

Brandywine Road Speed Study FINAL REPORT

City of Albuquerque



Brandywine Road Speed Study Final Report

Albuquerque, New Mexico



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City of Albuquerque

May, 2016

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1. INTRODUCTION

The City of Albuquerque – Department of Municipal Development (Traffic Engineering Design Division) has requested that Souder, Miller & Associates conduct a speed study along Brandywine Road in northeast Albuquerque.

1.A. PROJECT PURPOSE

A speed study on Brandywine Road and Cherry Blossom Lane was conducted to determine the following:

- Evaluate the 85th percentile speed along Brandywine Lane at two (2) locations
- Calculate average and daily peak hour traffic volumes from Brandywine Road

As part of this study, an evaluation and cataloging of existing roadway conditions, collection of historical ADT and crash data, and evaluation of survey data will be completed.

1.B. PROJECT DESCRIPTION

The project area will be a 0.22 mile section of Brandywine Road and Cherry Blossom Lane between Cherry Hills Drive and Old Orchard Lane, ending at Cherry Hills Drive and Old Orchard Lane. Figure 1.B.1. on page 2 displays the project limits.





FIGURE 1.B.1.
PROJECT LIMITS



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1.C. BACKGROUND OF SPEED LIMITS

Speed limits are established on roadways of virtually all classifications, from interstate freeways to low volume local streets. The primary purpose of speed limits is to give motorists clear instruction as to what is a reasonable speed for them to drive at while traveling on a given roadway.

Among regulatory signage, speed limit signs arguably contain the most critical information that motorists need to be informed of while driving (next to stop signs, which are considered the highest impact regulatory sign). Drivers unfamiliar with a roadway often do not realize what characteristics the roadway has, and properly established speed limit signs give them the information they need to drive the roadway safely.

The NMDOT has guidelines for analyzing and establishing posted speed limits; the following text is based on one such example:

Realistic posted speed limits are of public importance for many reasons:

- They invite public compliance by conforming to the behavior or the driving majority
- They give clear reminders of safe and reasonable speeds to non-conforming violators
- They offer the most effective tool for law enforcement of safe driving
- They will minimize public antagonism toward law enforcement that results from unreasonable regulations

Improperly, or artificially low, posted speed limits can cause problems for state and local agencies for several reasons:

- They do not encourage voluntary compliance, since they do not reflect the behavior of the majority
- They make the behavior of the majority unlawful
- They maximize public antagonism toward law enforcement, since the perception is that the police are enforcing a “speed trap”
- They create a bad image for a community in the eyes of tourists / visitors

1.D. SETTING SPEED LIMITS

In accordance with Section 66-7-303 of the New Mexico Criminal and Traffic Law Manual, the speed limit on state highways shall be set by the Cabinet Secretary of the Department of Transportation, based on an engineering survey and traffic investigation that includes the following parameters.

- Spot speed studies (typically consisting of 100 vehicles)
- Roadway geometry/number of lanes
- Roadside environment and characteristics
- Building setbacks (if within a commercial business district)
- Driveway and intersection spacing/density
- Historical crash data for the roadway study area

Many speed limits are established using the theory of 85th percentile. Out of the (typically) 100 vehicles surveyed, beginning with the fastest vehicle speed recorded the 15th vehicle from that speed is determined to show where the 85th percentile speed is. This is assuming that most drivers (85%) drive within reasonable limits. The posted speed limit can be established and is usually the 5 – mph increment just below the 85th percentile speed. For example, if the 85th percentile speed



has been determined by an engineering survey to be 57 mph, the posted speed would be 55 mph. This method of posting speed limits allows for a reasonable posted speed limit that can be enforced by local agencies, without creating a speed trap.

For surveys with a different amount than 100 vehicles, the 85th percentile speed is determined by the following formula: $100/15 = \# \text{ of vehicles surveyed}/X$ (where x = the vehicle at the 85th percentile). For example, a 50 vehicle survey would result in:

$$\frac{100}{15} = \frac{50}{x}$$

Where $x = 7.5$, or the 8th vehicle in the survey

Other methods are frequently used to further analyze the posting of speed limits – these are the mode, median, and geometric mean:

- Mode is the most frequently clocked vehicle speed in a given survey. For example, in a 100 vehicle survey where 12 vehicles were clocked traveling 55 mph and no other speed was observed as frequently, the mode is 55 mph.
- Median is the numerical midpoint of a given survey. For example, in a survey of 100 vehicles, the speeds of the 50th and 51st vehicles are added and divided by 2 to obtain the median speed. If the 50th vehicle of such a survey was traveling at 56 mph and the 51st vehicle was also traveling at 56 mph, the resulting median would be $(56 + 56) \div 2 = 112 \div 2 = 56$ mph
- Geometric mean is described as follows: “an average of a set of numbers that is calculated by multiplying all the numbers (“n”), and taking the nth root of the total.”

Formula for Geometric Mean:

$$\text{Geometric Mean} = ((X_1)(X_2) \dots \dots (X_n))^{1/N}$$

X = Individual score (speed)
 N = Sample size (number of scores)

Geometric Mean Example:

Sample speeds = 51, 52, 55, 58, and 60 mph

Step 1:

$N = 5$, the total number of values, $\frac{1}{N} = 0.2$

Step 2:

Determine geometric mean using the formula.

$$\text{Geometric Mean} = ((51)(52)(55)(58)(60))^{0.2} = 55.09 \text{ mph}$$

In most cases, the geometric mean of a speed study will be of similar value of the median, often within 1 to 2 mph of either side of the median. In the above example, the median speed would be the third vehicle surveyed (55 mph), and the geometric mean is 55.09 mph.



2. EXISTING CONDITIONS

2.A. COUNT LOCATIONS

The study area included two traffic/speed count locations which were at the following locations:

- Brandywine Road East
- Brandywine Road North

Figure 2.1. on page 6 displays the traffic count locations.

2.B. EXISTING CONDITIONS

Figure 2.2. on page 6 displays the existing typical section of Brandywine Road and Cherry Blossom Lane.

Also to be noted is the BOP and EOP intersection are three-legged intersections. Near the EOP of the Cherry Blossom Lane / Cherry Hills Drive is the additional intersection of Cherry Blossom Lane / Cherry Hills Loop. There are 31 driveways within the project area which provide access to residential homes. Also between the BOP and EOP is an approximate right angle curve where Brandywine Road turns northbound to Cherry Blossom Lane.



FIGURE 2.1.
 COUNT LOCATIONS

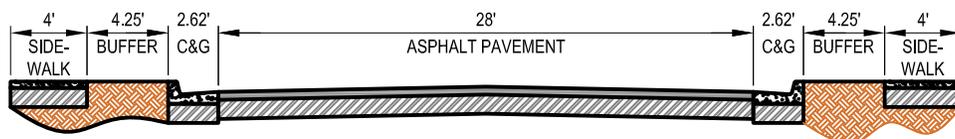


FIGURE 2.2.
 EXISTING TYPICAL SECTION



3. DATA

3.A. AADT

The AADT for the two (2) count locations are listed below in Table 3.A.1.

Brandywine Road ADT			
Count Location	WB / NB	EB / SB	ADT
Brandywine East	110	126	236
Brandywine North	100	117	217
Average	105	121.5	226.5

Table 3.A.1.

The Brandywine Road project area ADT ranges from 217 to 236 vehicles per day.

3.B. SPEED STUDY RESULTS

The results of the speed study are displayed below in Table 3.B.1. and Table 3.B.2.

Brandywine Road East Speed Study			
Speed (mph)	WB	EB	Total
Average	18.5	20.3	19.4
10 mph Pace	20.1 - 30.0	20.1 - 30.0	20.1 - 30.0
50th Percentile	21.4	22.4	21.9
67th Percentile	22.9	24.3	23.6
85th Percentile	26.8	28.0	27.5

Table 3.B.1.

Brandywine Road North Speed Study			
Speed (mph)	NB	SB	Total
Average	14.2	14.7	14.4
10 mph Pace	5.8 - 15.7	5.4 - 15.3	15.0 - 24.9
50th Percentile	12.0	12.7	14.6
67th Percentile	14.1	20.6	20.3
85th Percentile	22.9	23.2	23.1

Table 3.B.2.

When considering whether to establish a new posted speed limit or not, surveying the existing traffic speeds is crucial to determining a reasonable posted speed limit.

Before a posted speed limit can be adjusted, an analysis must be conducted to ascertain whether or not the speed limit can be adjusted without resulting in further increases of motorists' travel speeds. Motorists usually drive at speeds which they



perceive as safe, based on the observable roadway conditions. A flat and straight roadway may result in a different travel speed than the posted speed limit due to the driver's observation of the roadway condition.

In relation to Brandywine Road, the posted speed limit is 25 mph, roadway conditions are consistent; controlled access, satisfactory pavement conditions, two travel lanes, and on-street parking. The only unusual roadway condition is a curve near the middle of the project area. Table 3.B.3 displays that 14 percent of the total ADT of the two count locations recorded speeds greater than the posted speed limit of 25 mph.

Brandywine Road ADT ≥ 25 mph				
Speed (mph)	0 - 19.9	20 - 24.9	≥ 25	Avg. ADT
Brandywine North	143	66	7.5	217
Brandywine East	83.5	92	54	230
Total	226.5	158	61.5	447
% Total	51%	35%	14%	-

Table 3.B.3.

3.C. CRASH DATA

Crash data was requested from the Mid-Region Council of Governments. The crash data requested showed there was one recorded crash in 2011 within the project area at the corner of Brandywine Road and Cherry Blossom Lane which was a property damage only crash resulting from driver inattention and backing into a parked car.

4. U.S. LIMITS SPEED LIMITS PROGRAM

U.S. Limits is an FHWA sponsored program used to analyze speed limits. This program calculates a recommended speed limit based on the criteria given, which is listed on the website as follows:

- Density of surrounding development (e.g. high density, low density, or rural);
- Frequency of roadside access (e.g. number of residential driveways, commercial, industrial, shopping, and special activity properties, and the number and type of intersection roads);
- Road function (e.g. traffic movement vs. access to abutting properties);
- Road characteristics (e.g. paved width, divided or undivided, lane width, number and lanes, and sight restrictions);
- Road conditions and important high speed road characteristics (e.g. interchange spacing, AADT, and shoulders);
- Existing vehicle operating speeds;
- Adjoining speed limits: and
- Any special conditions that may exist on the road section (e.g. adverse alignment, pedestrian and roadside activities, high crash rates, etc.)

This analysis was used for Brandywine Road and based on the data entered into <http://www.uslimits.com> for the above-listed categories, the program concluded that a 20 mph was warranted for the corridor. The output sheet is shown in



Appendix C – U.S. Limits Output. The recommended speed limit of 20 mph was warranted due to the single crash in 2011 which was a result driver inattention.

5. CONCLUSION

After evaluating the volume and speed data within the project area, it is concluded that only 14% of the traffic is exceeding 25 mph, the stand alone reported crash may not have been corrected with traffic calming, and the 85th percentile speed of traffic is not exceeding the posted speed limit by 5 mph or more at both count locations. In order to meet criteria for traffic calming measures as outlined in the City of Albuquerque’s Neighborhood Traffic Management Program, at least two (2) of the following threshold criteria must be met:

COA NMTP Traffic Calming Measures	
Item	Description
1	Reported crashes in the past 3 years that could be corrected with traffic calming
2	Peak-hour traffic volume greater than 400 vehicles in one direction
3	25% of peak-hour traffic is non-local cut-through traffic (not studied)
4	85th percentile speeds exceeds the posted speed limit by 5 mph or more
Figure 5.1.	

Based on the data collected, Brandywine Road DOES NOT meet any of the criteria outlined to warrant traffic calming.

Appendices

- Appendix A – USLIMITS2 Speed Zoning Report
- Appendix B – Volume and Speed Data
- Appendix C – Crash Data



Appendix A



USLIMITS2 Speed Zoning Report

Project Name: Brandywine Speed Study

Analyst: Souder, Miller & Associates

Date: 05-06-2016

Basic Project Information

Project Number: 9044.00
Route Name: Brandywine Road
From: Old Orchard Lane
To: Cherry Hills Drive
State: New Mexico
County: Bernalillo County
City: Albuquerque city
Route Type: Road Section in Developed Area
Route Status: Existing

Roadway Information

Section Length: .22 mile(s)
Statutory Speed Limit: 25 mph
Adverse Alignment: No
One-Way Street: No
Divided/Undivided: Undivided
Number of Through Lanes: 2
Area Type: Residential-Subdivision
Number of Driveways: 31
Number of Signals: 0

Crash Data Information

Crash Data Years: 1.08
Crash AADT: 236 veh/day
Total Number of Crashes: 1
Total Number of Injury Crashes: 0
Section Crash Rate: 4871 per 100 MVM
Section Injury Crash Rate: 0 per 100 MVM
Crash Rate Average for Similar Roads: 366
Injury Rate Average for Similar Roads: 101

Traffic Information

85th Percentile Speed: 26 mph
50th Percentile Speed: 19 mph
AADT: 236 veh/day
On Street Parking and Usage: Not High
Pedestrian / Bicyclist Activity: High

Recommended Speed Limit:



Note: The section crash rate of 4871 per 100 MVM is more than 30 percent above the average for similar roads (366) but below the critical rate (6243). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

Appendix B



Special Speed Study Report: Brandywine East

Station ID : Brandywine East

Info Line 1 : West of Old Orchard Ln
 Info Line 2 : Albuquerque

GPS Lat/Lon :

DB File : BRAND 1 WB.DB

Last Connected Device Type : Apollo

Version Number : 1.45

Serial Number : 93883

Number of Lanes : 1

Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Vehicle Sensors	Sensor Spacing	Loop Length	Comment
1.	Westbound		Ax-Ax	4.0 ft	6.0 ft	

Lane #1 Special Speed Study Data From: 00:00 - 04/26/2016 To: 23:59 - 04/27/2016

Date	Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	Total
		0 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 - 44.9	45 - 49.9	50 - 54.9	55 - 59.9	60 - 64.9	65 - 69.9	70 - 74.9	75 - 79.9	80 - 84.9	85 - 89.9	Other	
04/26/16	00:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Tue	01:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	07:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	08:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	09:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	10:00	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	11:00	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	12:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	13:00	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	14:00	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	15:00	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	16:00	8	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	13
	17:00	5	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	18:00	5	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	19:00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	20:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	21:00	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	22:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	23:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Daily Total :		41	45	14	3	0	0	0	0	0	0	0	0	0	0	0	0	103
Percent :		40%	44%	14%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		40%	83%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :		2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5

Average Speed 18.5 mph	50% Speed : 21.7 mph	67% Speed : 22.9 mph	85% Speed : 27.2 mph
10mph Pace: 21.1 - 31.0 (57.3%)			

Date	Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	Total
		0 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 - 44.9	45 - 49.9	50 - 54.9	55 - 59.9	60 - 64.9	65 - 69.9	70 - 74.9	75 - 79.9	80 - 84.9	85 - 89.9	Other	
04/27/16	00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wed	01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	07:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	08:00	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	11:00	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	12:00	1	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	13:00	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	9
	14:00	3	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	15:00	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	7
	16:00	9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	17:00	9	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	12
	18:00	5	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	19:00	2	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	20:00	4	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	9
	21:00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	22:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	23:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Daily Total :		46	46	17	4	0	0	0	0	0	0	0	0	0	0	0	0	113
Percent :		41%	41%	15%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		41%	81%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :		2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5

Average Speed	18.5 mph	50% Speed :	21.7 mph	67% Speed :	22.9 mph	85% Speed :	27.2 mph
				10mph Pace: 21.1 - 31.0 (55.8%)			

Lane #3 Configuration

#	Dir.	Information	Vehicle Sensors	Sensor Spacing	Loop Length	Comment
3.	Eastbound		Ax-Ax	4.0 ft	6.0 ft	

Lane #3 Special Speed Study Data From: 00:00 - 04/26/2016 To: 23:59 - 04/27/2016

Date	Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	Total
		0 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 - 44.9	45 - 49.9	50 - 54.9	55 - 59.9	60 - 64.9	65 - 69.9	70 - 74.9	75 - 79.9	80 - 84.9	85 - 89.9	Other	
04/26/16	00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tue	01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	05:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	06:00	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	07:00	6	3	3	1	0	1	0	0	0	0	0	0	0	0	0	0	14
	08:00	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	09:00	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	8
	10:00	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	11:00	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	12:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	13:00	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	14:00	2	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6
	15:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	16:00	2	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	8
	17:00	3	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	18:00	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	19:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	20:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	21:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	22:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Daily Total :	36	37	22	5	0	1	0	0	0	0	0	0	0	0	0	0	0	101
Percent :	36%	37%	22%	5%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	36%	72%	94%	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5

Average Speed 19.8 mph	50% Speed : 22.2 mph	67% Speed : 23.3 mph
85% Speed : 27.6 mph		
10mph Pace: 21.4 - 31.3 (58.4%)		

Date	Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	Total
		0 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 - 44.9	45 - 49.9	50 - 54.9	55 - 59.9	60 - 64.9	65 - 69.9	70 - 74.9	75 - 79.9	80 - 84.9	85 - 89.9	Other	
04/27/16	00:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Wed	01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	07:00	6	5	5	4	0	0	0	0	0	0	0	0	0	0	0	0	20
	08:00	4	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	09:00	2	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	8
	10:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	11:00	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	12:00	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	13:00	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	14:00	2	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	8
	15:00	4	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	16
	16:00	6	6	0	2	0	0	0	0	0	0	0	0	0	0	0	0	14
	17:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	18:00	6	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	15
	19:00	2	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6
	20:00	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	21:00	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	22:00	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	7
	23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily Total :		44	56	29	13	0	0	0	0	0	0	0	0	0	0	0	0	142
Percent :		31%	39%	20%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		31%	70%	91%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :		2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	6

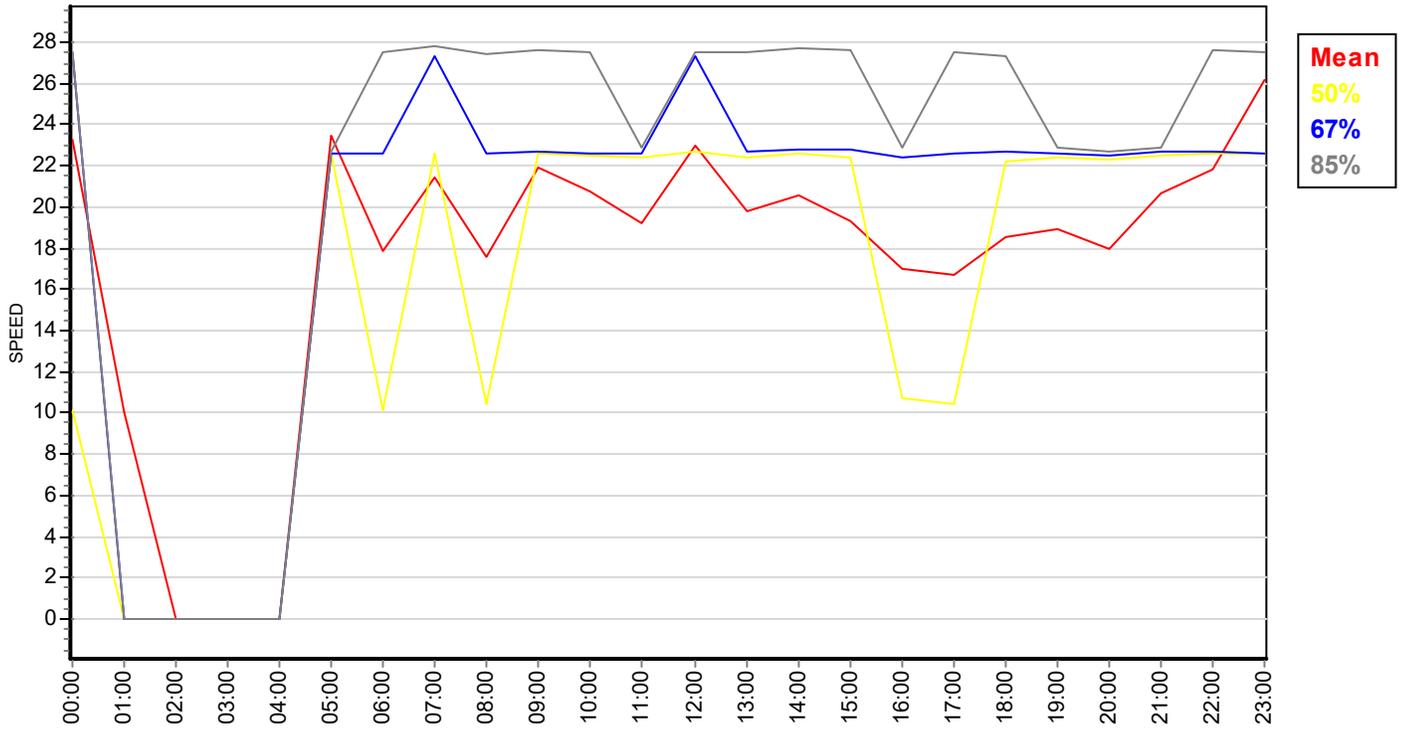
Average Speed	20.6 mph	50% Speed :	22.5 mph	67% Speed :	24.0 mph	85% Speed :	27.8 mph
				10mph Pace: 20.8 - 30.7 (59.9%)			

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16		
	0 -	20 -	25 -	30 -	35 -	40 -	45 -	50 -	55 -	60 -	65 -	70 -	75 -	80 -	85 -			
<i>Date</i>	19.9	24.9	29.9	34.9	39.9	44.9	49.9	54.9	59.9	64.9	69.9	74.9	79.9	84.9	89.9	<i>Other</i>	<i>Total</i>	

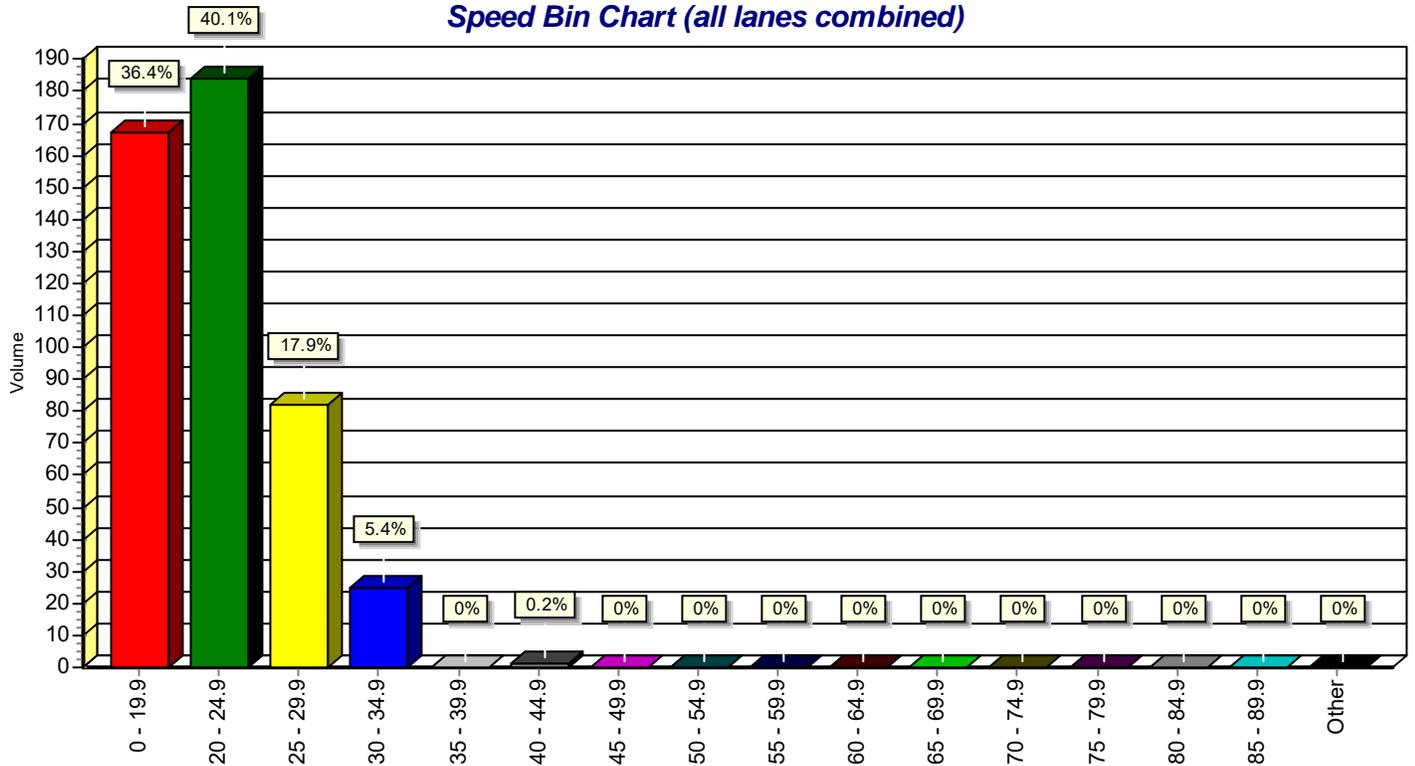
Special Speed Study Summary: Brandywine East

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	
	0 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 - 44.9	45 - 49.9	50 - 54.9	55 - 59.9	60 - 64.9	65 - 69.9	70 - 74.9	75 - 79.9	80 - 84.9	85 - 89.9	Other	Total
Grand Total #1:	87	91	31	7	0	0	0	0	0	0	0	0	0	0	0	0	216
Percent :	40%	42%	14%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	40%	82%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
ADT = 108	Average Speed 18.5 mph 50% Speed : 21.4 mph 67% Speed : 22.9 mph 85% Speed : 26.8 mph 10mph Pace: 20.1 - 30.0 (56.5%)																
Grand Total #3:	80	93	51	18	0	1	0	0	0	0	0	0	0	0	0	0	243
Percent :	33%	38%	21%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	33%	71%	92%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
ADT = 121	Average Speed 20.3 mph 50% Speed : 22.4 mph 67% Speed : 24.3 mph 85% Speed : 28.0 mph 10mph Pace: 20.1 - 30.0 (59.3%)																
Comb. Total :	167	184	82	25	0	1	0	0	0	0	0	0	0	0	0	0	459
Percent :	36%	40%	18%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	36%	76%	94%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	3	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	10
ADT = 229	Average Speed 19.4 mph 50% Speed : 21.9 mph 67% Speed : 23.6 mph 85% Speed : 27.5 mph 10mph Pace: 20.1 - 30.0 (58.0%)																

Speed Percent vs. Time (all lanes)



Speed Bin Chart (all lanes combined)



Special Speed Study Report: Brandywine North

Station ID : Brandywine North

Info Line 1 : South of Cherry Hills Lp
 Info Line 2 : Albuquerque

GPS Lat/Lon :

DB File : BRAND NOR 1SB.DB

Last Connected Device Type : Apollo

Version Number : 1.63

Serial Number : 21495

Number of Lanes : 1

Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Vehicle Sensors	Sensor Spacing	Loop Length	Comment
1.		Southbound	Ax-Ax	4.0 ft	6.0 ft	

Lane #1 Special Speed Study Data From: 00:00 - 04/26/2016 To: 23:59 - 04/27/2016

Date	Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	Total
		0 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 - 44.9	45 - 49.9	50 - 54.9	55 - 59.9	60 - 64.9	65 - 69.9	70 - 74.9	75 - 79.9	80 - 84.9	85 - 89.9	Other	
04/26/16	00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tue	01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	07:00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	08:00	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	09:00	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	10:00	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	11:00	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	12:00	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	13:00	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	14:00	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	15:00	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	16:00	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	17:00	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	18:00	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	19:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	20:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	21:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	22:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily Total :		65	29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	95
Percent :		68%	31%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		68%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :		3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

Average Speed 14.0 mph 50% Speed : 10.9 mph 67% Speed : 11.9 mph 85% Speed : 22.6 mph
 10mph Pace: 8.0 - 17.9 (68.4%)

Date	Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	Other	Total
		0 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 - 44.9	45 - 49.9	50 - 54.9	55 - 59.9	60 - 64.9	65 - 69.9	70 - 74.9	75 - 79.9	80 - 84.9	85 - 89.9			
04/27/16	00:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Wed	01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	07:00	4	6	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	12
	08:00	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	09:00	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	10:00	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	11:00	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	12:00	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	13:00	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	14:00	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	15:00	7	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
	16:00	12	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
	17:00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	18:00	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	19:00	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	20:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	21:00	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	22:00	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily Total :		85	47	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	139
Percent :		61%	34%	4%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		61%	95%	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Average :		4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

Average Speed	15.2 mph	50% Speed :	11.7 mph	67% Speed :	21.6 mph	85% Speed :	23.1 mph
				10mph Pace:	7.4 - 17.3 (61.2%)		

Lane #3 Configuration

#	Dir.	Information	Vehicle Sensors	Sensor Spacing	Loop Length	Comment
3.		Northbound	Ax-Ax	4.0 ft	6.0 ft	

Lane #3 Special Speed Study Data From: 00:00 - 04/26/2016 To: 23:59 - 04/27/2016

Date	Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	Total
		0 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 - 44.9	45 - 49.9	50 - 54.9	55 - 59.9	60 - 64.9	65 - 69.9	70 - 74.9	75 - 79.9	80 - 84.9	85 - 89.9	Other	
04/26/16	00:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tue	01:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	05:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	07:00	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	08:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	09:00	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	10:00	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	11:00	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	12:00	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	13:00	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	14:00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	15:00	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	16:00	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	17:00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	18:00	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	19:00	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	20:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	21:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	23:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Daily Total :	65	26	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93
Percent :	70%	28%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	70%	98%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

Average Speed 13.9 mph	50% Speed : 10.9 mph	67% Speed : 11.9 mph
85% Speed : 22.6 mph		
10mph Pace: 8.0 - 17.9 (69.9%)		

Date	Time	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	Other	Total
		0 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 - 44.9	45 - 49.9	50 - 54.9	55 - 59.9	60 - 64.9	65 - 69.9	70 - 74.9	75 - 79.9	80 - 84.9	85 - 89.9			
04/27/16	00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wed	01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	05:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	07:00	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	08:00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	09:00	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	10:00	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	11:00	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	12:00	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	13:00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	14:00	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	15:00	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	16:00	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	17:00	7	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	18:00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	19:00	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	20:00	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	21:00	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily Total :		71	30	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	106
Percent :		67%	28%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		67%	95%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Average :		3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

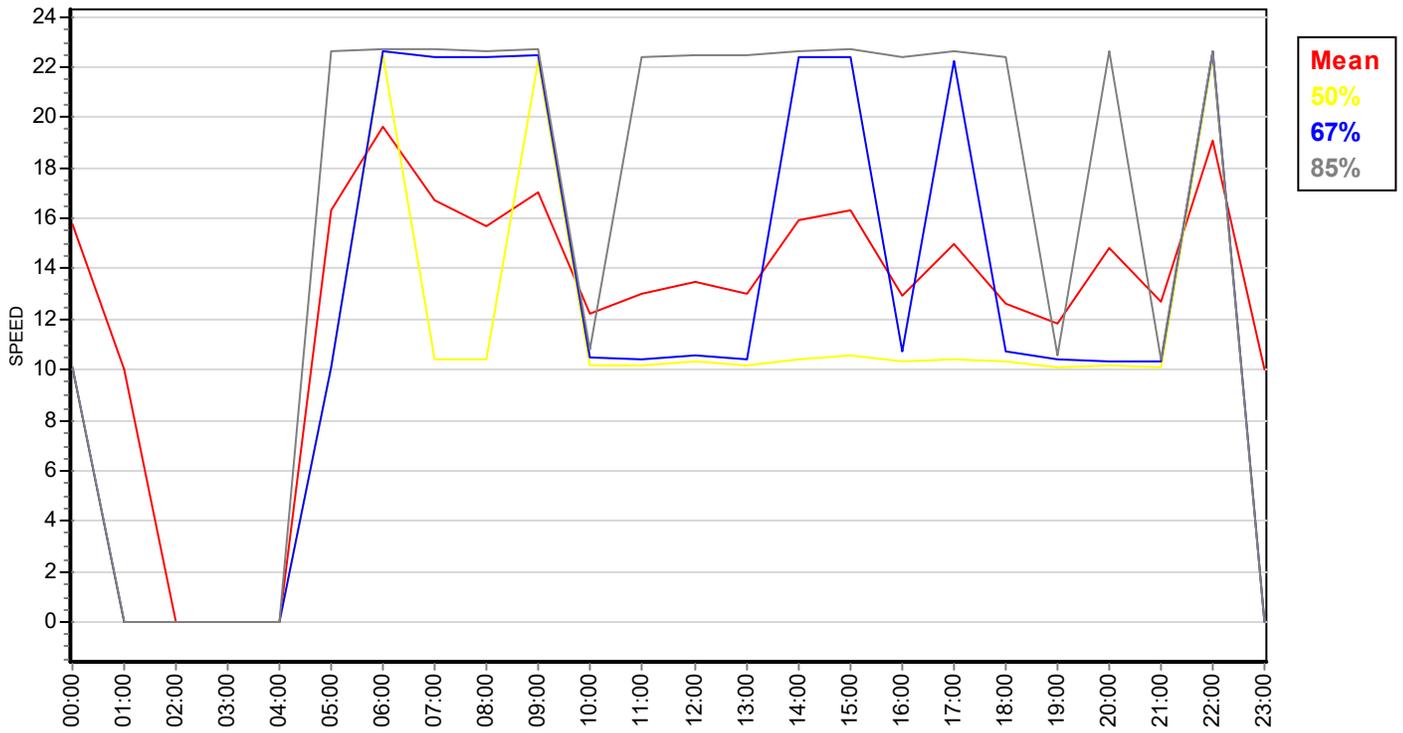
Average Speed	14.4 mph	50% Speed :	11.1 mph	67% Speed :	12.2 mph	85% Speed :	22.8 mph
				10mph Pace:	7.8 - 17.7 (67.0%)		

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16		
	0 -	20 -	25 -	30 -	35 -	40 -	45 -	50 -	55 -	60 -	65 -	70 -	75 -	80 -	85 -			
<i>Date</i>	19.9	24.9	29.9	34.9	39.9	44.9	49.9	54.9	59.9	64.9	69.9	74.9	79.9	84.9	89.9	<i>Other</i>	<i>Total</i>	

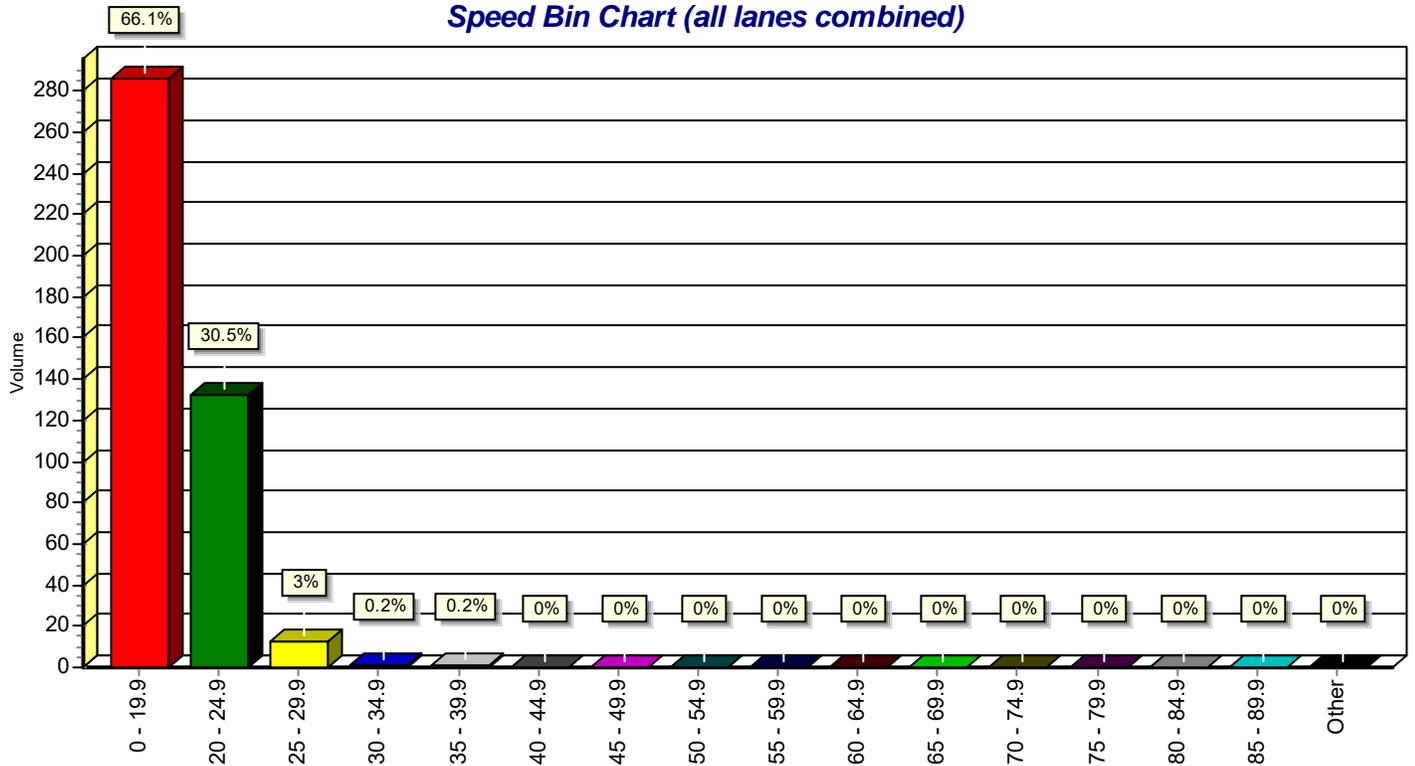
Special Speed Study Summary: Brandywine North

Description	#1 0 - 19.9	#2 20 - 24.9	#3 25 - 29.9	#4 30 - 34.9	#5 35 - 39.9	#6 40 - 44.9	#7 45 - 49.9	#8 50 - 54.9	#9 55 - 59.9	#10 60 - 64.9	#11 65 - 69.9	#12 70 - 74.9	#13 75 - 79.9	#14 80 - 84.9	#15 85 - 89.9	#16 Other	Total
Grand Total #1:	150	76	7	0	1	0	0	0	0	0	0	0	0	0	0	0	234
Percent :	64%	32%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	64%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
ADT = 117	Average Speed 14.7 mph 50% Speed : 12.7 mph 67% Speed : 20.6 mph 85% Speed : 23.2 mph 10mph Pace: 5.4 - 15.3 (64.1%)																
Grand Total #3:	136	56	6	1	0	0	0	0	0	0	0	0	0	0	0	0	199
Percent :	68%	28%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	68%	96%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
ADT = 99	Average Speed 14.2 mph 50% Speed : 12.0 mph 67% Speed : 14.1 mph 85% Speed : 22.9 mph 10mph Pace: 5.8 - 15.7 (68.3%)																
Comb. Total :	286	132	13	1	1	0	0	0	0	0	0	0	0	0	0	0	433
Percent :	66%	30%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	66%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
ADT = 216	Average Speed 14.4 mph 50% Speed : 14.6 mph 67% Speed : 20.3 mph 85% Speed : 23.1 mph 10mph Pace: 15.0 - 24.9 (45.3%)																

Speed Percent vs. Time (all lanes)



Speed Bin Chart (all lanes combined)



Basic Volume Report: Brandywine East

Station ID : Brandywine East

Info Line 1 : West of Old Orchard Ln

Info Line 2 : Albuquerque

GPS Lat/Lon :

DB File : BRAND 1 WB.DB

Last Connected Device Type : Apollo

Version Number : 1.45

Serial Number : 93883

Number of Lanes : 1

Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.		Westbound				

Lane #1 Basic Volume Data From: 00:00 - 04/26/2016 To: 23:59 - 04/27/2016

Date	Time	:00	:15	:30	:45	Total
04/26/16	00:00	0	0	0	1	1
Tue	01:00	0	0	0	1	1
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	1	0	0	1
	06:00	0	1	0	0	1
	07:00	3	0	1	0	4
	08:00	0	2	0	1	3
	09:00	1	0	1	1	3
	10:00	2	0	1	1	4
	11:00	1	3	4	1	9
	12:00	0	1	1	0	2
	13:00	5	1	2	0	8
	14:00	2	1	2	0	5
	15:00	3	0	1	5	9
	16:00	1	4	4	4	13
	17:00	5	1	0	4	10
	18:00	5	2	2	3	12
	19:00	2	3	2	1	8
	20:00	1	1	1	0	3
	21:00	1	1	0	3	5
	22:00	0	0	0	1	1
	23:00	0	1	1	0	2

Day Total : 105

AM Total :	27 (25.7%)	Peak AM Hour : 10:45 =	9 (8.6%)	Peak AM Factor : 0.562	Average Period :	1.1
PM Total :	78 (74.3%)	Peak PM Hour : 16:15 =	17 (16.2%)	Peak PM Factor : 0.850	Average Hour :	4.4

Date	Time	:00	:15	:30	:45	Total
04/27/16	00:00	0	0	0	0	0
Wed	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	1	0	0	0	1
	06:00	0	0	0	0	0
	07:00	0	0	2	1	3
	08:00	1	1	3	0	5
	09:00	0	0	0	0	0
	10:00	0	0	1	0	1
	11:00	3	0	2	0	5
	12:00	3	1	2	3	9
	13:00	2	2	2	3	9
	14:00	1	0	6	1	8
	15:00	1	1	3	2	7
	16:00	6	1	3	4	14
	17:00	2	7	3	0	12
	18:00	3	4	0	5	12
	19:00	1	5	2	3	11
	20:00	5	2	0	2	9
	21:00	0	1	2	1	4
	22:00	1	1	0	0	2
	23:00	1	0	0	1	2
Day Total :						114

AM Total :	15 (13.2%)	Peak AM Hour : 07:45 =	6 (5.3%)	Peak AM Factor : 0.500	Average Period :	1.2
PM Total :	99 (86.8%)	Peak PM Hour : 16:30 =	16 (14.0%)	Peak PM Factor : 0.571	Average Hour :	4.8

Lane #3 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
3.		Eastbound				

Lane #3 Basic Volume Data From: 00:00 - 04/26/2016 To: 23:59 - 04/27/2016

Date	Time	:00	:15	:30	:45	Total
04/26/16	00:00	0	0	0	0	0
Tue	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	1	1	0	2
	06:00	0	2	0	1	3
	07:00	6	1	4	6	17
	08:00	2	2	3	0	7
	09:00	1	2	4	1	8
	10:00	1	0	0	4	5
	11:00	1	0	1	2	4
	12:00	0	1	0	2	3
	13:00	3	2	0	3	8
	14:00	2	3	0	1	6
	15:00	0	1	2	3	6
	16:00	2	0	4	3	9
	17:00	5	2	0	1	8
	18:00	2	2	1	5	10
	19:00	2	1	0	0	3
	20:00	0	1	1	0	2
	21:00	0	2	0	2	4
	22:00	0	0	1	0	1
	23:00	0	0	0	0	0

Day Total : 106

AM Total :	46 (43.4%)	Peak AM Hour : 07:00 =	17 (16.0%)	Peak AM Factor : 0.708	Average Period :	1.1
PM Total :	60 (56.6%)	Peak PM Hour : 16:30 =	14 (13.2%)	Peak PM Factor : 0.700	Average Hour :	4.4

Date	Time	:00	:15	:30	:45	Total
04/27/16	00:00	1	0	1	0	2
Wed	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	1	0	0	0	1
	06:00	1	1	0	0	2
	07:00	7	3	4	7	21
	08:00	1	3	2	2	8
	09:00	0	3	3	2	8
	10:00	0	2	1	0	3
	11:00	1	3	1	3	8
	12:00	1	2	0	1	4
	13:00	1	2	0	4	7
	14:00	3	1	4	0	8
	15:00	1	4	6	6	17
	16:00	4	4	1	5	14
	17:00	1	0	1	2	4
	18:00	5	5	3	2	15
	19:00	4	1	1	0	6
	20:00	1	1	1	2	5
	21:00	1	2	0	2	5
	22:00	1	3	1	2	7
	23:00	0	0	0	0	0

Day Total : 145

AM Total :	53 (36.6%)	Peak AM Hour : 07:00 =	21 (14.5%)	Peak AM Factor : 0.750	Average Period :	1.5
PM Total :	92 (63.4%)	Peak PM Hour : 15:15 =	20 (13.8%)	Peak PM Factor : 0.833	Average Hour :	6.0

Basic Volume Summary: Brandywine East

Grand Total For Data From: 00:00 - 04/26/2016 To: 23:59 - 04/27/2016

Lane	Total Count	# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	219 (46.6%)	2.00	110	1.1	4.6	42 (19.2%)	177 (80.8%)
#3.	251 (53.4%)	2.00	126	1.3	5.2	99 (39.4%)	152 (60.6%)
ALL	470	2.00	236	2.4	9.8	141 (30.0%)	329 (70.0%)

Lane	Peak AM Hour	Date	Peak AM Factor	Peak PM Hour	Date	Peak PM Factor
#1.	10:45 =	9 04/26/2016	0.562	16:15 =	17 04/26/2016	0.850
#3.	07:00 =	21 04/27/2016	0.750	15:15 =	20 04/27/2016	0.833

Basic Volume Report: Brandywine North

Station ID : Brandywine North

Info Line 1 : South of Cherry Hills Lp

Info Line 2 : Albuquerque

GPS Lat/Lon :

DB File : BRAND NOR 1SB.DB

Last Connected Device Type : Apollo

Version Number : 1.63

Serial Number : 21495

Number of Lanes : 1

Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.		Southbound				

Lane #1 Basic Volume Data From: 00:00 - 04/26/2016 To: 23:59 - 04/27/2016

Date	Time	:00	:15	:30	:45	Total
04/26/16	00:00	0	0	0	0	0
Tue	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	0	1	0	1
	06:00	0	2	1	0	3
	07:00	3	0	2	3	8
	08:00	0	1	3	0	4
	09:00	1	2	3	1	7
	10:00	1	3	1	3	8
	11:00	1	2	1	2	6
	12:00	1	2	0	2	5
	13:00	0	3	0	2	5
	14:00	0	3	0	1	4
	15:00	1	0	5	0	6
	16:00	4	1	3	1	9
	17:00	6	2	0	2	10
	18:00	1	3	1	4	9
	19:00	1	2	0	0	3
	20:00	0	1	2	0	3
	21:00	0	1	0	2	3
	22:00	0	0	1	0	1
	23:00	0	0	0	0	0

Day Total : 95

AM Total :	37 (38.9%)	Peak AM Hour : 07:00 =	8 (8.4%)	Peak AM Factor : 0.667	Average Period :	1.0
PM Total :	58 (61.1%)	Peak PM Hour : 16:30 =	12 (12.6%)	Peak PM Factor : 0.500	Average Hour :	4.0

Date	Time	:00	:15	:30	:45	Total
04/27/16	00:00	1	0	1	0	2
Wed	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	1	0	0	0	1
	06:00	0	0	0	0	0
	07:00	5	2	2	3	12
	08:00	0	3	2	3	8
	09:00	0	4	4	1	9
	10:00	2	4	1	1	8
	11:00	1	3	0	2	6
	12:00	1	3	1	2	7
	13:00	1	1	2	3	7
	14:00	2	1	4	0	7
	15:00	1	4	7	4	16
	16:00	5	5	1	4	15
	17:00	3	1	2	2	8
	18:00	4	6	3	1	14
	19:00	4	3	0	0	7
	20:00	1	1	1	0	3
	21:00	1	1	0	2	4
	22:00	1	2	1	1	5
	23:00	0	0	0	0	0

Day Total : 139

AM Total :	46 (33.1%)	Peak AM Hour : 07:00 =	12 (8.6%)	Peak AM Factor : 0.600	Average Period :	1.4
PM Total :	93 (66.9%)	Peak PM Hour : 15:30 =	21 (15.1%)	Peak PM Factor : 0.750	Average Hour :	5.8

Lane #3 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
3.		Northbound				

Lane #3 Basic Volume Data From: 00:00 - 04/26/2016 To: 23:59 - 04/27/2016

Date	Time	:00	:15	:30	:45	Total
04/26/16	00:00	0	0	0	1	1
Tue	01:00	0	0	0	1	1
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	1	0	0	1
	06:00	0	3	3	1	7
	07:00	1	1	1	1	4
	08:00	0	2	0	1	3
	09:00	1	0	1	2	4
	10:00	2	3	2	2	9
	11:00	1	2	2	0	5
	12:00	2	2	2	1	7
	13:00	2	0	3	0	5
	14:00	2	0	2	1	5
	15:00	3	1	1	2	7
	16:00	1	2	1	1	5
	17:00	3	1	1	3	8
	18:00	2	3	2	2	9
	19:00	0	2	2	1	5
	20:00	1	1	1	0	3
	21:00	2	1	0	0	3
	22:00	0	0	0	0	0
	23:00	0	1	0	0	1

Day Total : 93

AM Total :	35 (37.6%)	Peak AM Hour : 09:45 =	9 (9.7%)	Peak AM Factor : 0.750	Average Period :	1.0
PM Total :	58 (62.4%)	Peak PM Hour : 17:45 =	10 (10.8%)	Peak PM Factor : 0.833	Average Hour :	3.9

Date	Time	:00	:15	:30	:45	Total
04/27/16	00:00	0	0	0	0	0
Wed	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	1	0	0	0	1
	06:00	0	1	1	2	4
	07:00	0	1	3	1	5
	08:00	1	0	5	1	7
	09:00	1	2	0	1	4
	10:00	1	0	2	1	4
	11:00	3	0	0	1	4
	12:00	3	2	1	3	9
	13:00	3	0	1	4	8
	14:00	2	0	4	0	6
	15:00	1	2	0	3	6
	16:00	4	4	2	4	14
	17:00	2	4	4	1	11
	18:00	2	3	1	2	8
	19:00	0	3	1	2	6
	20:00	1	2	0	2	5
	21:00	0	2	1	1	4
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						106

AM Total :	29 (27.4%)	Peak AM Hour : 08:30 =	9 (8.5%)	Peak AM Factor : 0.450	Average Period :	1.1
PM Total :	77 (72.6%)	Peak PM Hour : 16:00 =	14 (13.2%)	Peak PM Factor : 0.875	Average Hour :	4.4

Basic Volume Summary: Brandywine North

Grand Total For Data From: 00:00 - 04/26/2016 To: 23:59 - 04/27/2016

Lane	Total Count	# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	234 (54.0%)	2.00	117	1.2	4.9	83 (35.5%)	151 (64.5%)
#3.	199 (46.0%)	2.00	100	1.0	4.1	64 (32.2%)	135 (67.8%)
ALL	433	2.00	217	2.2	9.0	147 (33.9%)	286 (66.1%)

Lane	Peak AM Hour	Date	Peak AM Factor	Peak PM Hour	Date	Peak PM Factor
#1.	07:00 = 12	04/27/2016	0.600	15:30 = 21	04/27/2016	0.750
#3.	09:45 = 9	04/26/2016	0.750	16:00 = 14	04/27/2016	0.875

Appendix C



Mid-Region Council of Governments Crash Records from Brandywine Road

REPORT 23249052	DATE 2/4/2011	MONTH 2	DY 4	YEAR 2011	TIME 1030	HOUR 10	DAY Friday
COUNTY Bernalillo	CITY Albuquerque	AGENCY Driver Report	ASTREET 8601 BRANDYWINE RD NE	BSTREET UNKNOWN - NOT GIVEN	ROUTE	MILEPOST 0.00	VNUM 2
TOTAL 2	KILLED 0	CLASSA 0	CLASSB 0	CLASSC 0	UNHURT 2	SEVERITY Property Damage Only Crash	CLASS Parked Vehicle
TOPCFACC Driver Inattention	ANALYSIS Back Into Parked	ALCINV None Indicated	DRUGINV None Indicated	PEDINV Not Involved	MCINV Not Involved	PECINV Not Involved	TRKINV Not Involved
HZINV Not Involved	LIGHT Daylight	WEATHER Clear	HITRUN Yes	DOTPROP	MAXDAM Other Veh	MAXENF	SYSTEM Urban
FUNCTCL Urban Local	ELEMENT Non-Intersection	ROADREL Off The Roadway	CHARACT Straight	GRADE Level	FEET 9998	MILES 0.00	IDRECT U
DIRECT							



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