



US 40 Corridor Safety Study

Chesaco Avenue to Todds Lane

Thursday, February 9th 2012

Maryland Department of Transportation – State Highway Administration



Concerns for Pedestrian Safety





- **Follow up on May 4th, 2011 public meeting**
- **Provide information on completed improvements**
- **Provide information on planned improvements**
- **Provide opportunity for discussion**



Study Area



END STUDY

BEGIN STUDY





Crash Data

Summary of Crashes by Type (2005 – Nov. 2011) Within Study Area

Type of Crash	2005	2006	2007	2008	2009	2010	2011	TOTAL
Fatalities	1	3	1	1	1	0	0	7
Injury	18	23	29	12	20	22	12	136
No Injured	33	38	43	26	28	39	21	228
Property Damage	22	22	30	24	28	24	20	170
Total Crashes	41	48	60	37	49	46	33	314
Opposite Direction	0	0	2	1	3	0	0	6
Rear End	15	16	25	20	22	16	16	130
Sideswipe	2	1	4	4	9	9	3	32
Left Turn	3	1	1	2	5	3	3	18
Angle	7	10	6	4	5	3	6	41
Pedestrian Related Crashes	4	4	5	2	1	2	1	20
U-Turn	1	2	3	2	2	3	1	14
Parked Vehicles	1	4	2	0	0	0	0	7
Fixed Objects	8	7	10	1	4	11	2	44
Truck Related	2	2	4	4	3	3	1	19
Other	1	5	5	3	0	2	0	16

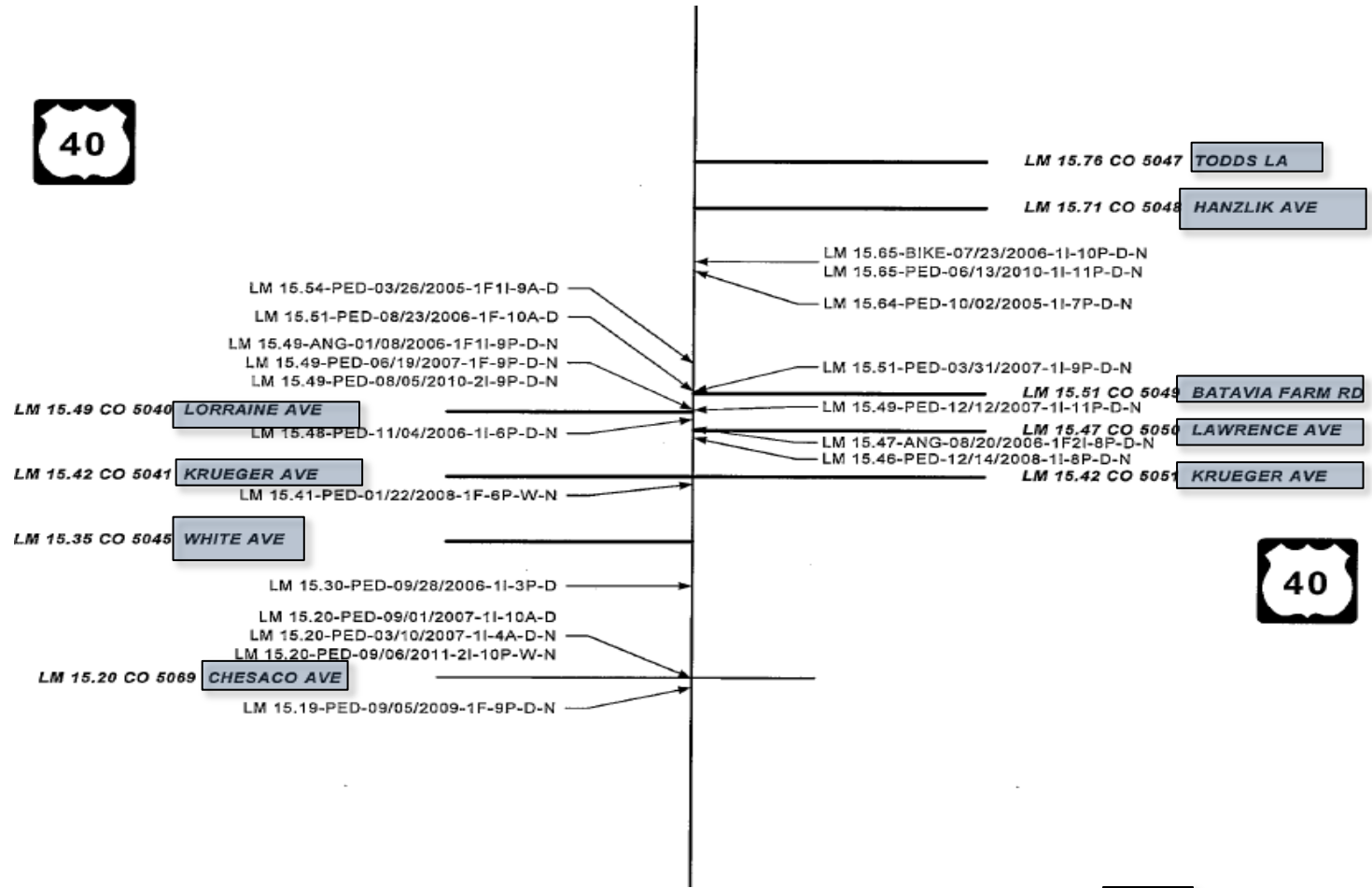


Summary of Pedestrian & other Related Fatal Crashes
by Severity Within the Study Area

Severity	Total
Pedestrian Fatality	5
Vehicle Occupant Fatality	2



Crash Data – 2005 to Nov. 2011



Ped & Fatal Accidents Only



Completed Interim Improvements



“Black on fluorescent yellow” speed advisory installed January 2011 along WB US 40 just east of Lorraine Ave



“Black on fluorescent yellow” intersection warning signs installed in 2008



“Black on fluorescent yellow” pedestrian warning signs installed in 2008

Batavia Farm Rd

Lorraine Ave

Lawrence Ave

Baltimore County installed larger “green on white” corner street name signs in 2008

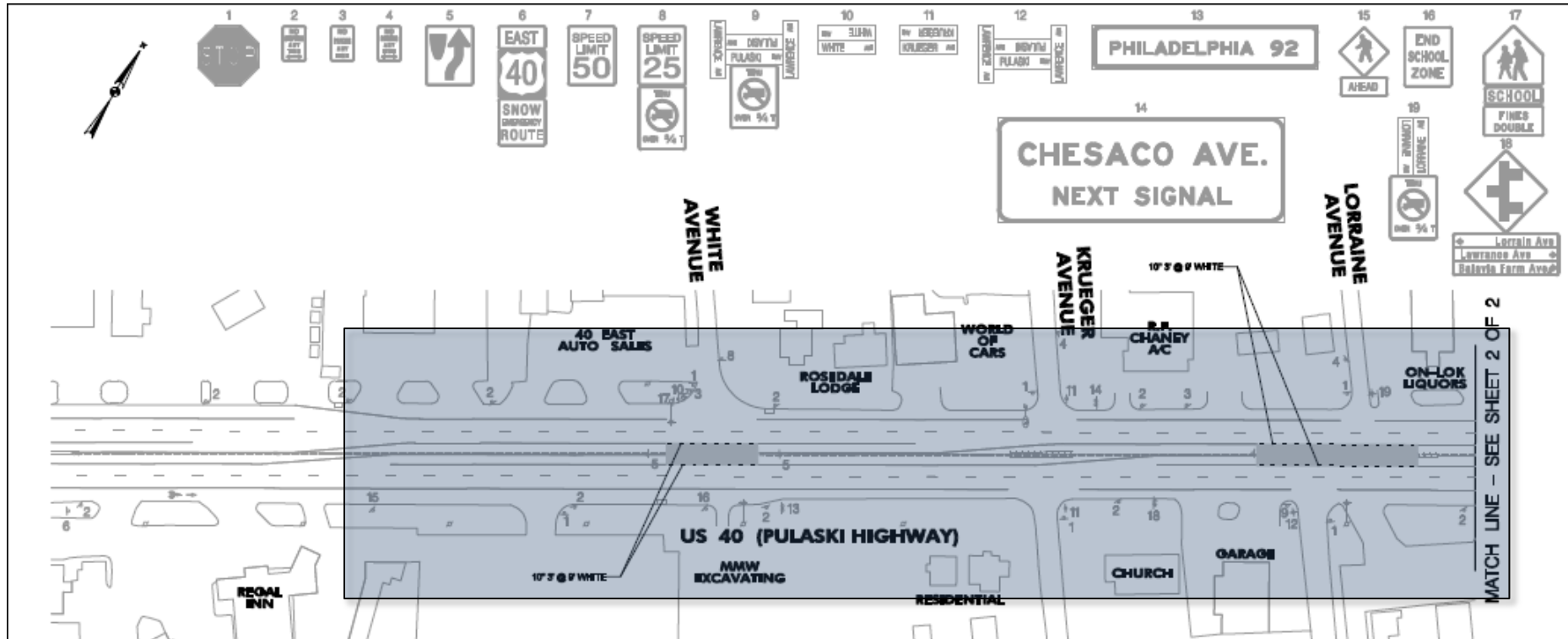


Baltimore County Police Department enforcement in the area on-going.



Interim Improvements from Chesaco to Lorraine

Completed After May 4th, 2011



LEGEND

PROPOSED COLORED PAVEMENT MARKING (COLOR TO BE DETERMINED)

GRAPHIC SCALE

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US 40 FROM CHESACO AVENUE TO TODDS LANE

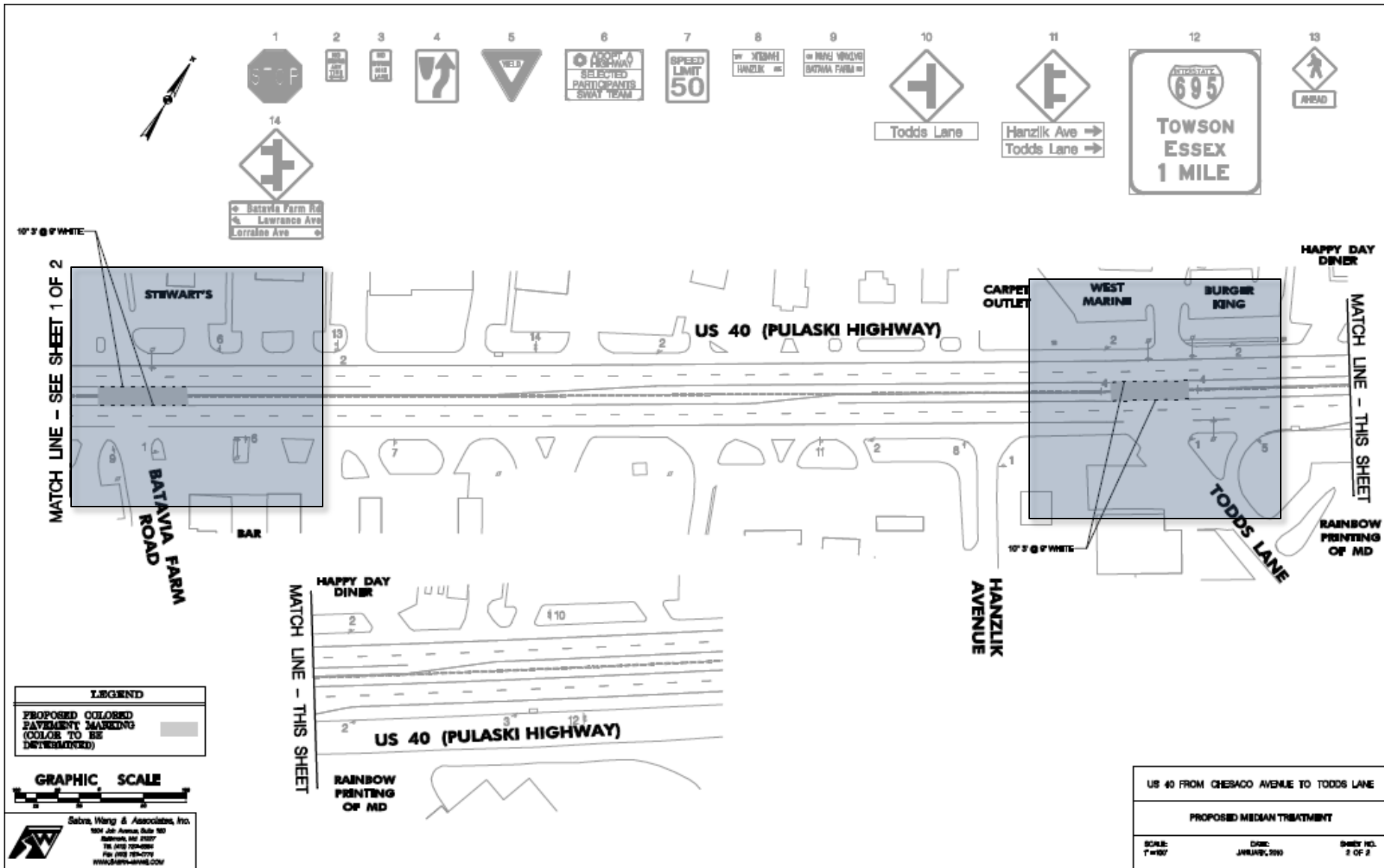
PROPOSED MEDIAN TREATMENT

SCALE: T#197 DATE: JANUARY, 2010 SHEET NO. 1 OF 2



Interim Improvements from Batavia Farms to Todd

Completed After May 4th, 2011



- 1 STOP
- 2
- 3
- 4
- 5 YIELD
- 6
- 7 SPEED LIMIT 50
- 8
- 9
- 10
- 11
- 12
- 13
- 14

MATCH LINE - SEE SHEET 1 OF 2

STEWART'S

BATAVIA FARM ROAD

BAR

US 40 (PULASKI HIGHWAY)

CARPET OUTLET

HAPPY DAY DINER

WEST MARINE

BURGER KING

TODDS LANE

HANZLIK AVENUE

RAINBOW PRINTING OF MD

MATCH LINE - THIS SHEET

MATCH LINE - THIS SHEET

RAINBOW PRINTING OF MD

US 40 (PULASKI HIGHWAY)

STATE ROUTE 695

TOWSON
 ESSEX
 1 MILE



- **Lighting Upgrades and Repairs Completed Fall 2011**
 - **US 40 @ Rosedale Avenue**
 - **US 40 @ Chesaco Avenue**
 - **US 40 @ Krueger Avenue**
 - **US 40 @ Todds Lane**
 - **US 40 @ Berk Avenue**



- **16 Total Citizen Responses**
- **Preferred Preliminary Concept**
 - **Option A - Batavia Signal Concept (Signalize Batavia Farm Road & Close median opening at Lorraine/Lawrence Avenue) – 25% (2 of 8 Respondents)**
 - **Option B - Lorraine/Lawrence Signal Concept (Signalize Lorraine/Lawrence Avenue & Close median opening at Batavia Farm Road) - 75% (6 of 8 Respondents)**
- **Concerned with speed reduction - 25% (4 of 16 Respondents)**
- **In favor of sidewalk improvements - 56% (9 of 16 Respondents)**
- **In favor of installing fencing on jersey walls - 19% (3 of 16 Respondents)**



- **Install sidewalk along US 40 from Chesaco Ave to Todds Lane along both sides of the roadway**
- **Install traffic signal with crosswalks and pedestrian signals and close adjacent median break**
- **County to signalize Todds Lane in conjunction with future extension of Kelso Drive to Todds Lane**



Future Sidewalk Concept from Chesaco Ave. to Todds Ln.



PEDESTRIAN ACCIDENTS SUMMARY /PROPOSED SIDEWALK LAYOUT (JANUARY 2005 – NOVEMBER 2011)

- ▬ PROPOSED CURB & GUTTER AND SIDEWALK
- LOCATION OF PEDESTRIAN FATALITY
- ▼ LOCATION OF VEHICLE FATALITY
- LOCATION OF PEDESTRIAN INJURY



- **Provides designated pedestrian route through the corridor**
- **Directs pedestrians to appropriate US 40 crossing location**
- **Has traffic calming effect through corridor**
- **Meets the requirements of the Americans with Disabilities Act (ADA) for pedestrian accessibility**
- **Improves roadway drainage through the installation of curb, gutter and inlets**
- **Proposed sidewalk is within SHA right-of-way**

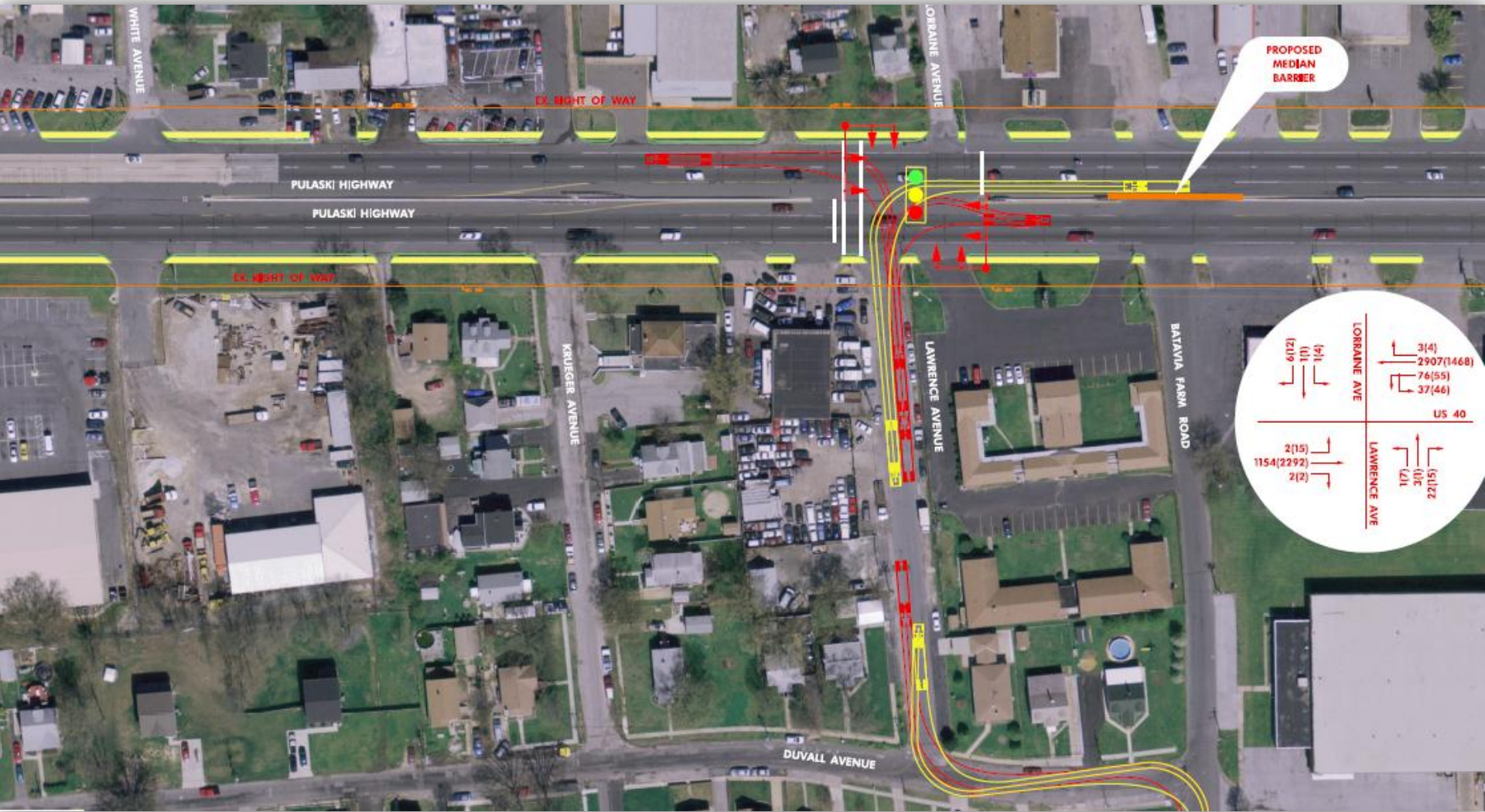


CONCEPTS:

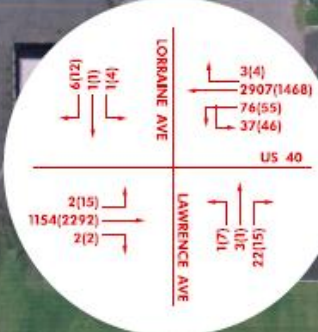
- A. Signalize Batavia Farm Rd while closing the median at Lorraine Ave**
- B. Signalize Lorraine Ave while closing the median at Batavia Farm Rd**
 - **Provide crosswalks and pedestrian signals at new signal**



Concept B – Signal at Lorraine Ave. with Closed Median at Batavia Farm



PROPOSED
MEDIAN
BARRIER












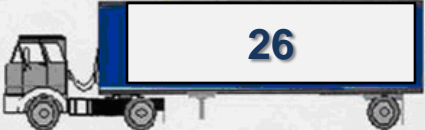


Types of Trucks Accessing Batavia Farm Rd.





Batavia Farm Rd. – 24 Hour Vehicle Count (by Classification)

January 23, 2012 – January 24, 2012

<p>(1) Motorcycles</p>  <p>3</p>	<p>(2) Passenger Cars (w/ 1 or 2 axle trailers)</p>  <p>495</p>	<p>(3) Two Axle, 4 Tire Single Units. Pickup or Van w/ 1 or 2 axle trailers</p>  <p>216</p>	<p>(4) Buses</p>  <p>20</p>	
<p>(5) 2D – Two Axle, Six Tire Single Unit Includes Handicapped Equipped & Mini School Buses.</p>  <p>220</p>		<p>(6) 3 Axles Single Unit</p>  <p>11</p>	<p>(7) 4, or more, Axles Single Unit</p>  <p>0</p>	<p>(8) 3-4 Axles, Single Trailer</p>  <p>26</p>
<p>(9) 5 Axles Single Trailer</p>  <p>9</p>		<p>(10) 6, or more, Axles Single Trailer</p>  <p>3</p>		



Batavia Farm Rd. – 24 Hour Vehicle Count (by Classification)

January 23, 2012 – January 24, 2012

Daily Total Classes Report

Location: Batavia Farm Road

Unit ID:

Study Date: Monday - January 23, 2012 / Tuesday - January 24, 2012

Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13
10:30 - 11:29	0	11	16	0	11	1	0	0	0	0	0	0	0
11:30 - 12:29	0	40	16	2	24	0	0	0	1	0	0	0	0
12:30 - 13:29	0	27	21	1	16	1	1	2	1	0	0	0	0
13:30 - 14:29	0	27	17	3	16	0	0	0	0	0	0	0	0
14:30 - 15:29	0	32	23	2	34	0	0	5	0	0	0	0	0
15:30 - 16:29	0	31	15	0	23	0	0	0	0	0	0	0	0
16:30 - 17:29	0	27	13	0	5	0	0	0	0	0	0	0	0
17:30 - 18:29	0	25	11	0	3	0	0	0	0	0	0	0	0
18:30 - 19:29	0	9	11	0	3	0	0	0	0	0	0	0	0
19:30 - 20:29	0	14	4	0	1	0	0	0	0	0	0	0	0
20:30 - 21:29	0	18	2	0	1	0	0	0	0	0	0	0	0
21:30 - 22:29	0	10	1	0	3	0	0	0	0	0	0	0	0
22:30 - 23:29	0	1	2	0	0	0	0	0	0	0	0	0	0
23:30 - 00:29	0	1	3	0	2	0	0	0	0	0	0	0	0
00:30 - 01:29	0	2	0	0	2	0	0	0	0	0	0	0	0
01:30 - 02:29	0	0	1	0	1	0	0	0	0	0	0	0	0
02:30 - 03:29	0	0	0	0	1	2	0	0	1	0	0	0	0
03:30 - 04:29	0	2	0	0	0	0	0	0	1	0	0	0	0
04:30 - 05:29	0	3	2	0	0	1	0	0	0	0	0	0	0
05:30 - 06:29	0	25	12	0	11	0	0	0	0	1	0	0	0
06:30 - 07:29	0	49	27	2	28	0	0	2	0	0	0	0	0
07:30 - 08:29	0	42	10	3	24	0	0	2	2	1	0	0	0
08:30 - 09:29	0	32	15	1	14	4	0	1	1	1	0	0	0
09:30 - 10:29	0	25	18	2	20	1	0	3	2	0	0	0	0
Totals	0	453	240	16	243	10	1	15	9	3	0	0	0
Percent of Totals	0	45	24	1	24	1	0	1	0	0	0	0	0
Percent of AM	0	21	11	1	13	0	0	0	0	0	0	0	0
Percent of PM	0	23	12	0	11	0	0	0	0	0	0	0	0

Night Time Hours

Truck Summary: Total Trucks (#4 thru #13) 297 % of Total Trucks: 30 % of AM Trucks: 16 % of PM Trucks: 13

FHWA Classifications:

- | | | | |
|----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|
| #1 Motorcycles - 2 Axles | #5 Single Unit - 2 Axles, 6 Tires | #9 Double Unit - 5 Axles | #13 Multi-Unit - 7 Axles or More |
| #2 Passenger Cars - 2 Axles | #6 Single Unit Truck - 3 Axles | #10 Double Unit - 6 Axles or More | |
| #3 Pickup Trucks, Vans - 2 Axles | #7 Single Unit - 4 Axles | #11 Multi-Unit - 5 Axles or Less | |
| #4 Buses | #8 Single Unit - 4 Axles or Less | #12 Multi-Unit - 6 Axles | |



PROS

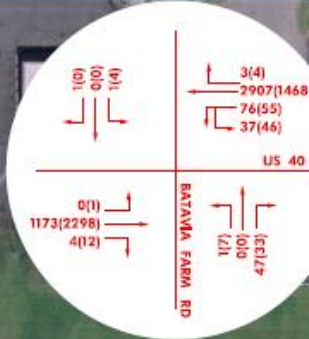
1. Limits pedestrians from crossing mid-block
2. Reduces conflict points
3. Provides pedestrian crosswalks with count down/APS signal
4. Provides signalized access for motorists on Old Philadelphia Rd. to US 40

CONS

1. Longer travel route for some local businesses
2. Vehicles exiting Batavia Farm Rd to go WB on US 40 will have to travel to the closest intersection at Todds Lane (1300 feet)
3. Vehicles traveling WB on US 40 will have to use Lawrence Ave to access Batavia Farm Rd
4. Sight distance is more limited at Lorraine than at Batavia Farm Rd
5. More difficult to signalize roadway due to the offset at Lawrence Ave.
6. Less desirable for pedestrians to cross due to the current offset of Lorraine and Lawrence Ave
7. Turning radius is inadequate for large vehicles to u-turn at median openings
8. Truck restriction will need to be lifted on Duval Ave. between Batavia Farm and Lawrence



Concept A – Signal at Batavia Farm with Closed Median at Lorraine





Signal at Batavia Farm Rd. with Closed Median at Lorraine Ave

PROS

1. Sight distance is better at Batavia Farm Rd than Lorraine Ave
2. Larger vehicles can access local businesses via Batavia Farm Rd
3. Trucks weighing more than $\frac{3}{4}$ ton cannot access Duvall Ave (Signal at this location will enforce truck restriction)
4. Median closure will eliminate conflicts for left/u-turning vehicles as well as angle crashes at Lorraine/Lawrence Ave
5. Reduces conflict points by closing the median
6. Improves signal coordination at Chesaco Ave
7. Provide pedestrian crosswalks with count down/APS signal
8. Discourage large vehicles and trucks from making u-turns at the medians

CONS

1. Longer travel route for some local businesses and residents
2. Vehicles exiting Lorraine Ave to go EB on US 40 will have to travel WB to the closest intersection at White Ave (900 feet)
3. Vehicles exiting Lawrence Ave to go WB on US 40 will have to travel to the signal at Batavia Farm Rd
4. Turning radius is inadequate for large vehicles to u-turn at median openings



- **Signals are synchronized between Chesaco & 66th Street. They're on line and operating as designed**
 - **Previous Issue with video detection being knocked out of alignment due to high winds has been corrected.**

- **Count down pedestrian signals checked and found to be operational**

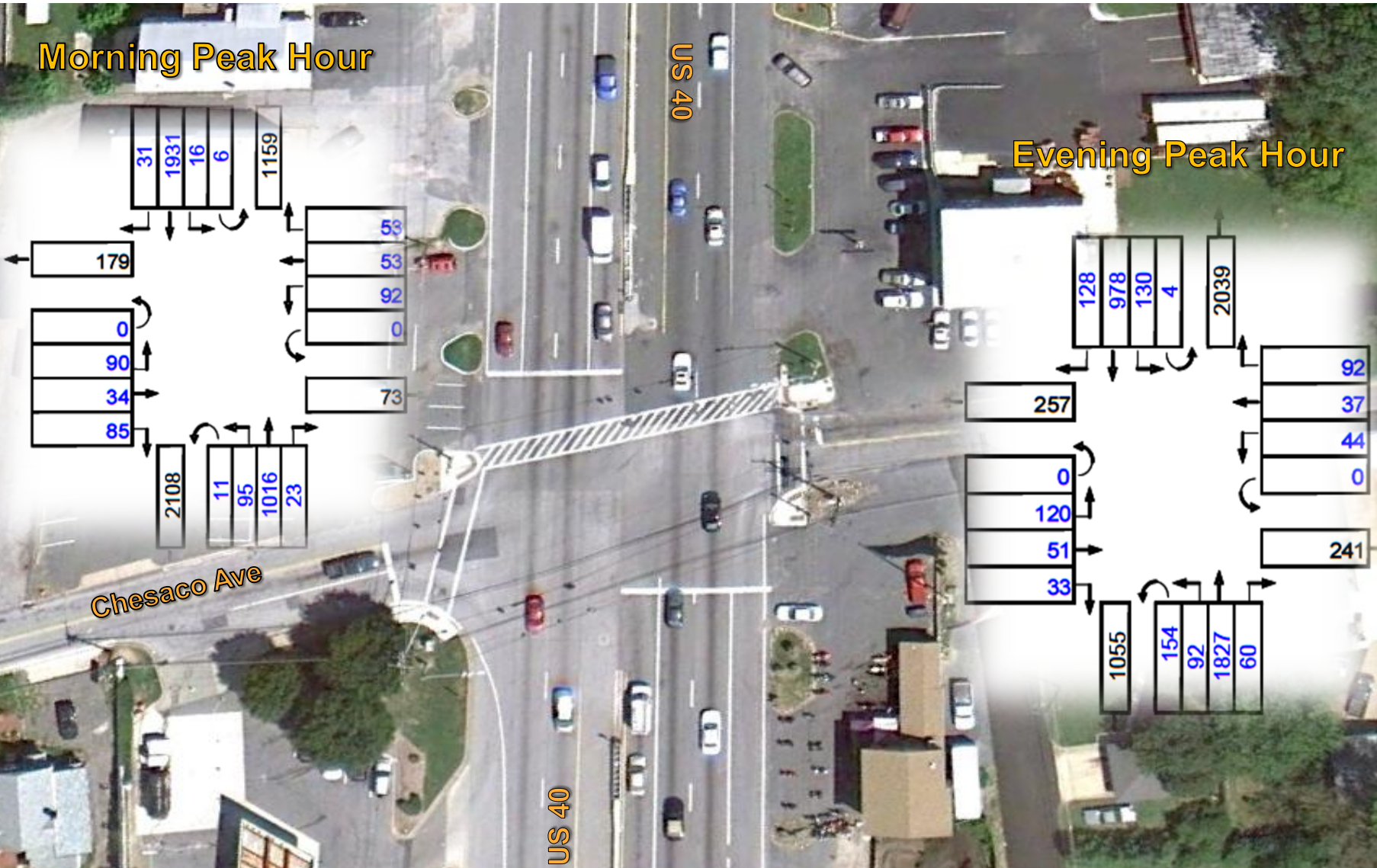


US 40 & Chesaco Avenue

Existing Lane Configurations & Peak Period Volumes

Morning Peak Hour

Evening Peak Hour



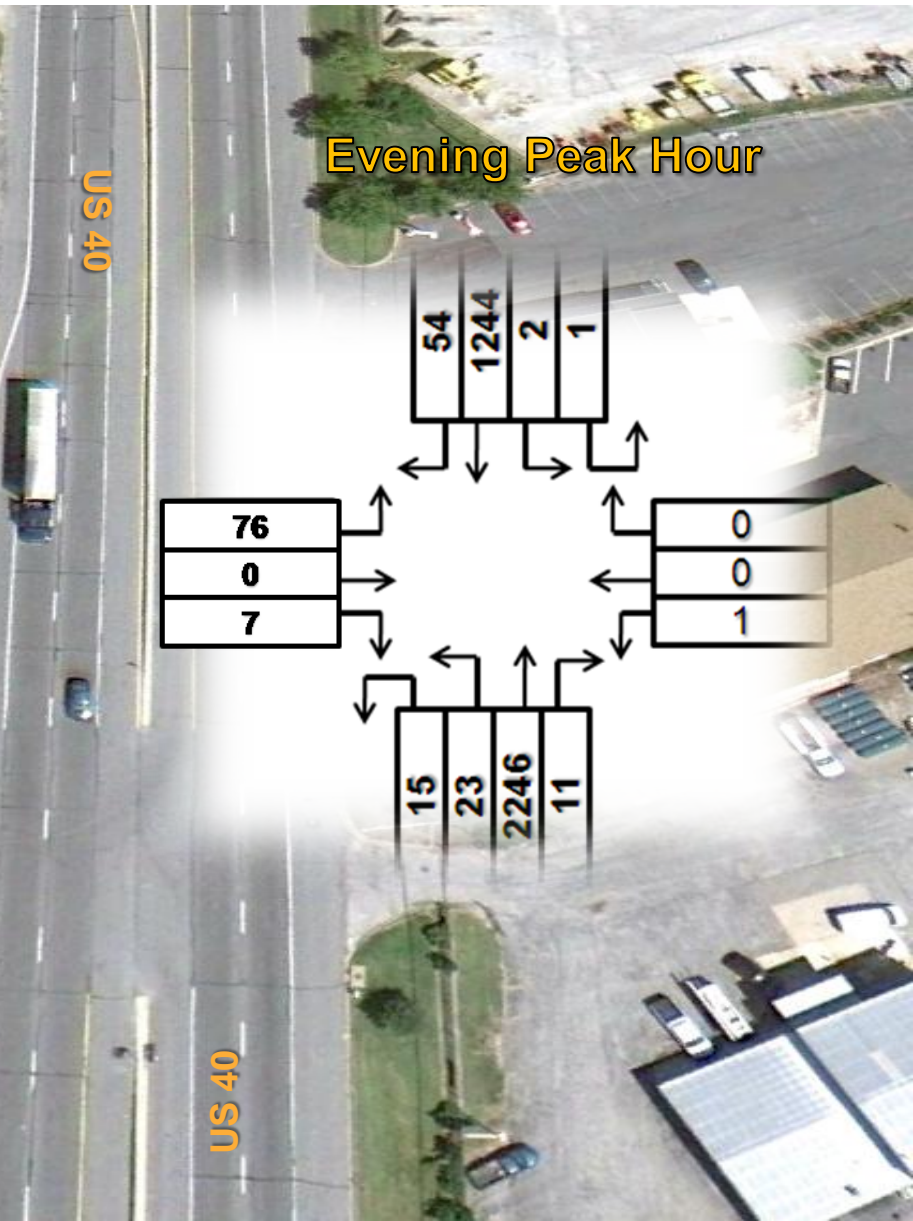
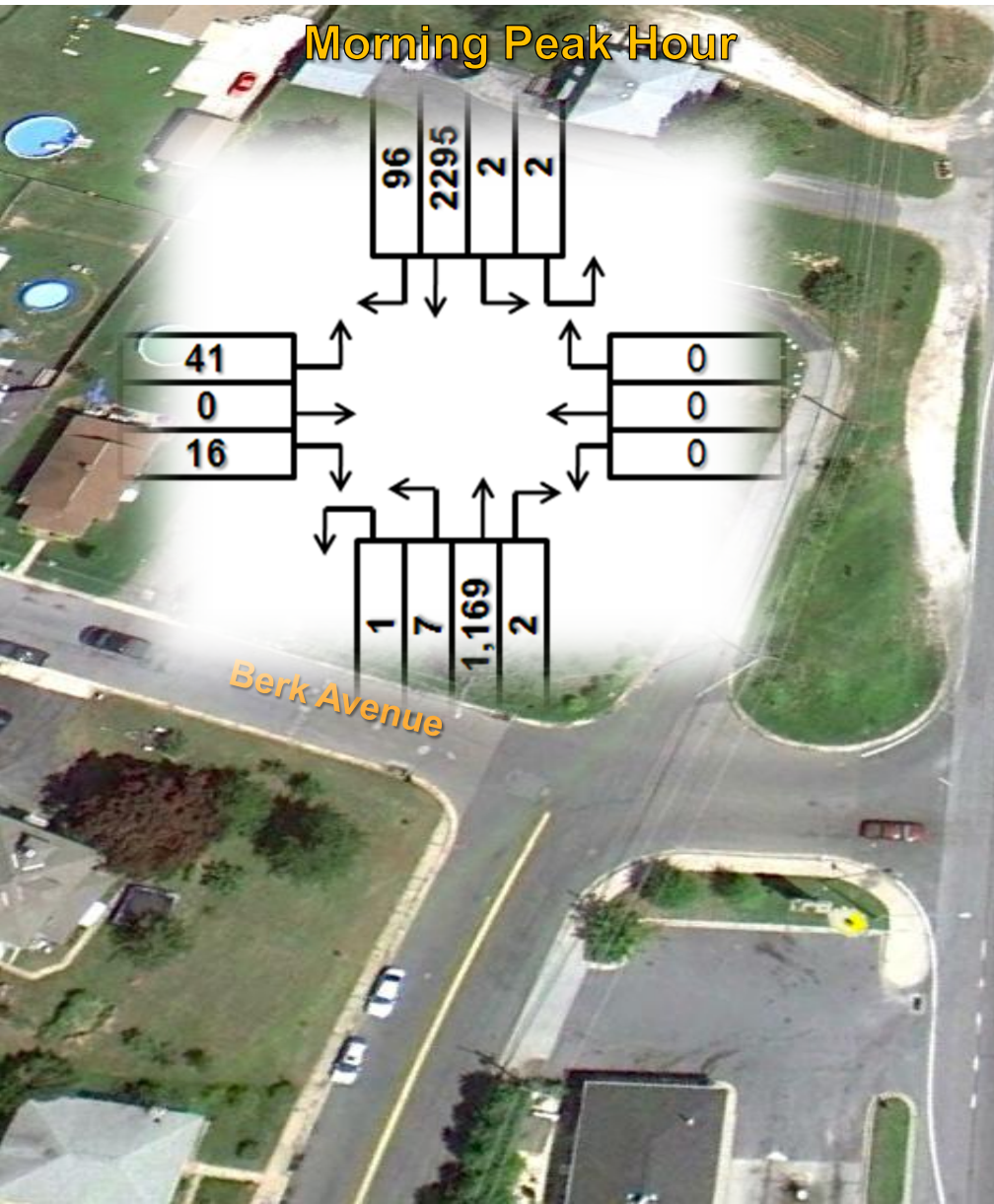


- **Based on 2006 Maryland MUTCD signal warrants, existing traffic counts, field observations and crash experience, the need for traffic signalization is not warranted**
- **In place of signalization, signing and pavement marking improvements will be implemented at this intersection**



US 40 & Berk Avenue

Existing Lane Configurations & Peak Period Volumes





US 40 & Berk Avenue

Proposed Signing & Striping for Installation in Summer of 2012

SIGNS

ROTATE 15° AND REPLACE EXISTING SIGN WITH 18" X 30" R4-7 SIGN



Berk Ave ②

Pulaski Hwy ③

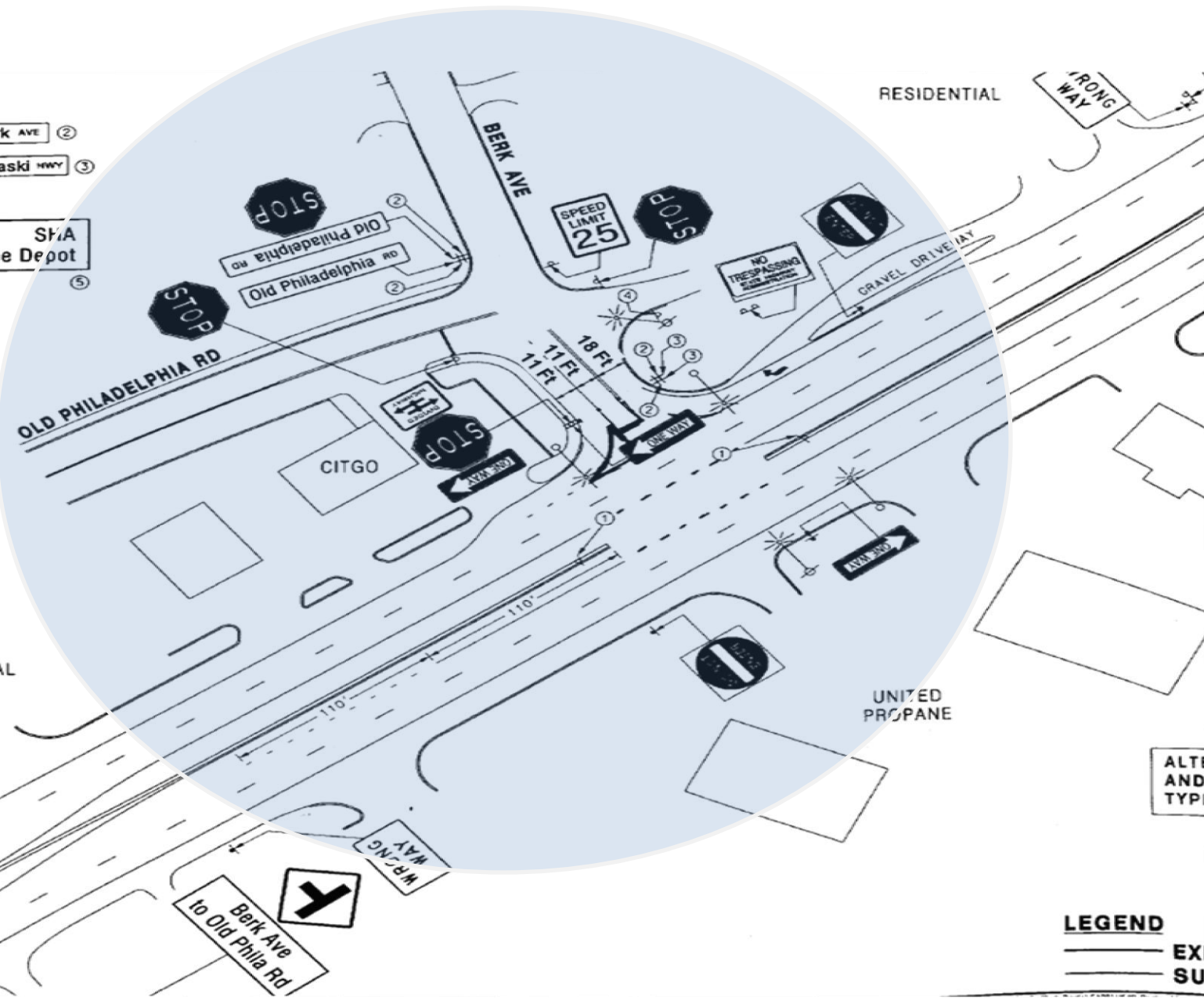
①



④

← S/A Landscape Depot ⑤

⑤



COMMERCIAL

RESIDENTIAL

US 40

Berk Ave to Old Phila Rd

LEGEND

— EXI
— SU



Contact Us

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