



## CITY OF DUNWOODY

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# MEMORANDUM

**To:** Honorable Mayor and City Council  
**From:** Richard Meehan, Director of Public Works  
**Date:** November 16, 2009  
**Subject:** Update on Radar Speed Detection Signs

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The first permanent Radar Speed Detection Signs have been in place on Womack Road at the new school for just over one month. We initially ran the radar only with the display off for one week to collect base line data. Since the displays have been turned on, we have continued to collect speed data. Attached is the initial report showing the effectiveness of the signs. There is a lot of data in the report but the key findings are:

- During School Zone hours, a 3 to 5 mph reduction in average speed and a drop in the percent of violators from 75-90% to 50-65%
- About a 5 mph reduction in average travel speed
- A significant reduction in the number of speed limit violations

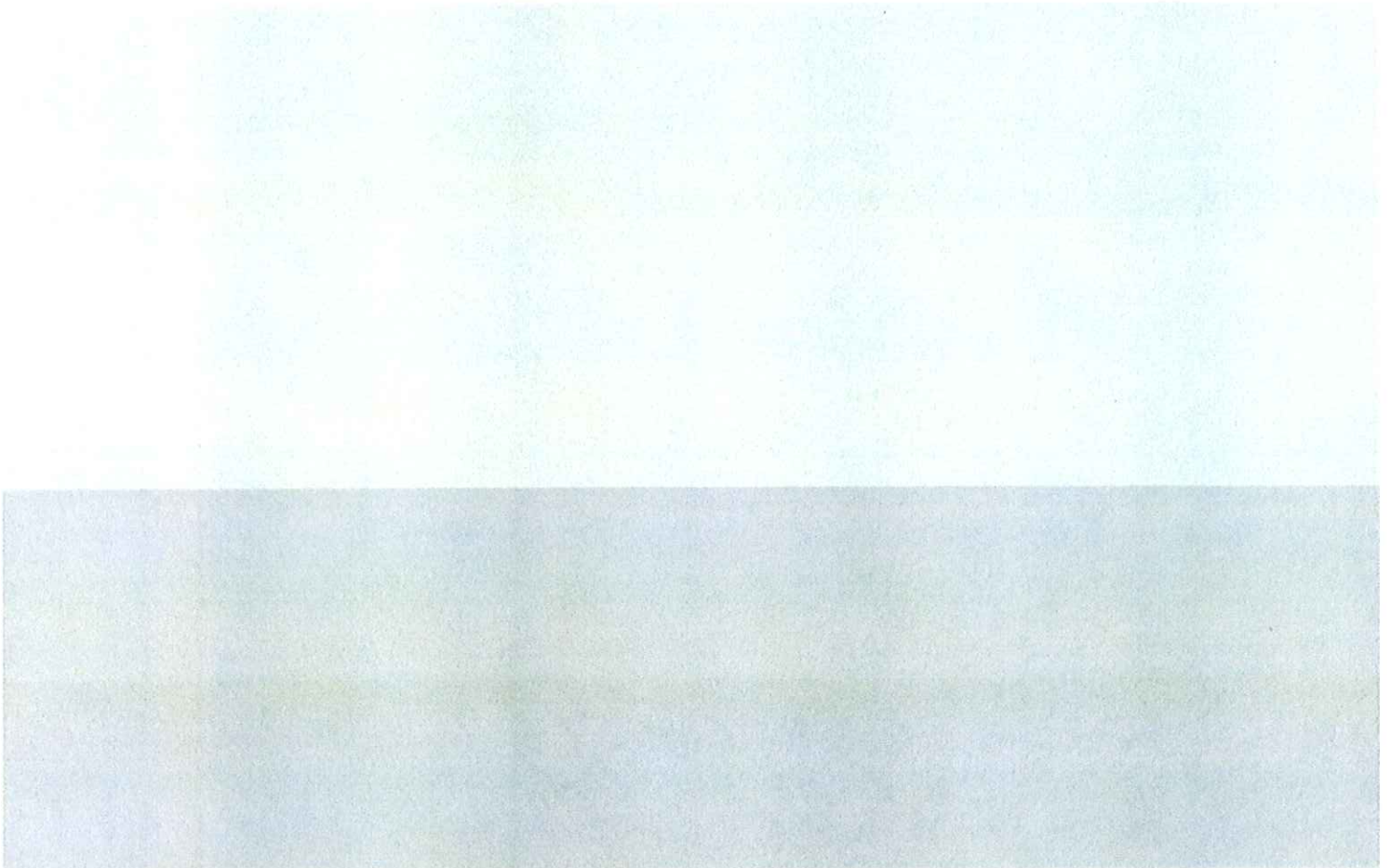
We are scheduled to complete the installation of the remaining eight radar speed detection signs during the week of November 16. As with Womack Road, these signs will be operated in stealth mode for the first week to collect base line data at each location before being put in active display mode. The following are the locations for these signs:

1. Chamblee-Dunwoody Road at Redfield Road & Harris Circle (Austin ES)
2. Mt Vernon Road at Statham Drive/Forest Springs Drive (Vanderlyn ES)
3. North Peachtree Road at Brook Run & Brookhurst Drive (Peachtree MS/Chestnut ES)
4. North Peachtree Road at Davantray Drive (Kingsley ES)

# Radarsign Effectiveness

Womack Elementary School

Prepared by Richard Garrett



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## Background

Two school zone beacon / radarsign systems were installed on October 9, 2009 at the Wolmack Elementary School in Dunwoody. We wanted to determine the effectiveness of the radarsign and to do this we decided to leave the radarsign display off until October 18, 2009. The radarsign began collecting data in the stealth mode when it was installed.

On October 18<sup>th</sup> the display was turned on to notify drivers of their speed and if speeding flash their speed. The goal was to determine if creating awareness of the driver's speed would result in slower average speeds. On November 4<sup>th</sup>, data accumulated since October 9<sup>th</sup> was download via Bluetooth to a laptop for reporting an analysis.

## Results

Various charts and graphs were created using the information obtained from the sign on Womack road. Particular attention was placed on comparing the data from the week of October 11<sup>th</sup> when the display was in stealth mode to the data from October 25<sup>th</sup>.

Key information that was determined is as follows:

- Average Weekly Speeds by MPH Segment – Bar Graph: With the display enabled on the radarsign the following results were determined:
  - 41+ MPH = 44% decrease
  - 36-40 MPH = 20% decrease
- Average Weekly Speeds by MPH Segment – Line Graph
  - This shows a shift in the average speed when the display was on of about 5 MPH.
- % of Daily Speeders
  - This bar graph shows significant reductions in the percentage of speeders. The percent of speeders (using average speed) drops from an average of about 70% to 50%.

## Dunwoody Wolmack Sign Effectiveness

### SIGN OFF

	Time	# Vehicles	# Violators	Peak MPH	% Violators	AVG. MPH
12-Oct Monday	7:00	45	38	49	84.4%	30.9
	7:30	49	46	47	93.9%	32.7
	2:00	86	72	49	83.7%	32.8
	2:30	75	62	56	82.7%	33.3
13-Oct Tuesday	7:00	90	68	51	75.6%	29.2
	7:30	84	67	59	79.8%	30.2
	2:00	107	88	65	82.2%	32.3
	2:30	99	78	53	78.8%	32.3

### SIGN ON

	Time	# Vehicles	# Violators	Peak MPH	% Violators	AVG. MPH
19-Oct Monday	7:00	81	48	50	59.3%	27.4
	7:30	104	54	47	51.9%	26.9
	2:00	97	67	51	69.1%	28.6
	2:30	93	58	51	62.4%	28.6
20-Oct Tuesday	7:00	93	58	48	62.4%	27.0
	7:30	105	59	45	56.2%	26.4
	2:00	104	68	63	65.4%	28.4
	2:30	89	68	49	76.4%	29.6

### EFFECTIVENESS

#### Average Speed During School Hours

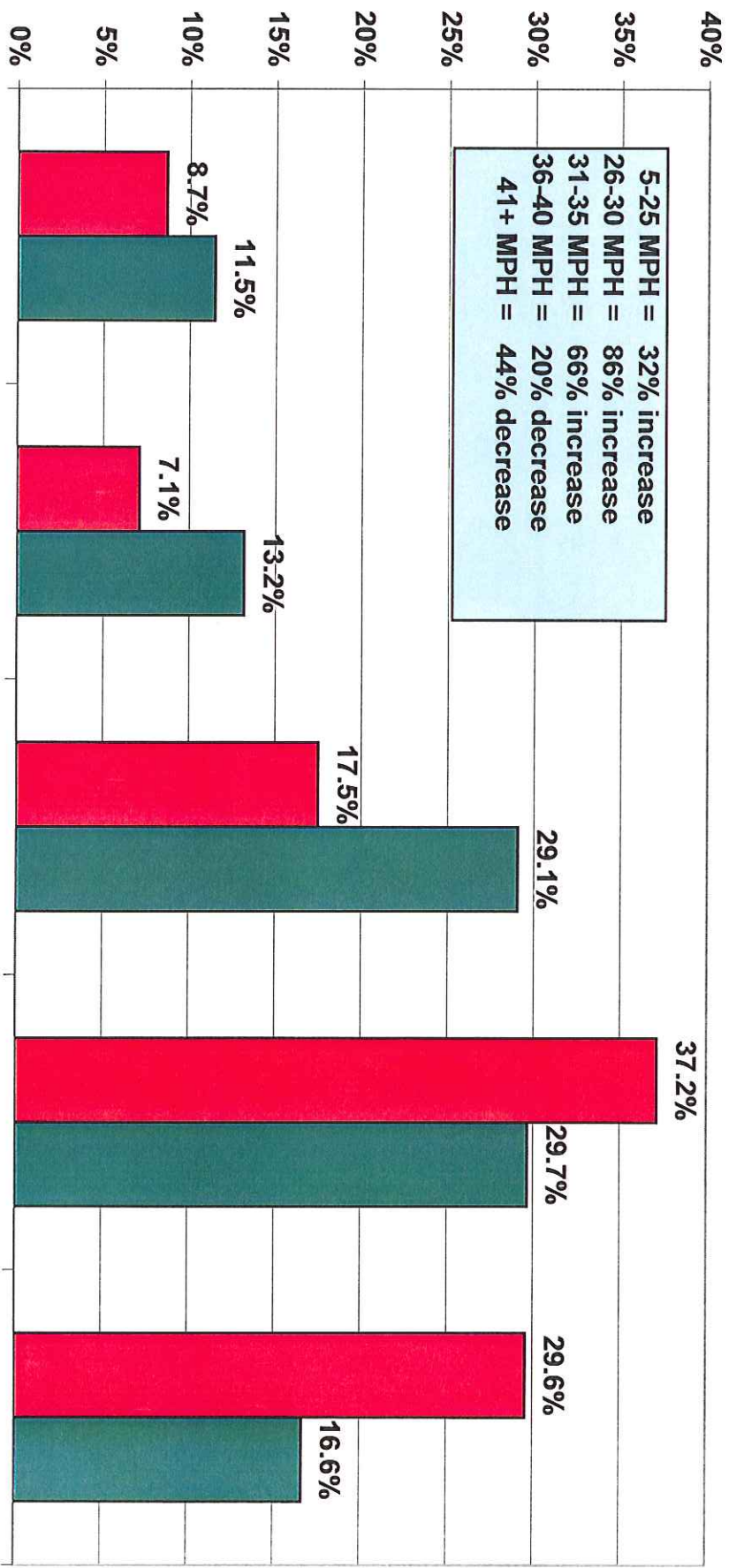
	Time	% Violators	Sign On	Sign Off	AVG. MPH
19-Oct Monday	7:00	-25.2%	27.4	30.9	(3.50)
	7:30	-42.0%	26.9	32.7	(5.80)
	2:00	-14.6%	28.6	32.8	(4.20)
	2:30	-20.3%	28.6	33.3	(4.70)
20-Oct Tuesday	7:00	-13.2%	27.0	29.2	(2.20)
	7:30	-23.6%	26.4	30.2	(3.80)
	2:00	-16.9%	28.4	32.3	(3.90)
	2:30	-2.4%	29.6	32.3	(2.70)

# AVG. WEEKLY SPEEDS: By MPH SEGMENT

Dunwoody Wornack

■ SIGN OFF ■ Sign ON

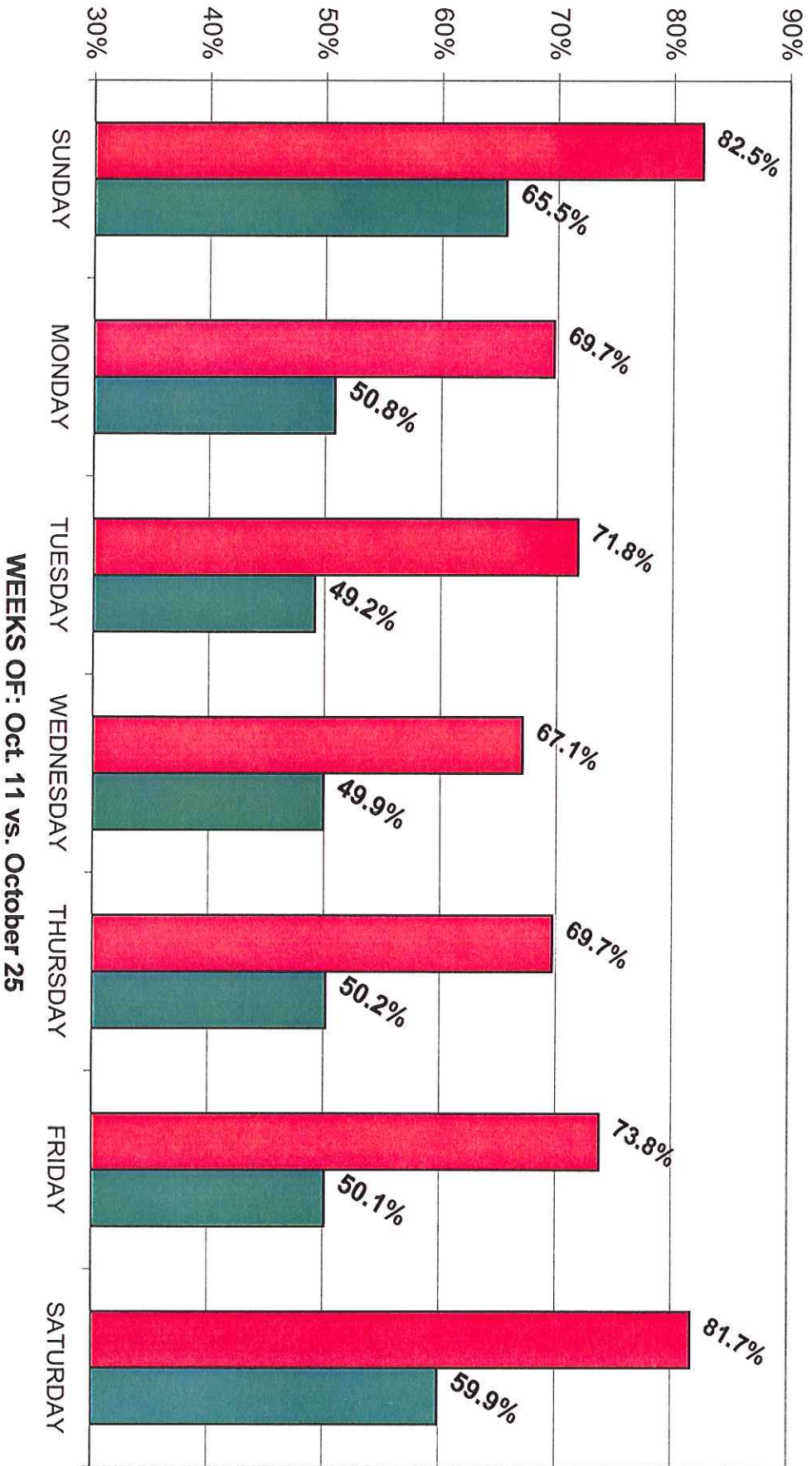
5-25 MPH = 32% increase  
 26-30 MPH = 86% increase  
 31-35 MPH = 66% increase  
 36-40 MPH = 20% decrease  
 41+ MPH = 44% decrease



Weeks of: October 11 vs. October 25

# % of Daily Speeders

Dunwoody Wornack

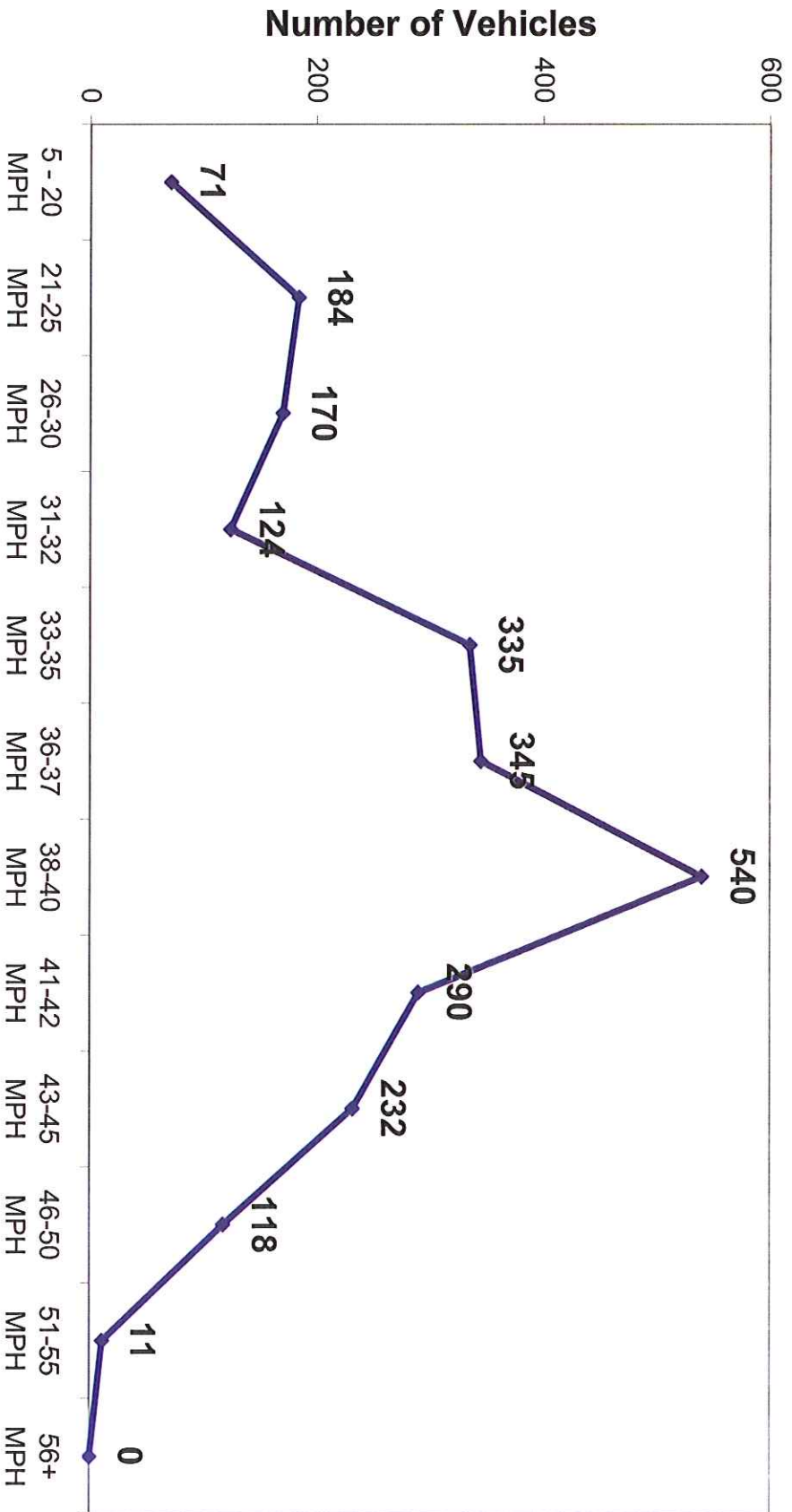


WEEKS OF: Oct. 11 vs. October 25

# DAILY AVG. SPEEDS: BY MPH SEGMENTS

Dunwoody Womak

# Vehicles



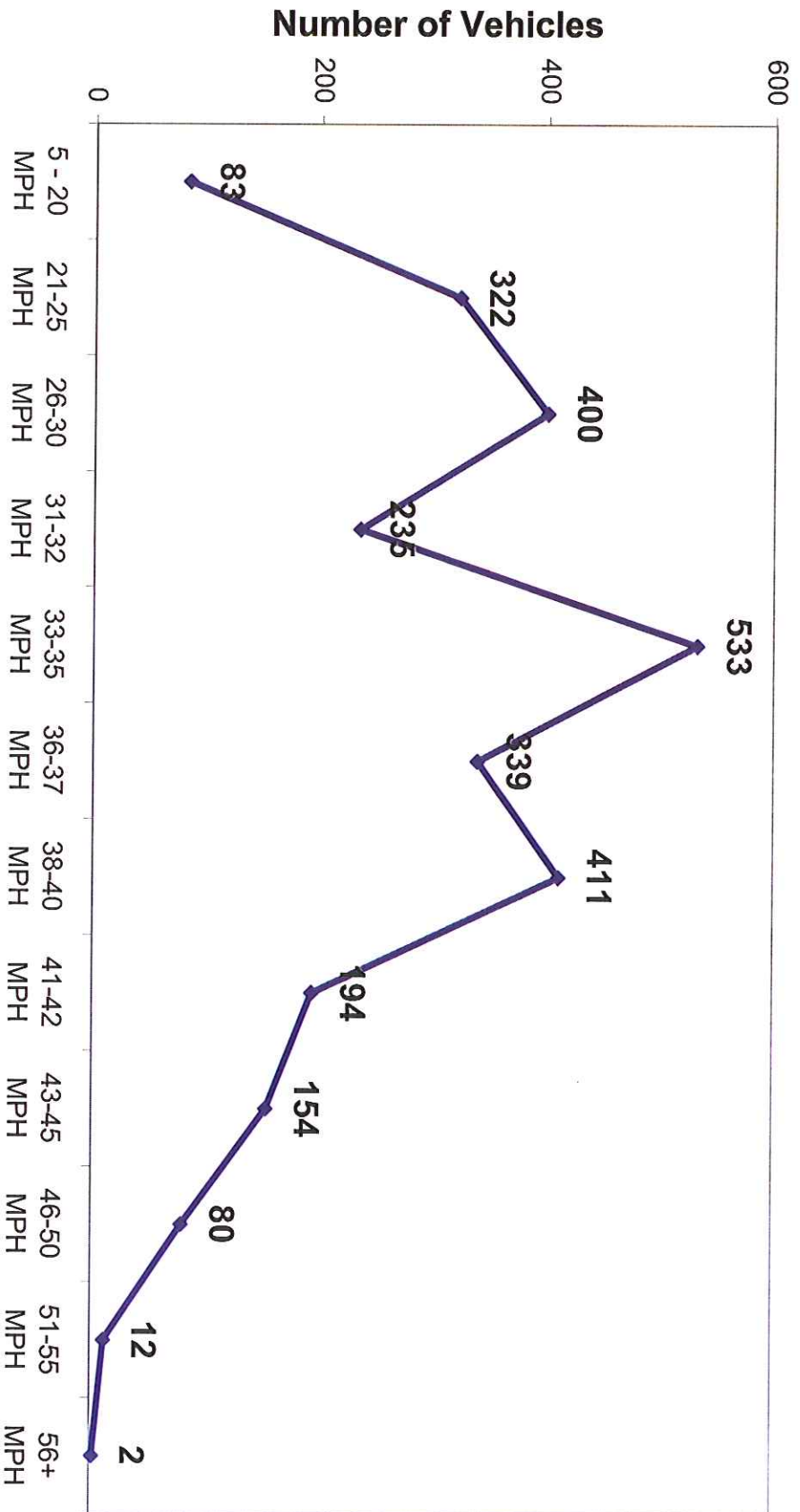
**MONDAY: October 12 2009**



# DAILY AVG. SPEEDS: BY MPH SEGMENTS

Dunwoody Womack

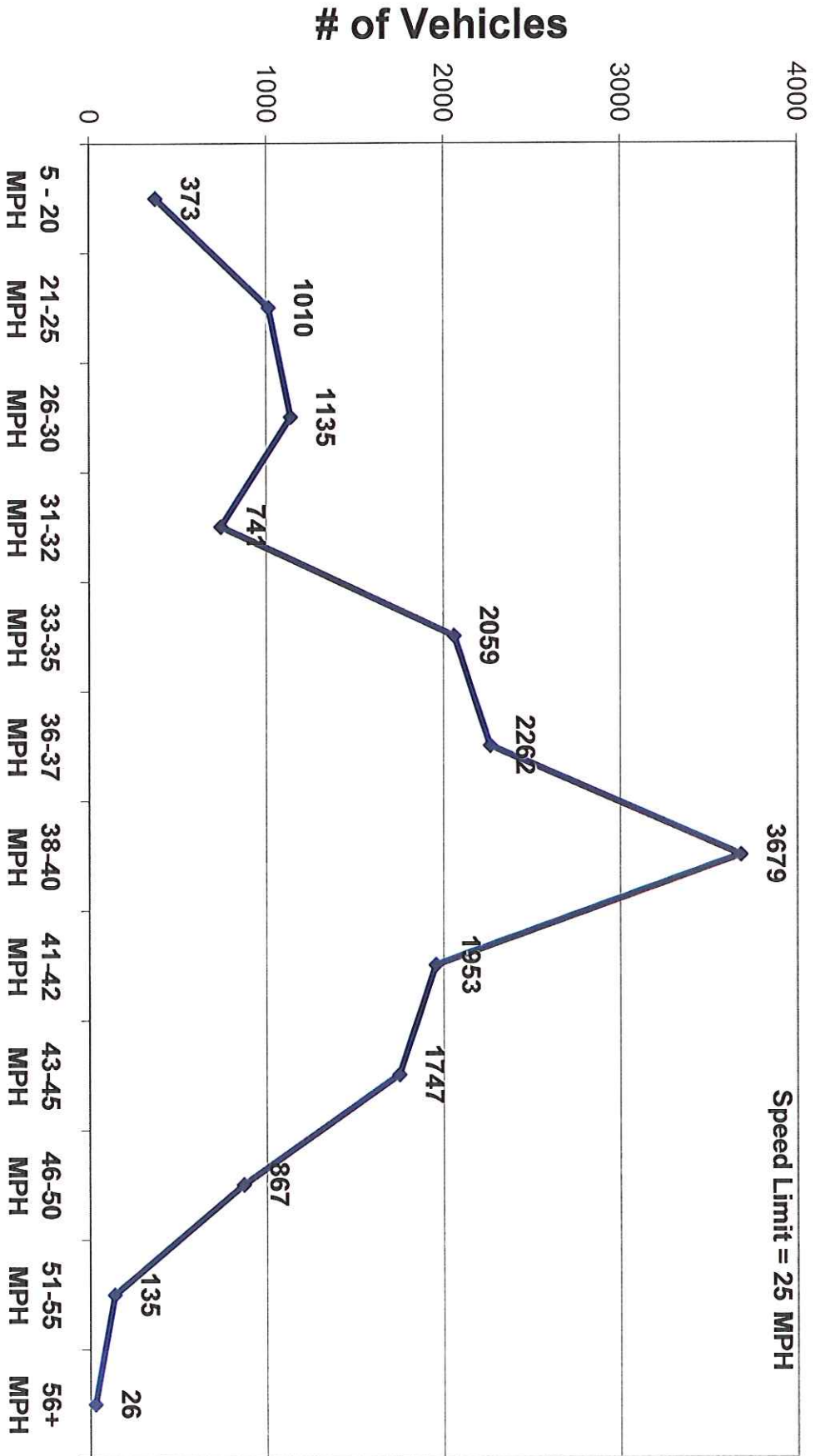
# Vehicles



**MONDAY: October 26 2009**

# AVG. SPEEDS - By MPH Segments

Dunwoody Womak



WEEK OF: October 11 2009

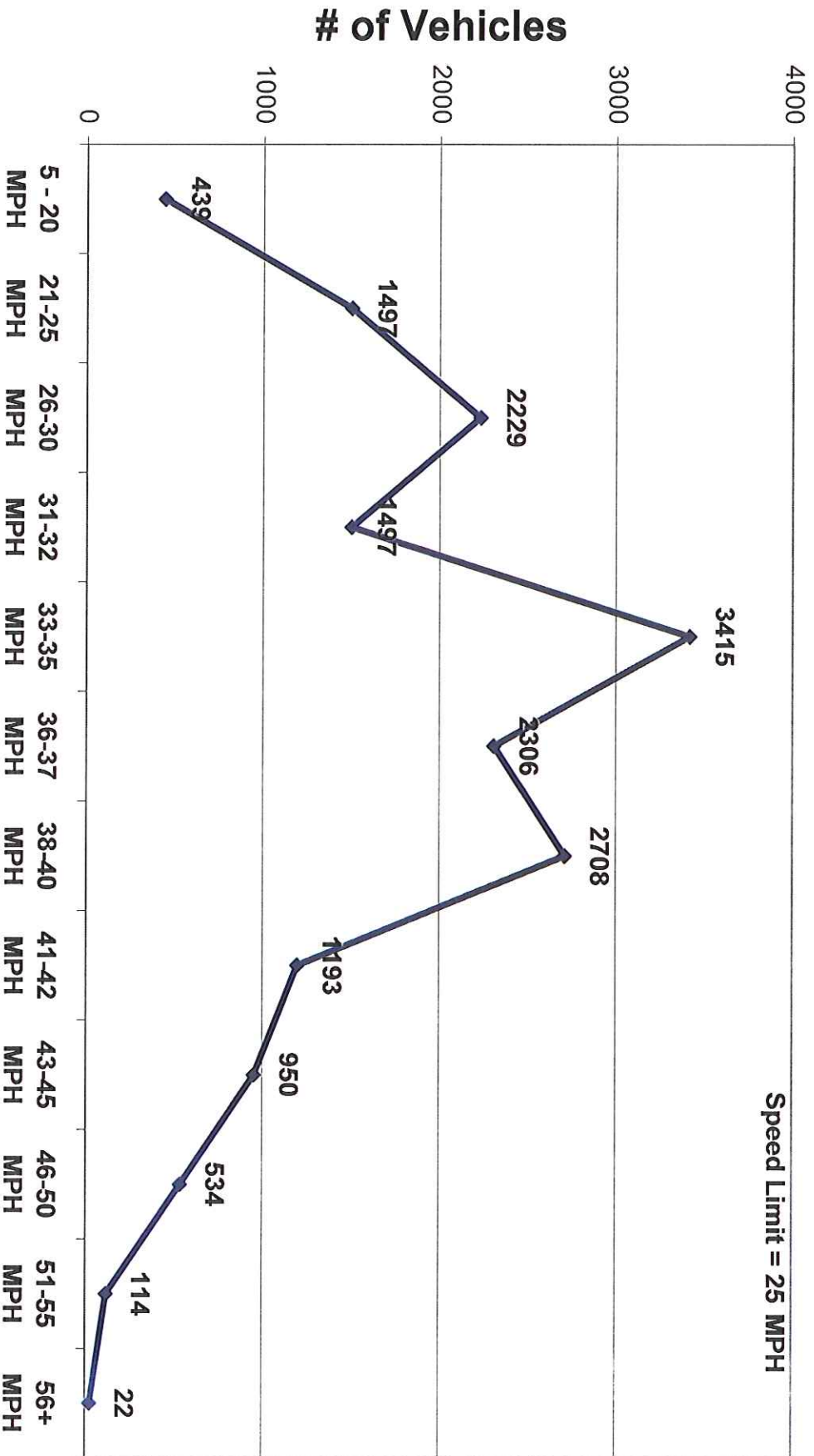
Speed Limit = 25 MPH

# AVG. SPEEDS - By MPH Segments

Dunwoody Wornack



Speed Limit = 25 MPH



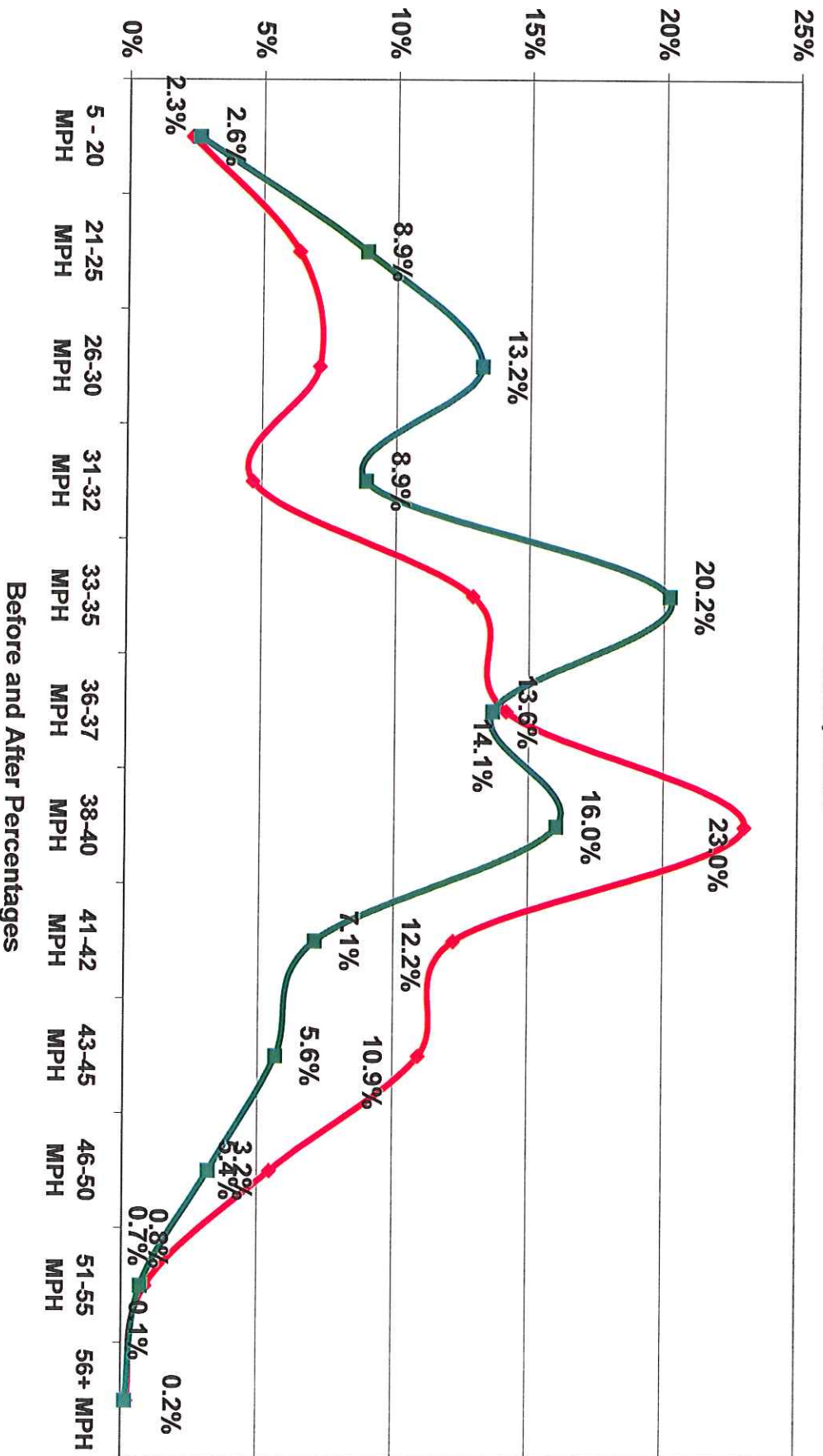
WEEK OF: October 25 2009

# AVG DAILY SPEEDS: BY MPH SEGMENTS



NO SIGN (red line with diamond markers) WITH Radarsign (green line with square markers)

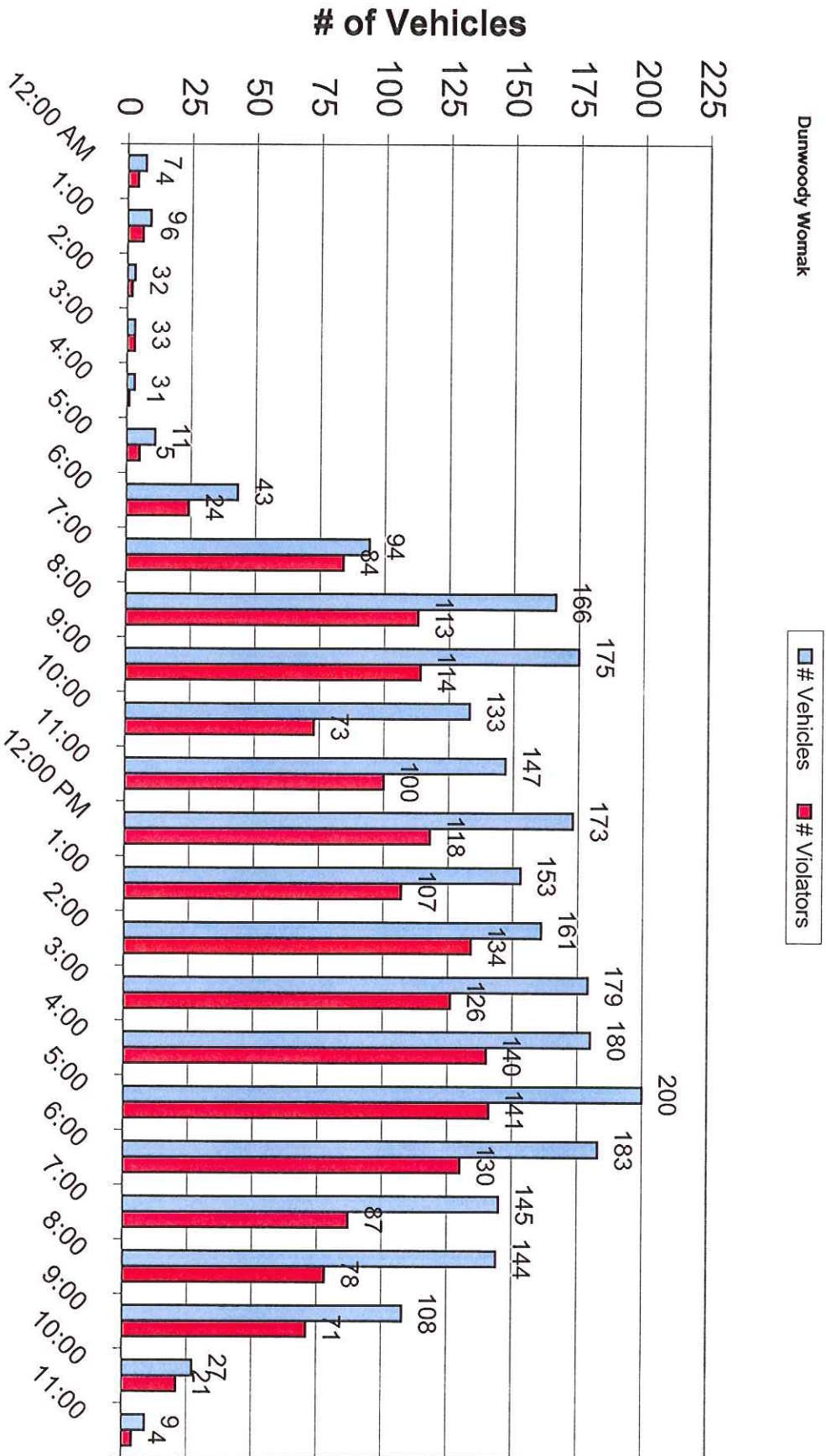
Dunwoody Womack



Before and After Percentages

# Vehicle & Violation Count - 1 Hour Segments

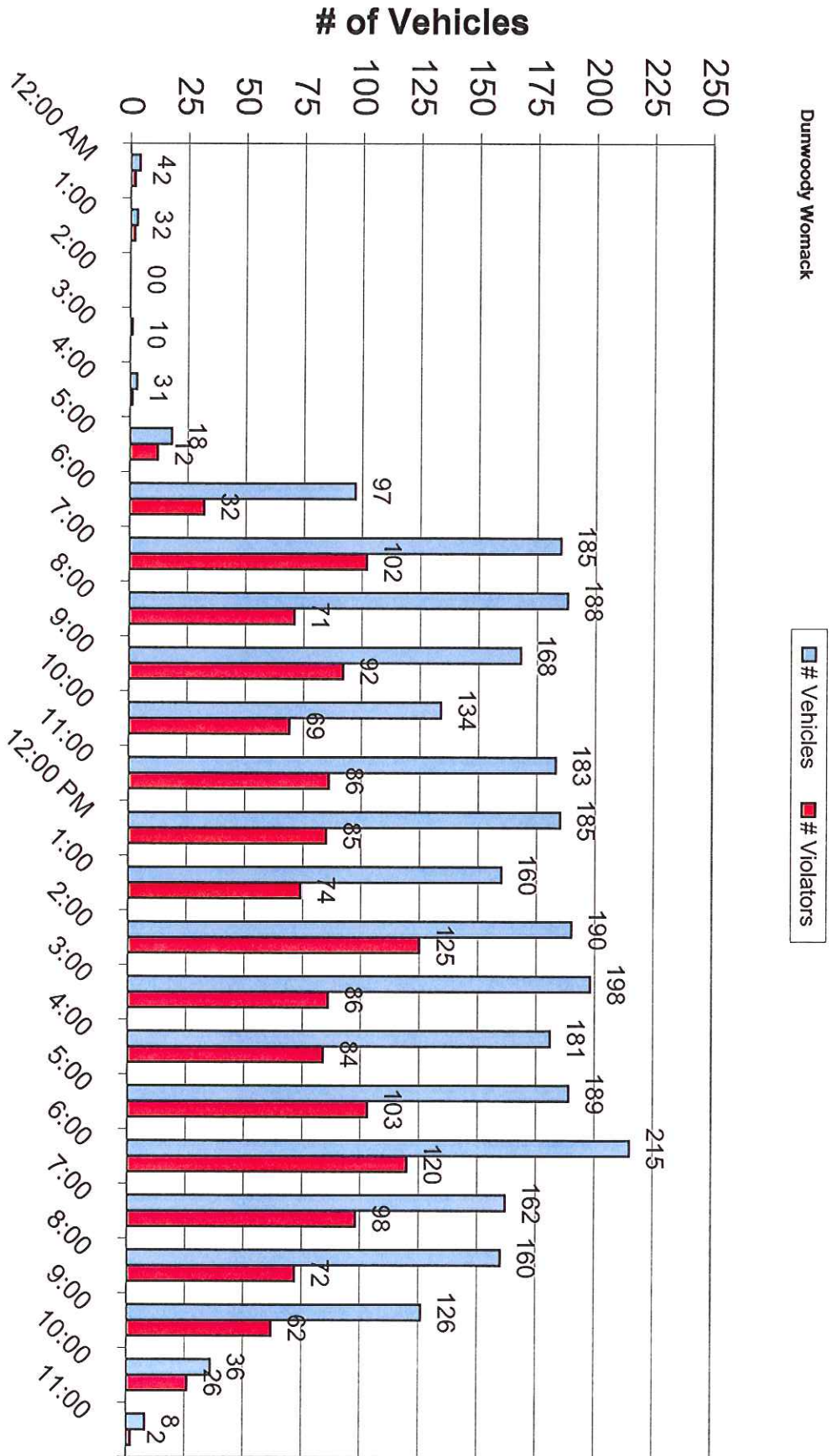
Dunwoody Womak



**MONDAY: October 12 2009**

# Vehicle & Violation Count - 1 Hour Segments

Dunwoody Wornack



**MONDAY: October 26 2009**

## Conclusion

Driver feedback of their speed has shown to reduce the number of cars speeding as well as the average speed. The 44% decrease of cars going over 41 MPH is significant and together with the other reports shows the radarsign is an effective tool in slowing drivers down thus improving safety.