

# SR 2108-A12 – Forbes Avenue Betterment and SR 2108-A13 – Forbes Avenue Corridor Improvements



**Carnegie Mellon University**



City of Pittsburgh



August 31, 2016



# Agenda

- Welcome
  - Ralph Horgan, CMU
- Overview of Projects
  - Dan Cessna, PENNDOT
- Forbes Corridor Overview
  - Eric C. Meyer, WRA
- Campus Projects
  - Bob Reppe, CMU
- Forbes: S Craig to Beeler
  - Eric C. Meyer, WRA
  - Bob Reppe, CMU
- Q and A

# Introductions

- Project Team
  - PENNDOT
    - H. Daniel Cessna, PE; District Executive
    - Cheryl Moon-Sirianni, PE; ADE – Design
    - John J. Zelesnak, PE; Project Manager
    - Todd Kravits, PE; Traffic
    - Mark Young; Environmental
  - WRA
    - Eric C. Meyer, PE; Project Manager
    - Daniel Fritz, PE; Senior Project Engineer
  - CMU
    - Ralph Horgan, Associate Vice President
    - Bob Reppe; Director of Design

## Project Description

### SR 2108/SR 2308-A12 – Forbes Avenue Betterment

- A betterment project from the Birmingham Bridge to Beeler Street – Resurfacing (mill/overlay) of corridor with traffic signal upgrades (two new traffic signals) utilizing Federal and State funds. Additional work is being considered based on the Road Safety Audit and Traffic Study performed.

### SR 2108-A13 - Forbes Avenue Corridor Improvements

- Complete replacement of signals at South Craig Street, Cyert Drive (relocated from Hamburg Hall), Morewood Avenue, Beeler Street and Margaret Morrison Street, with full pedestrian and ADA compliant upgrades. Utilizes Federal Congestion Management funding, with CMU providing the local match for the Federal dollars.

# Forbes Avenue – Continued Improvements



*Forbes and Oakland - Before*



*Forbes and Oakland - After*



*Forbes and Atwood - Before*



*Forbes and Atwood - After*

# Forbes Avenue – Continued Improvements

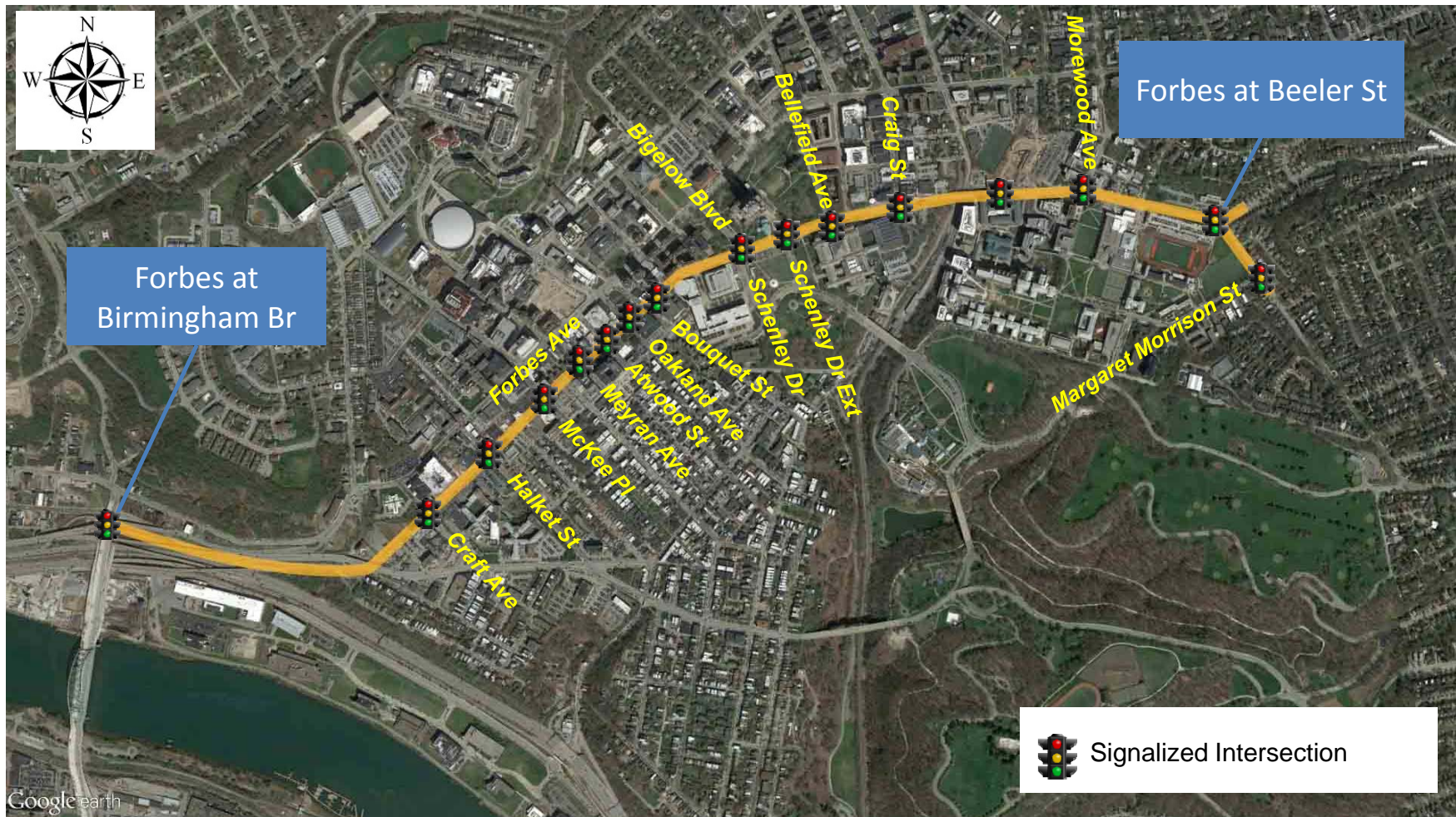
*\*clockwise*

- Pedestrian countdown signals
- Curb extensions
- ADA compliant handicap curb ramps
- Crosswalk delineations



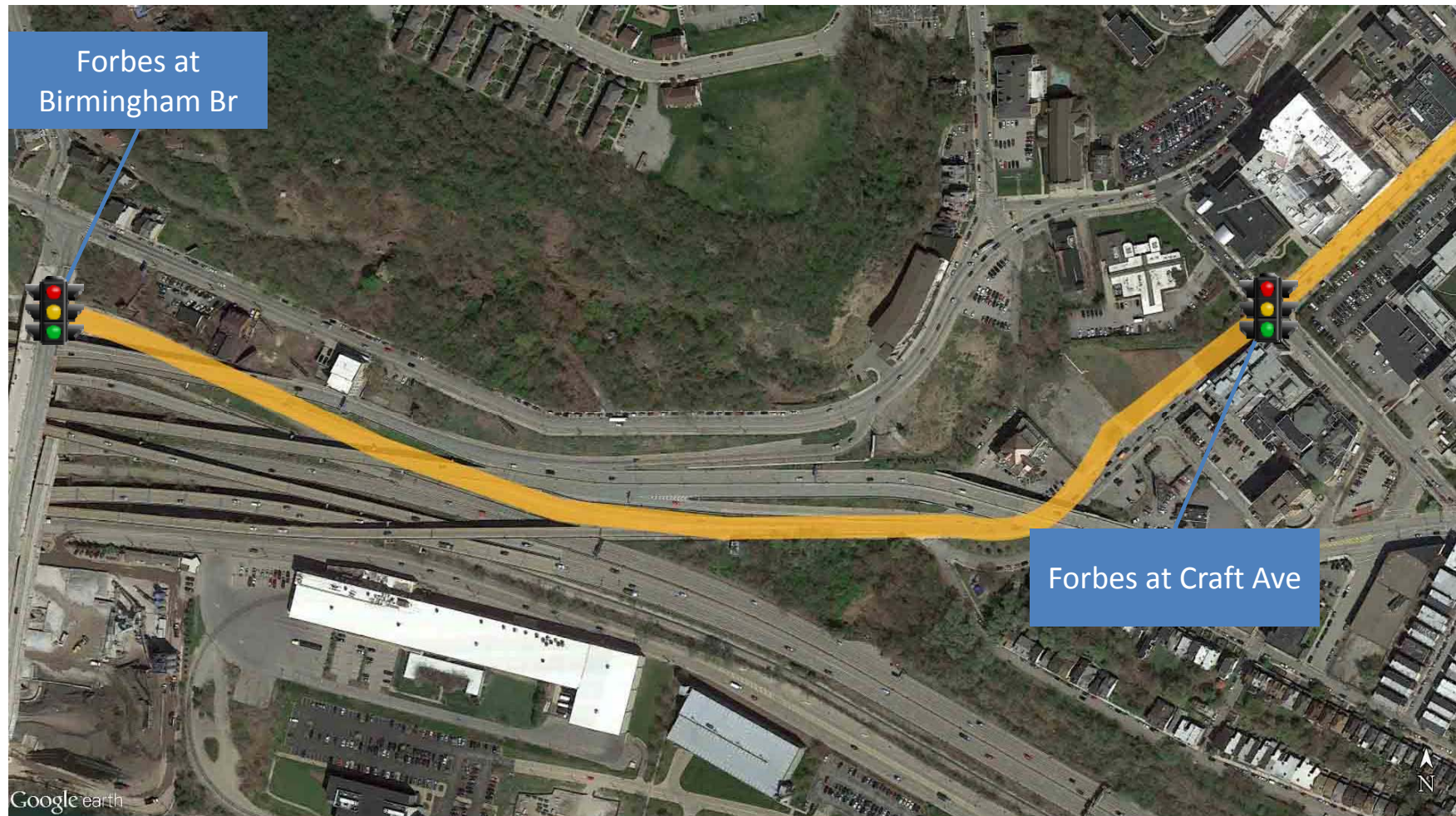


# Project Overview – SR 2108-A12 Forbes Avenue Betterment





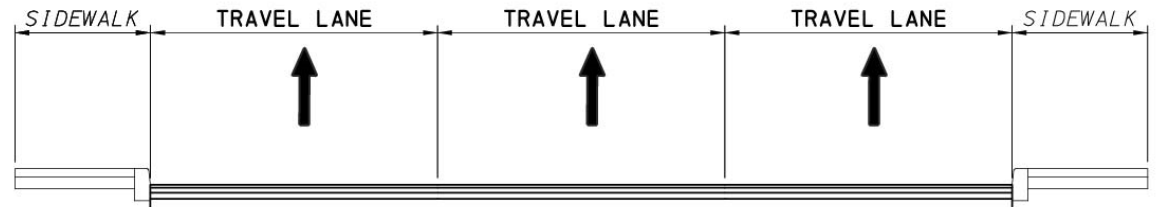
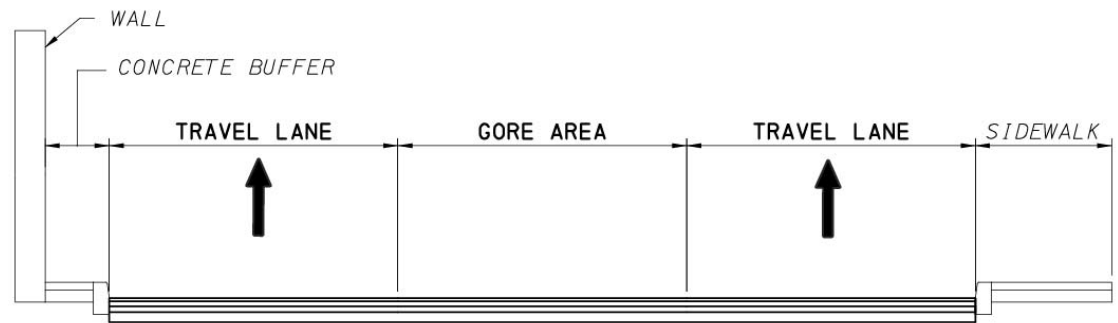
# Birmingham to Craft Avenue





# Birmingham to Craft Avenue

## Typical Section



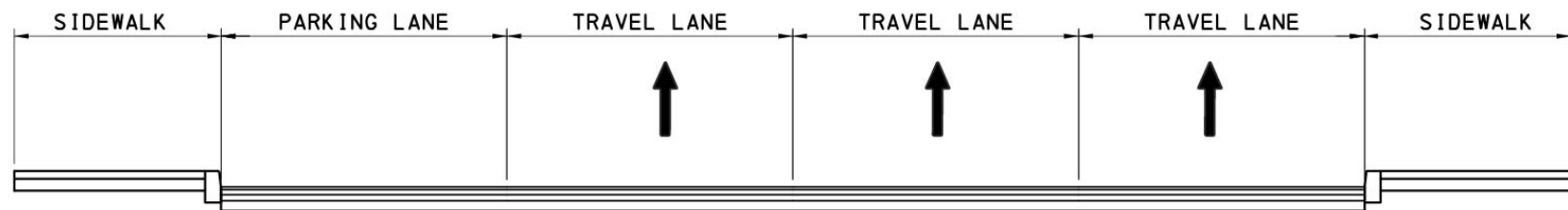
# Craft Avenue to Bigelow Blvd





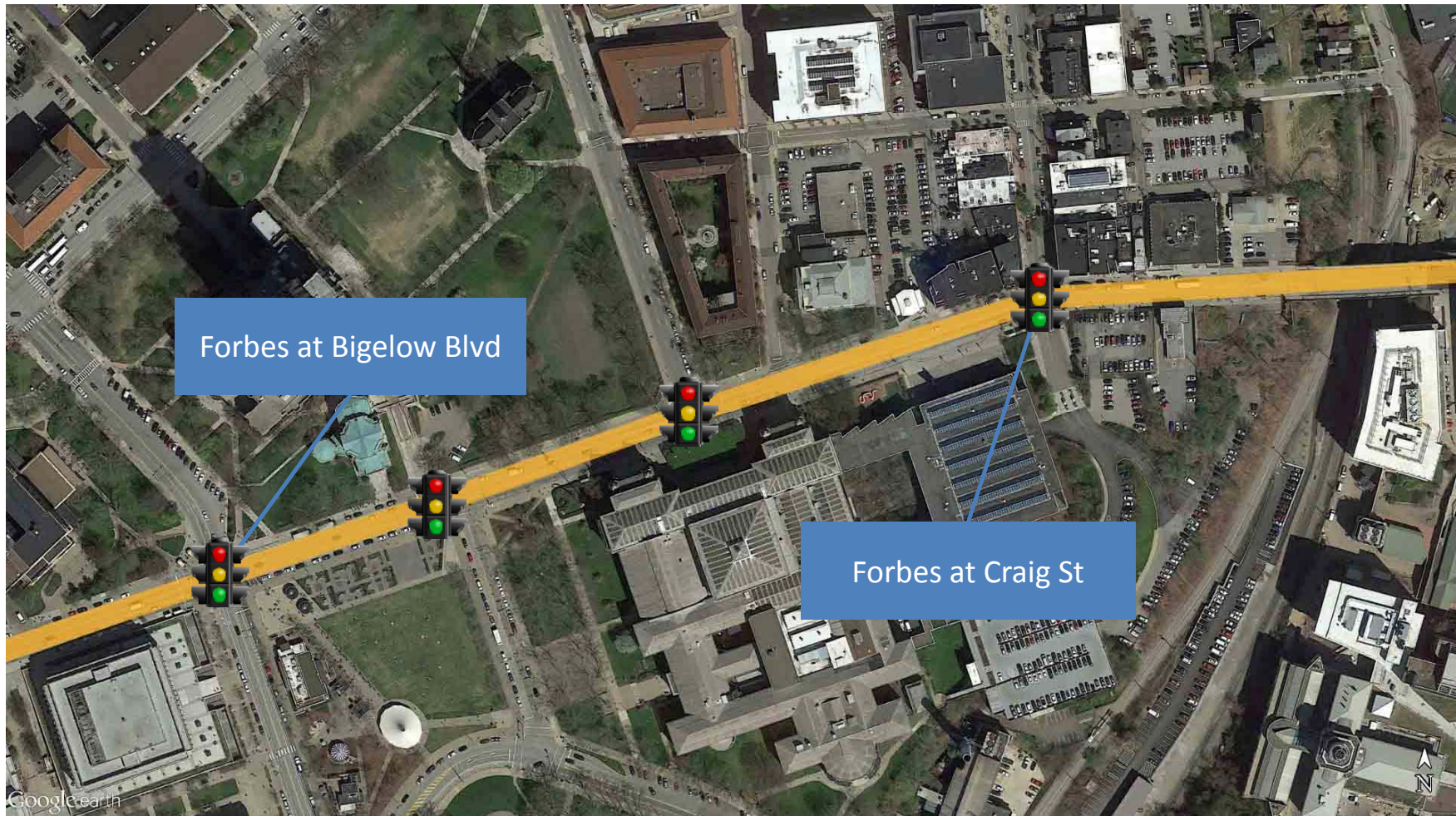
# Craft Avenue to Bigelow Blvd

## Typical Section



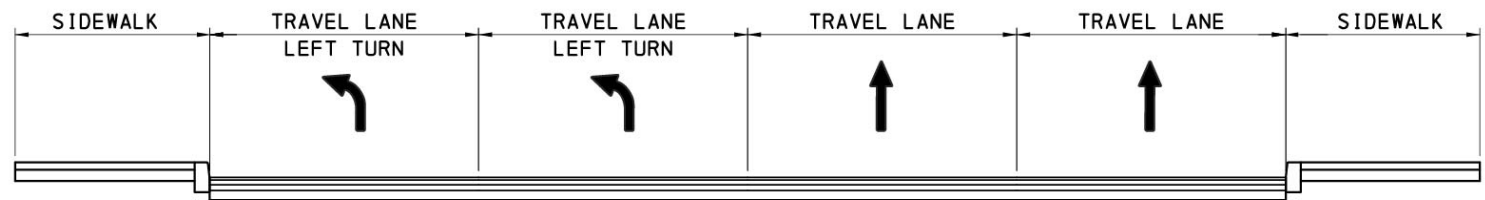
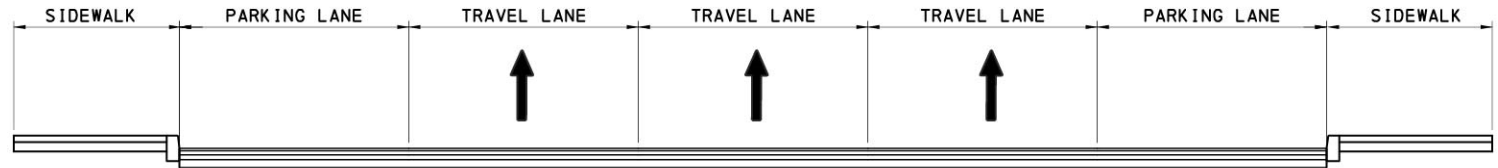


# Bigelow Blvd to Craig Street



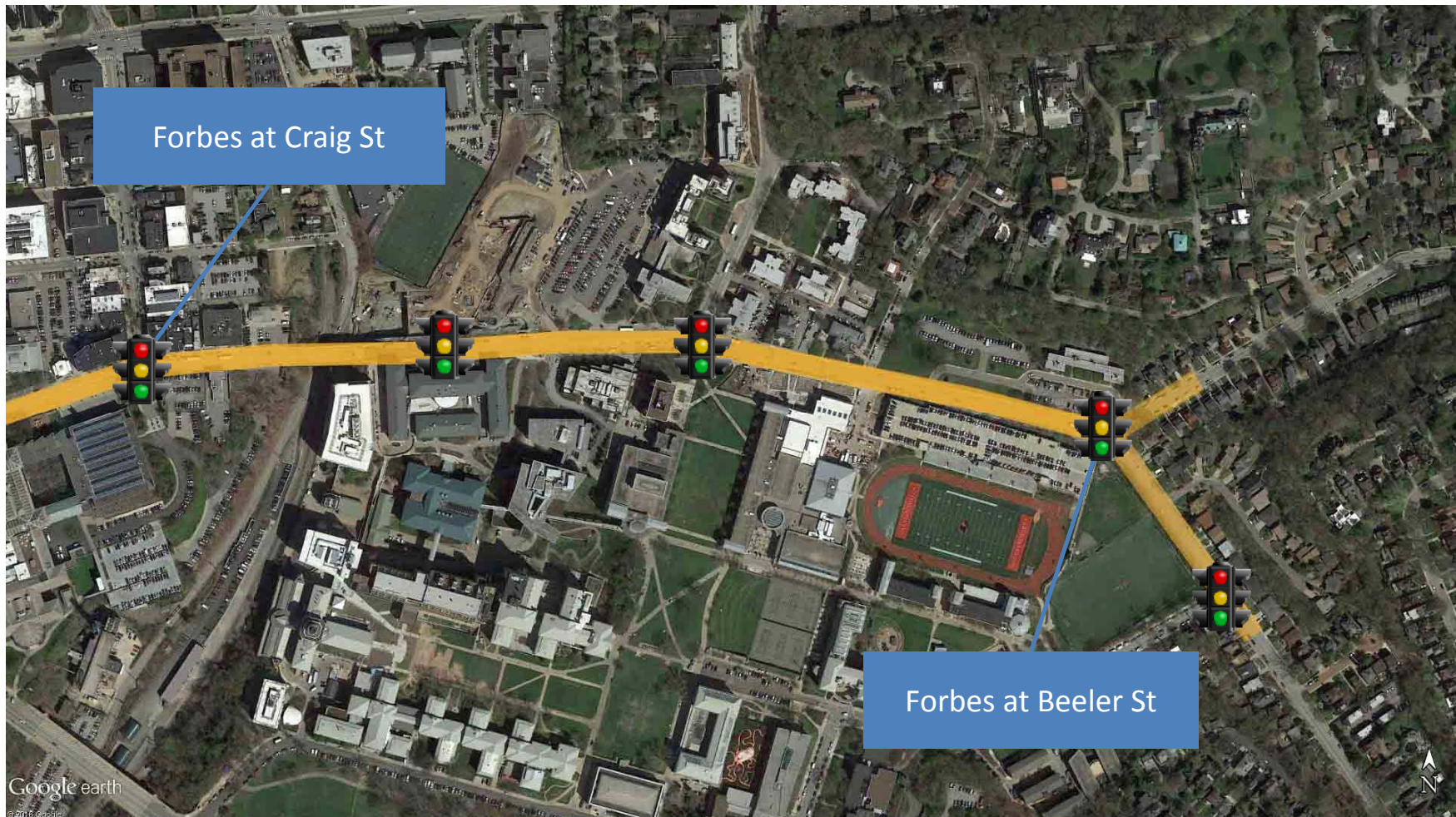
# Bigelow Blvd to Craig Street

## Typical Section





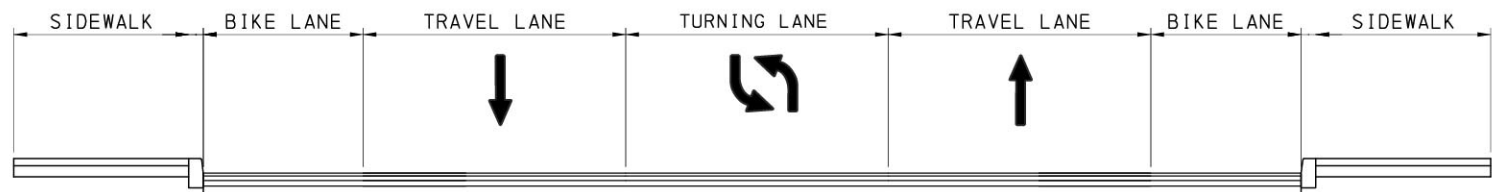
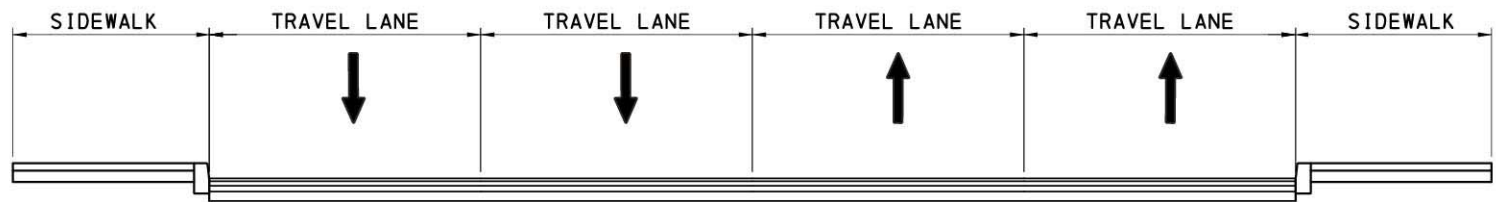
# Craig Street to Beeler Street



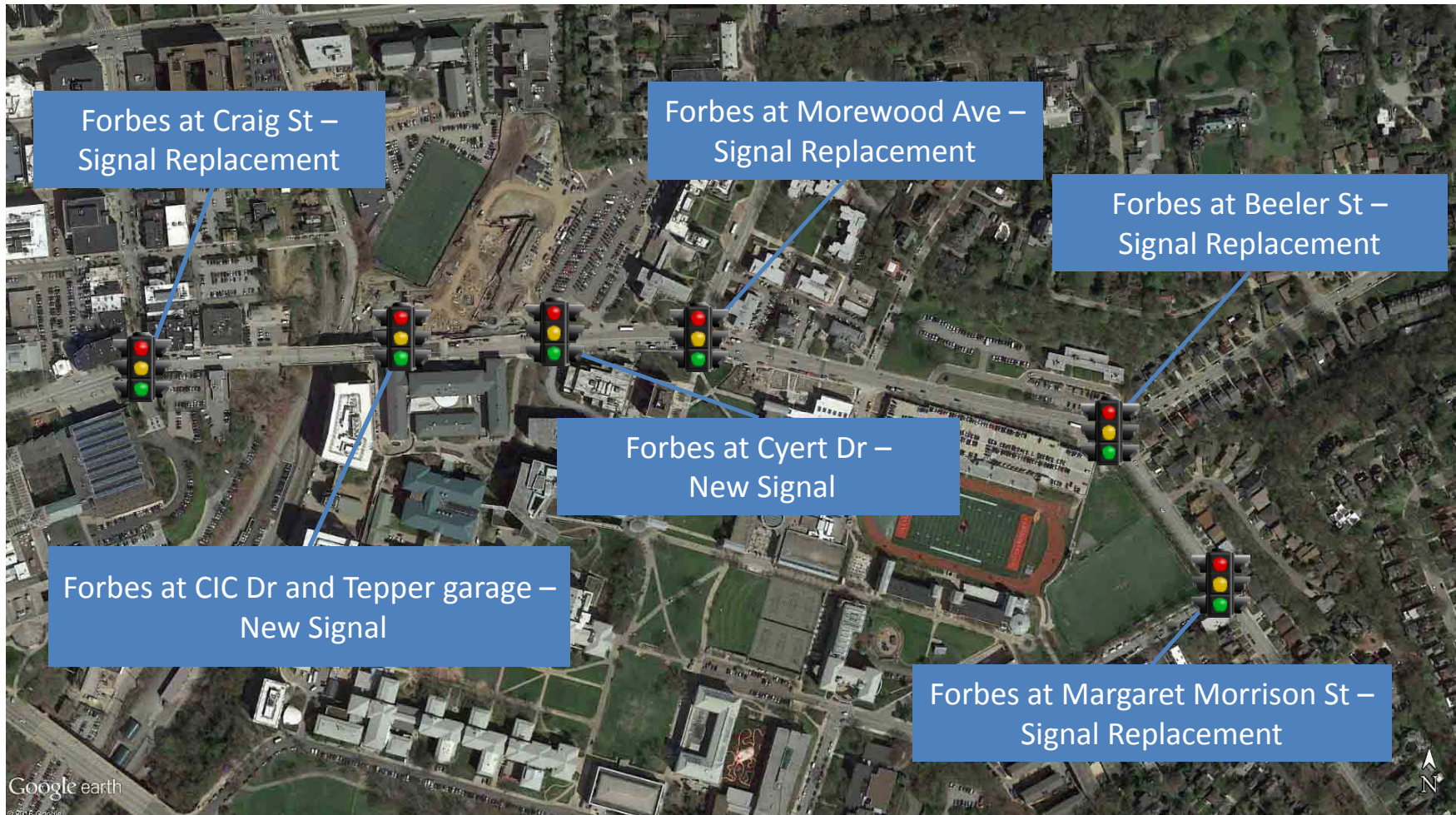


# Craig Street to Beeler Street

## Typical Section



# Project Overview – SR 2108-A13 Forbes Avenue Corridor Improvements





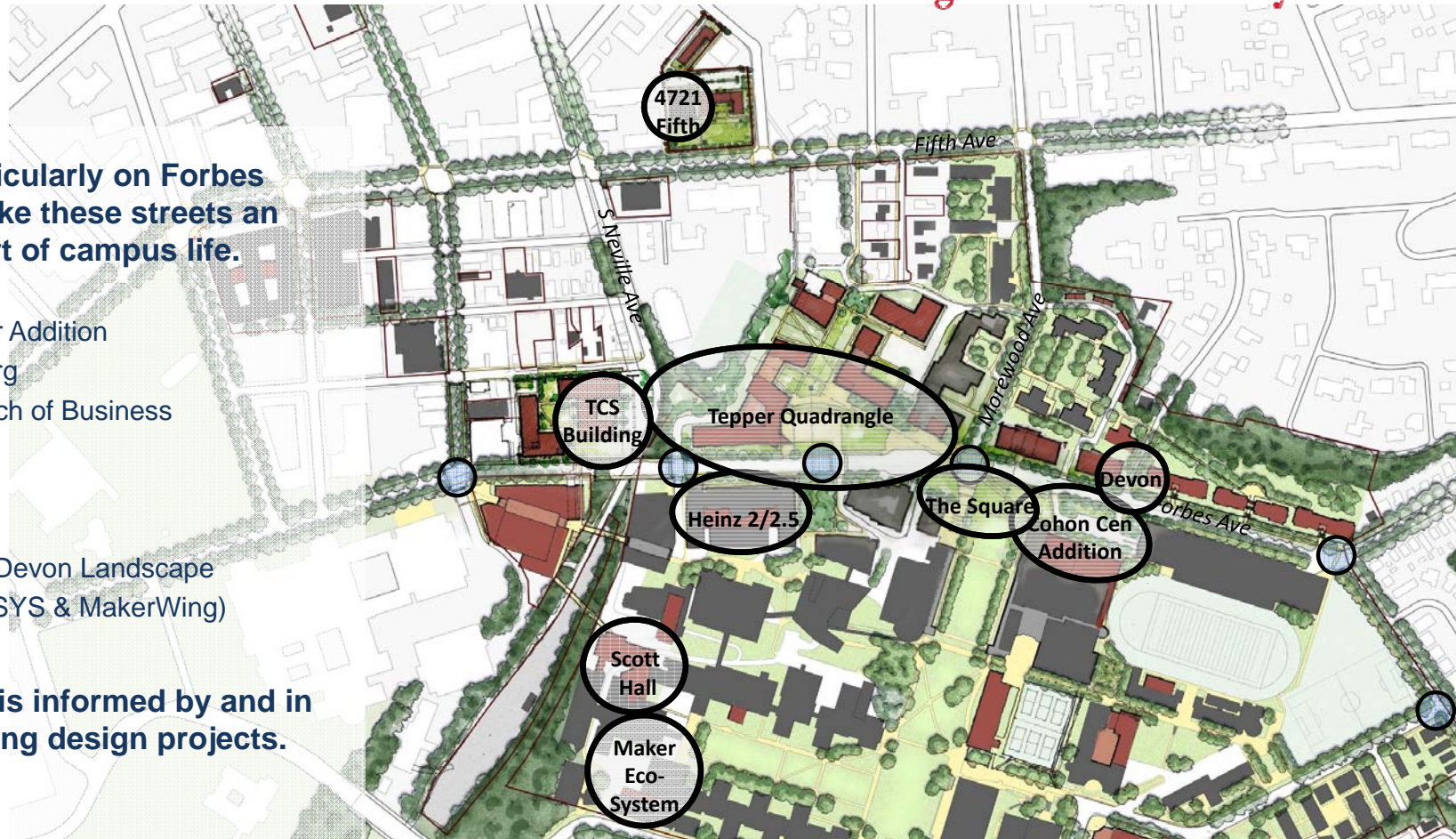
# Upcoming Projects

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Upcoming projects, particularly on Forbes Avenue, are going to make these streets an even more important part of campus life.

- Scott Hall
- Cohon University Center Addition
- Heinz 2 & 2.5 in Hamburg
- Tepper Quad / Tepper Sch of Business
- TCS Building
- The Square
- 4721 Fifth
- Forbes Intersections & Devon Landscape
- Maker Eco-System (ANSYS & MakerWing)

Streetscape Vision Plan is informed by and in sync with multiple ongoing design projects.





# Corridor Improvements

## Cohon University Center

Carnegie Mellon University

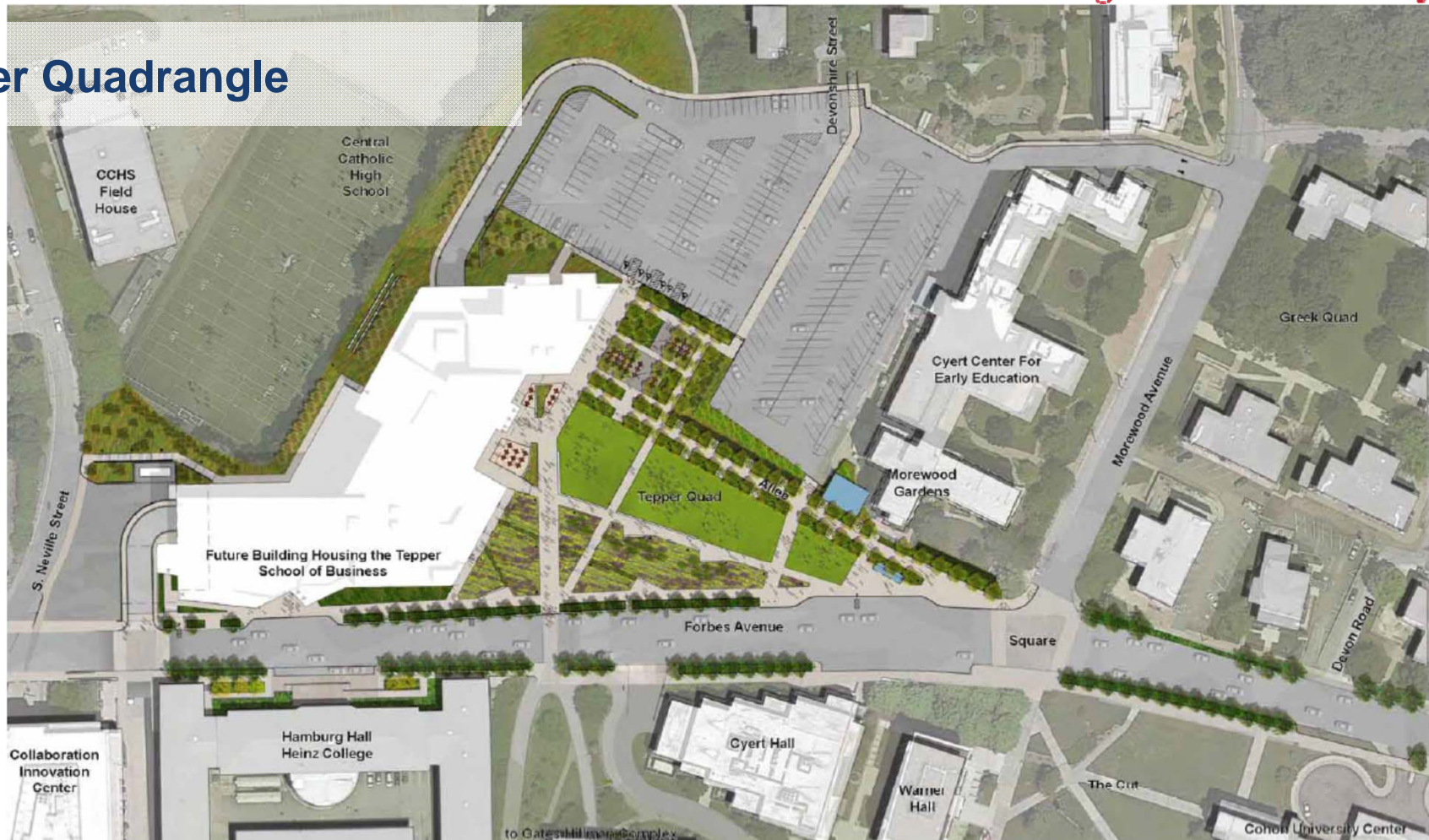




# Corridor Improvements

Carnegie Mellon University

## Tepper Quadrangle



# Corridor Improvements

Carnegie Mellon University

## Tepper Quadrangle





# Corridor Improvements

Heinz College in Hamburg



Carnegie Mellon University



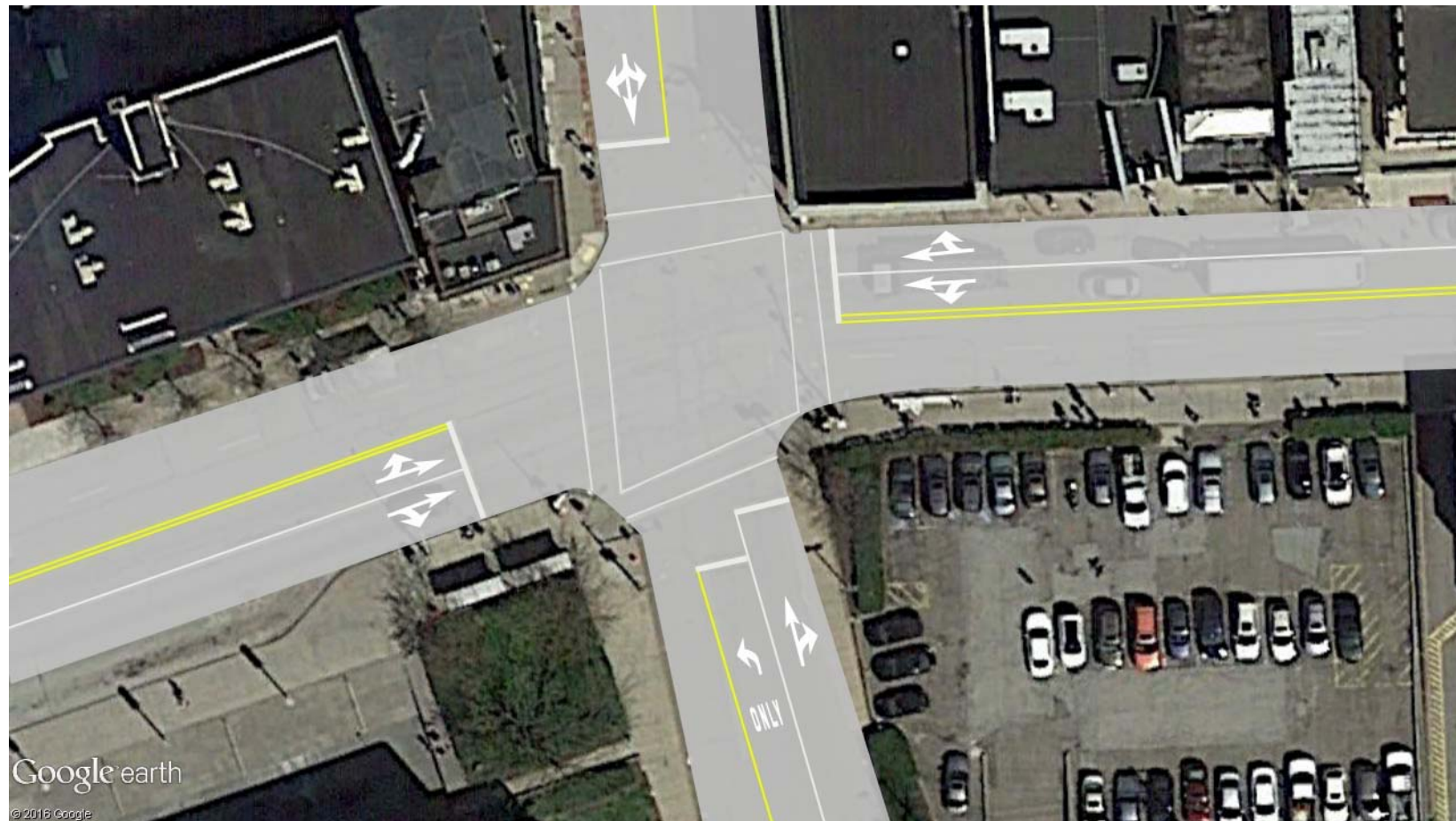
## Traffic Volumes

- Forbes Ave – Prior to Craft Avenue
  - Approximately 22,300 Veh/Day
- Forbes Ave – Craft Avenue to Bellefield Avenue
  - Approximately 16,000 Veh./Day
- Forbes Ave – Bellefield Avenue to Beeler Street
  - Approximately 12,700 Veh./Day (both directions)



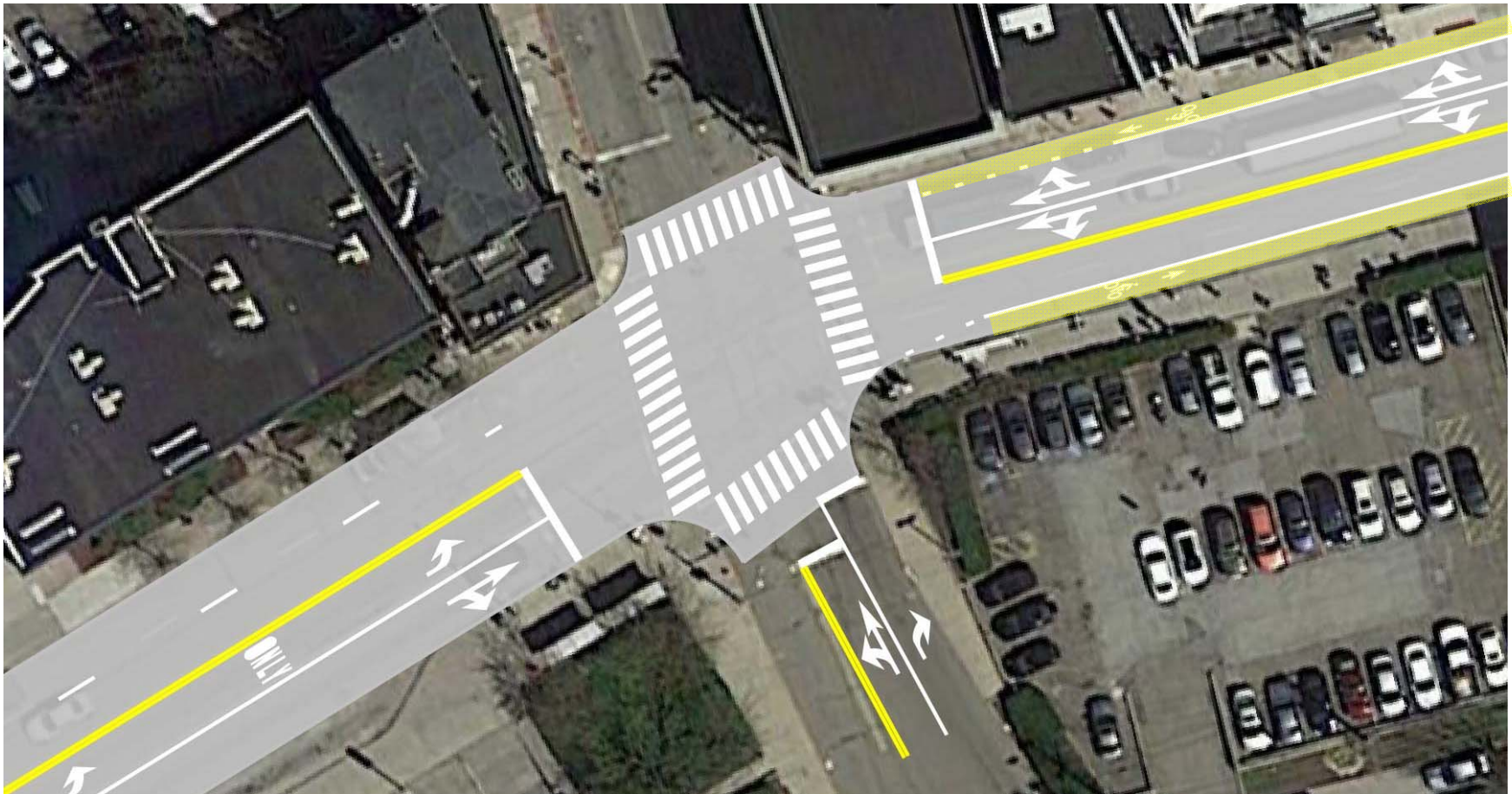
# Existing Intersection Configurations

Forbes Avenue at Craig Street



# Proposed Intersection Configurations

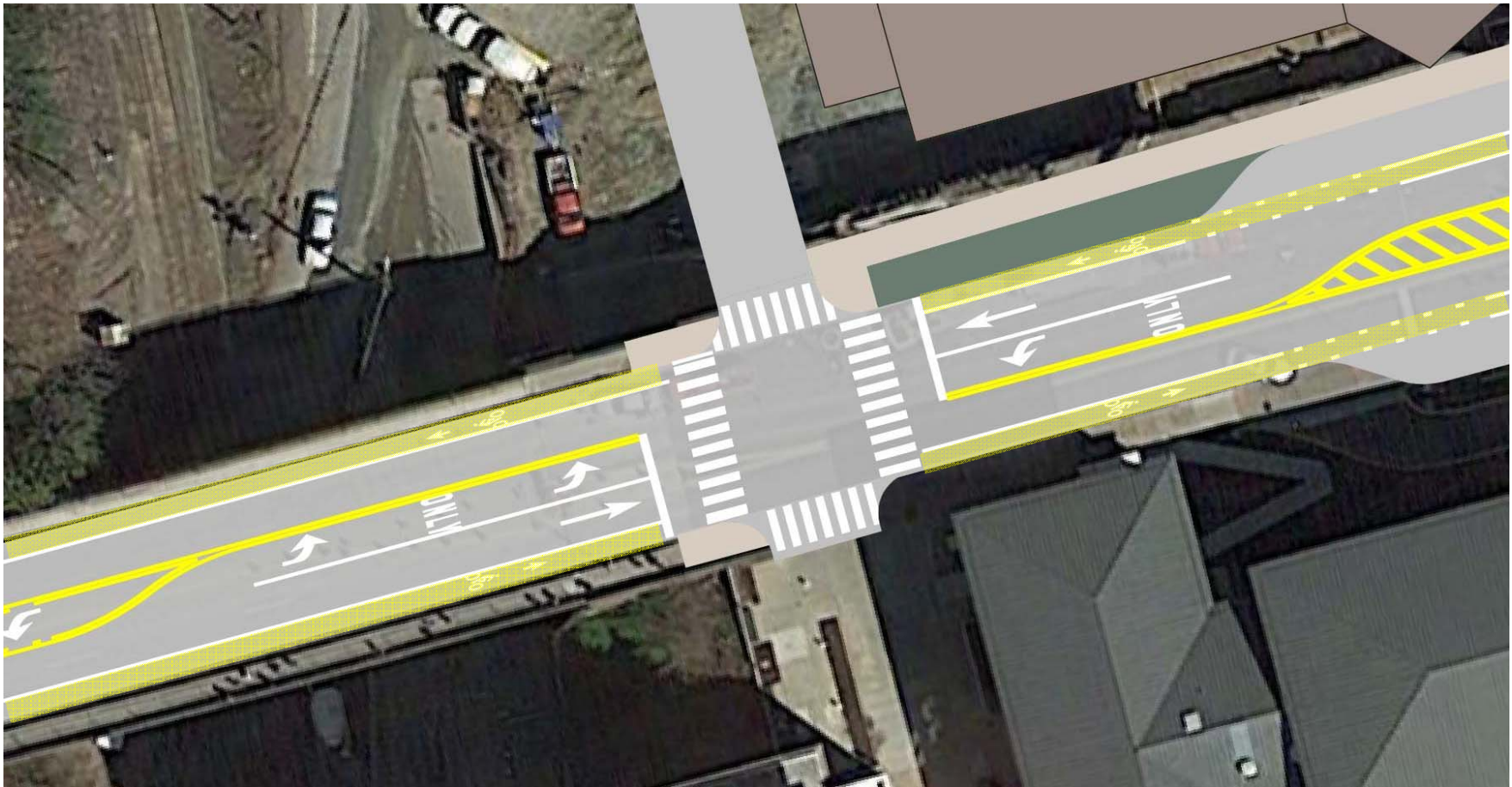
Forbes Avenue at Craig Street





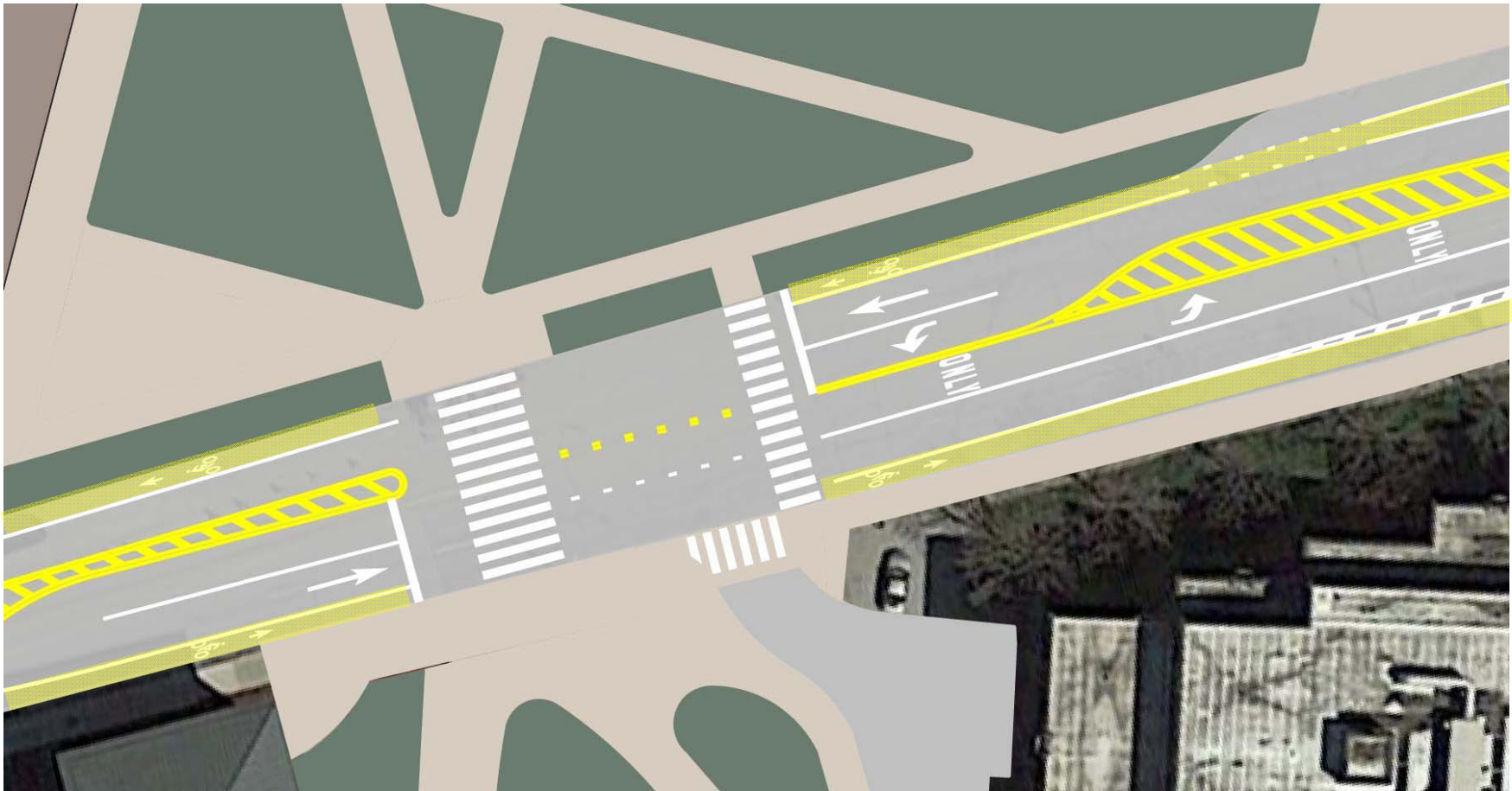
# Proposed Intersection Configurations

Forbes Avenue at CIC Drive and Tepper Garage Ramp



# Proposed Intersection Configurations

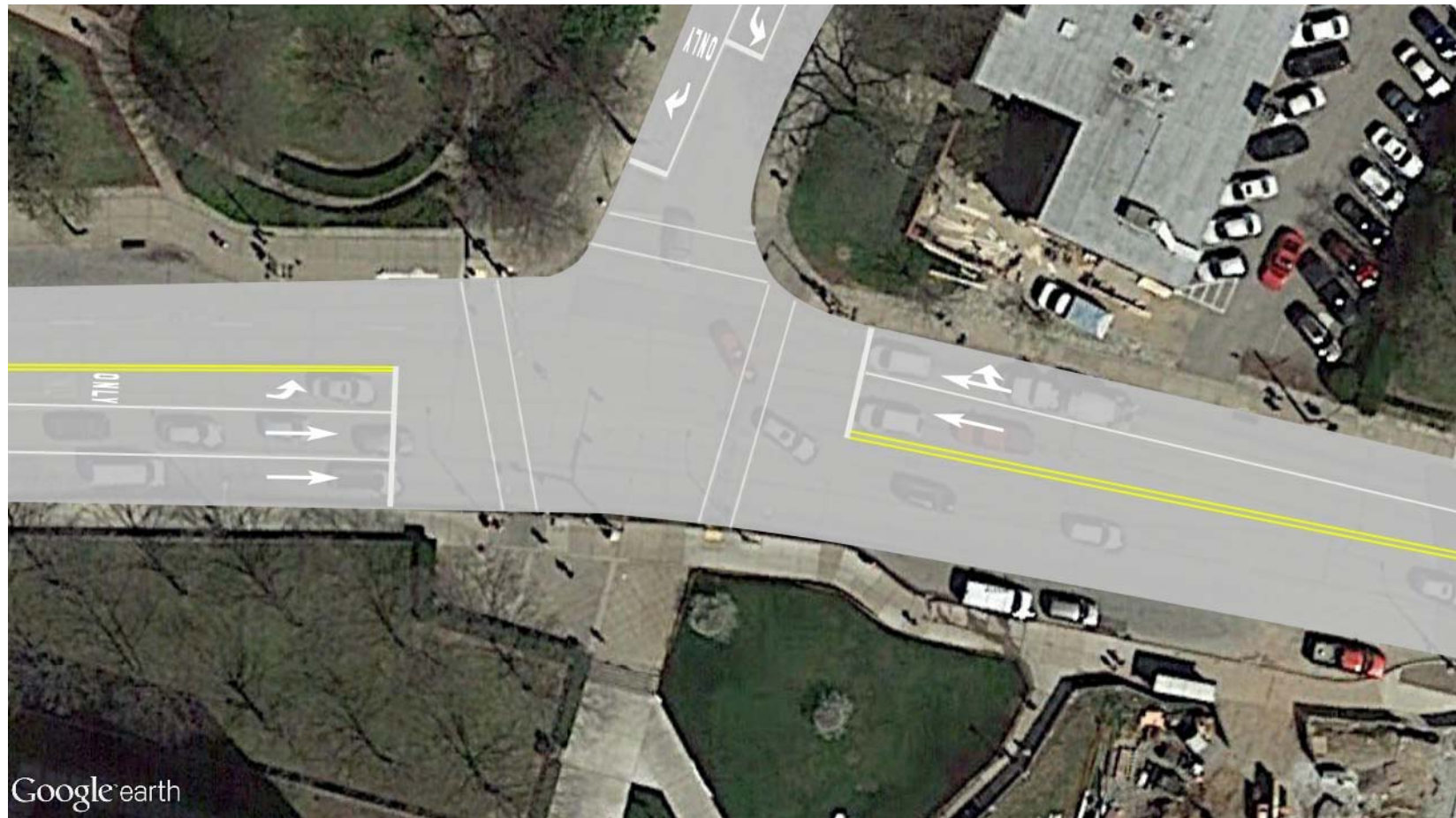
Forbes Avenue at Cyert Drive





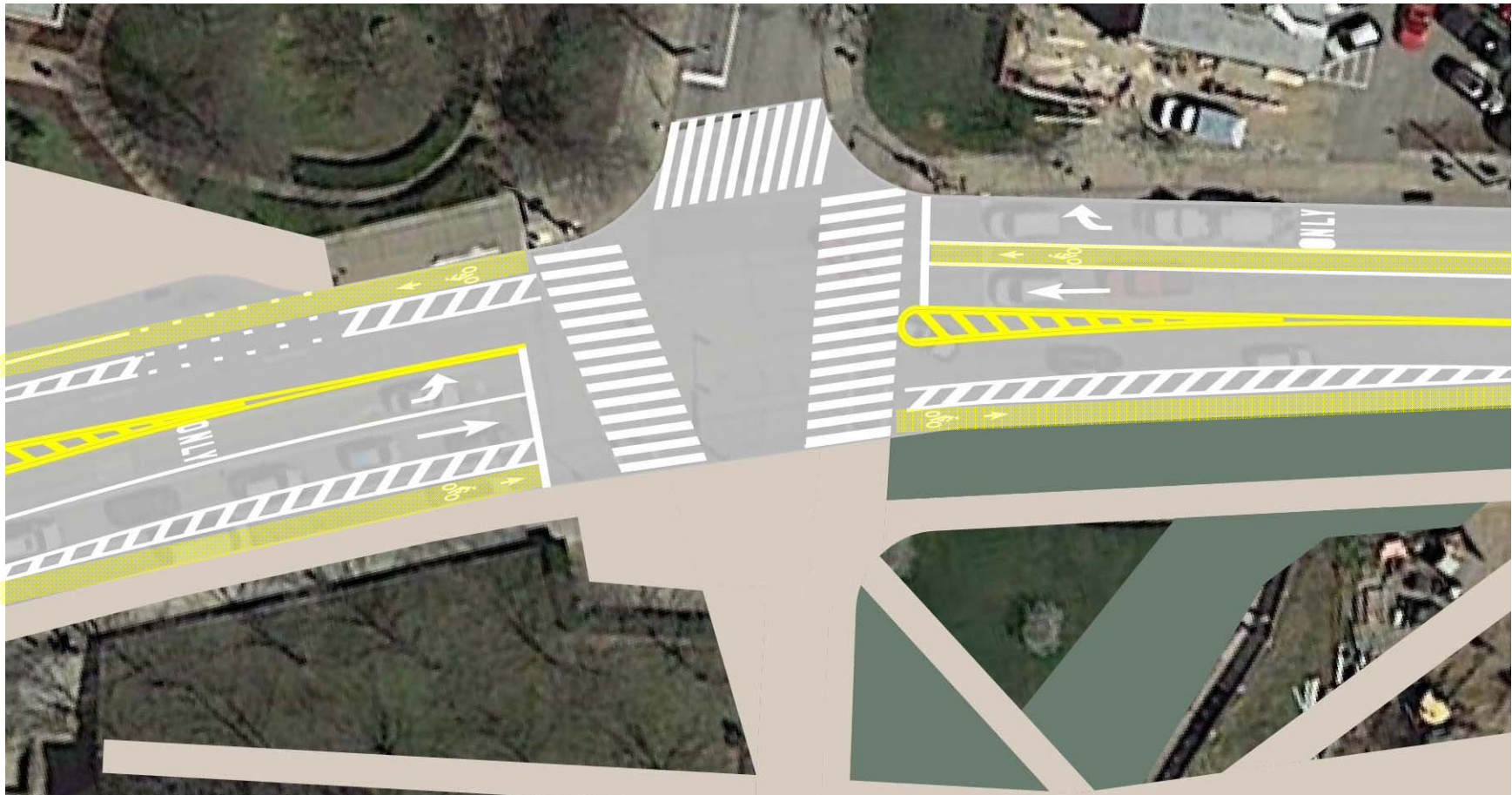
# Existing Intersection Configurations

Forbes Avenue at Morewood Avenue



# Proposed Intersection Configurations

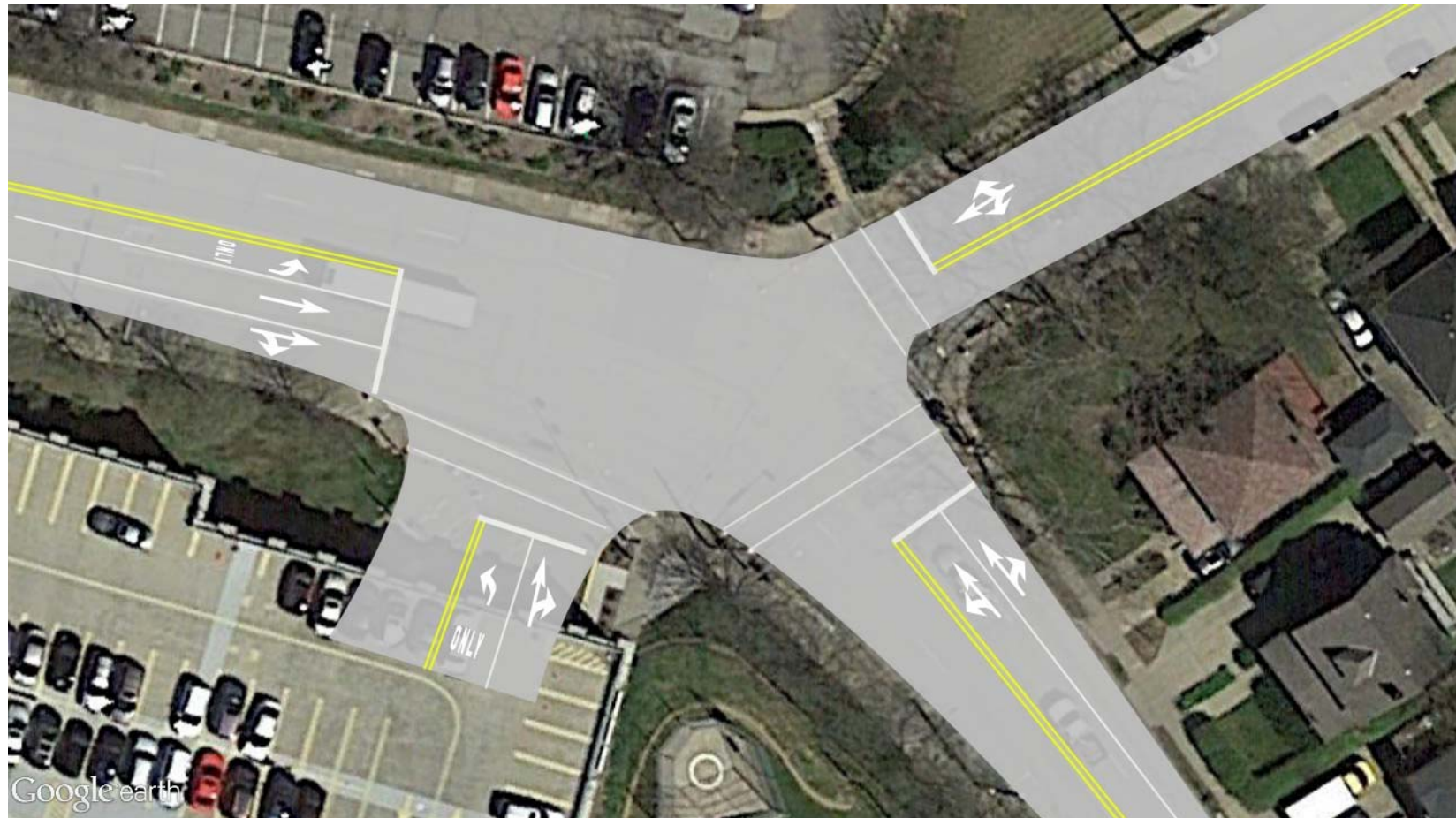
Forbes Avenue at Morewood Avenue





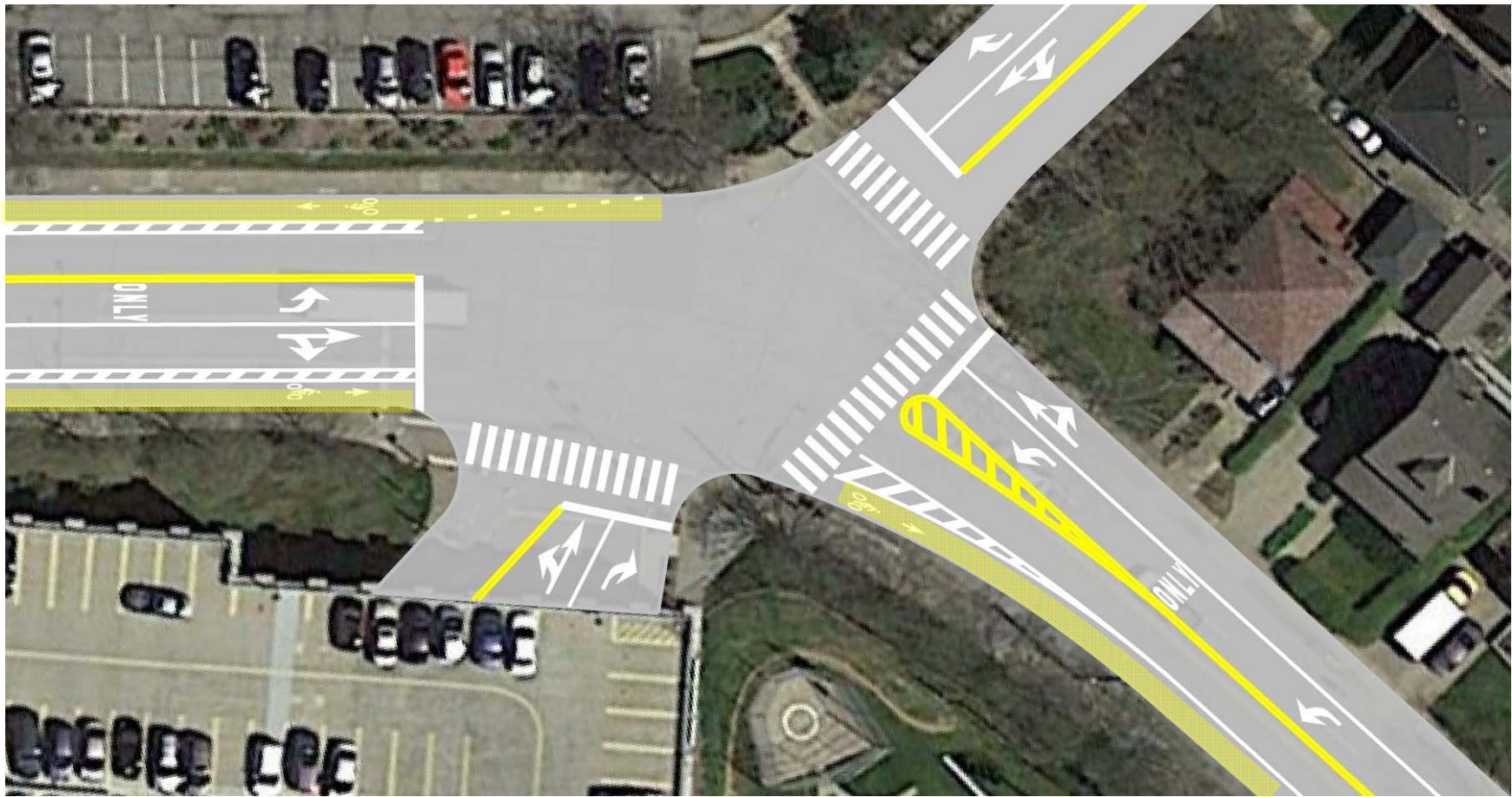
# Existing Intersection Configurations

Forbes Avenue at Beeler Street



# Proposed Intersection Configurations

Forbes Avenue at Beeler Street





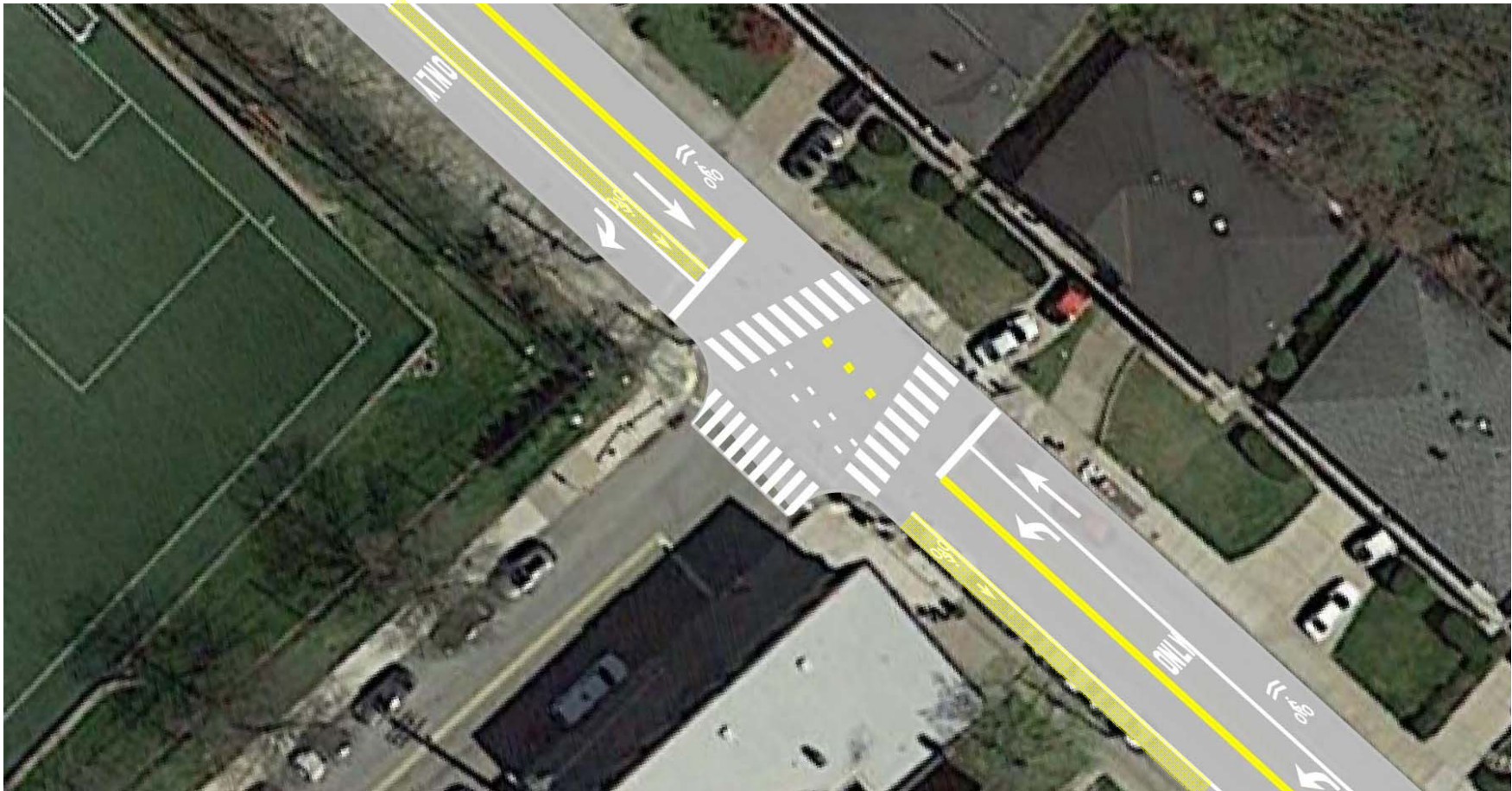
# Existing Intersection Configurations

Forbes Avenue at Margaret Morrison Drive



# Proposed Intersection Configurations

Forbes Avenue at Margaret Morrison Drive

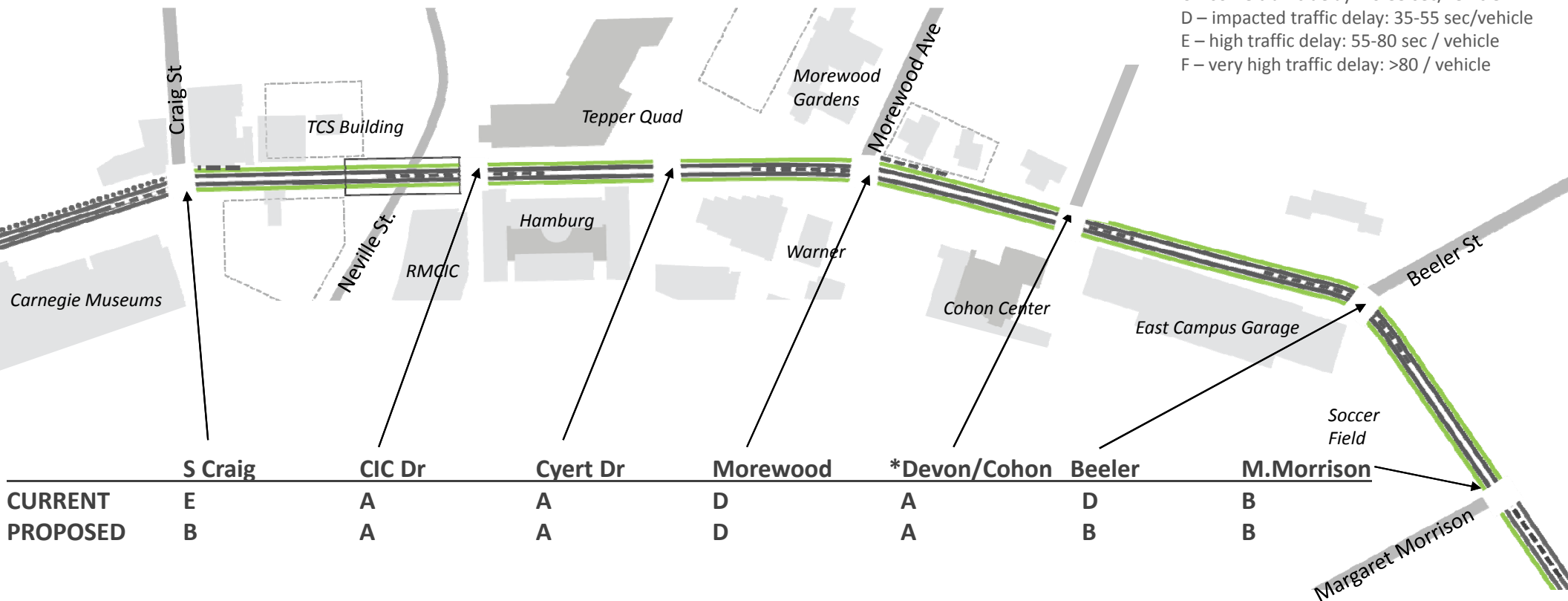




# Levels of Service AM

## Levels of Service Definition

- A – no/low traffic delay: < 10 sec/vehicle
- B – low traffic delay: 10-20 sec/vehicle
- C – some traffic delay: 20-35 sec/vehicle
- D – impacted traffic delay: 35-55 sec/vehicle
- E – high traffic delay: 55-80 sec / vehicle
- F – very high traffic delay: >80 / vehicle



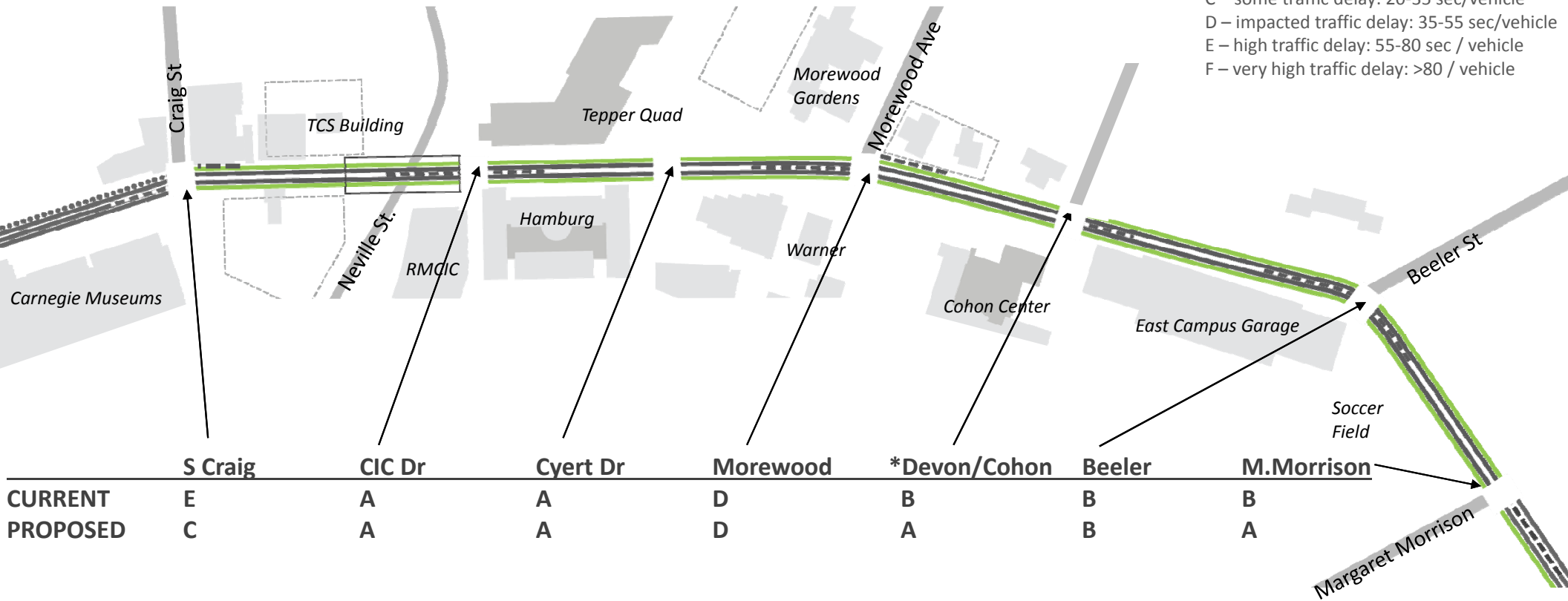
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\* UNSIGNALIZED INTERSECTION

# Levels of Service PM

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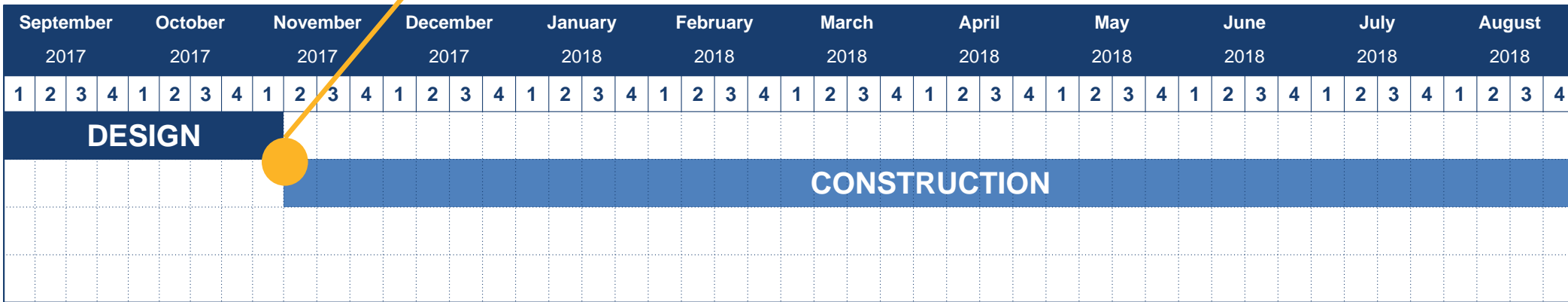
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\* UNSIGNALIZED INTERSECTION



# Project Schedule

Project Let  
November 2, 2017



## Likely Restrictions

- Commencements
- Move-Ins
- Special Events

# Maintenance and Protection of Traffic

- Milling/Paving Operations
  - Nighttime Work
  - Potential Weekend Closures – Non-Event Weekends
- Sidewalk and Signal Construction
  - Maintain Pedestrian Access
  - ADA Accessible



**Questions?**