

# GROVE AVENUE TRAFFIC CALMING ASSESSMENT



City of Petersburg, VA

March 19, 2019

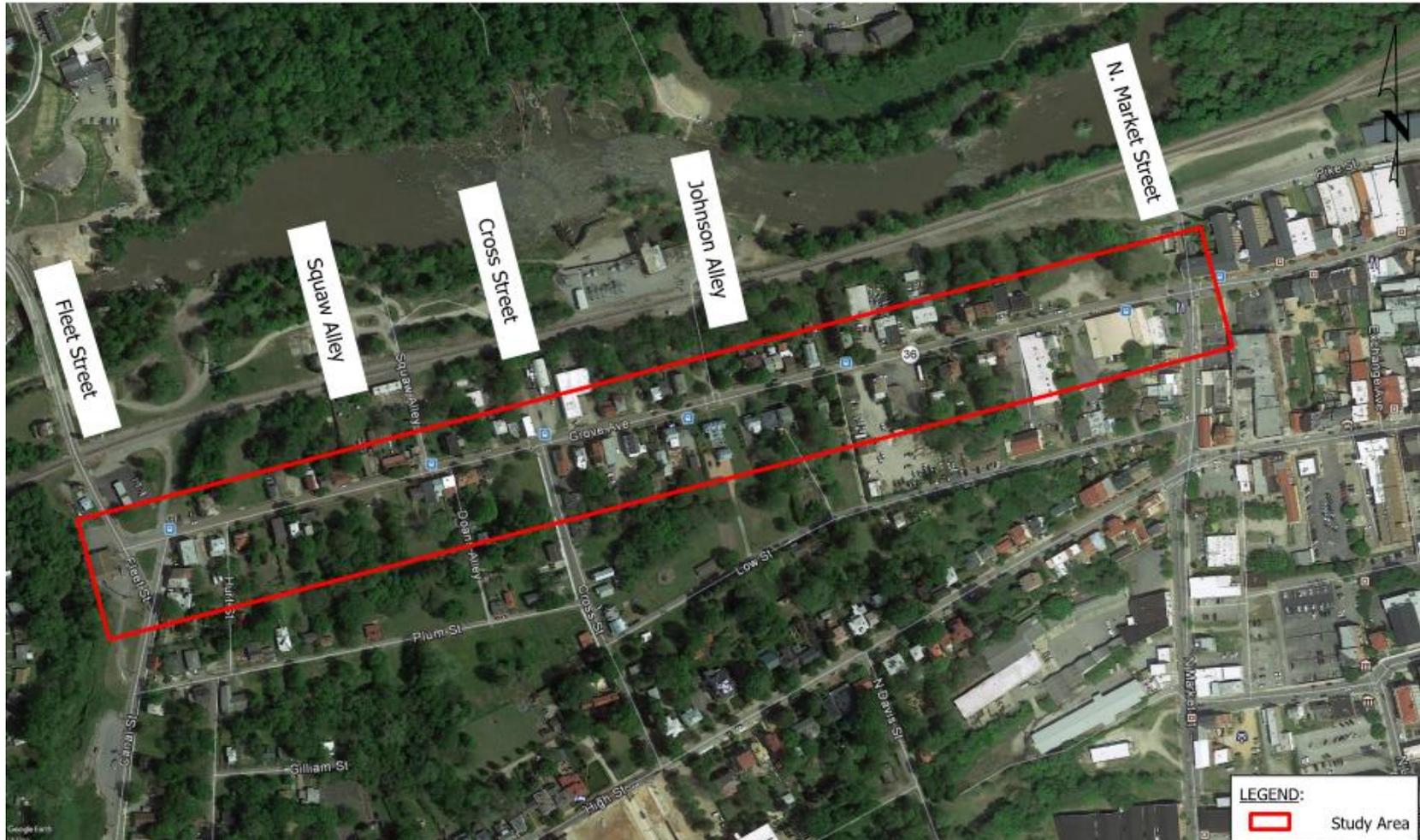
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# Scope of Work

- Site Visit
- Speed Data Collection
- Crash History Review
- Traffic Calming Assessment
- Stakeholder Meeting
- Technical Memo

# Grove Avenue Study Area



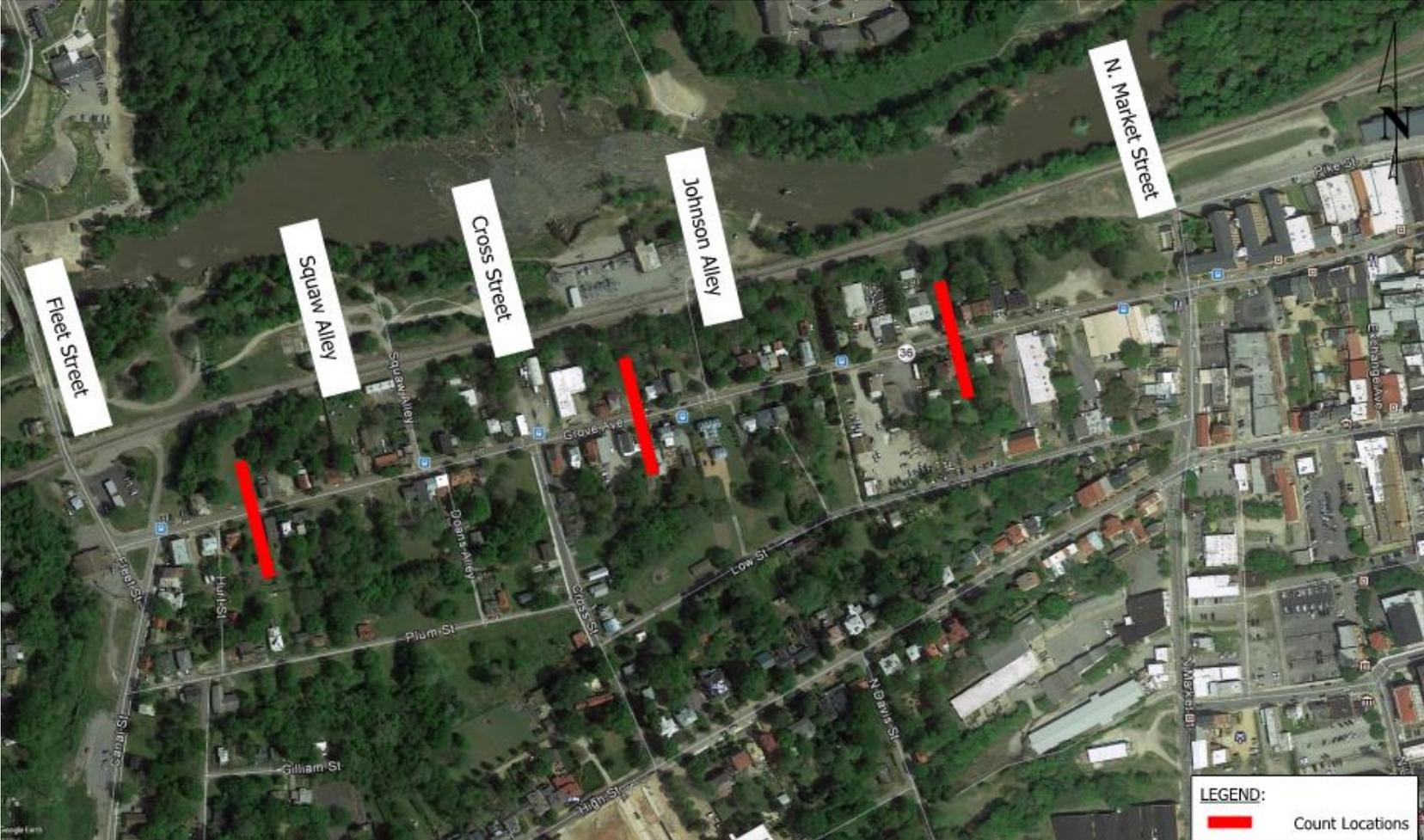
# Existing Street



# Pedestrian Amenities



# Data Collection Locations



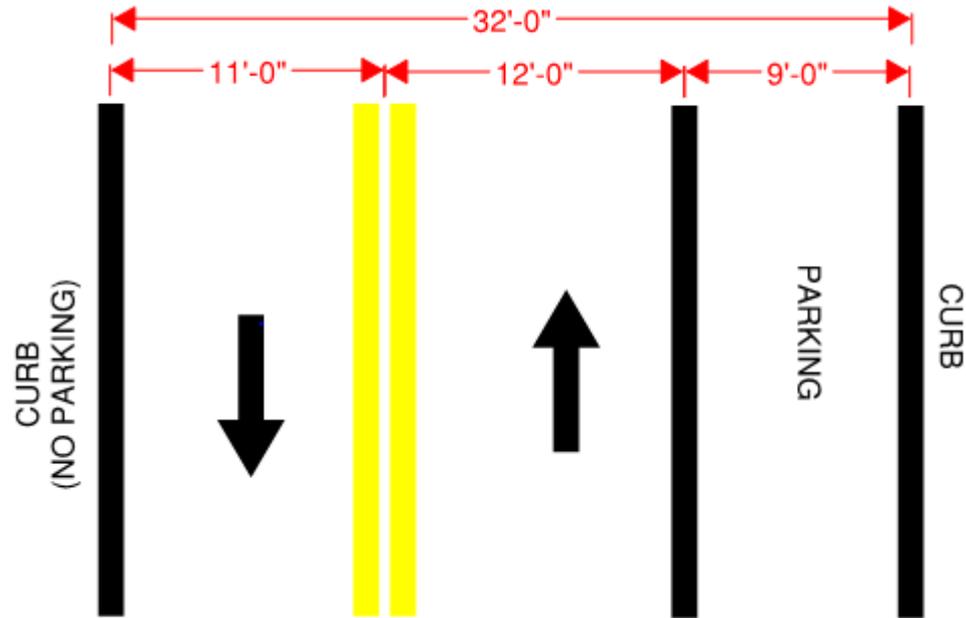
# Speed Data

Location	Market to Johnson		Johnson to Squaw		Squaw to Fleet	
	EB	WB	EB	WB	EB	WB
<b>85<sup>th</sup> Percentile Speed</b>	28 MPH	28 MPH	26 MPH	27 MPH	28 MPH	27 MPH
<b>95<sup>th</sup> Percentile Speed</b>	31 MPH	32 MPH	29 MPH	29 MPH	31 MPH	29 MPH
<b>Average Speed</b>	23 MPH	24 MPH	22 MPH	22 MPH	24 MPH	23 MPH
<b>Percent of Vehicles &gt;25 MPH</b>	34.6%	37.7%	22.6%	24.5%	36.5%	28.7%

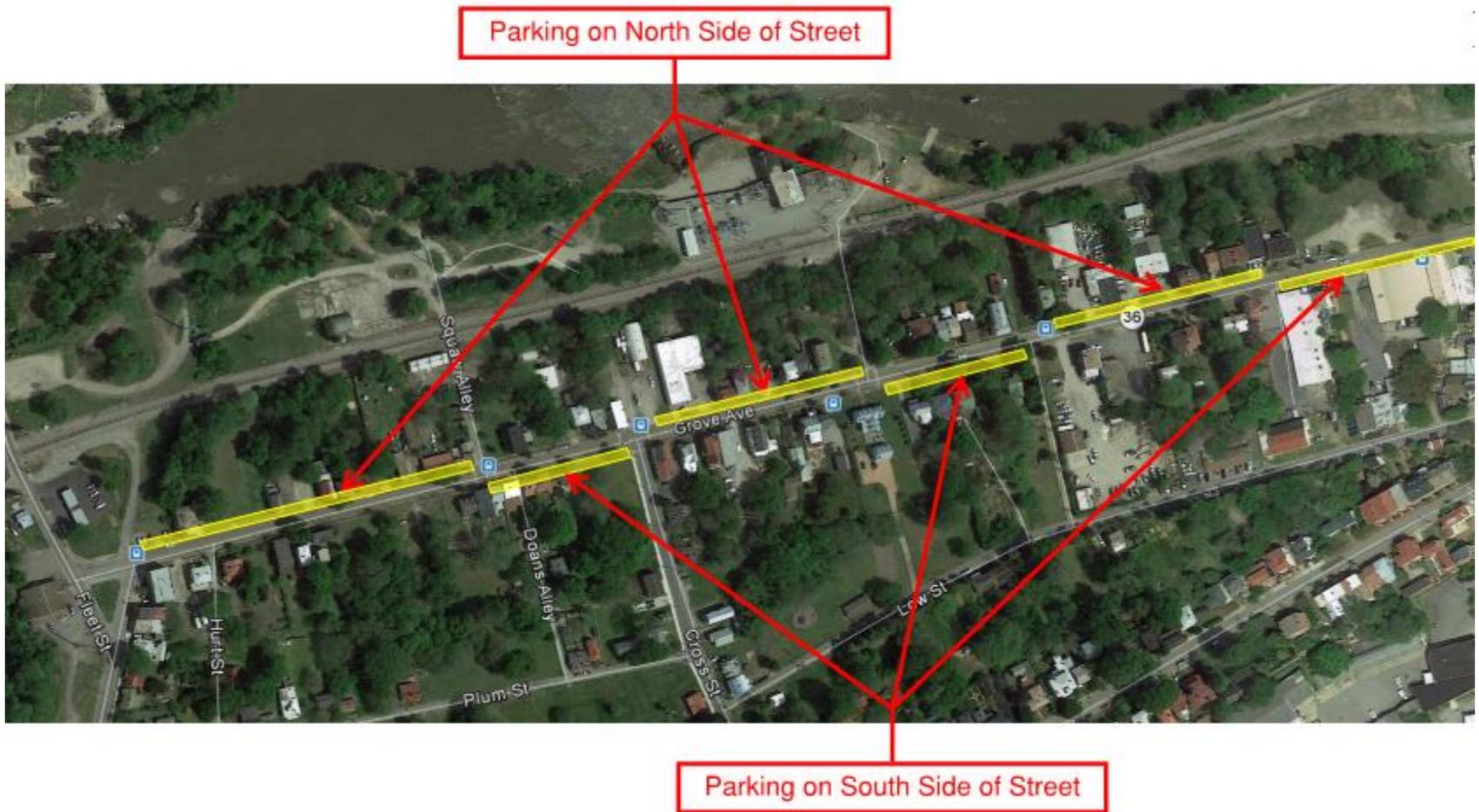
# Crash Data

Collision Type	2013	2014	2015	2016	2017	2018	Total	%
Rear End	0	0	1	0	0	1	2	12%
Angle	0	0	1	0	2	0	3	18%
Head On	0	1	0	0	0	0	1	6%
Sideswipe - Same Direction	0	0	1	1	0	2	4	24%
Sideswipe - Opposite Direction	0	1	0	0	0	0	1	6%
Fixed Object in Road	0	0	0	1	1	0	2	12%
Fixed Object - Off Road	0	0	3	0	0	1	4	24%
<b>Total Crashes</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>17</b>	<b>100%</b>

# Option 1 – Pavement Markings

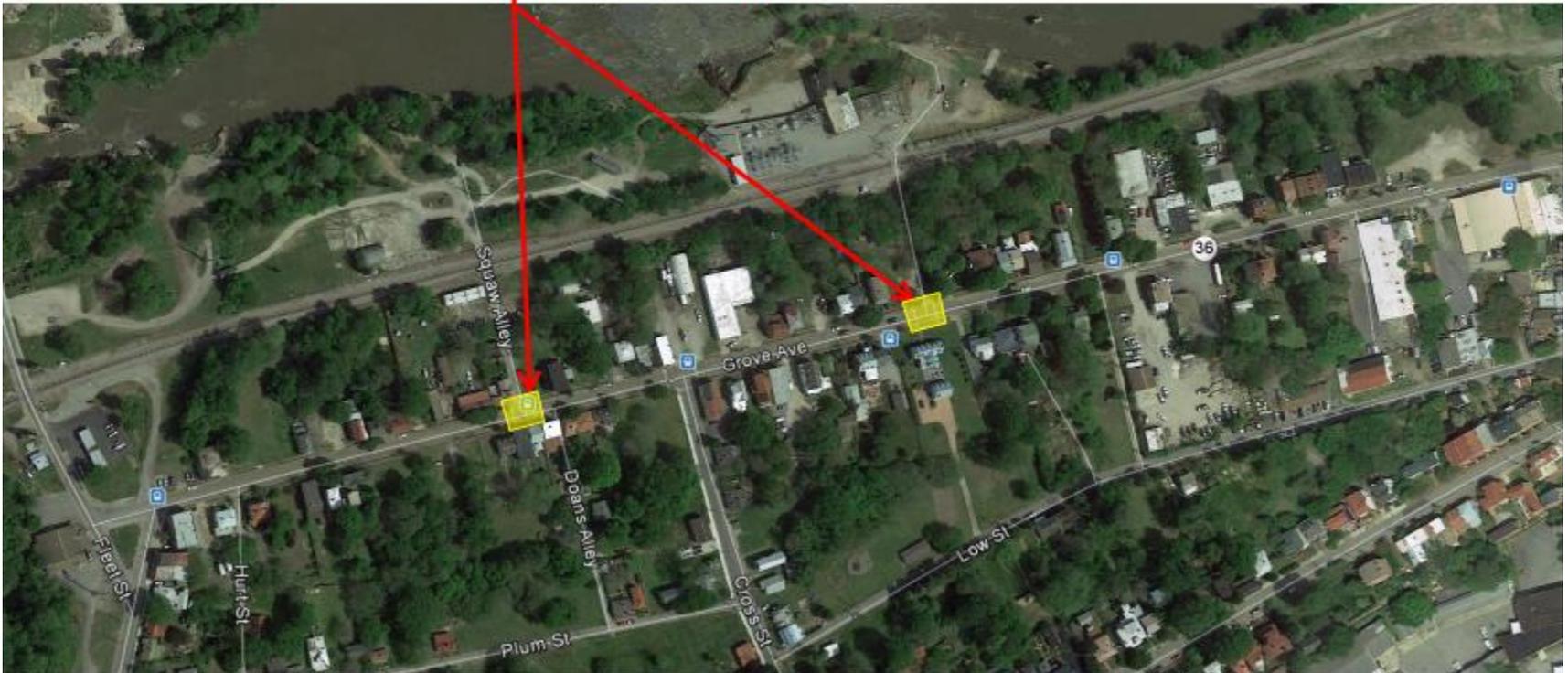


# Option 2 – Pavement Marking Chicane



# Option 3 – Multi-Way Stops

Install Multi-Way Stops at Squaw Alley and Johnson Alley



# Option 4 – Transverse Rumble Strips

Install Transverse Rumble Strips  
at Canal Street, Squaw Alley,  
Cross Street, Johnson Alley, and  
Market Street



# Option 5 – Improved Pedestrian Crosswalks

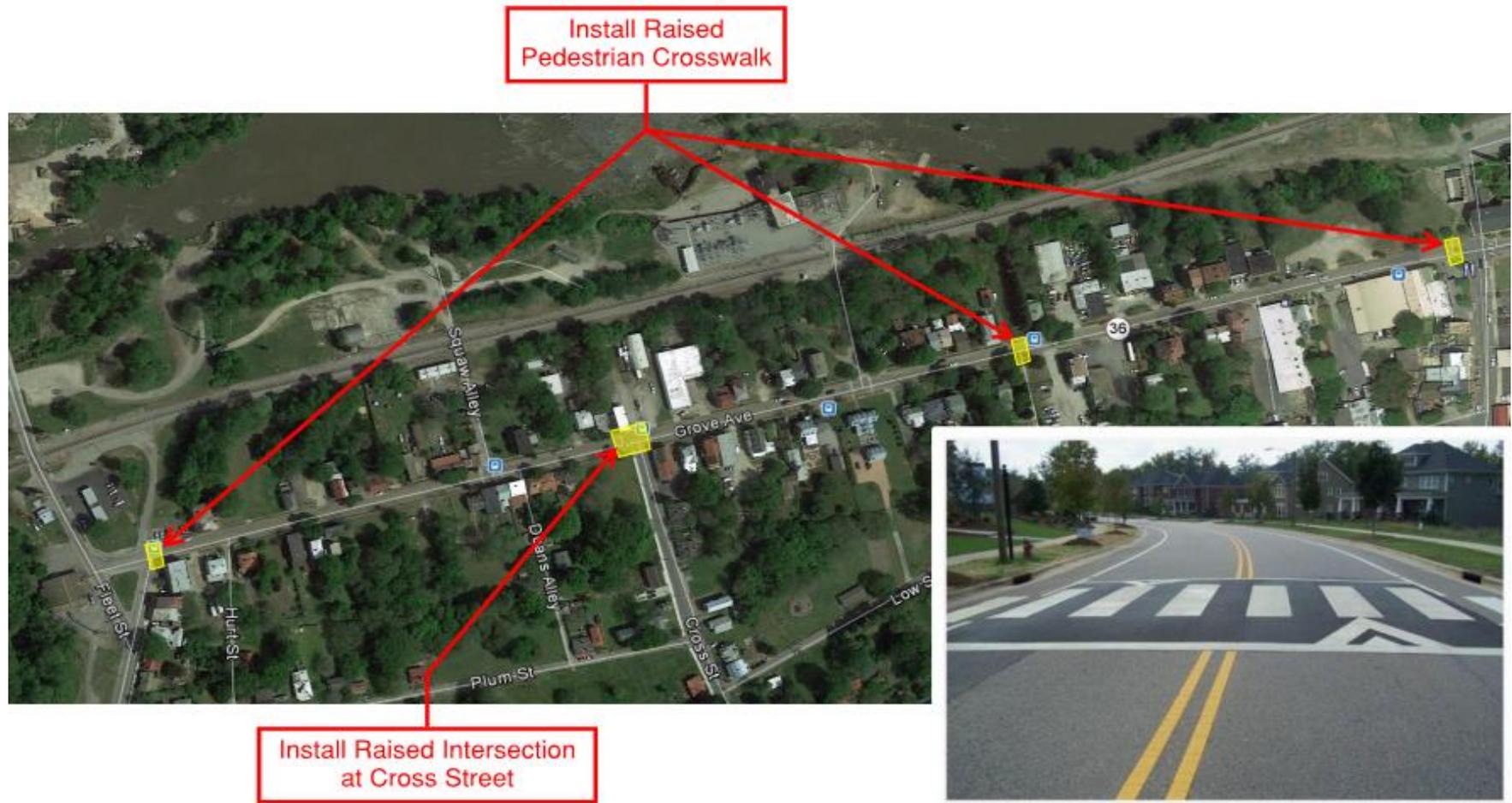
Reconstruct Existing Pedestrian Crosswalks and Curb Ramps, Install New Pavement Markings and Signage



Install New Pedestrian Crosswalk and Curb Ramps, Install New Pavement Markings and Signage



# Option 6 – Raised Crosswalks/Intersection



# Cost Estimates

Option	Description	Cost Estimate
1	Pavement Markings	\$7,000
2	Chicane	\$7,000
3	Multi-Way Stops	\$2,000
4	Transverse Rumble Strips	\$10,000
5	Improved Crosswalks	\$8,000 – \$45,000
6	Raised Crosswalks/Intersections	\$60,000 – \$95,000

# VDOT Traffic Calming Guidelines

- Minimum Requirements
  1. Within the state system of highways
  2. Neighborhood setting
  3. Posted speed limit of 25 MPH
- Speed Study
  - 85<sup>th</sup> percentile operating speed is 10 MPH or more above posted speed limit in one direction
- VDOT Review
  - Required for any changes to horizontal/vertical geometry

# Conclusions

- Speed Study
  - 85<sup>th</sup> percentile only 3 MPH above posted speed limit
- Crash Review
  - 25% of crashes attributed to speeding
  - 35% of crashes involved a driver under the influence
  - Most crashes are property damage only crashes
  - Crashes are a result vehicles leaving their travel path and hitting either a parked vehicle or opposing traffic.

# Short-Term Recommendation

- Option 1 – Pavement Markings
  - Directly addresses the crash history relative to sideswipe and parked vehicle crashes and nighttime crashes.
  - Reduces vehicle speeds
  - Non-intrusive
  - No VDOT input required
  - Approximately 2-3 weeks for completion

# Long-Term Recommendation

- Perform speed study and crash history review at least one (1) year from date of Option 1 installation.
- Option 6 – Raised Pedestrian Crosswalks
  - Provides speed reduction only
  - Does not address crash history along the corridor
  - Intrusive
  - VDOT approval and design input required
  - Approximately 7-9 months for completion

# Questions?