

# ESPANOLA STREET SPEED STUDY



# Espanola Street Speed Study Final Report

Albuquerque, New Mexico



Souder, Miller & Associates ♦ 3451 Candelaria Road NE, Suite D  
Albuquerque, NM 87107-1948 ♦ (505) 299-0942 ♦ (877) 299-0942 ♦ fax (505) 293-3430



City of Albuquerque

June 2017

## Table of Contents

INTRODUCTION .....	1
1.A. PROJECT PURPOSE .....	1
1.B. PROJECT DESCRIPTION .....	1
1.C. BACKGROUND OF SPEED LIMITS .....	3
1.D. SETTING SPEED LIMITS .....	3
2. EXISTING CONDITIONS .....	5
2.A. COUNT LOCATIONS .....	5
2.B. EXISTING CONDITIONS .....	5
3. DATA .....	7
3.A. ADT .....	7
3.B. PEAK HOUR TRAFFIC VOLUMES .....	7
3.C. SPEED STUDY RESULTS .....	8
3.D. CRASH DATA .....	9
4. U.S. LIMITS SPEED LIMITS PROGRAM .....	10
5. CONCLUSION .....	11
Appendices .....	12



## List of Tables

Table 3.A.1.	Espanola Street ADT .....	7
Table 3.B.1.	Espanola Street Peak Hour Traffic Volumes (vph) .....	7
Table 3.C.1.	Espanola Street North Speed Study.....	8
Table 3.C.2.	Espanola Street South Speed Study.....	8
Table 3.C.3.	Espanola Street ADT $\geq$ 25 mph .....	8
Table 3.D.1.	Espanola Street Crash Summary .....	9
Table 5.1.	COA NMTP Traffic Calming Measures .....	11



## List of Figures

FIGURE 1.B.1. STUDY LOCATION .....	1
FIGURE 1.B.2. STUDY LIMITS .....	2
FIGURE 2.1. COUNT LOCATIONS.....	6
FIGURE 2.2. EXISTING ESPANOLA STREET TYPICAL SECTION.....	6



## INTRODUCTION

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

### 1.A. PROJECT PURPOSE

A speed study on Espanola Street from Los Arboles Avenue to Phoenix Avenue was conducted to determine the following:

- Evaluate the 85<sup>th</sup> percentile speed along Espanola Street at two (2) locations;
- Calculate average and daily peak hour traffic volumes along Espanola Street.

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

### 1.B. PROJECT DESCRIPTION

The study area will be a 0.24 (1267.20 LF) mile section of Espanola Street from Los Arboles Avenue to Phoenix Avenue. Figure 1.B.1. below displays the study location and Figure 1.B.2. on page 2 displays the project limits.

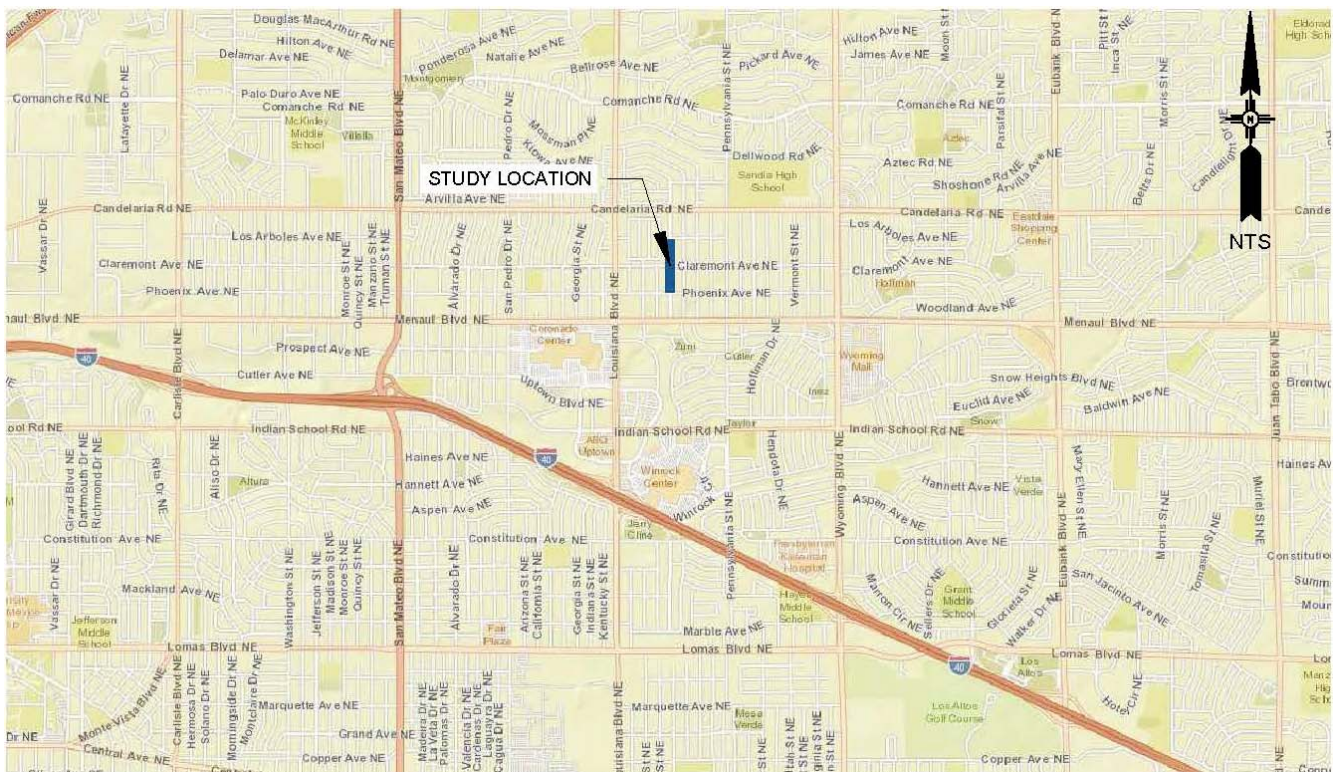


FIGURE 1.B.1.  
STUDY LOCATION



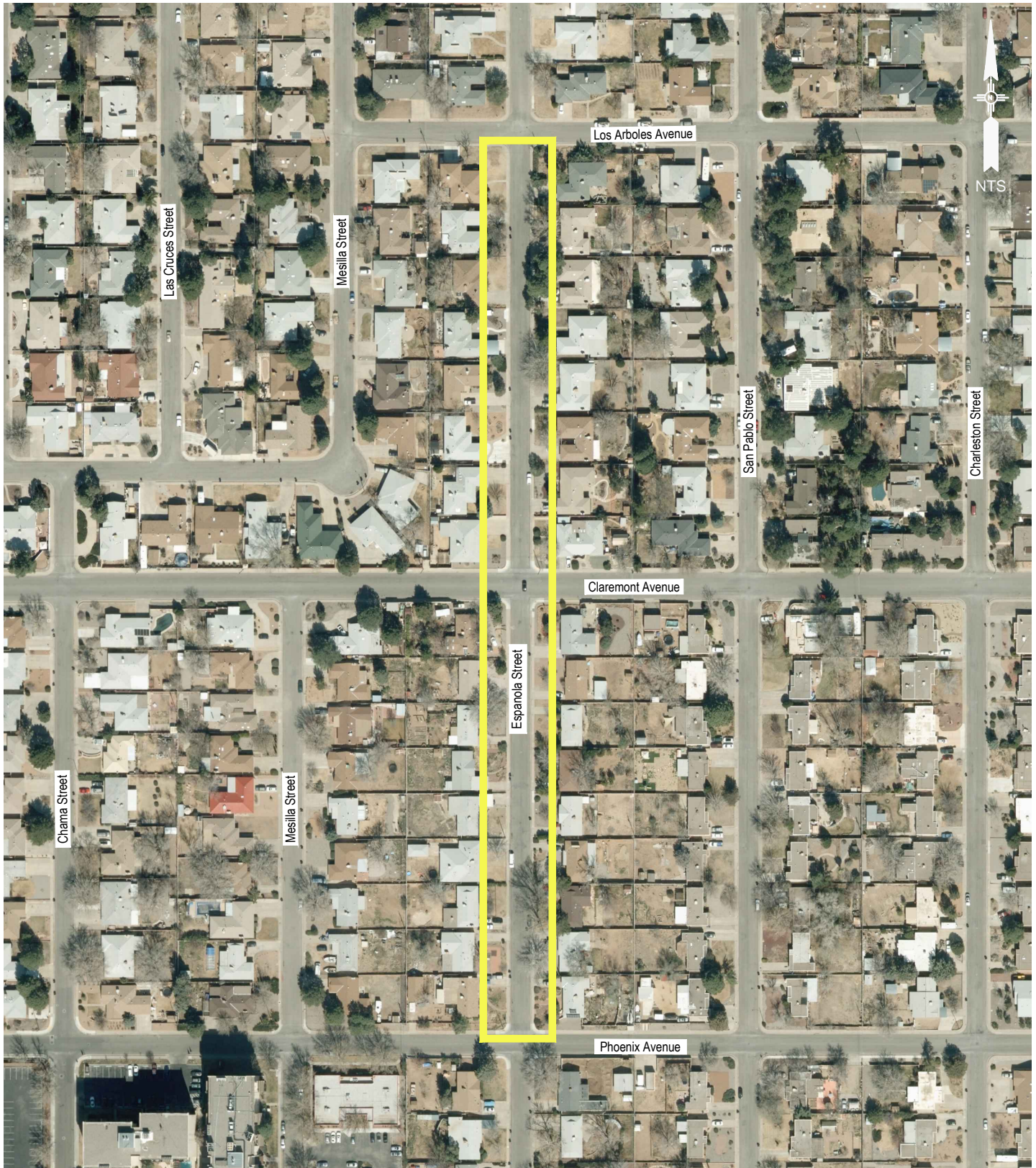


FIGURE 1.B.2.  
STUDY LIMITS



## 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 85<sup>th</sup> percentile. Out of the (typically) 100 vehicles surveyed, beginning with the fastest vehicle speed recorded the 15<sup>th</sup> vehicle from that speed is determined to show where the 85<sup>th</sup> 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 85<sup>th</sup> percentile speed. For example, if the 85<sup>th</sup> 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 85<sup>th</sup> percentile speed is determined by the following formula:  $100/15 = \# \text{ of vehicles surveyed}/X$  (where  $x =$  the vehicle at the 85<sup>th</sup> percentile). For example, a 50 vehicle survey would result in:

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

Where  $x = 7.5$ , or the 8<sup>th</sup> 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 50<sup>th</sup> and 51<sup>st</sup> vehicles are added and divided by 2 to obtain the median speed. If the 50<sup>th</sup> vehicle of such a survey was traveling at 56 mph and the 51<sup>st</sup> 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 (2) volume and speed count locations which were at the following locations:

- Espanola Street between Phoenix Avenue and Claremont Avenue;
- Espanola Street between Claremont Avenue and Los Arboles Avenue.

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

### 2.B. EXISTING CONDITIONS

Figure 2.2. on page 6 displays the existing typical section of Espanola Street. Within the study limits, there is one intersection and approximately 32 driveways that provide access to residential homes. Also to be noted, the speed limit within the study limits is 25 mph.





FIGURE 2.1.  
 COUNT LOCATIONS

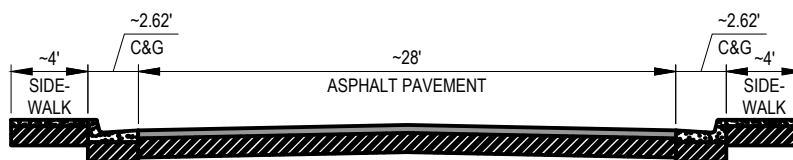


FIGURE 2.2.  
 EXISTING ESPANOLA STREET TYPICAL SECTION



### 3. DATA

#### 3.A. ADT

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

Table 3.A.1.			
Espanola Street ADT			
Count Location	NB	SB	ADT
Espanola Street North	171	143	314
Espanola Street South	157	158	315
Average	164.0	150.5	314.5

The Espanola Street study area ADT ranges from 314 to 315 vehicles per day.

#### 3.B. PEAK HOUR TRAFFIC VOLUMES

The peak hour traffic volumes for the two (2) count locations are shown below in Table 3.B.1.

Table 3.B.1.			
Espanola Street Peak Hour Traffic Volumes (vph)			
Count Location	Peak Hour	Northbound (Peak Hour)	Southbound (Peak Hour)
Espanola Street North	AM Peak	15 (9:15 AM - 10:15 AM)	18 (7:00 AM - 8:00 AM)
	PM Peak	27 (3:45 PM - 4:45 PM)	14 (4:30 PM - 5:30 PM)
Espanola Street South	AM Peak	20 (6:45 AM - 7:45 AM)	13 (10:30 AM - 11:30 AM)
	PM Peak	18 (3:00 PM - 4:00 PM)	22 (2:00 PM - 3:00 PM)

The Espanola Street study area peak hour traffic volumes range from 13 to 27 vehicles per hour.

### 3.C. SPEED STUDY RESULTS

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

Table 3.C.1.			
Espanola Street North Speed Study			
Speed	NB	SB	Total
Average	20.4	20.4	20.4
10 mph Pace	20.1 - 30.0 (59.5%)	20.1 - 30.0 (60.5%)	20.1 - 30.0 (60.0%)
50th Percentile	22.6	22.6	22.6
67th Percentile	25.4	24.8	25.2
85th Percentile	28.2	28.3	28.4

Table 3.C.2.			
Espanola Street South Speed Study			
Speed	NB	SB	Total
Average	22.1	20.9	21.5
10 mph Pace	20.1 - 30.0 (57.0%)	20.1 - 30.0 (60.2%)	20.1 - 30.0 (58.6%)
50th Percentile	23.6	22.9	23.2
67th Percentile	26.9	26.1	26.5
85th Percentile	31.3	28.5	29.3

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 Espanola Street, the posted speed limit is 25 mph, roadway conditions are consistent; controlled access, satisfactory pavement conditions, two travel lanes, and on-street parking. Table 3.C.3. displays that 37 percent of the total ADT of the two count locations recorded speeds greater than the posted speed limit of 25 mph.

Table 3.C.3.							
Espanola Street ADT ≥ 25 mph							
Speed (mph)	0 - 19.9 MPH		20 - 24.9 MPH		≥ 25 MPH		Avg. ADT
Espanola Street North	103.5	33%	104.5	33%	105.5	34%	313.5
Espanola Street South	92	30%	91.5	30%	126	41%	309.5
Total	195.5	31%	196	31%	231.5	37%	623

### 3.D. CRASH DATA

Crash data was requested from the Mid-Region Council of Governments. The crash data requested showed there was 2 recorded crashes within the study area from 2012 to 2014.

Table 3.D.1.					
Espanola Street Crash Summary					
Year	Location	Cause of Crash	Crash Analysis	Crash Severity	Crash Correct with Traffic Calming?
2012	2707 Espanola Street	Impaired Driving	Parked Vehicle	Property Damage Only Crash	No
2014	Claremont Avenue / Espanola Street	Driver Inattention	Intersection - Both Going Straight / Entering at Angle	Property Damage Only Crash	No

## 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 Espanola Street and based on the data entered into <http://www.uslimits.com> for the above-listed categories. The output sheet is shown in Appendix A – U.S. Limits Output. The U.S. Limits Output recommended a speed limit of 25 mph which is the existing study speed limit.



## 5. CONCLUSION

After evaluating the volume and speed data within the project area, it is concluded that 37% of the traffic is exceeding 25 mph and the 85<sup>th</sup> percentile speed of traffic is not exceeding the posted speed limit by 5 mph or more at the 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:

Figure 5.1.	
COA NMTP Traffic Calming Measures	
Description	Warranted?
Reported crashes in the past 3 years that could be corrected with traffic calming	No
Peak-hour traffic volume greater than 400 vehicles in one direction	No
25% of peak-hour traffic is non-local cut-through traffic	Not Studied
85th percentile speeds exceeds the posted speed limit by 5 mph or more	No

Based on the data collected, Espanola Street DOES NOT meet the minimum COA NTMP traffic calming measures threshold.



## 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: Espanola Street Speed Study

**Analyst:** Thaddeus Yazzie

**Date:** 06-07-2017

### Basic Project Information

Project Number: 6254.11  
Route Name: Espanola Street  
From: Phoenix Avenue  
To: Los Arboles Avenue  
State: New Mexico  
County: Bernalillo County  
City: Albuquerque city  
Route Type: Road Section in Developed Area  
Route Status: Existing

### Roadway Information

Section Length: .24 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: 34  
Number of Signals: 0

### Crash Data Information

Crash Data Years: 3.00  
Crash AADT: 315 veh/day  
Total Number of Crashes: 2  
Total Number of Injury Crashes: 0  
Section Crash Rate: 2416 per 100 MVM  
Section Injury Crash Rate: 0 per 100 MVM  
Crash Rate Average for Similar Roads: 263  
Injury Rate Average for Similar Roads: 67

### Traffic Information

85th Percentile Speed: 29 mph  
50th Percentile Speed: 23 mph  
AADT: 315 veh/day  
On Street Parking and Usage: Not High  
Pedestrian / Bicyclist Activity: Not High

**Project Description:** Espanola Street Speed Study from Phoenix Avenue to Los Arboles Avenue.

**Recommended Speed Limit:**



**Note:** The section crash rate of 2416 per 100 MVM is above the critical rate (2320). 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: Espanola North

## Station ID : Espanola North

Info Line 1 : Between Los Arboles & Claremon  
 Info Line 2 : Albuquerque

GPS Lat/Lon :

DB File : ESP NO CLMNT.DB

Last Connected Device Type : Apollo

Version Number : 1.62

Serial Number : 21494

Number of Lanes : 1

Posted Speed Limit : 0.0 mph

### 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 - 04/11/2017 To: 23:59 - 04/12/2017

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	
04/11/17	00:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tue	01:00	0	0	1	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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
	05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	4	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	8
	07:00	1	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	9
	08:00	3	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	16
	09:00	3	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	10:00	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	11:00	2	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	6
	12:00	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	6
	13:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	14:00	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	15:00	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	16:00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	17:00	6	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	18:00	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8
	19:00	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	20:00	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	21:00	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	22:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	23:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
<b>Daily Total :</b>		55	49	32	8	0	0	0	0	0	0	0	0	0	0	0	0	144
Percent :		38%	34%	22%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		38%	72%	94%	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	19.4 mph	50% Speed : 22.1 mph	67% Speed : 23.5 mph
			85% Speed : 27.7 mph
10mph Pace: 21.0 - 30.9 (56.3%)			

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	
04/12/17	00:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	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	1	0	0	0	0	0	0	0	0	0	0	0	4
	07:00	5	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	18
	08:00	1	3	4	3	0	0	0	0	0	0	0	0	0	0	0	0	11
	09:00	5	4	4	3	0	0	0	0	0	0	0	0	0	0	0	0	16
	10:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	11:00	4	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	11
	12:00	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	13:00	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	14:00	2	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	15:00	1	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	16:00	2	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	6
	17:00	7	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	18:00	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	19:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	20:00	1	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	8
	21:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	22:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
	23:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Daily Total :</b>		38	52	40	10	2	0	0	0	0	0	0	0	0	0	0	0	142
Percent :		27%	37%	28%	7%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		27%	63%	92%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :		2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6

Average Speed	21.4 mph	50% Speed :	23.0 mph	67% Speed :	26.6 mph	85% Speed :	28.1 mph
				10mph Pace:	20.9 - 30.8 (64.8%)		

## 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 - 04/11/2017 To: 23:59 - 04/12/2017

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	
04/11/17	00:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	04:00	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
	05:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	7
	07:00	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	08:00	0	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	6
	09:00	3	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	10:00	2	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	11
	11:00	2	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	12:00	2	2	6	2	0	0	0	0	0	0	0	0	0	0	0	0	12
	13:00	9	7	3	1	1	0	0	0	0	0	0	0	0	0	0	0	21
	14:00	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	8
	15:00	7	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	16:00	11	7	5	1	0	0	0	0	0	0	0	0	0	0	0	0	24
	17:00	4	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	18:00	2	4	3	2	0	0	0	0	0	0	0	0	0	0	0	0	11
	19:00	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	20:00	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	6
	21:00	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	22:00	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	23:00	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Daily Total :		67	54	42	12	2	0	0	0	0	0	0	0	0	0	0	0	177
Percent :		38%	31%	24%	7%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cum. Percent :		38%	68%	92%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Average :		3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	8

Average Speed 19.8 mph	50% Speed : 22.2 mph	67% Speed : 24.0 mph	85% Speed : 28.0 mph
10mph Pace: 20.9 - 30.8 (54.2%)			

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	
04/12/17	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	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	04:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	05:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	4	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	9
	07:00	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	08:00	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	09:00	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	10:00	5	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	11:00	6	1	6	0	2	0	0	0	0	0	0	0	0	0	0	0	15
	12:00	3	2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	15
	13:00	5	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	13
	14:00	6	10	9	1	0	0	0	0	0	0	0	0	0	0	0	0	26
	15:00	1	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	8
	16:00	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	17:00	5	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	15
	18:00	1	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0	10
	19:00	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	5
	20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	21:00	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	22:00	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
<b>Daily Total :</b>		47	54	53	8	2	0	0	0	0	0	0	0	0	0	0	0	164
Percent :		29%	33%	32%	5%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		29%	62%	94%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :		2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6

Average Speed	21.2 mph	50% Speed :	23.1 mph	67% Speed :	26.3 mph	85% Speed :	28.2 mph
				10mph Pace:	20.9 - 30.8 (65.2%)		



---

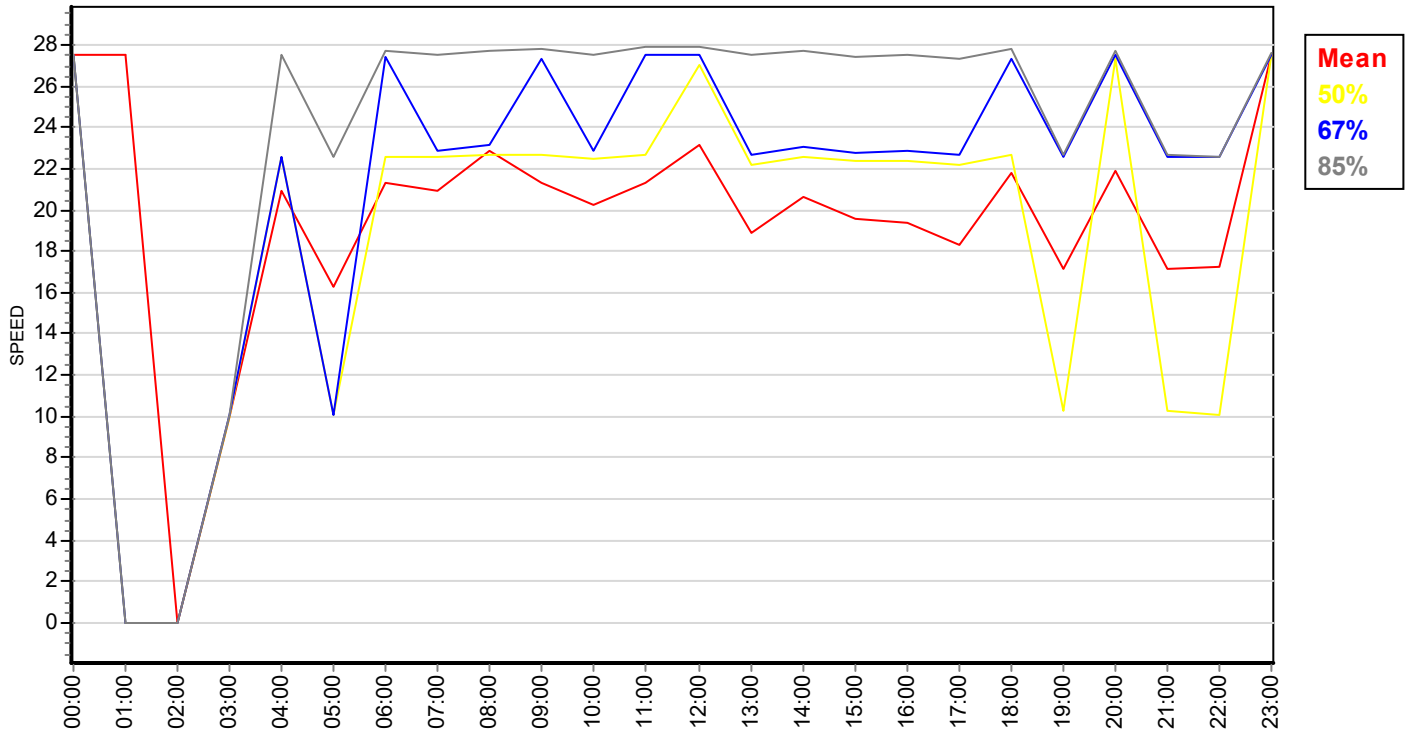
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16		
	0 -	20 -	25 -	30 -	35 -	40 -	45 -	50 -	55 -	60 -	65 -	70 -	75 -	80 -	85 -			
Date	Time	19.9	24.9	29.9	34.9	39.9	44.9	49.9	54.9	59.9	64.9	69.9	74.9	79.9	84.9	89.9	Other	Total

---

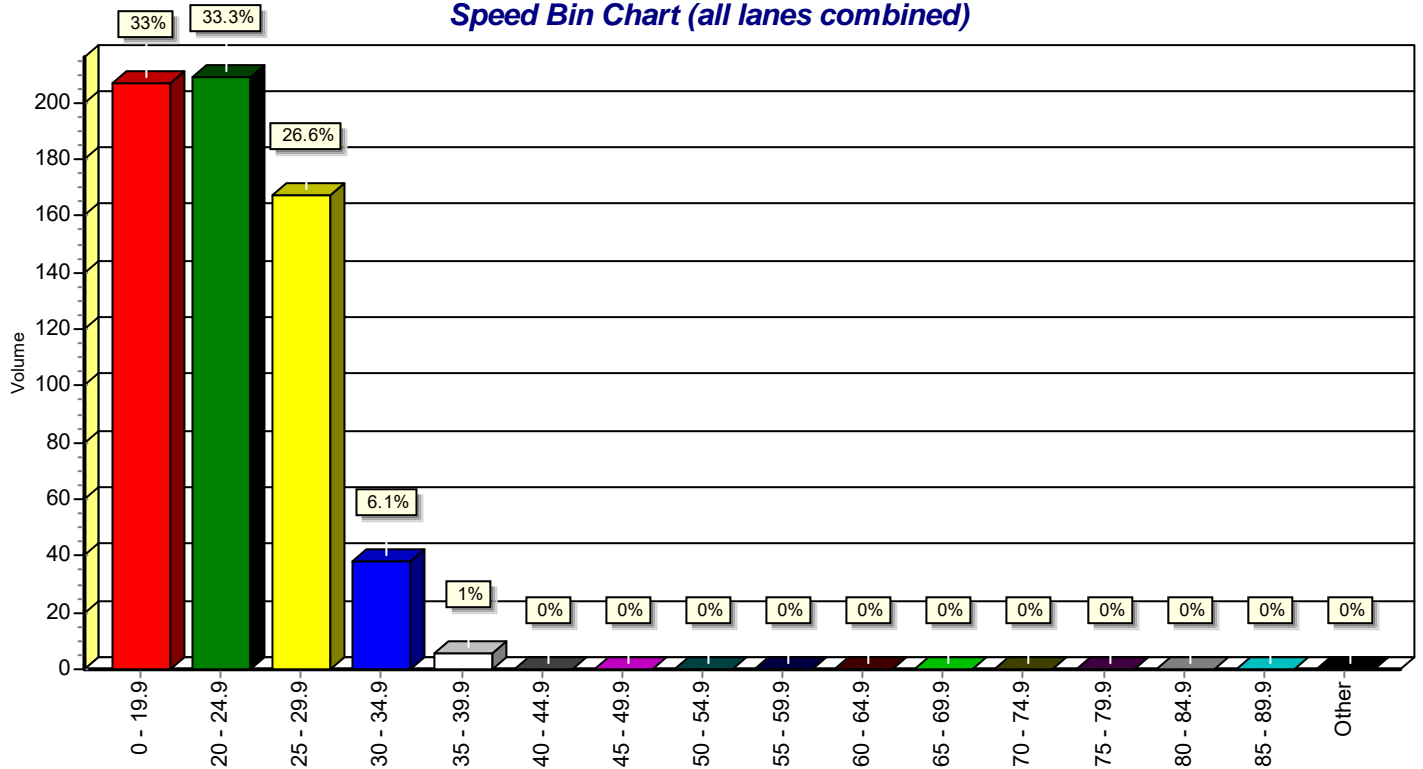
# Special Speed Study Summary: Espanola North

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															
<b>Grand Total #1:</b>	93	101	72	18	2	0	0	0	0	0	0	0	0	0	0	0	286															
Percent :	33%	35%	25%	6%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%																
Cum. Percent :	33%	68%	93%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%																
Average :	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6															
<b>ADT = 143</b>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: left;"> <tr> <td>Average Speed</td> <td>20.4 mph</td> <td>50% Speed :</td> <td>22.6 mph</td> <td>67% Speed :</td> <td>24.8 mph</td> <td>85% Speed :</td> <td>28.3 mph</td> </tr> <tr> <td colspan="8">10mph Pace: 20.1 - 30.0 (60.5%)</td> </tr> </table>																Average Speed	20.4 mph	50% Speed :	22.6 mph	67% Speed :	24.8 mph	85% Speed :	28.3 mph	10mph Pace: 20.1 - 30.0 (60.5%)							
Average Speed	20.4 mph	50% Speed :	22.6 mph	67% Speed :	24.8 mph	85% Speed :	28.3 mph																									
10mph Pace: 20.1 - 30.0 (60.5%)																																
<b>Grand Total #3:</b>	114	108	95	20	4	0	0	0	0	0	0	0	0	0	0	0	341															
Percent :	33%	32%	28%	6%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%																
Cum. Percent :	33%	65%	93%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%																
Average :	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6															
<b>ADT = 170</b>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: left;"> <tr> <td>Average Speed</td> <td>20.4 mph</td> <td>50% Speed :</td> <td>22.6 mph</td> <td>67% Speed :</td> <td>25.4 mph</td> <td>85% Speed :</td> <td>28.2 mph</td> </tr> <tr> <td colspan="8">10mph Pace: 20.1 - 30.0 (59.5%)</td> </tr> </table>																Average Speed	20.4 mph	50% Speed :	22.6 mph	67% Speed :	25.4 mph	85% Speed :	28.2 mph	10mph Pace: 20.1 - 30.0 (59.5%)							
Average Speed	20.4 mph	50% Speed :	22.6 mph	67% Speed :	25.4 mph	85% Speed :	28.2 mph																									
10mph Pace: 20.1 - 30.0 (59.5%)																																
<b>Comb. Total :</b>	207	209	167	38	6	0	0	0	0	0	0	0	0	0	0	0	627															
Percent :	33%	33%	27%	6%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%																
Cum. Percent :	33%	66%	93%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%																
Average :	4	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	12															
<b>ADT = 313</b>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: left;"> <tr> <td>Average Speed</td> <td>20.4 mph</td> <td>50% Speed :</td> <td>22.6 mph</td> <td>67% Speed :</td> <td>25.2 mph</td> <td>85% Speed :</td> <td>28.4 mph</td> </tr> <tr> <td colspan="8">10mph Pace: 20.1 - 30.0 (60.0%)</td> </tr> </table>																Average Speed	20.4 mph	50% Speed :	22.6 mph	67% Speed :	25.2 mph	85% Speed :	28.4 mph	10mph Pace: 20.1 - 30.0 (60.0%)							
Average Speed	20.4 mph	50% Speed :	22.6 mph	67% Speed :	25.2 mph	85% Speed :	28.4 mph																									
10mph Pace: 20.1 - 30.0 (60.0%)																																

Speed Percent vs. Time (all lanes)



Speed Bin Chart (all lanes combined)



# Special Speed Study Report: Espanola South

## Station ID : Espanola South

Info Line 1 : Between Claremont & Phoenix  
 Info Line 2 : Albuquerque

GPS Lat/Lon :

DB File : ESP NO PHX.DB

Last Connected Device Type : Apollo

Version Number : 1.66

Serial Number :

Number of Lanes : 1

Posted Speed Limit : 0.0 mph

### 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 - 04/11/2017 To: 23:59 - 04/12/2017

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	
04/11/17	00:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
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	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
	05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	06:00	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
	07:00	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	08:00	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	09:00	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	10:00	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	11:00	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	12:00	0	5	3	3	0	0	0	0	0	0	0	0	0	0	0	0	11
	13:00	3	4	8	1	0	0	0	0	0	0	0	0	0	0	0	0	16
	14:00	5	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	15:00	8	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	14
	16:00	7	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	19
	17:00	5	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	16
	18:00	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	19:00	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	20:00	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	21:00	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	22:00	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	23:00	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<b>Daily Total :</b>		56	52	42	7	1	0	0	0	0	0	0	0	0	0	0	0	158
Percent :		35%	33%	27%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		35%	68%	95%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :		2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6

Average Speed	19.9 mph	50% Speed : 22.4 mph	67% Speed : 24.0 mph
			85% Speed : 27.8 mph
		10mph Pace: 20.9 - 30.8 (59.5%)	

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	
04/12/17	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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	04:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	06:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	07:00	5	0	1	2	1	0	1	0	0	0	0	0	0	0	0	0	10
	08:00	6	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	8
	09:00	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	10:00	4	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	11:00	2	2	4	3	0	0	0	0	0	0	0	0	0	0	0	0	11
	12:00	0	6	6	2	0	0	0	0	0	0	0	0	0	0	0	0	14
	13:00	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	14:00	3	9	8	2	0	0	0	0	0	0	0	0	0	0	0	0	22
	15:00	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	16:00	2	3	5	2	0	0	0	0	0	0	0	0	0	0	0	0	12
	17:00	5	3	7	2	0	0	0	0	0	0	0	0	0	0	0	0	17
	18:00	3	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	10
	19:00	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	20:00	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	21:00	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	22:00	1	0	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
<b>Daily Total :</b>		44	41	54	15	1	0	1	0	0	0	0	0	0	0	0	0	156
Percent :		28%	26%	35%	10%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		28%	54%	89%	99%	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :		2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	7

Average Speed	21.9 mph	50% Speed :	23.4 mph	67% Speed :	27.0 mph	85% Speed :	28.8 mph
				10mph Pace:	21.3 - 31.2 (60.9%)		

## 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 - 04/11/2017 To: 23:59 - 04/12/2017

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	
04/11/17	00:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
	05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	06:00	1	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	6
	07:00	5	3	3	0	1	0	0	0	0	0	0	0	0	0	0	0	12
	08:00	2	4	5	2	1	0	0	0	0	0	0	0	0	0	0	0	14
	09:00	0	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	10
	10:00	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	11:00	1	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0	10
	12:00	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	13:00	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	14:00	3	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	13
	15:00	6	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	16
	16:00	6	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	10
	17:00	4	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	11
	18:00	4	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7
	19:00	3	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	20:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	21:00	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	22:00	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	23:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

<b>Daily Total :</b>	47	54	39	14	3	0	0	0	0	0	0	0	0	0	0	0	0	157
Percent :	30%	34%	25%	9%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	30%	64%	89%	98%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7

Average Speed 21.1 mph	50% Speed : 22.8 mph	67% Speed : 26.5 mph
85% Speed : 28.3 mph		
10mph Pace: 20.9 - 30.8 (59.2%)		

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	
04/12/17	00:00	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Wed	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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	06:00	0	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	6
	07:00	9	2	6	1	0	0	0	0	0	0	0	0	0	0	0	0	18
	08:00	0	2	5	3	1	0	0	0	0	0	0	0	0	0	0	0	11
	09:00	1	2	7	4	1	0	0	0	0	0	0	0	0	0	0	0	15
	10:00	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	5
	11:00	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	12:00	4	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	13:00	3	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7
	14:00	4	2	4	1	1	0	0	0	0	0	0	0	0	0	0	0	12
	15:00	4	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	11
	16:00	3	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	8
	17:00	4	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	12
	18:00	3	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	11
	19:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	20:00	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	6
	21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	22:00	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
	23:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Daily Total :</b>		37	36	45	25	5	0	0	0	0	0	0	0	0	0	0	0	148
Percent :		25%	24%	30%	17%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :		25%	49%	80%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :		2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	7

Average Speed	23.1 mph	50% Speed :	26.2 mph	67% Speed :	27.7 mph	85% Speed :	32.1 mph
				10mph Pace: 21.4 - 31.3 (54.7%)			

---

	#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>	

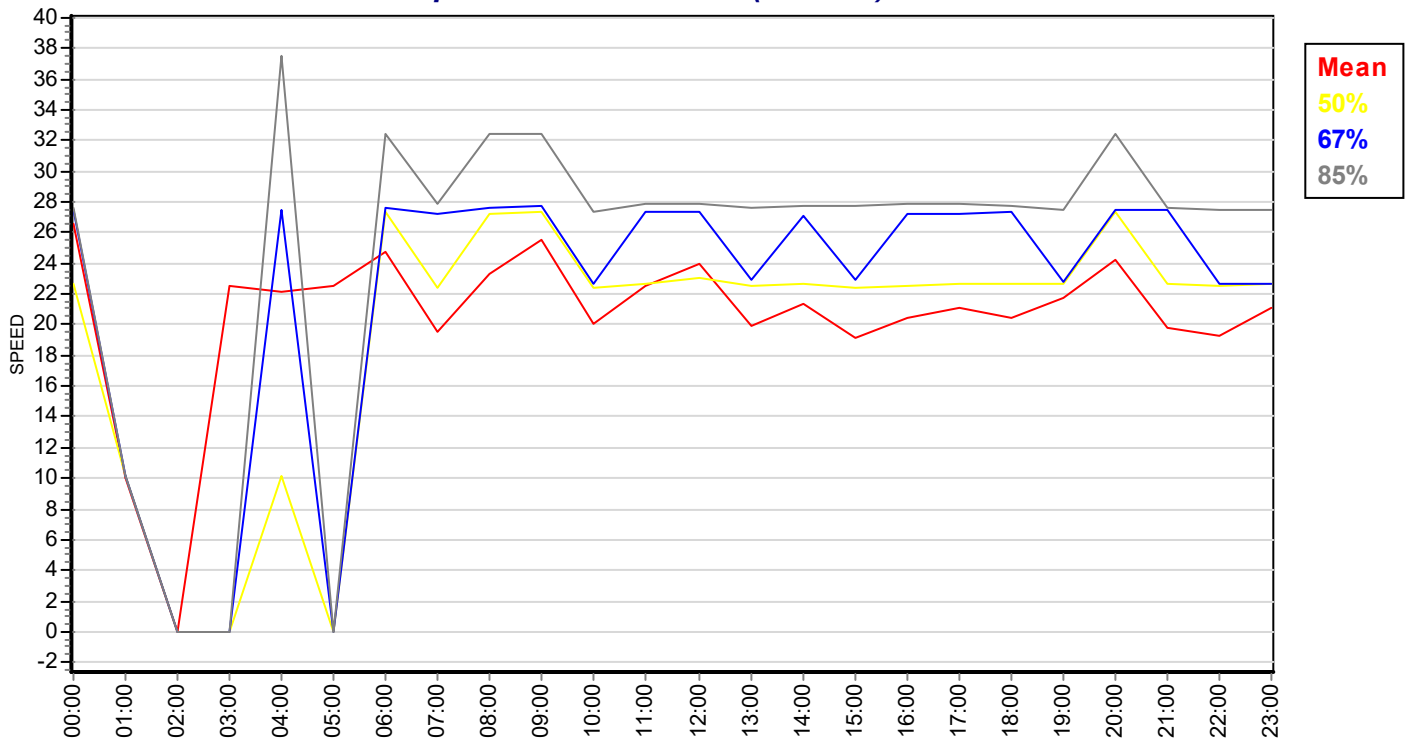
---



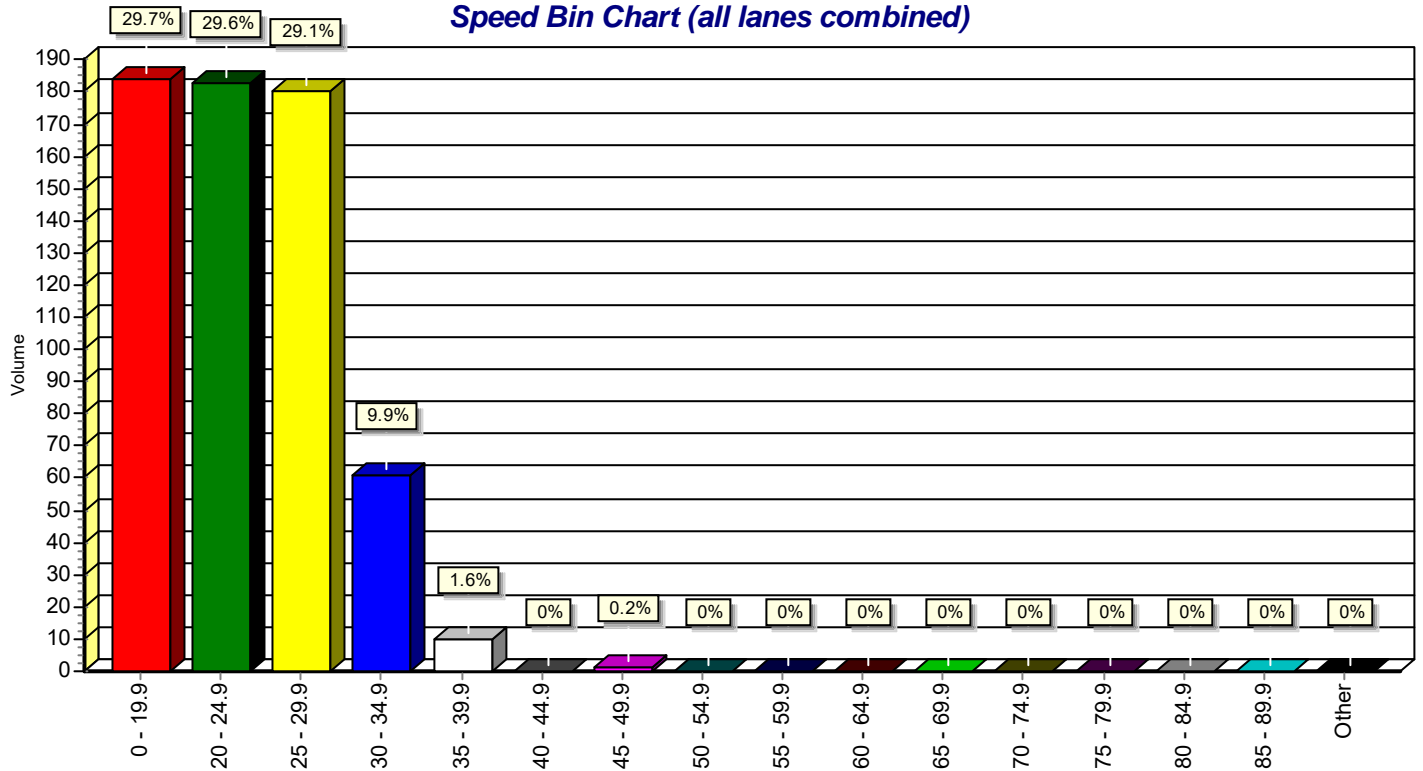
# Special Speed Study Summary: Espanola South

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
<b>Grand Total #1:</b>	100	93	96	22	2	0	1	0	0	0	0	0	0	0	0	0	314
Percent :	32%	30%	31%	7%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	32%	61%	92%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
<b>ADT = 157</b>	<div style="border: 1px solid black; padding: 5px; display: flex; justify-content: space-between;"> <span>Average Speed 20.9 mph</span> <span>50% Speed : 22.9 mph</span> <span>67% Speed : 26.1 mph</span> <span>85% Speed : 28.5 mph</span> </div> <div style="border: 1px solid black; padding: 5px; display: flex; justify-content: center; margin-top: 5px;"> <span>10mph Pace: 20.1 - 30.0 (60.2%)</span> </div>																
<b>Grand Total #3:</b>	84	90	84	39	8	0	0	0	0	0	0	0	0	0	0	0	305
Percent :	28%	30%	28%	13%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	28%	57%	85%	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	7
<b>ADT = 152</b>	<div style="border: 1px solid black; padding: 5px; display: flex; justify-content: space-between;"> <span>Average Speed 22.1 mph</span> <span>50% Speed : 23.6 mph</span> <span>67% Speed : 26.9 mph</span> <span>85% Speed : 31.3 mph</span> </div> <div style="border: 1px solid black; padding: 5px; display: flex; justify-content: center; margin-top: 5px;"> <span>10mph Pace: 20.1 - 30.0 (57.0%)</span> </div>																
<b>Comb. Total :</b>	184	183	180	61	10	0	1	0	0	0	0	0	0	0	0	0	619
Percent :	30%	30%	29%	10%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cum. Percent :	30%	59%	88%	98%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Average :	4	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	13
<b>ADT = 309</b>	<div style="border: 1px solid black; padding: 5px; display: flex; justify-content: space-between;"> <span>Average Speed 21.5 mph</span> <span>50% Speed : 23.2 mph</span> <span>67% Speed : 26.5 mph</span> <span>85% Speed : 29.3 mph</span> </div> <div style="border: 1px solid black; padding: 5px; display: flex; justify-content: center; margin-top: 5px;"> <span>10mph Pace: 20.1 - 30.0 (58.6%)</span> </div>																

**Speed Percent vs. Time (all lanes)**



**Speed Bin Chart (all lanes combined)**



# Basic Volume Report: Espanola North

**Station ID : Espanola North**

Info Line 1 : Between Los Arboles & Claremon

Info Line 2 : Albuquerque

GPS Lat/Lon :

DB File : ESP NO CLMNT.DB

Last Connected Device Type : Apollo

Version Number : 1.62

Serial Number : 21494

Number of Lanes : 1

Posted Speed Limit : 0.0 mph

## Lane #1 Configuration

#	Dir. Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.	Southbound	Normal	Veh.	No	

## Lane #1 Basic Volume Data From: 00:00 - 04/11/2017 To: 23:59 - 04/12/2017

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

Day Total : 144

AM Total :	62 (43.1%)	Peak AM Hour : 08:00 =	16 (11.1%)	Peak AM Factor : 0.800	Average Period :	1.5
PM Total :	82 (56.9%)	Peak PM Hour : 16:30 =	14 (9.7%)	Peak PM Factor : 0.583	Average Hour :	6.0

Date	Time	:00	:15	:30	:45	Total
04/12/17	00:00	0	0	1	0	1
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	1	0	1
	05:00	0	0	0	1	1
	06:00	0	4	0	0	4
	07:00	5	4	6	3	18
	08:00	2	2	4	3	11
	09:00	5	4	4	3	16
	10:00	1	0	1	1	3
	11:00	3	2	4	2	11
	12:00	3	3	0	3	9
	13:00	2	2	0	2	6
	14:00	3	2	2	3	10
	15:00	3	3	2	1	9
	16:00	2	0	1	3	6
	17:00	1	6	2	3	12
	18:00	3	3	2	1	9
	19:00	0	0	2	0	2
	20:00	2	2	2	2	8
	21:00	0	2	0	0	2
	22:00	1	0	0	1	2
	23:00	1	0	0	0	1
Day Total :						142

AM Total :	66 (46.5%)	Peak AM Hour : 07:00 =	18 (12.7%)	Peak AM Factor : 0.750	Average Period :	1.5
PM Total :	76 (53.5%)	Peak PM Hour : 17:15 =	14 (9.9%)	Peak PM Factor : 0.583	Average Hour :	5.9

## Lane #3 Configuration

#	Dir. Information	Volume Mode	Volume Sensors	Divide By 2	Comment
3.	Northbound	Normal	Veh.	No	

## Lane #3 Basic Volume Data From: 00:00 - 04/11/2017 To: 23:59 - 04/12/2017

Date	Time	:00	:15	:30	:45	Total
04/11/17	00:00	0	0	0	1	1
Tue	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	1	1
	04:00	1	0	0	2	3
	05:00	0	1	0	0	1
	06:00	1	0	1	5	7
	07:00	0	0	2	2	4
	08:00	1	1	3	1	6
	09:00	0	4	3	4	11
	10:00	4	3	2	2	11
	11:00	2	2	1	2	7
	12:00	5	1	2	4	12
	13:00	5	4	7	5	21
	14:00	3	2	2	1	8
	15:00	1	2	3	8	14
	16:00	5	6	8	5	24
	17:00	4	2	3	2	11
	18:00	6	2	0	3	11
	19:00	0	2	1	1	4
	20:00	3	2	1	0	6
	21:00	3	1	1	3	8
	22:00	1	1	2	0	4
	23:00	2	0	0	0	2
Day Total :						177

AM Total :	52 (29.4%)	Peak AM Hour : 09:15 =	15 (8.5%)	Peak AM Factor : 0.750	Average Period : 1.8
PM Total :	125 (70.6%)	Peak PM Hour : 15:45 =	27 (15.3%)	Peak PM Factor : 0.844	Average Hour : 7.4

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

Day Total : 164

AM Total :	57 (34.8%)	Peak AM Hour : 11:00 =	15 (9.1%)	Peak AM Factor : 0.625	Average Period :	1.7
PM Total :	107 (65.2%)	Peak PM Hour : 14:00 =	26 (15.9%)	Peak PM Factor : 0.591	Average Hour :	6.8



# Basic Volume Summary: Espanola North

**Grand Total For Data From: 00:00 - 04/11/2017 To: 23:59 - 04/12/2017**

Lane	Total Count	# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	286 (45.6%)	2.00	143	1.5	6.0	128 (44.8%)	158 (55.2%)
#3.	341 (54.4%)	2.00	171	1.8	7.1	109 (32.0%)	232 (68.0%)
ALL	627	2.00	314	3.3	13.1	237 (37.8%)	390 (62.2%)

Lane	Peak AM Hour	Date	Peak AM Factor	Peak PM Hour	Date	Peak PM Factor
#1.	07:00 = 18	04/12/2017	0.750	16:30 = 14	04/11/2017	0.583
#3.	09:15 = 15	04/11/2017	0.750	15:45 = 27	04/11/2017	0.844



# Basic Volume Report: Espanola South

## Station ID : Espanola South

Info Line 1 : Between Claremont & Phoenix

Info Line 2 : Albuquerque

GPS Lat/Lon :

DB File : ESP NO PHX.DB

Last Connected Device Type : Apollo

Version Number : 1.66

Serial Number :

Number of Lanes : 1

Posted Speed Limit : 0.0 mph

### Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.	Southbound		Normal	Veh.	No	

### Lane #1 Basic Volume Data From: 00:00 - 04/11/2017 To: 23:59 - 04/12/2017

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

Day Total : 159

AM Total :	44 (27.7%)	Peak AM Hour : 09:15 =	10 (6.3%)	Peak AM Factor : 0.625	Average Period :	1.7
PM Total :	115 (72.3%)	Peak PM Hour : 16:15 =	21 (13.2%)	Peak PM Factor : 0.875	Average Hour :	6.6

Date	Time	:00	:15	:30	:45	Total
04/12/17	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	1	0	1
	04:00	1	0	0	0	1
	05:00	0	0	0	0	0
	06:00	1	0	0	2	3
	07:00	3	3	4	1	11
	08:00	1	3	2	2	8
	09:00	0	1	1	2	4
	10:00	2	4	3	3	12
	11:00	2	5	0	4	11
	12:00	5	4	1	4	14
	13:00	3	1	2	4	10
	14:00	2	4	5	11	22
	15:00	0	5	0	3	8
	16:00	1	4	3	4	12
	17:00	6	5	4	2	17
	18:00	2	4	2	2	10
	19:00	1	2	3	0	6
	20:00	1	1	1	0	3
	21:00	0	2	0	1	3
	22:00	1	0	0	0	1
	23:00	0	0	0	0	0
Day Total :						157

AM Total :	51 (32.5%)	Peak AM Hour : 10:30 =	13 (8.3%)	Peak AM Factor : 0.650	Average Period :	1.6
PM Total :	106 (67.5%)	Peak PM Hour : 14:00 =	22 (14.0%)	Peak PM Factor : 0.500	Average Hour :	6.5

## Lane #3 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
3.	Northbound		Normal	Veh.	No	

## Lane #3 Basic Volume Data From: 00:00 - 04/11/2017 To: 23:59 - 04/12/2017

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

Day Total : 161

AM Total :	62 (38.5%)	Peak AM Hour : 07:45 =	15 (9.3%)	Peak AM Factor : 0.750	Average Period : 1.7
PM Total :	99 (61.5%)	Peak PM Hour : 15:00 =	18 (11.2%)	Peak PM Factor : 0.643	Average Hour : 6.7

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

Day Total : 152

AM Total :	69 (45.4%)	Peak AM Hour : 06:45 =	20 (13.2%)	Peak AM Factor : 0.714	Average Period :	1.6
PM Total :	83 (54.6%)	Peak PM Hour : 16:45 =	16 (10.5%)	Peak PM Factor : 0.444	Average Hour :	6.3



# Basic Volume Summary: Espanola South

**Grand Total For Data From: 00:00 - 04/11/2017 To: 23:59 - 04/12/2017**

Lane	Total Count	# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	316 (50.2%)	2.00	158	1.6	6.6	95 (30.1%)	221 (69.9%)
#3.	313 (49.8%)	2.00	157	1.6	6.5	131 (41.9%)	182 (58.1%)
ALL	629	2.00	315	3.2	13.1	226 (35.9%)	403 (64.1%)

Lane	Peak AM Hour	Date	Peak AM Factor	Peak PM Hour	Date	Peak PM Factor
#1.	10:30 = 13	04/12/2017	0.650	14:00 = 22	04/12/2017	0.500
#3.	06:45 = 20	04/12/2017	0.714	15:00 = 18	04/11/2017	0.643

## Appendix C



OBJECTID	ReportIDSt	Date	CrashDate	Year
297098	12.23295462	6/7/2012	20120607	2012
341549	14.710185904	11/7/2014	20141107	2014
OBJECTID	Day	Month	Time24	Hour24
297098	5	6	300	3
341549	6	11	1511	15
OBJECTID	Agency	County	City	AStreet
297098	45	1	7825	2707 ESPANOLA ST NE
341549	3	1	7825	CLAREMONT AVE NE
OBJECTID	BStreet	Landmark	Route	MilePost
297098	ESPANOLA ST NE			0
341549	ESPANOLA ST NE			0
OBJECTID	NumVeh	NumPersons	NumKilled	NumClassA
297098	2	2	0	0
341549	2	2	0	0
OBJECTID	NumClassB	NumClassC	NumInjured	NumUnhurt
297098	0	0	0	2
341549	0	0	0	2
OBJECTID	Severity	Class	Analysis	TOPCACC
297098	Property Damage Only Crash	6	Parked Veh-Unk Intersection - Both Going	Impaired Driving
341549	Property Damage Only Crash	4	Straight/Entering At Angle	Driver Inattention
OBJECTID	Weather	Lighting	ALCInv	DRUGInv
297098	1	4	T	T
341549	1	1	F	F
OBJECTID	PEDInv	MCIInv	PECIInv	TrkInv
297098	F	F	F	F
341549	F	F	F	F
OBJECTID	HZInv	HitRun	SHTDProp	System
297098	F	T	0	2
341549	F	F	0	2



OBJECTID	MaxDam	RoadRel	Character	Grade
297098	0	T	F	8
341549	3	T	F	9

OBJECTID	NonLocal	Measure	MeasureUni	Direction
297098	0			
341549	2		99	



Souder, Miller & Associates • 3451 Candalaria Road NE, Suite D  
Albuquerque, NM 87107-1948 • (505) 299-0942 • (877) 299-0942 • fax (505) 293-3430

---