

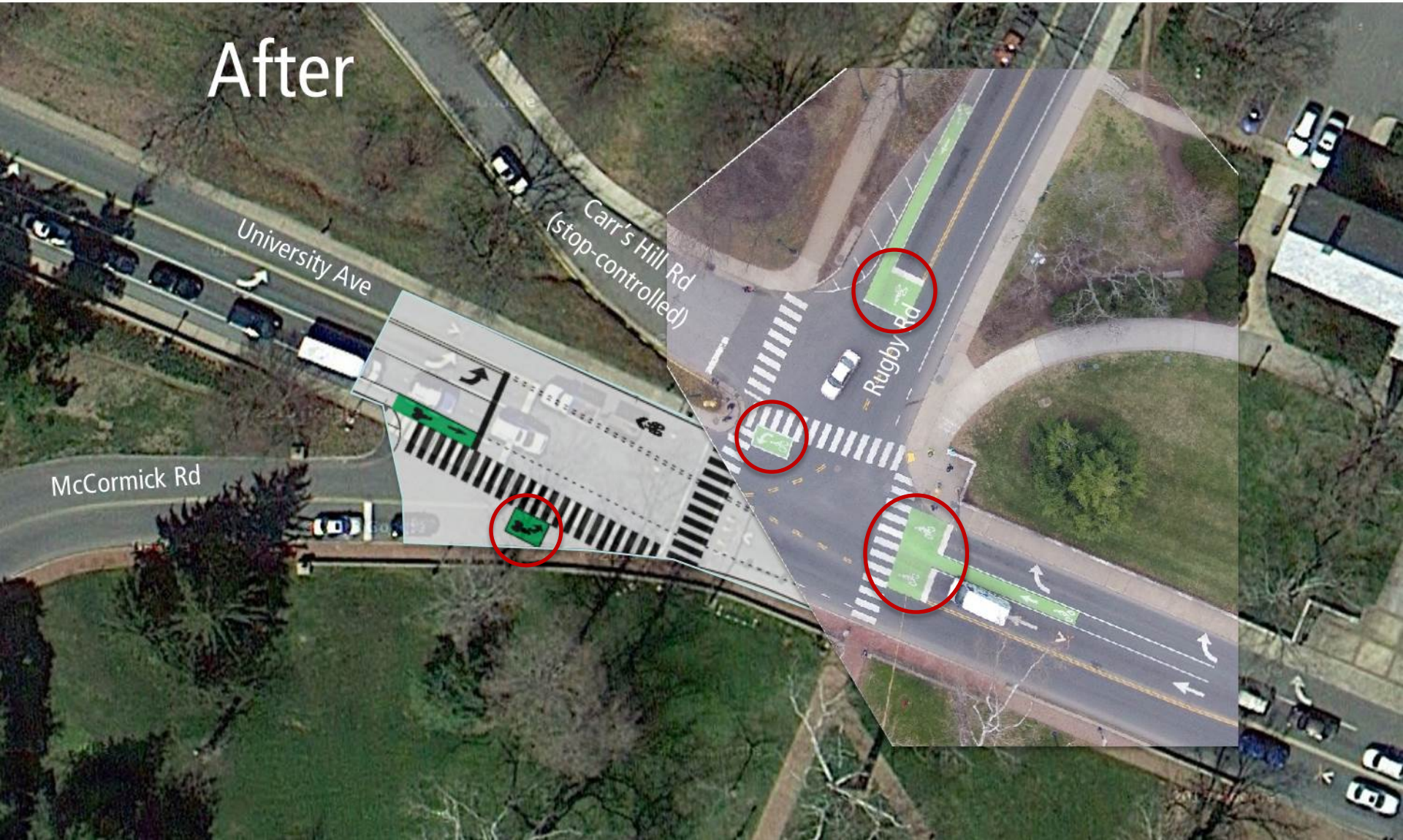


The Effects of Innovative Pavement
Markings to Facilitate Bicycle Travel

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After

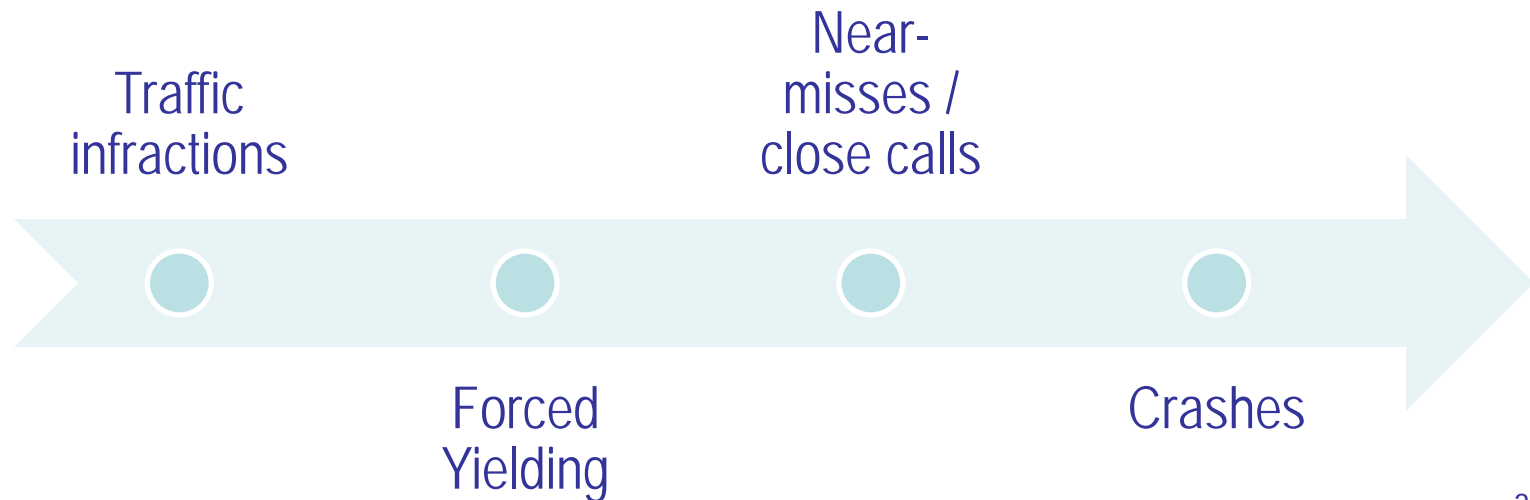


Map data © 2016 Google. Overlay images courtesy of Chris Gist (U.Va. Scholars' Lab) and City of Charlottesville.



Methods and Data

- Manual observation and classification based on video footage
- Classify road user interactions by severity level
- Compare “before” and “after” results



Initial findings: Rates of traffic infractions



 Unchanged/
inconclusive

 ↓ / unchanged



Other

 ↑, -, ↑, ↑

 ↓, -, ↑, ↑



A photograph of a busy street intersection. In the foreground, a group of pedestrians, many wearing backpacks, are waiting at a crosswalk. In the middle ground, several cars, including a red hatchback, are stopped at a traffic light. In the background, more pedestrians and bicycles are visible, along with trees and a clear blue sky. The scene is brightly lit, suggesting a sunny day.

Per 🚗 : ↑

Per 🚲 : ↑

Initial findings: Road user interactions

Initial findings: Bicyclists' use of markings



Bike box 1: Evenly split
Bike box 2: More proper use than improper use

Turn box 1: Split
Turn box 2: Very low usage dwarfed by improper use



Implications for practice



- Pairing automated counts with manually reviewed observations can be problematic
- Consistency in methods
 - Defining conflicts
 - Training video reviewers (to overcome interrater reliability issues)
- Is observation enough? (Is it preferred?)