Signal NOT a solution?



- Distance to adjacent signal = 720'
- Required distance between signals = 1,050'
(Per VDOT Road Design Manual on Minor Arterial)
- Conflict Points still an issue



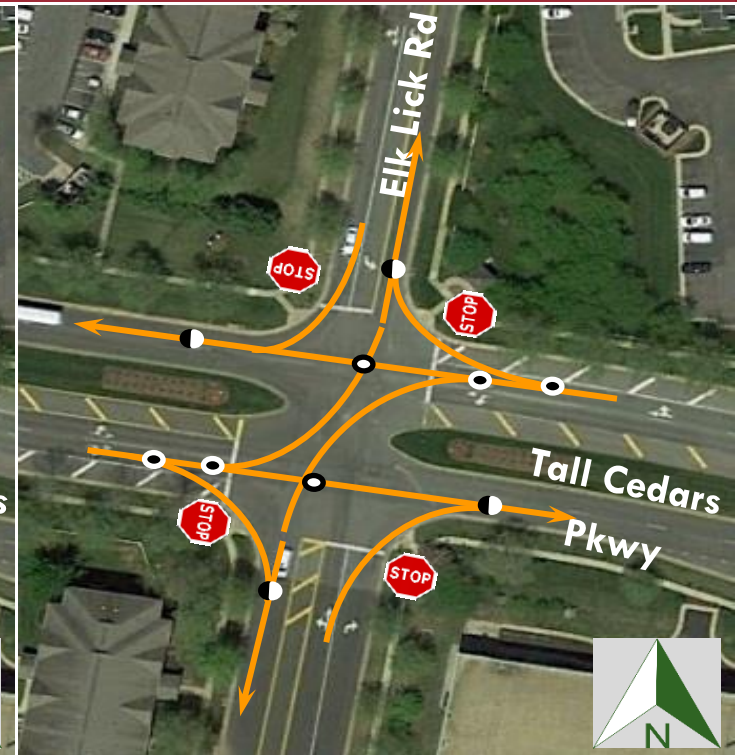
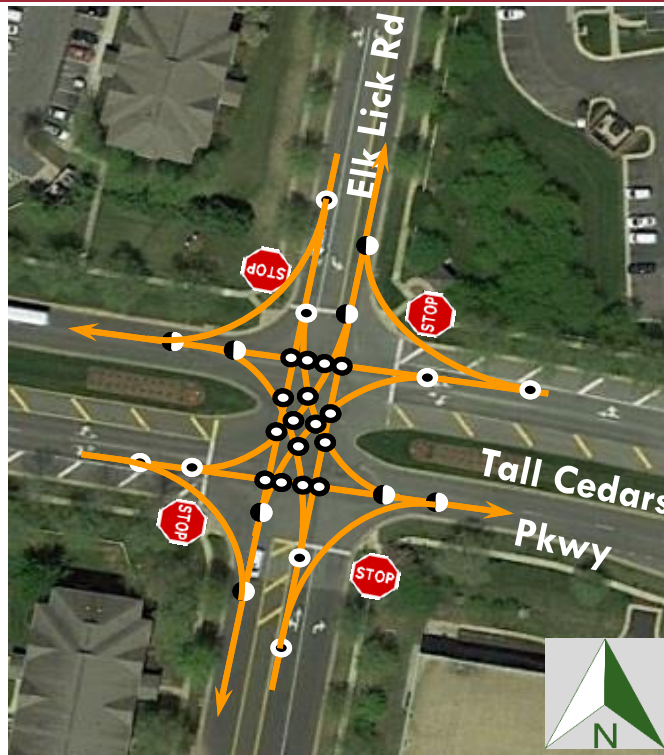
Conflict Point

Reduction

Right-in, Right-out, Left-in

LEGEND

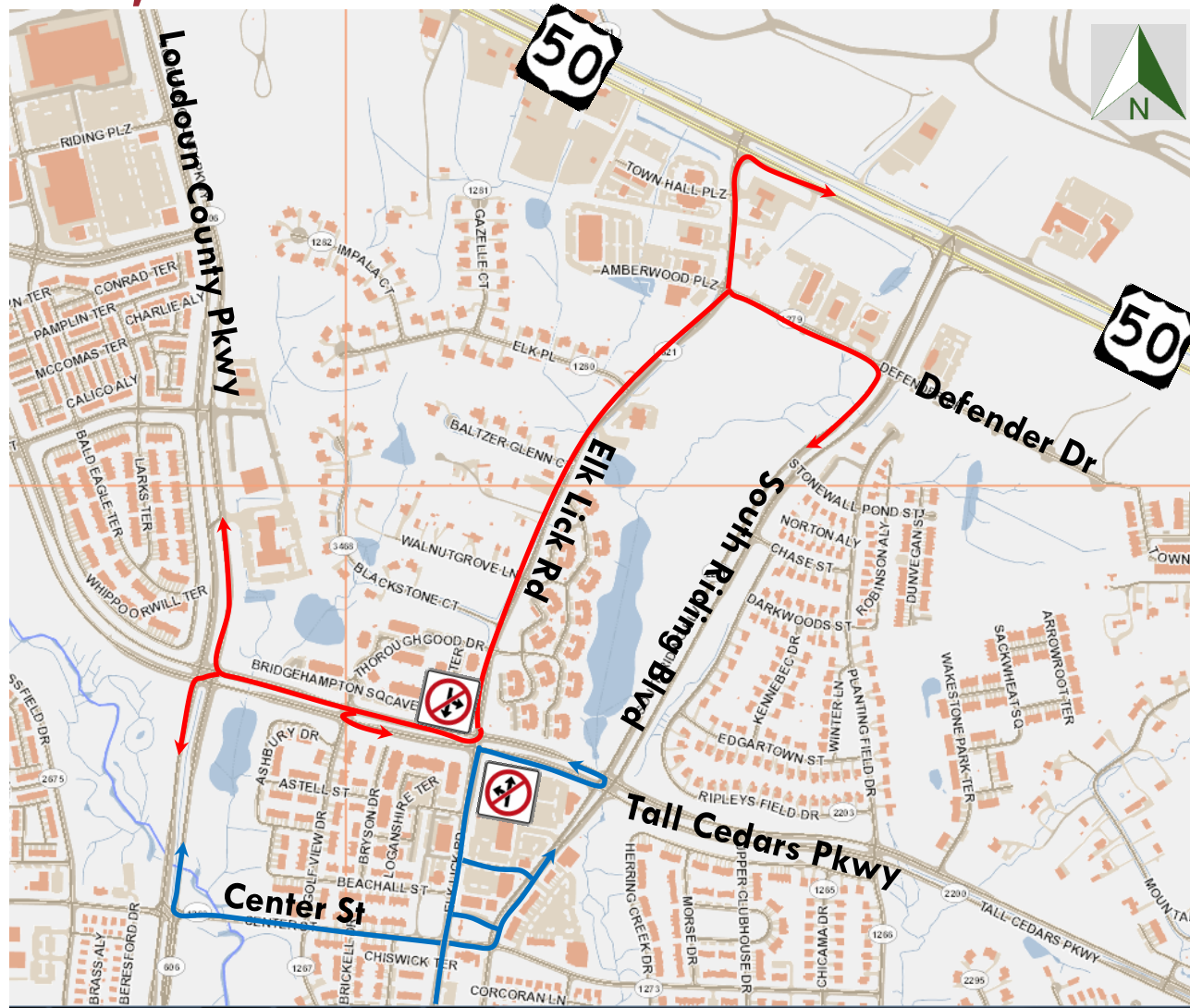
- - Merging
- - Diverging
- - Crossing
- - Vehicle Path



Type	Existing	Implementation of Solution
Merging	8	4
Diverging	8	4
Crossing	16	2
Total	32	10



Right-in, Right-out, Left-in: Traffic Diversions



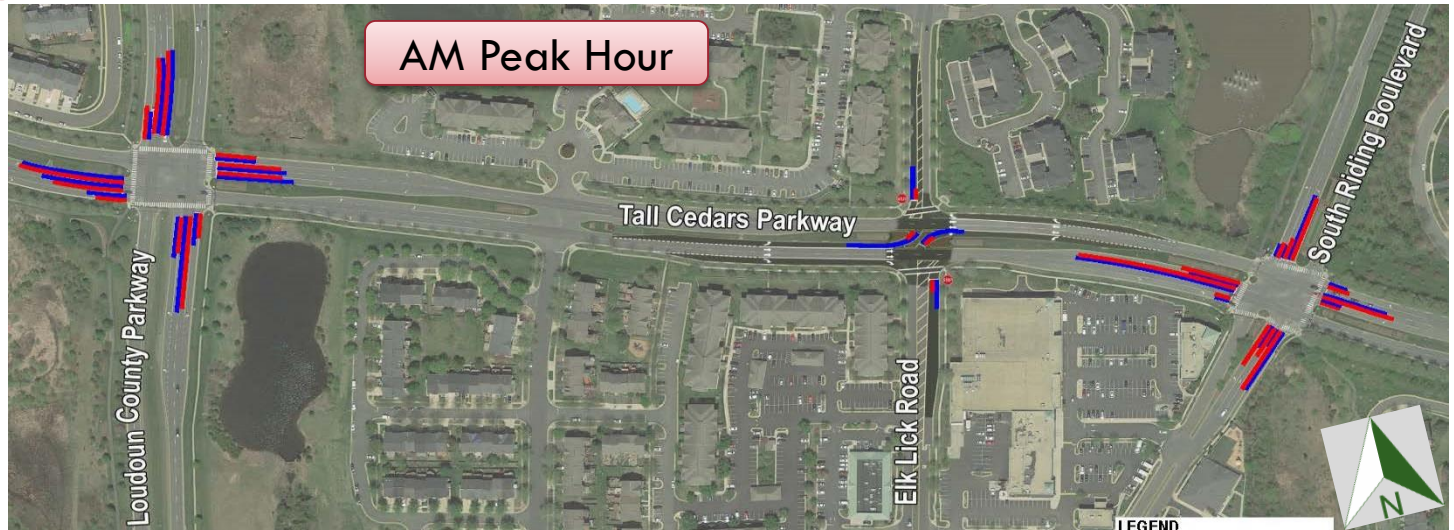
LEGEND

- Blue arrow - Northbound Traffic
- Red arrow - Southbound Traffic

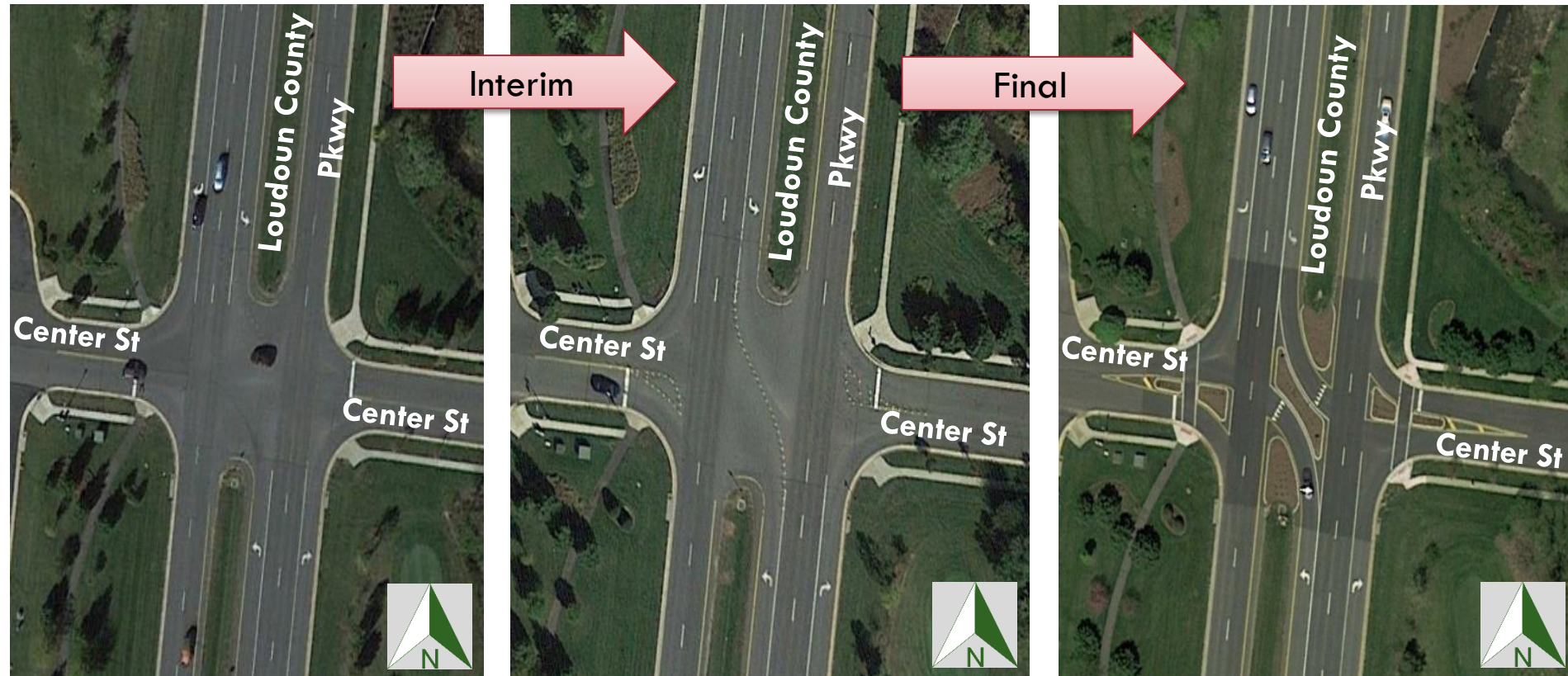


Right-in, Right-out, Left-in: Peak Hour Queues

Difference in queue lengths = Approx. 2 vehicle lengths

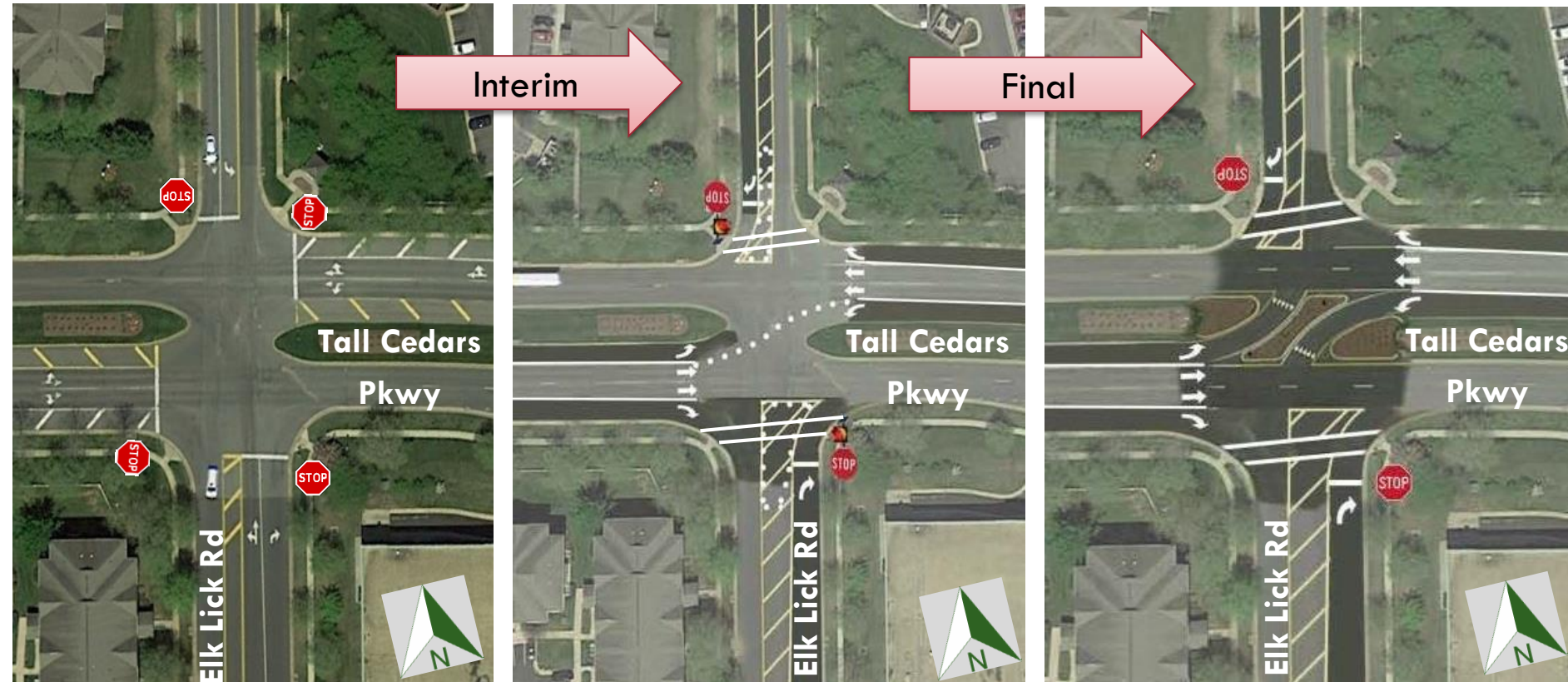


Loudoun County Parkway and Center Street



Similar Project Example

Tall Cedars Parkway and Elk Lick Road



Right-in, Right-out, Left-in

Next Steps:

- Design and implement interim intersection improvements
- Plan funding for long-term intersection improvements



Additional Questions?

- Following the meeting, please provide any additional written questions or feedback directly to:
 - Supervisor Matthew Letourneau (Matt.Letourneau@loudoun.gov)
 - Staff Aide: Tom Parker (Tom.Parker@loudoun.gov)

