

East Hanover Avenue Corridor Study

Morris County,
New Jersey

Technical Meeting #1 Existing and No Build Conditions

November 2011



One Team. Infinite Solutions



- I. Project Overview**
- II. Field Data Collection**
- III. Existing Condition**
- IV. 2015 and 2035 Future No Build Condition**
- V. Multimodal Opportunities**



I. Study Overview

A. Study Issues

B. Study Objectives

- Congestion and delays along East Hanover Ave:
 - AM Peak Period: EB Queues at Ridgedale Ave and Whippany Rd.
 - PM Peak Period: WB Queues at Speedwell Avenue.
- Redevelopment along the corridor = increase in vehicle and pedestrian volume.
- Limited pedestrian, bicycle, and transit facilities and connections.
- Multiple municipalities along corridor = need to plan land use and transportation comprehensively.

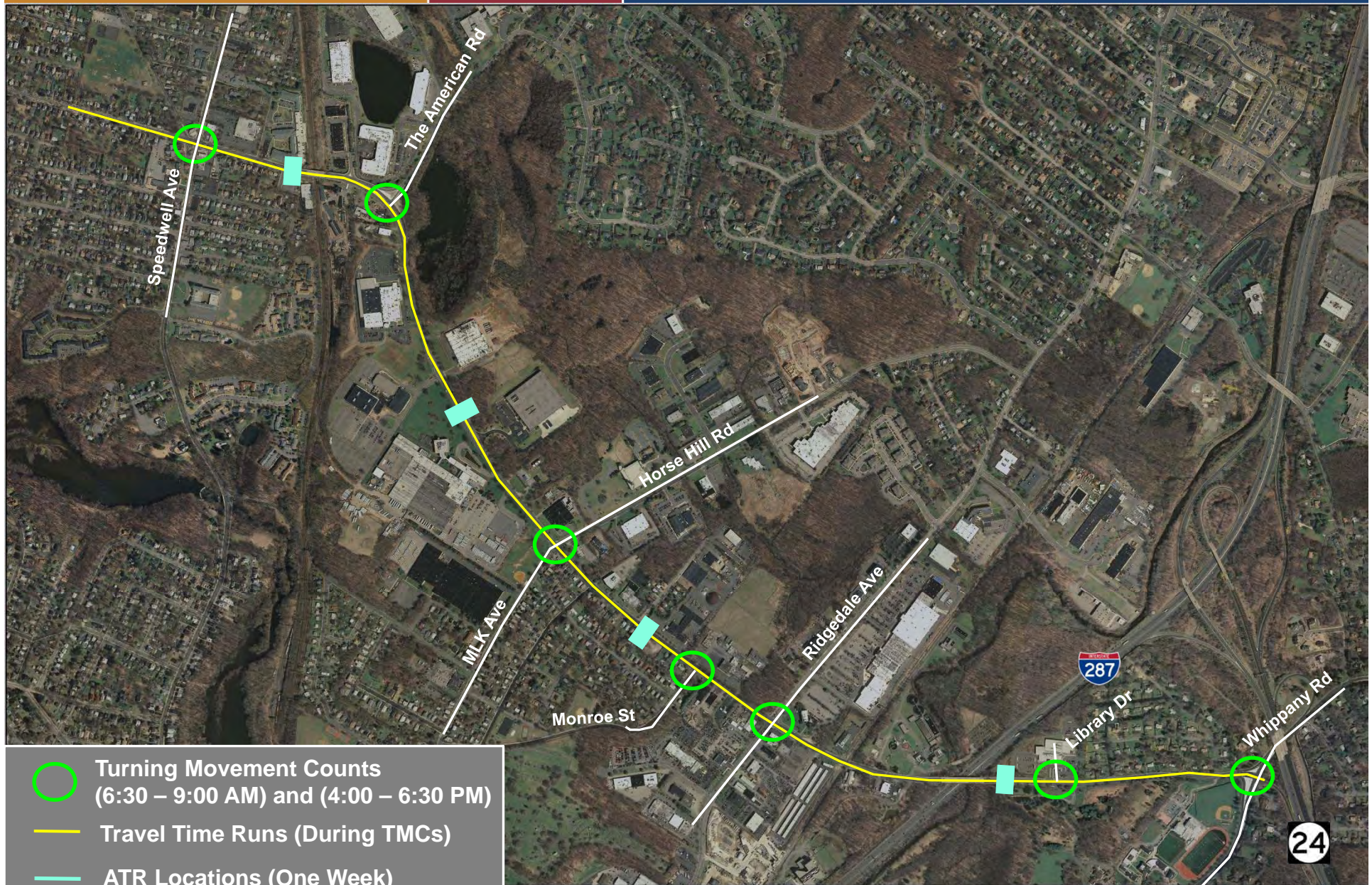
- Analyze existing and future projected traffic operations and analyze three improvement alternatives.
- Develop a comprehensive transportation plan for the corridor that includes infrastructure improvements that meet the need of all users.
- Develop recommendations and infrastructure improvement designs that will allow the County to negotiate contributions for transportation improvements with developers on the corridor.
- Improve pedestrian, bicycle, and transit connectivity.



II. Field Data Collection

- A. Data Collection Program**
- B. Peak Hour Volumes**
- C. Pedestrian and Bicycle Volumes**
- D. ATR Summary**

A. Data Collection Program



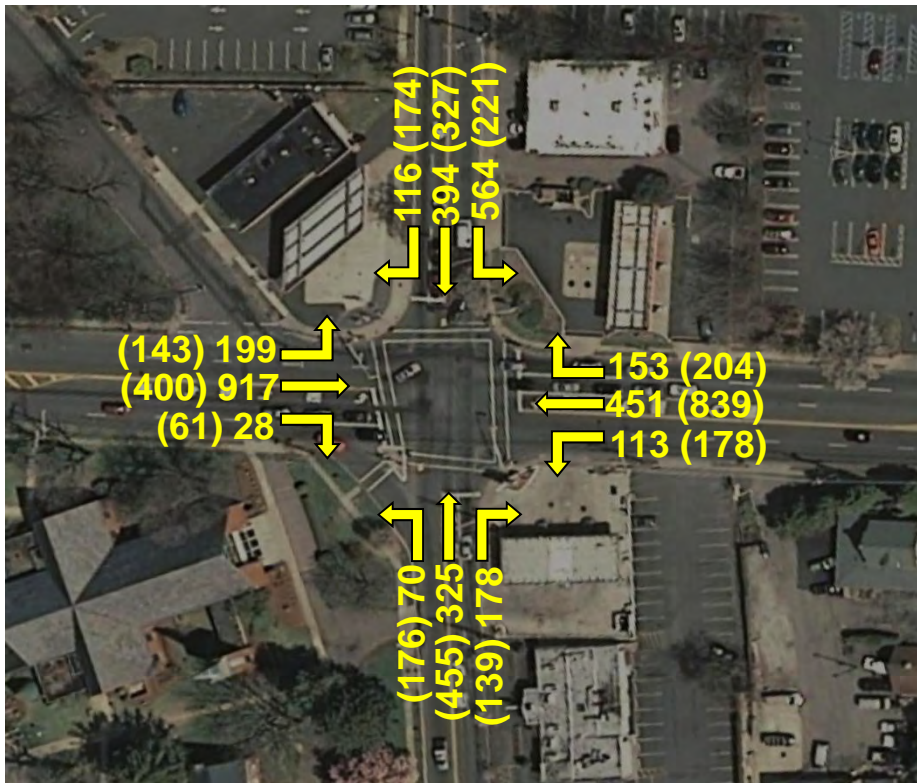
- **Peak Hours**

Weekday AM: 7:30 AM to 8:30 AM

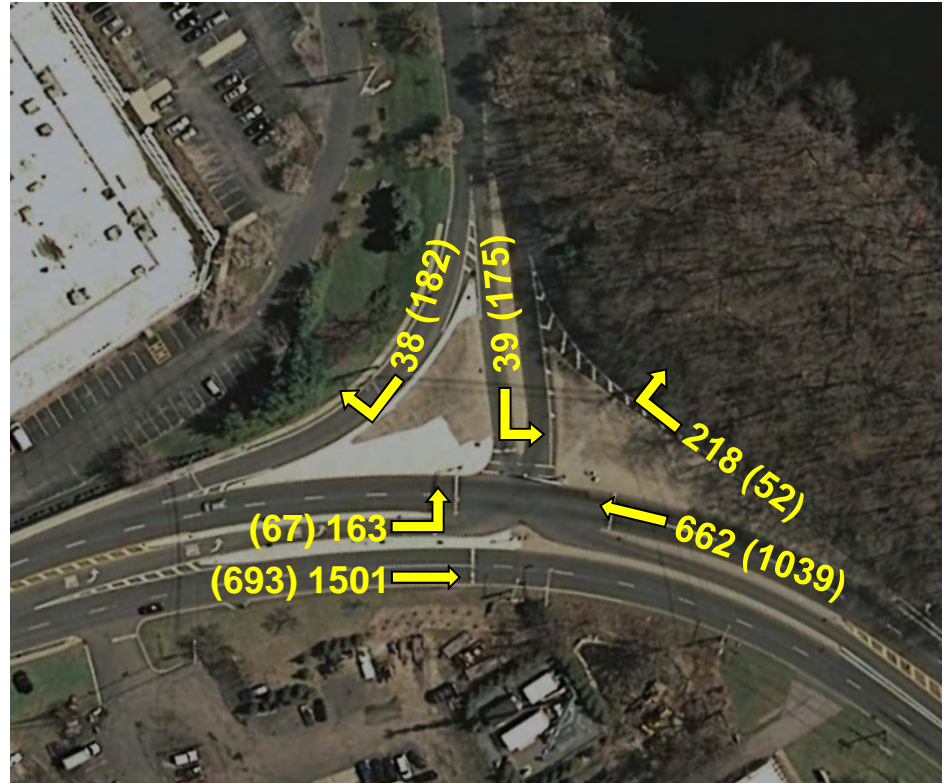
Weekday PM: 4:30 PM to 5:30 PM



B. Peak Hour Volumes



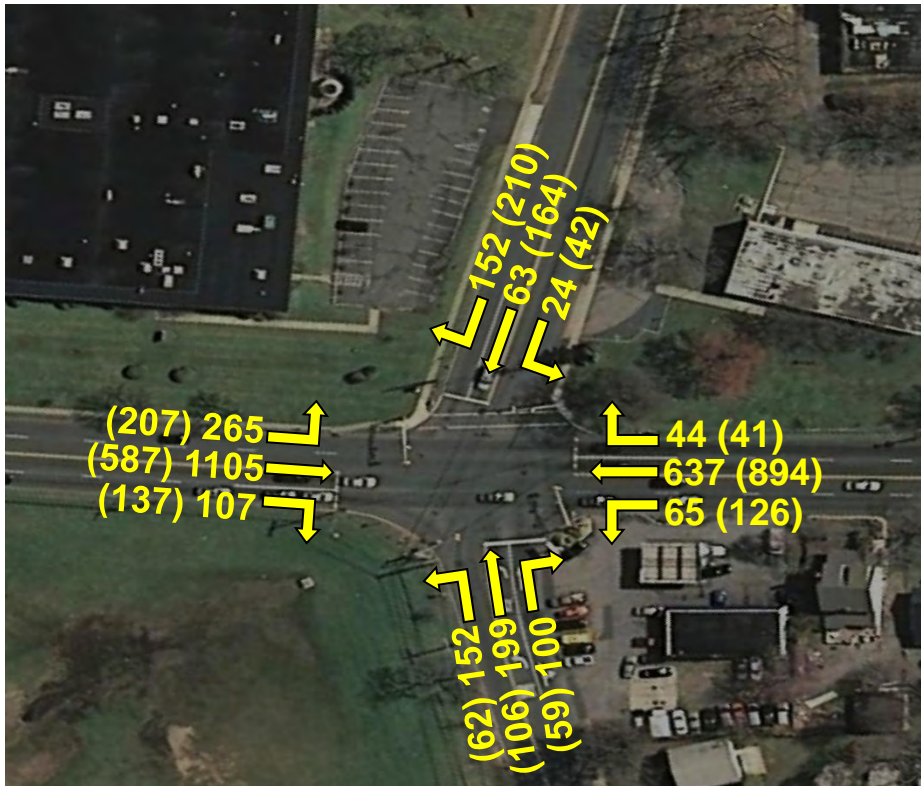
**E. Hanover Ave and
Speedwell Ave (US 202)**



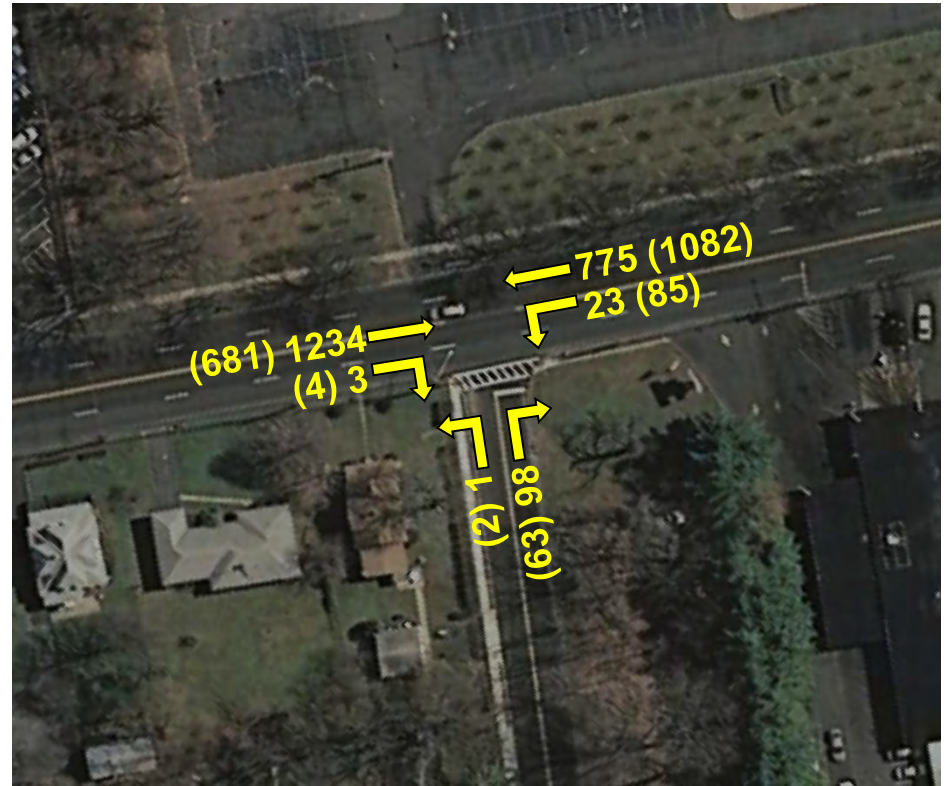
**E. Hanover Ave and
The American Rd**

← AM (PM)

B. Peak Hour Volumes



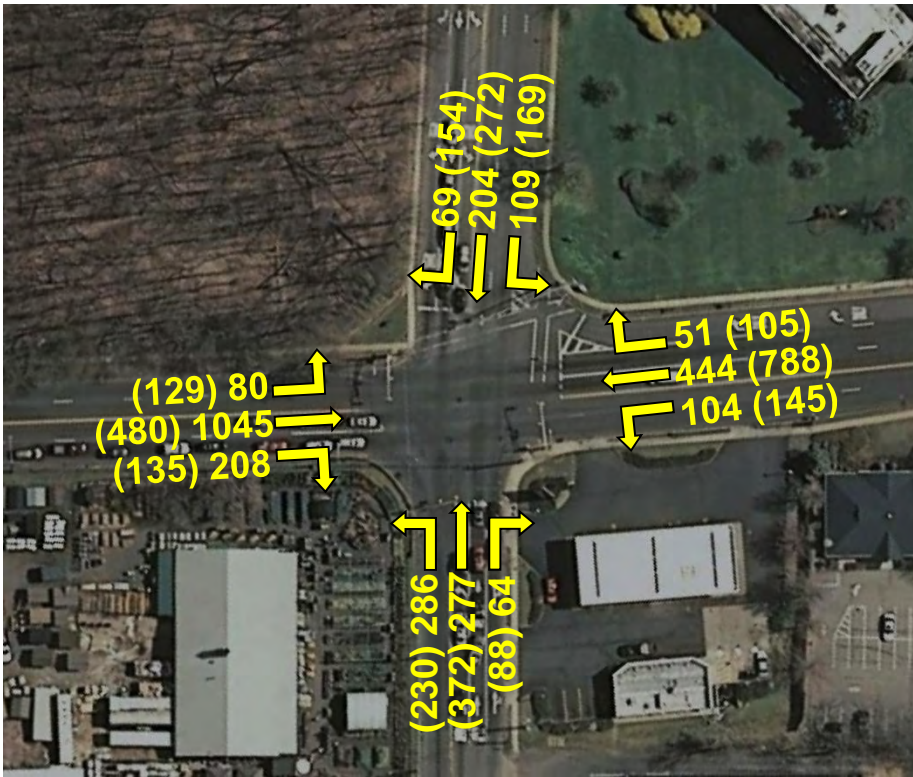
**E. Hanover Ave and
MLK Ave/Horse Hill Rd**



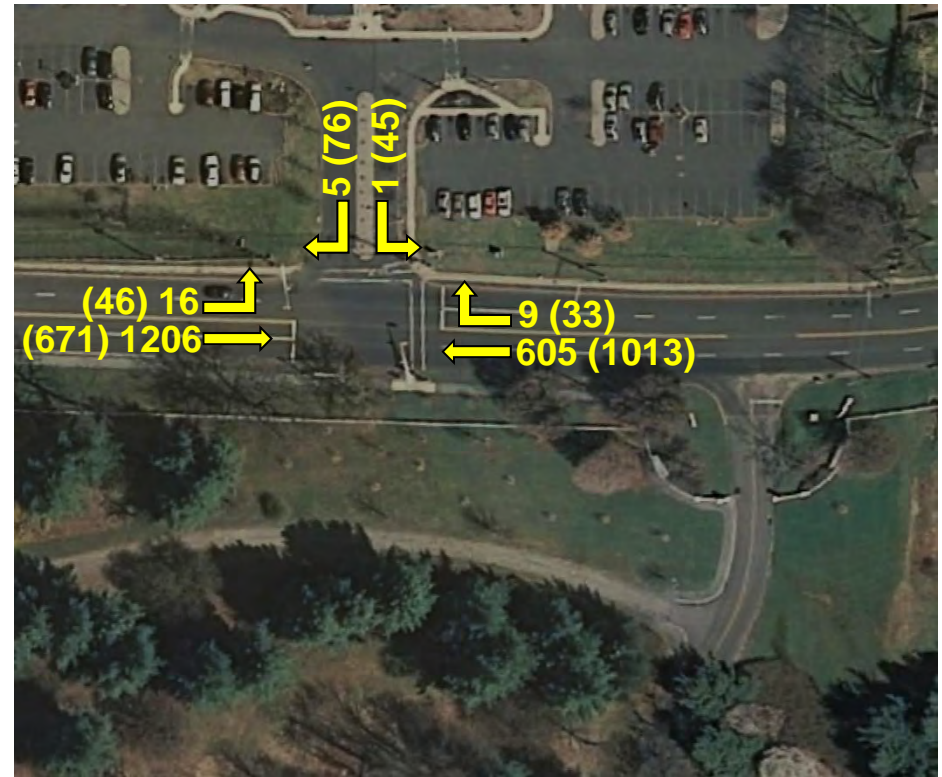
**E. Hanover Ave and
Monroe St**

← AM (PM)

B. Peak Hour Volumes



**E. Hanover Ave and
Ridgedale Ave**



**E. Hanover Ave and
Library Driveway**

← AM (PM)

B. Peak Hour Volumes



**E. Hanover Ave and
Whippany Rd**

← AM (PM)

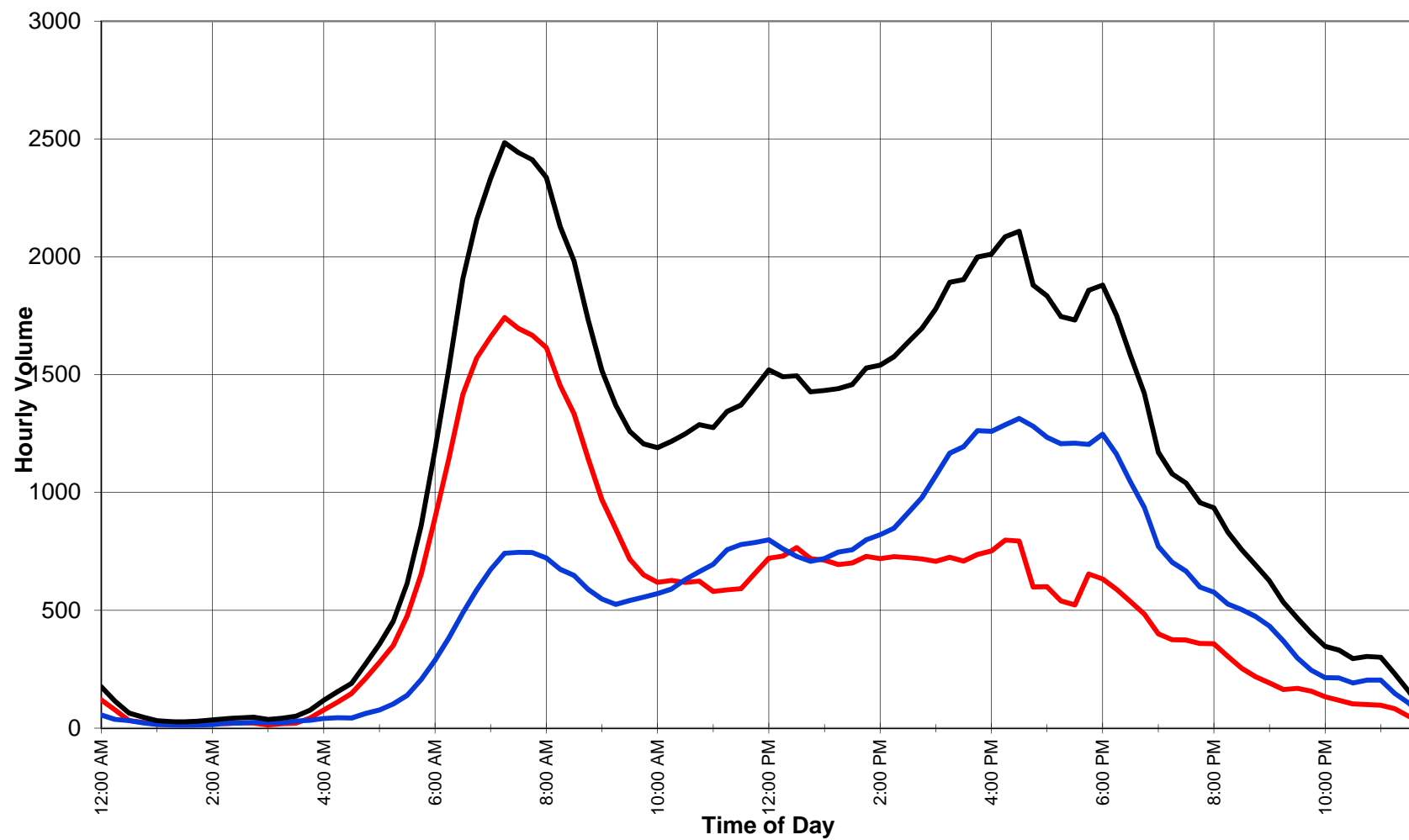
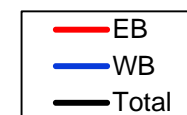
C. Pedestrian and Bicycle Volumes

- No recorded bicycles during the data collection.

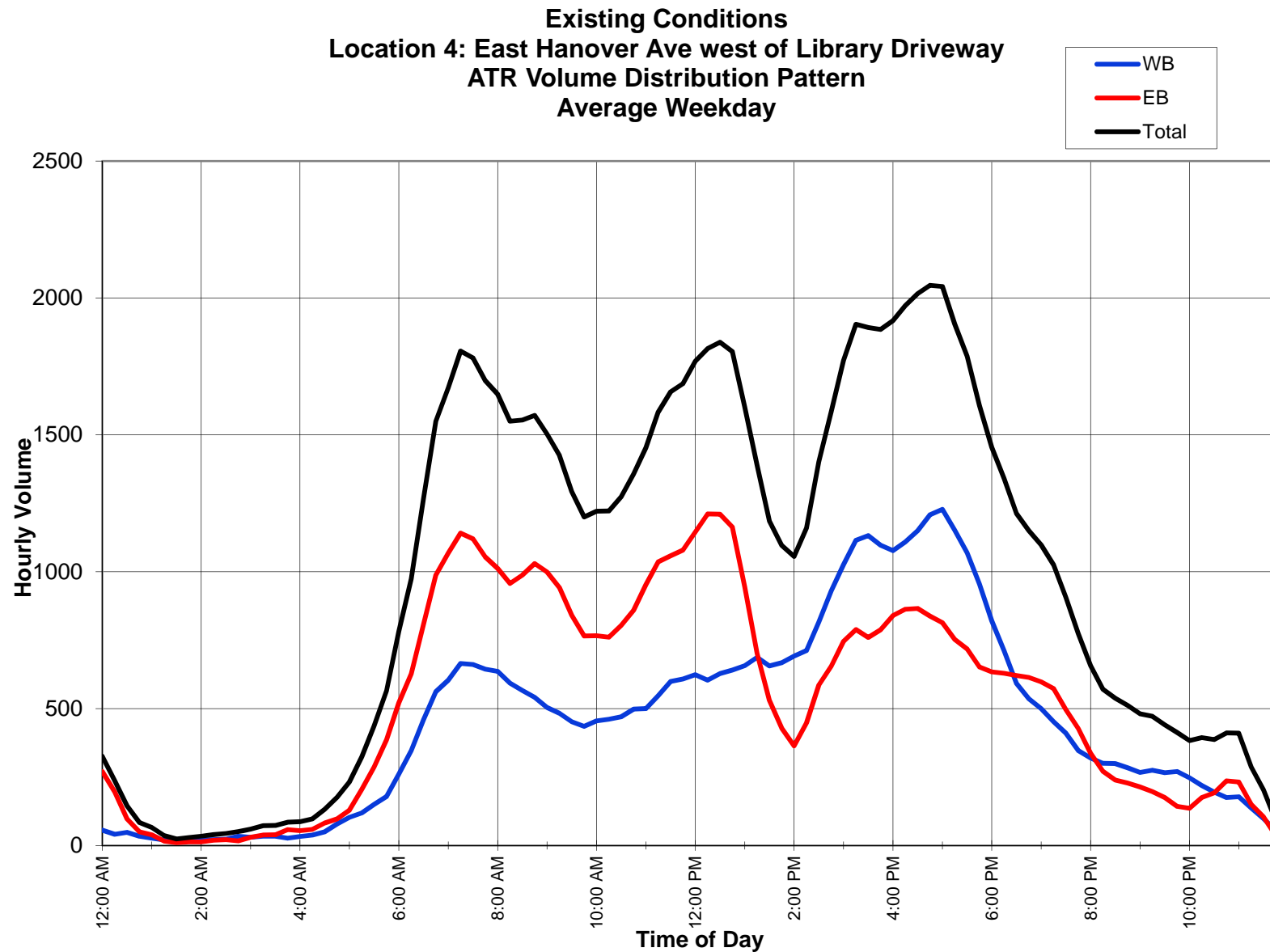
Intersection	Number of Peak Hour Peds AM (PM)
Speedwell Ave	13 (33) – Primarily Speedwell
The American Rd	2 (3)
MLK Ave / Horse Hill Rd	1 (0)
Monroe St	2 (0)
Ridgedale Ave	2 (3)
Library Driveway	3 (1)
Whippany Rd	0 (0)

D. ATR Summary

Existing Conditions
Location 1: East Hanover Ave West of The American Rd
ATR Volume Distribution Pattern
Average Weekday



D. ATR Summary





III. Existing Condition

- A. Average Corridor Travel Speed**
- B. Corridor Queuing**
- C. Infrastructure Assessment**
- D. Synchro Model Calibration**
- E. LOS Results**
- F. Critical Issue Summary**

Procedure

- Test vehicles traveled in traffic flow to match driving characteristics of existing vehicles.
- Recorded travel times and speed between checkpoints.

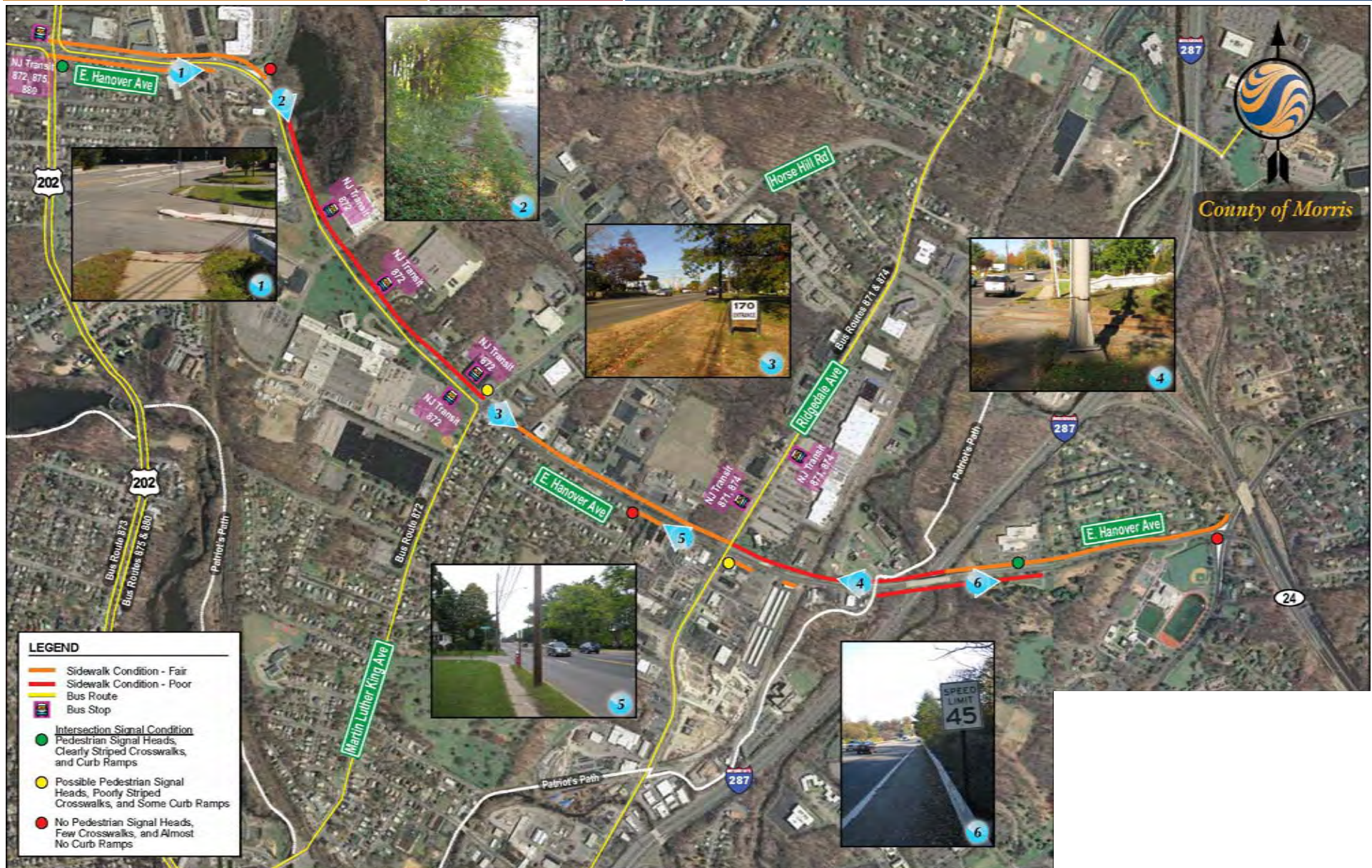
A. Average Corridor Travel Speed: AM Peak



A. Average Corridor Travel Speed: PM Peak



C. Infrastructure Assessment



D. Synchro Model Calibration: AM Peak

Link	Field Travel Time (s)	Model Travel Time (s)	% Difference
Speedwell Ave to The American Rd	37.8	34.9	-8%
The American Rd to Horse Hill Rd	80.8	83.3	3%
Horse Hill Rd to Monroe St	40.0	45.0	12%
Monroe St to Ridgedale Ave	62.5	63.2	1%
Ridgedale Ave to Library	81.0	82.8	2%
Library to Whippany Rd	211.3	254.3	18%

D. Synchro Model Calibration: PM Peak

Link	Field Travel Time (s)	Model Travel Time (s)	% Difference
Whippany Rd to Library	40.3	36.3	-10%
Library to Ridgedale Ave	126.5	114.8	-10%
Ridgedale Ave to Monroe St	20.0	22.2	10%
Monroe St to Horse Hill Rd	92.3	85.3	-8%
Horse Hill Rd to The American Rd	95.3	93.3	-2%
The America Rd to Speedwell Ave	380.3	406	7%

E. Existing Cond. LOS Results

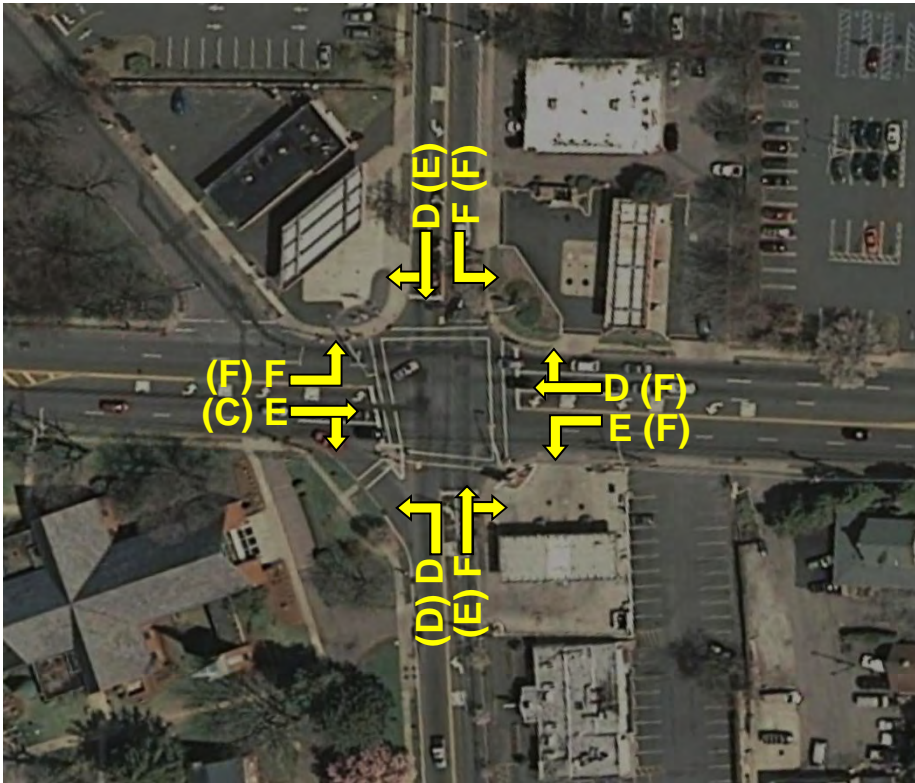
Unsignalized

LOS	Average Delay (sec/veh)
A	< 10
B	10 – 15
C	15 – 25
D	25 – 35
E	35 – 50
F	> 50

Signalized

LOS	Average Delay (sec/veh)
A	< 10
B	10 – 20
C	20 – 35
D	35 – 55
E	55 – 80
F	> 80

E. Existing Cond. LOS Results



**E. Hanover Ave and
Speedwell Ave (US 202)**

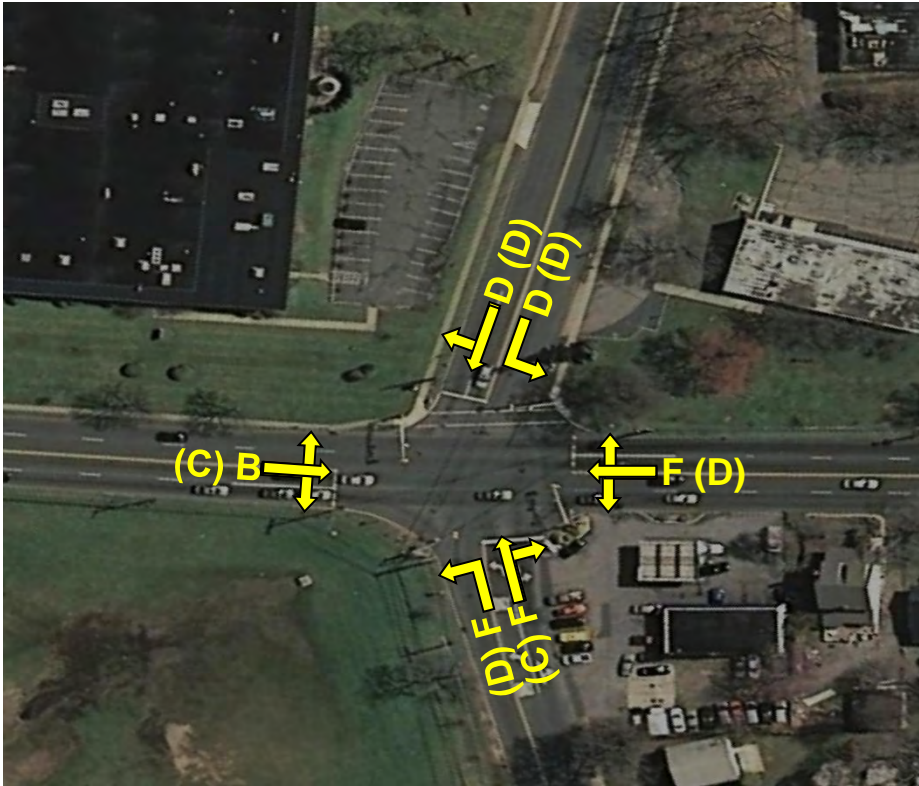


**E. Hanover Ave and
The American Rd**



AM (PM)

E. Existing Cond. LOS Results



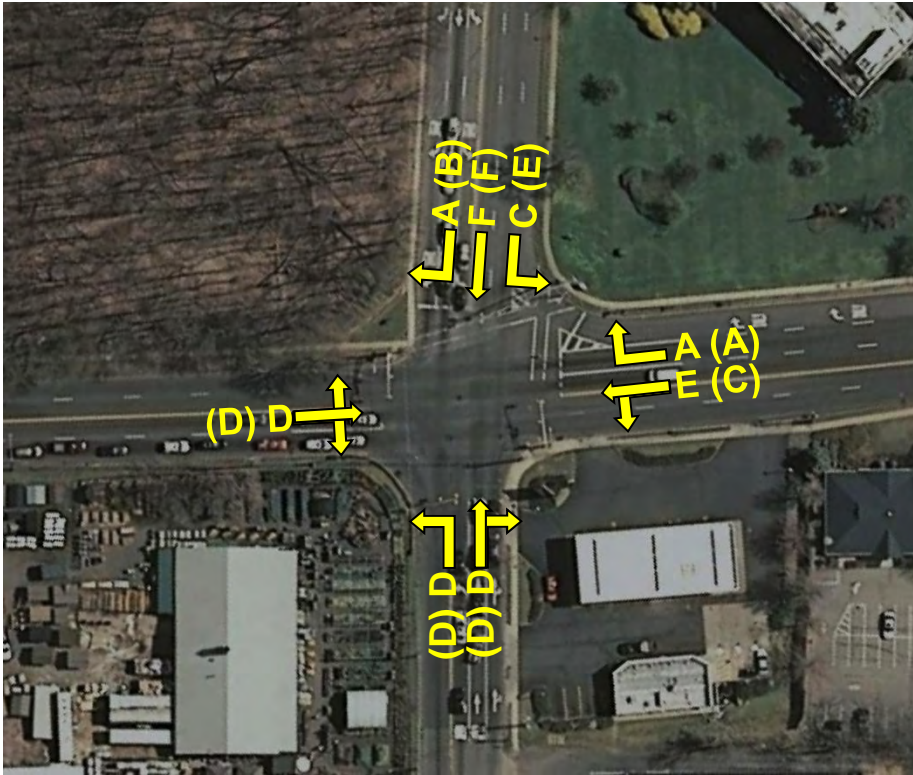
**E. Hanover Ave and
MLK Ave/Horse Hill Rd**



**E. Hanover Ave and
Monroe St**

← AM (PM)

E. Existing Cond. LOS Results



**E. Hanover Ave and
Ridgedale Ave**



**E. Hanover Ave and
Library Driveway**

← AM (PM)

E. Existing Cond. LOS Results



**E. Hanover Ave and
Whippany Rd**

← **AM (PM)**

F. Critical Issue Summary





IV. 2015 and 2035 Future No Build Condition

- A. Background Growth Rates**
- B. Developments**
- C. 2015 LOS Results**
- D. 2035 LOS Results**
- E. Queue Comparison**
- F. Critical Issue Summary**

A. Background Growth Rates

- 2015: Estimated Improvement Completion Date
(2% Per Year Between 2011 and 2015)
- 2035: 20-Year Horizon Design Year
(0.5% Per Year Between 2015 and 2035)
- **No-Build Condition:** Background traffic growth plus planned and potential developments.
- **Build Condition:** Background traffic growth plus development site traffic, with improvements.

B. Developments

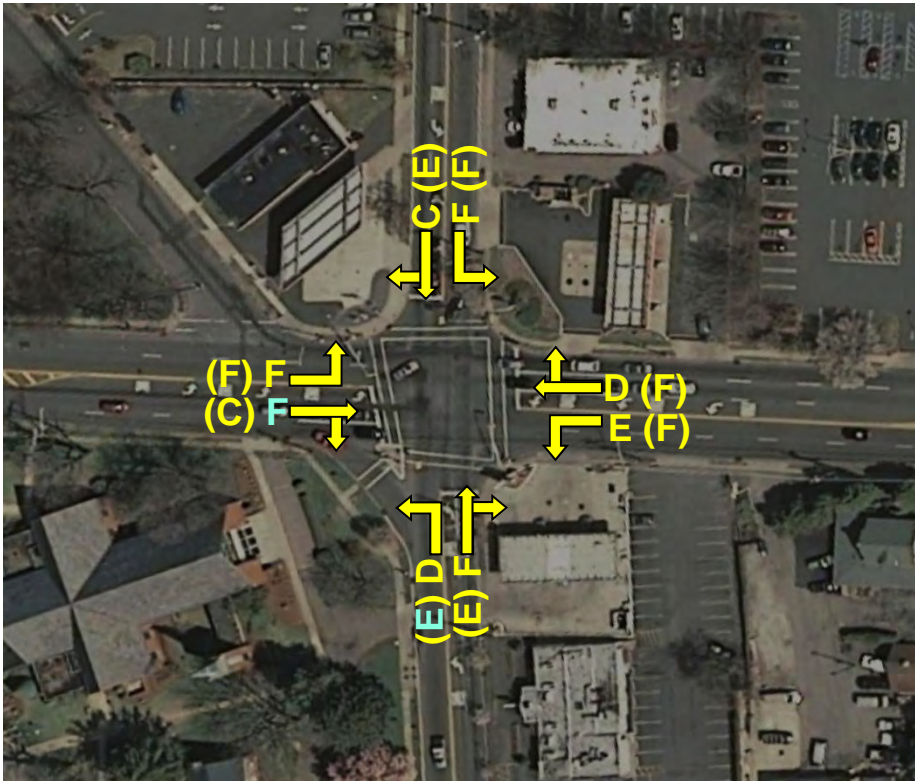


B. Developments

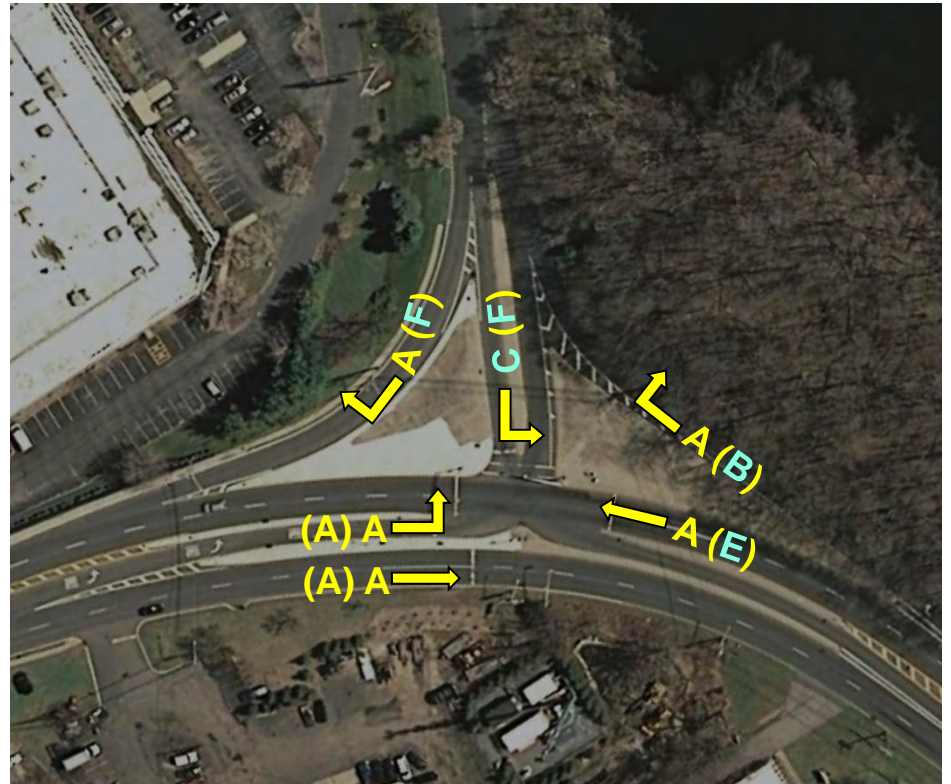
Site	AM Trips	PM Trips
60 Townhomes	34	40
ShopRite Center	144	593
20,000 SF Office	52	102
2015 Total	330	735
90,000 SF Shopping Center*	145	593
2035 Total	475	1,328

*Applied to 2035 Volumes Only

C. 2015 No Build LOS Results



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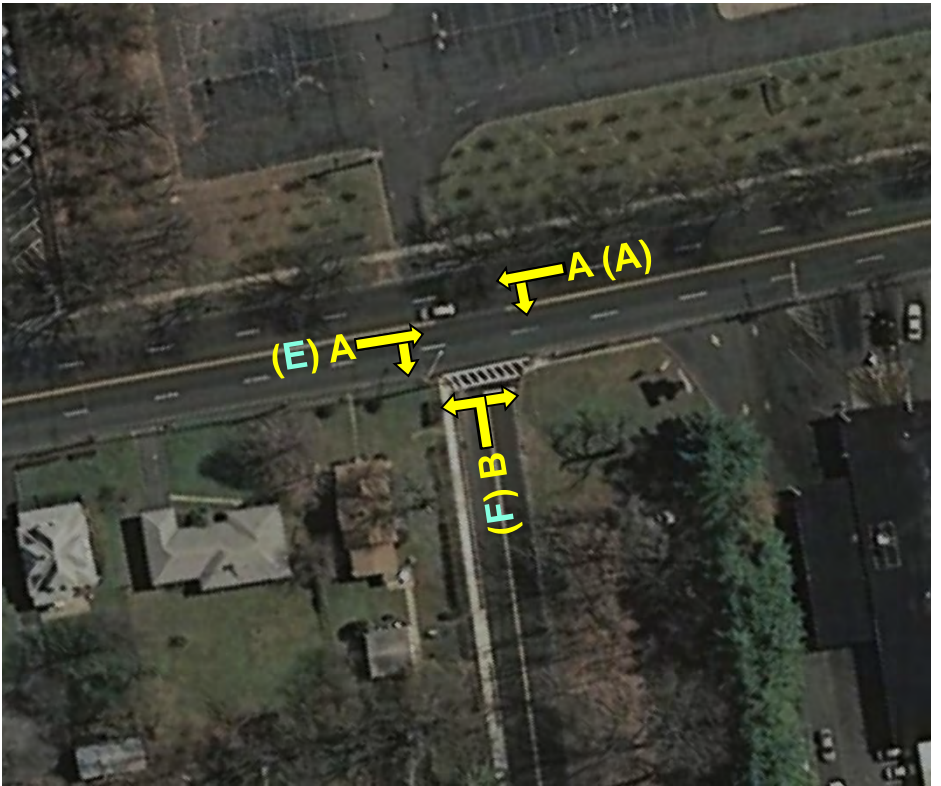


**E. Hanover Ave and
The American Rd**

← **AM (PM)**

Aqua numbers denoted movements that worsened from Existing.

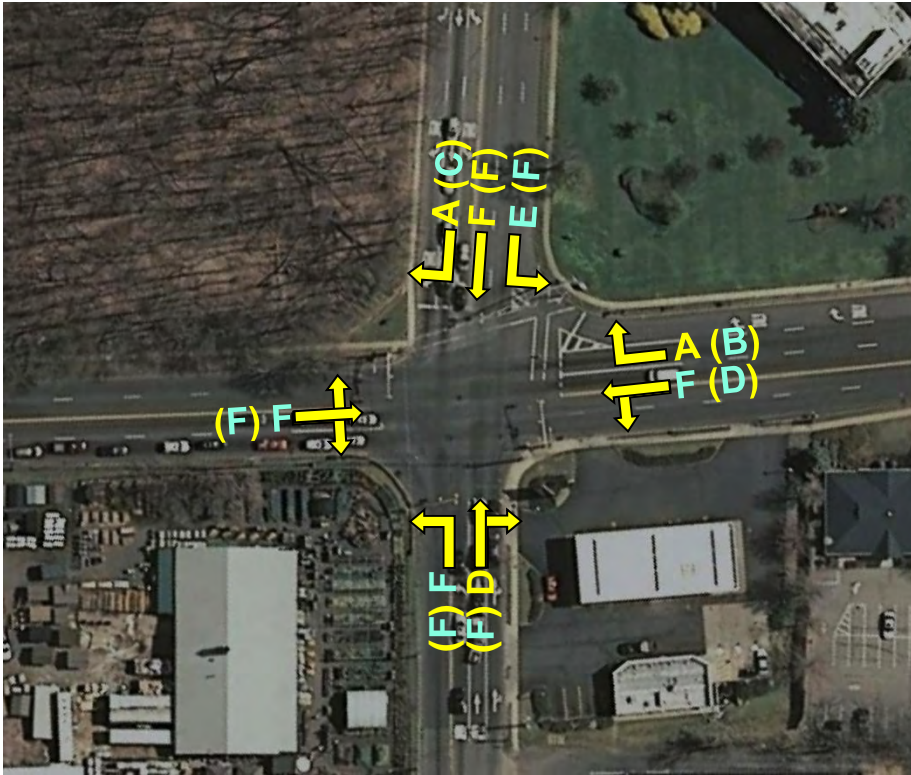
C. 2015 No Build LOS Results



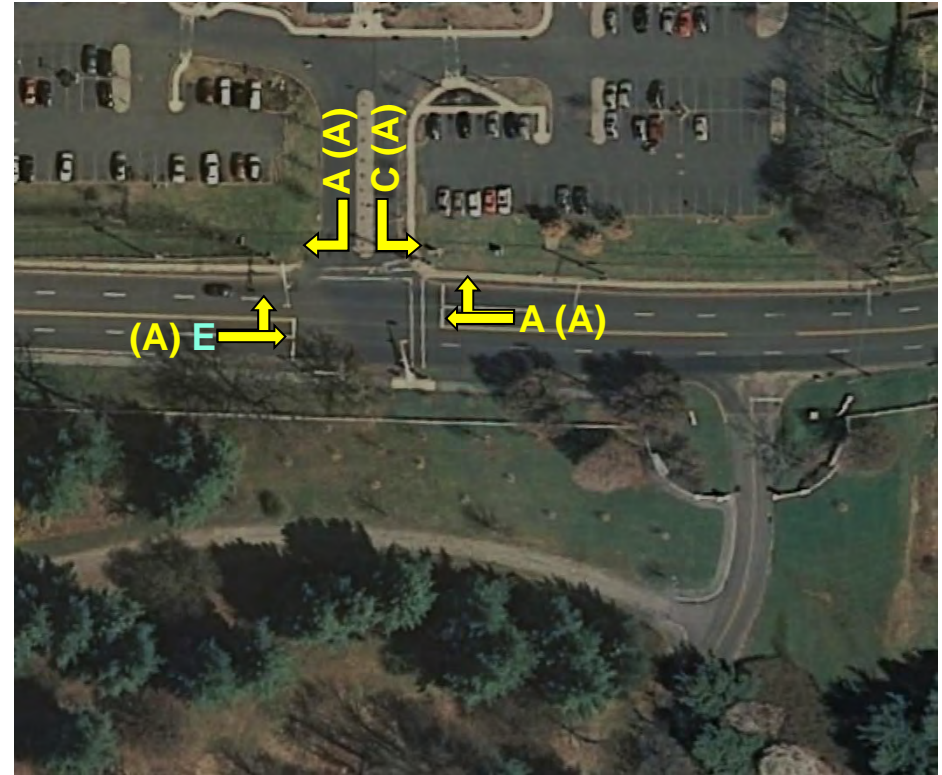
E. Hanover Ave and Monroe St

Aqua numbers denoted movements that worsened from Existing.

C. 2015 No Build LOS Results



E. Hanover Ave and
Ridgedale Ave



E. Hanover Ave and
Library Driveway

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C. 2015 No Build LOS Results

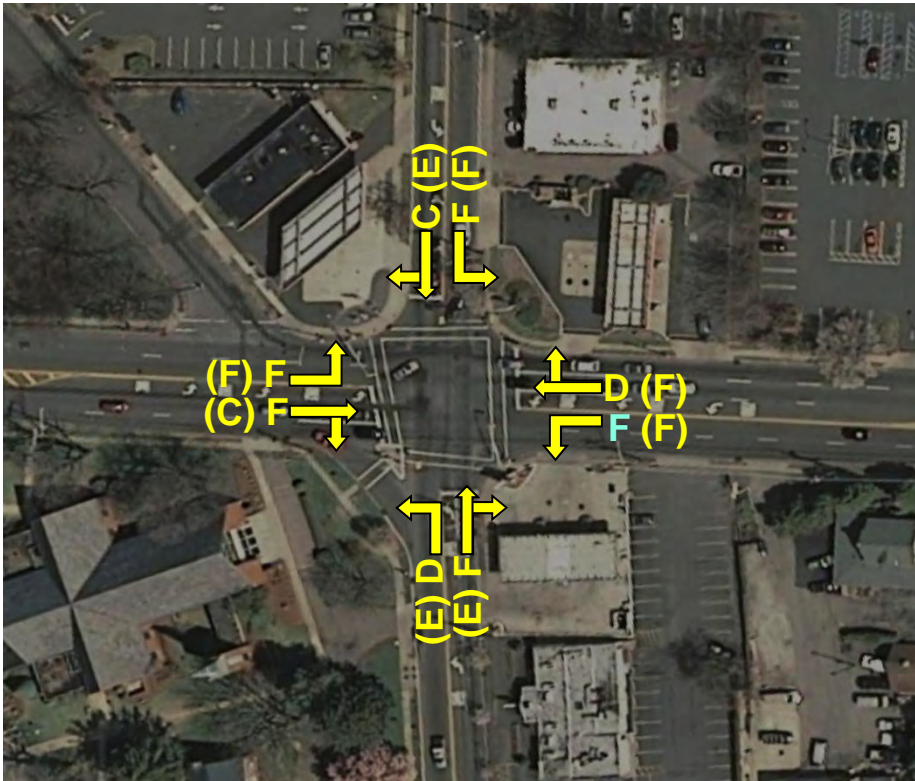


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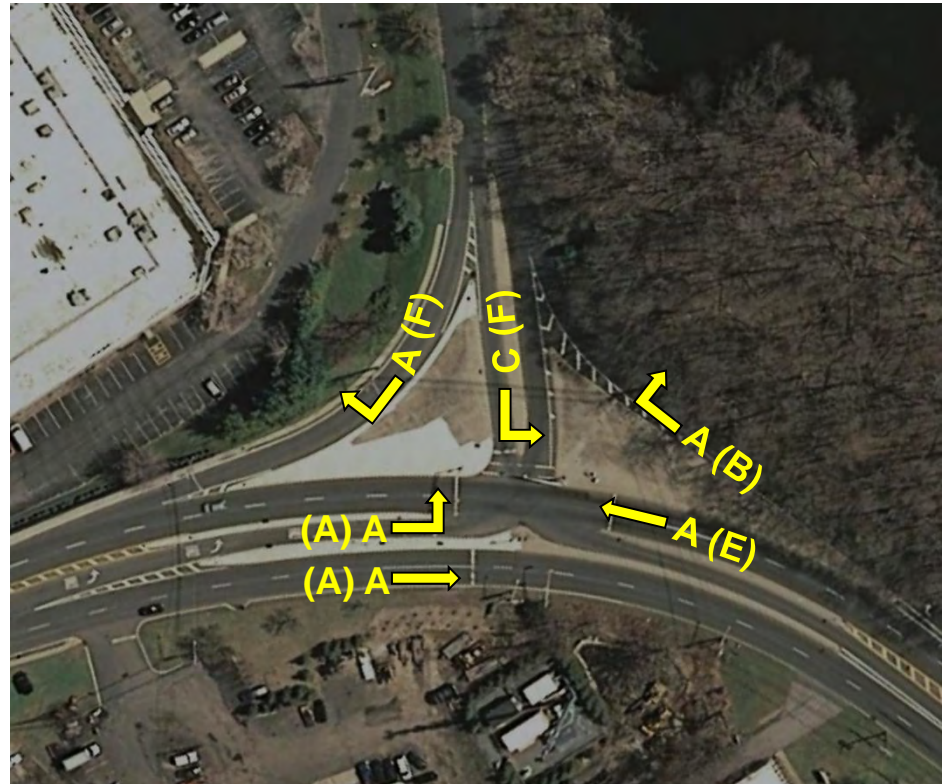
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D. 2035 No Build LOS Results



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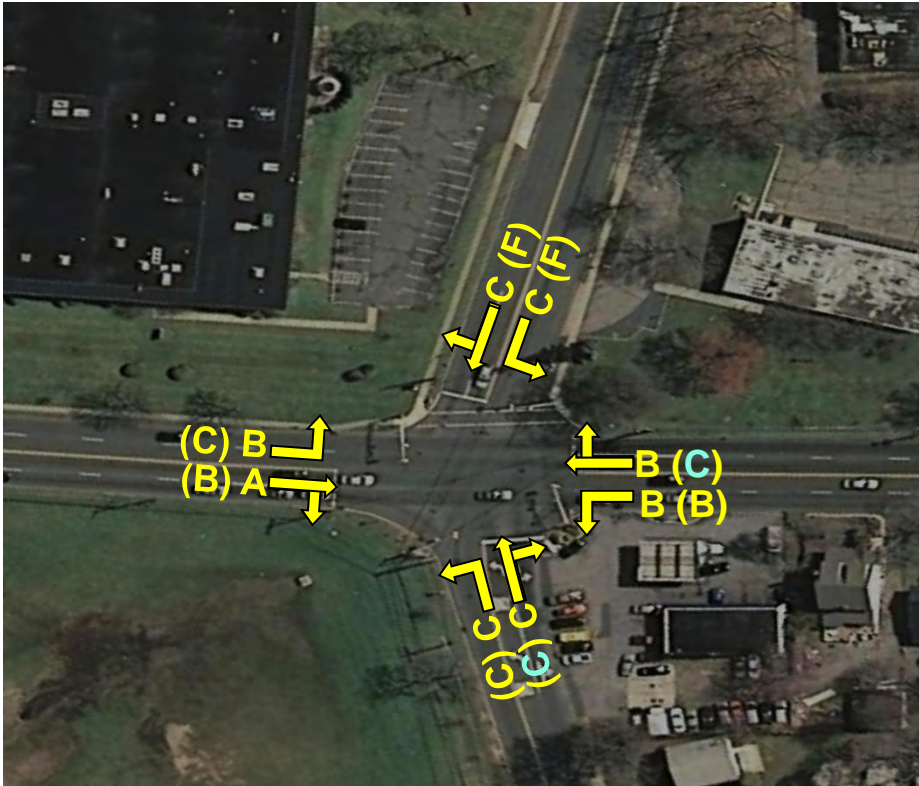


**E. Hanover Ave and
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D. 2035 No Build LOS Results



**E. Hanover Ave and
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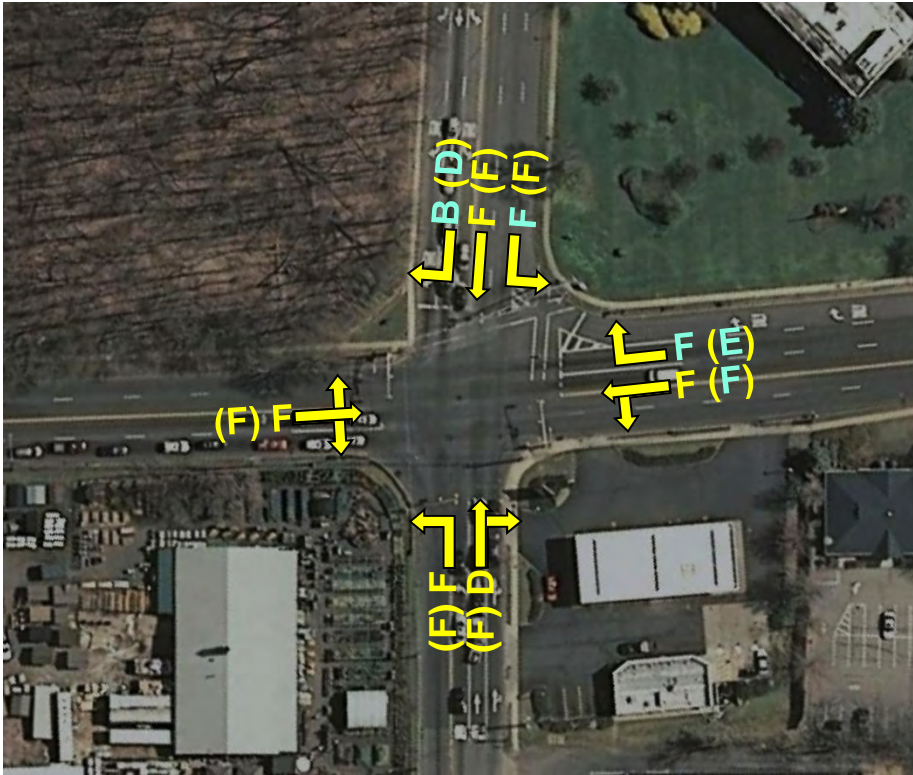


**E. Hanover Ave and
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D. 2035 No Build LOS Results



E. Hanover Ave and
Ridgedale Ave



E. Hanover Ave and
Library Driveway

← AM (PM)

Aqua numbers denoted movements that worsened from 2015 No Build.

D. 2035 No Build LOS Results



**E. Hanover Ave and
Whippany Rd**

← **AM (PM)**

Aqua numbers denoted movements that worsened from 2015 No Build.

E. Queue Comparison: AM Peak



E. Queue Comparison: PM Peak



F. Critical Issue Summary





V. Multimodal Opportunities

A. Pedestrian and Bicycle

B. Transit

A. Pedestrian and Bicycle

- Improved Sidewalks and Crosswalks
- Clear Vegetation Overgrowth
- Pedestrian Countdown Signals
- Connections to Patriot's Path, Library, Mennen Arena and Arboretum



A. Pedestrian and Bicycle

- Pedestrian and Bicycle Trailblazing
- Bike Lanes
- Multi-Use Path



B. Transit Opportunities

- Bus Pull-Offs
- Shelters and Benches
- Concrete Pads for Pedestrians





QUESTIONS/COMMENTS