

# Traffic Calming Study

*Village of Kinderhook*



*April 2017*

# MEETING AGENDA

- **Introductions**
- **Scope of the Study**
- **Data Collection**
- **Findings**
- **Traffic Calming Measures**
- **Summary**
- **Q&A**





# INTRODUCTIONS

- How the study came about
  - Which roads were included
- Scope of the study
  - What it is
  - What it isn't



# DATA COLLECTION

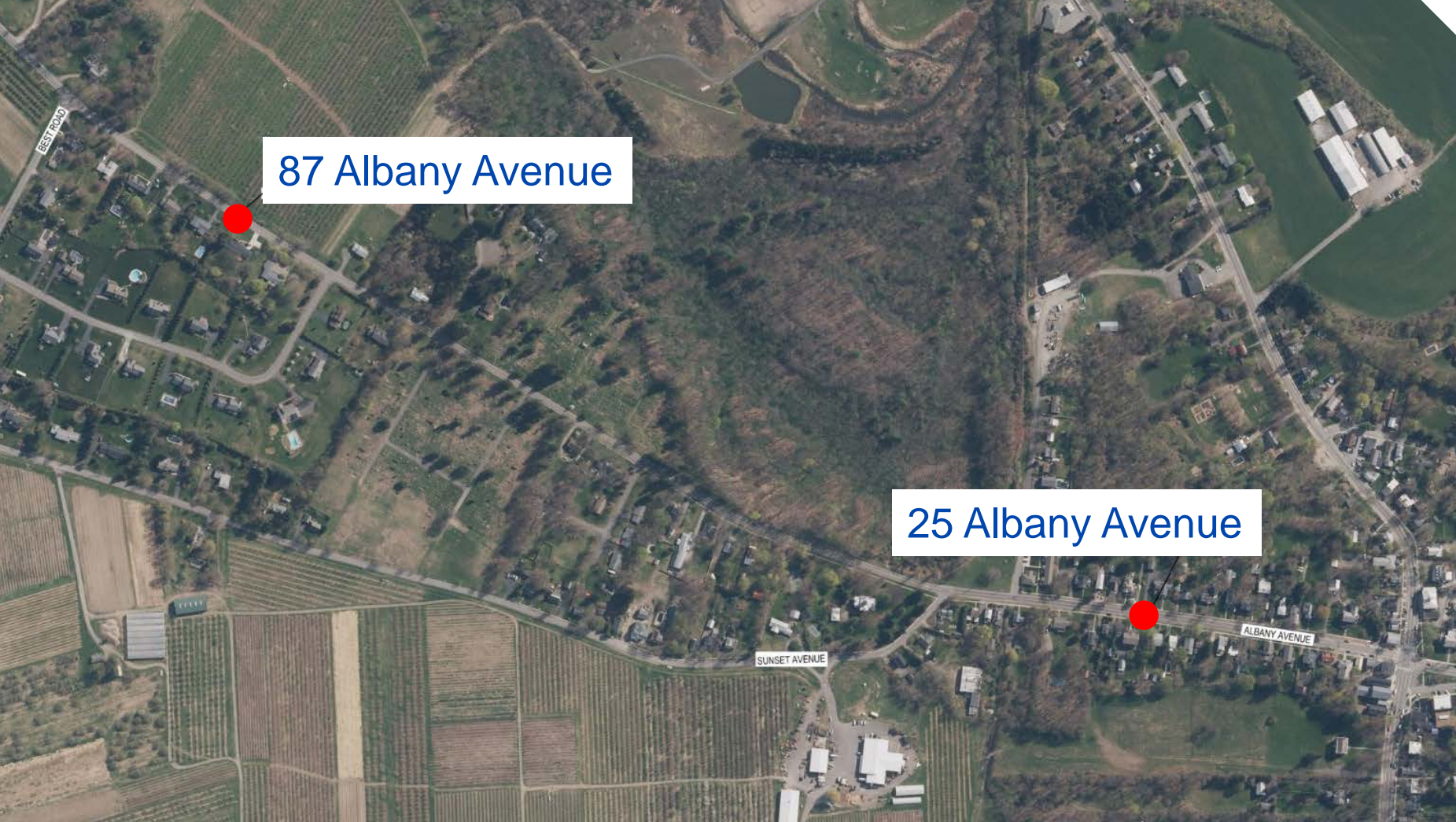
## Traffic Counting Program

- **Manual Turning Moving Counts**
  - 11/9/16 from 4pm to 6pm and 11/10/16 from 7am to 9am
    - Route 9/William Street
    - Route 9/Hudson Street/Albany Avenue
    - Hudson Street/William Street
- **Automatic Traffic Recorders**
  - 10/31/16 to 11/9/16:
    - 1 on Gaffney Lane and 2 on Eichybush Road
  - 11/9/16 to 11/17/16:
    - 1 on Hudson Street, 1 on William Street and 2 on Albany Avenue

## Existing Conditions

- **Village speed limit of 30mph**
  - Gaffney Lane is posted 25mph
  - William Street is posted 25mph
  - Hudson Street is posted 25mph near the library
- **Gaffney Lane, Eichybush Road and William Street**
  - 22' wide with no shoulders
- **Albany Avenue and Hudson Street**
  - 22' wide with narrow shoulders
  - Parking available
  - Sidewalks present

# ATR LOCATIONS: ALBANY AVENUE





# ATR LOCATIONS: HUDSON STREET AND WILLIAM STREET





# ATR LOCATIONS: EICHYBUSH ROAD





# ATR LOCATIONS: GAFFNEY LANE





# FINDINGS

## → Traffic Volumes

ATR Location	Direction	Total Volume	AADT	Total HV	HV %
Albany Street Between Route 9 and Sunset Avenue	WB	4,435	1,172	95	1.064%
	EB	4,491			
Albany Street West of Sunset Avenue	WB	3,172	836	78	1.259%
	EB	3,025			
Hudson Street	EB	6,635	1,832	174	1.235%
	WB	7,453			
Eichybush Road Between Route 9 and Gaffney Lane	WB	1,989	452	35	0.835%
	EB	2,202			
Eichybush Road West of Gaffney Lane	WB	2,006	446	27	0.648%
	EB	2,163			
William Street	WB	1,193	227	---	---
	EB	941			
Gaffney Lane	WB	1,208	257	---	---
	EB	1,180			

AADT = Annual Average Daily Traffic  
 HV = Heavy Vehicle

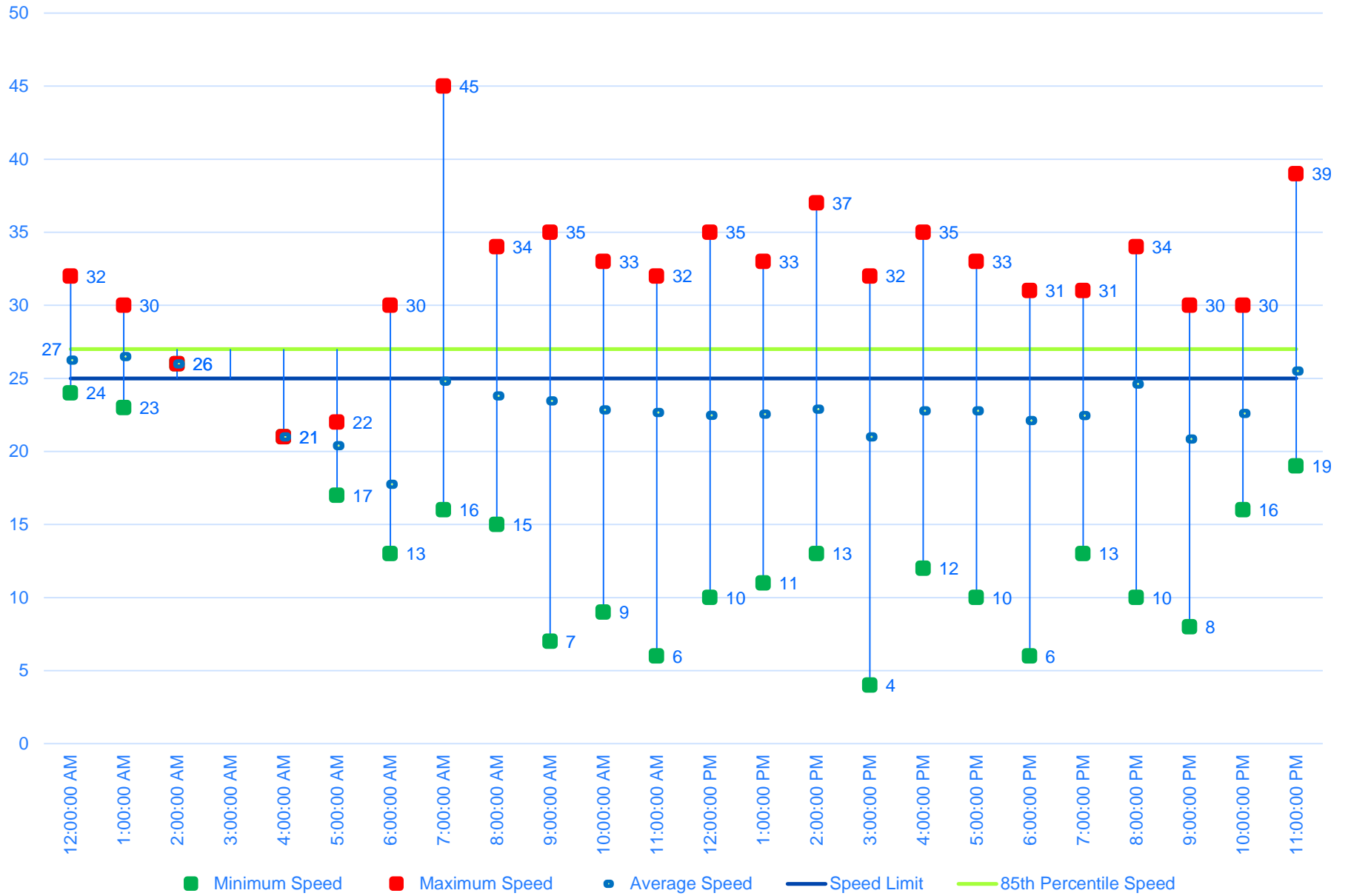
# FINDINGS

## → Speeds – 85<sup>th</sup> Percentile

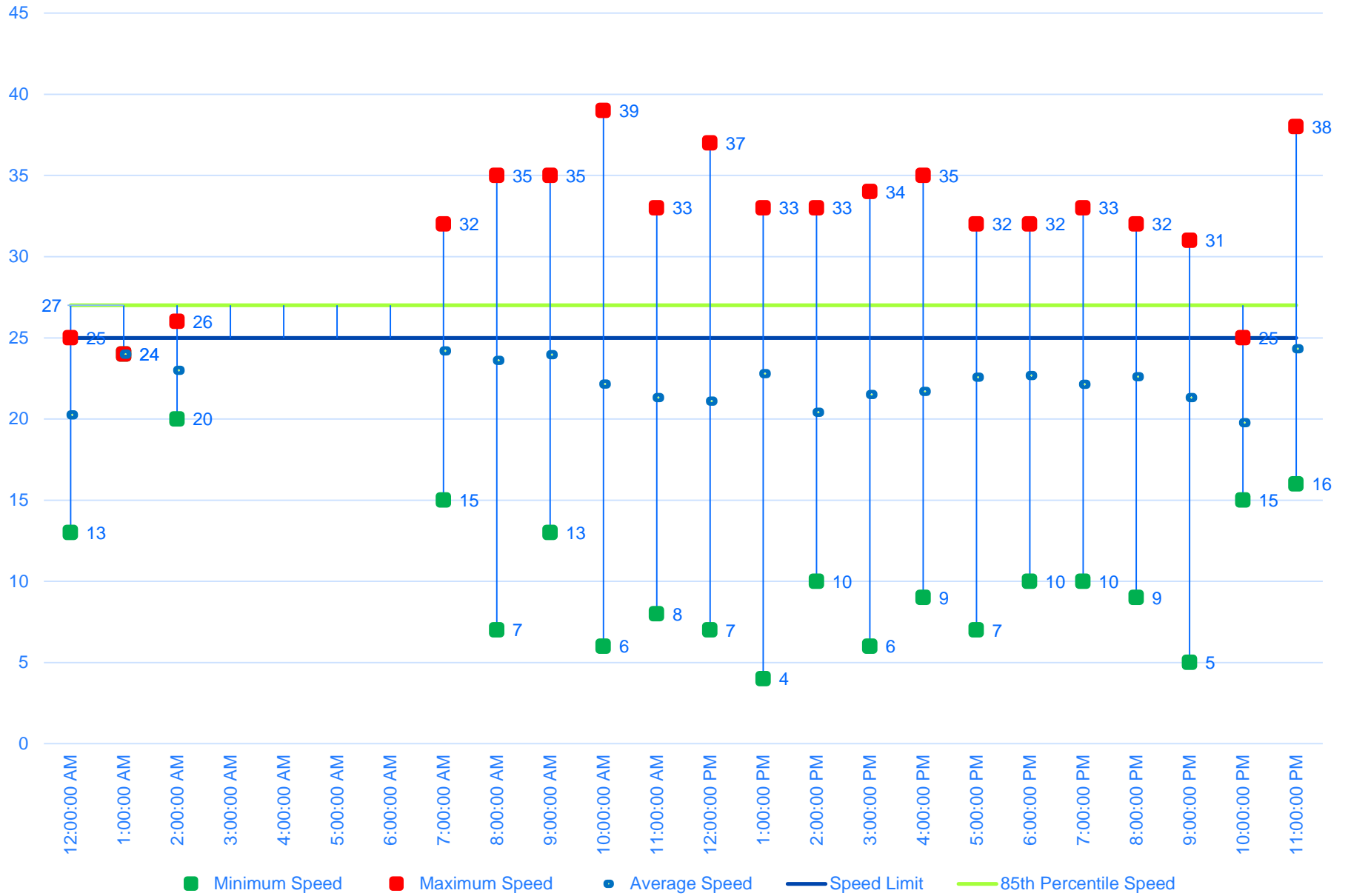
ATR Location	Direction	Posted Speed Limit	85th Percentile Speed	Vehicles Traveling 30 MPH to 40 MPH		Vehicles Traveling 41 MPH and Faster	
				Volume	%	Volume	%
Albany Street Between Route 9 and Sunset Avenue	WB	30	34	2,818	64%	84	2%
	EB	30	35	2,960	66%	179	4%
Albany Street West of Sunset Avenue	WB	30	44	1,885	59%	1,107	35%
	EB	30	42	2,079	69%	706	23%
Hudson Street	EB	30	36	5,153	78%	213	3%
	WB	30	38	6,074	81%	608	8%
Eichybush Road Between Route 9 and Gaffney Lane	WB	30	38	1,284	65%	187	9%
	EB	30	37	1,425	65%	185	8%
Eichybush Road West of Gaffney Lane	WB	30	42	1,299	65%	514	26%
	EB	30	41	1,540	71%	412	19%
ATR Location	Direction	Posted Speed Limit	85th Percentile Speed	Vehicles Traveling 25 MPH to 35 MPH		Vehicles Traveling 36 MPH and Faster	
				Volume	%	Volume	%
William Street	WB	25	27	372	31%	66	6%
	EB	25	27	323	34%	6	1%
Gaffney Lane	WB	25	33	737	61%	148	12%
	EB	25	34	714	61%	204	17%



## William Street: Traveling from Route 9 to Hudson Street

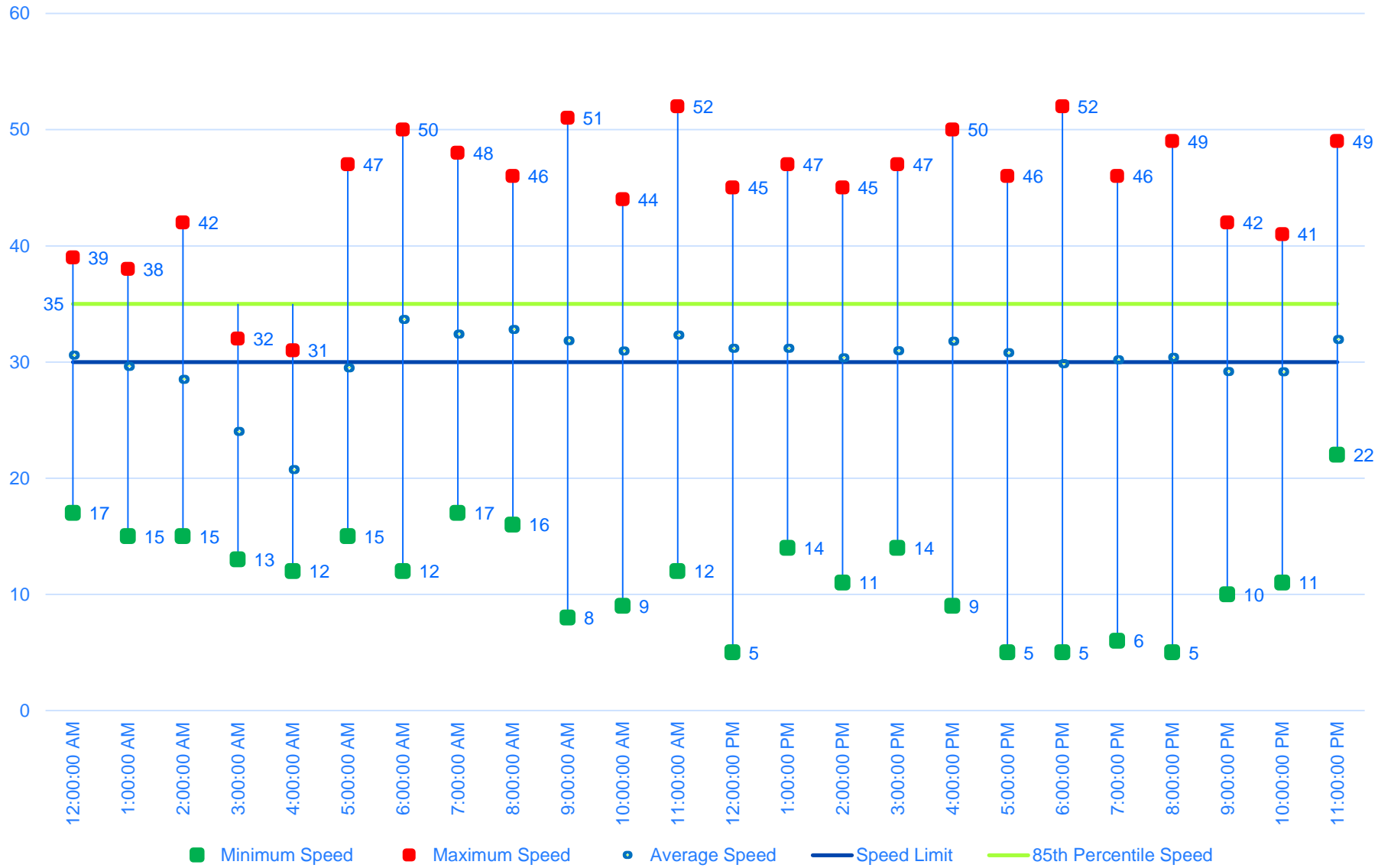


## William Street: Traveling from Hudson Street to Route 9

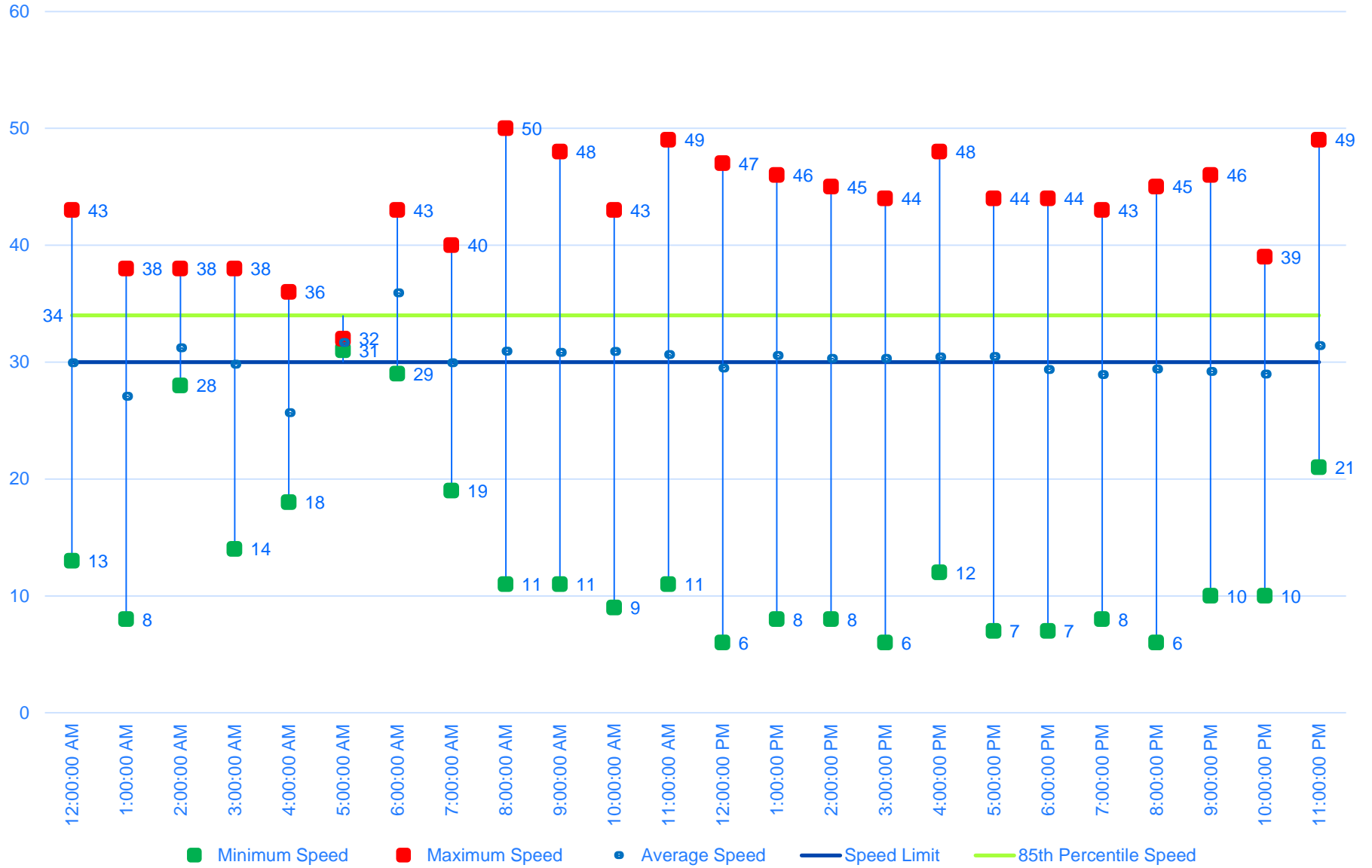




### Albany Avenue: Traveling from Sunset Avenue to Route 9 Entering the Village

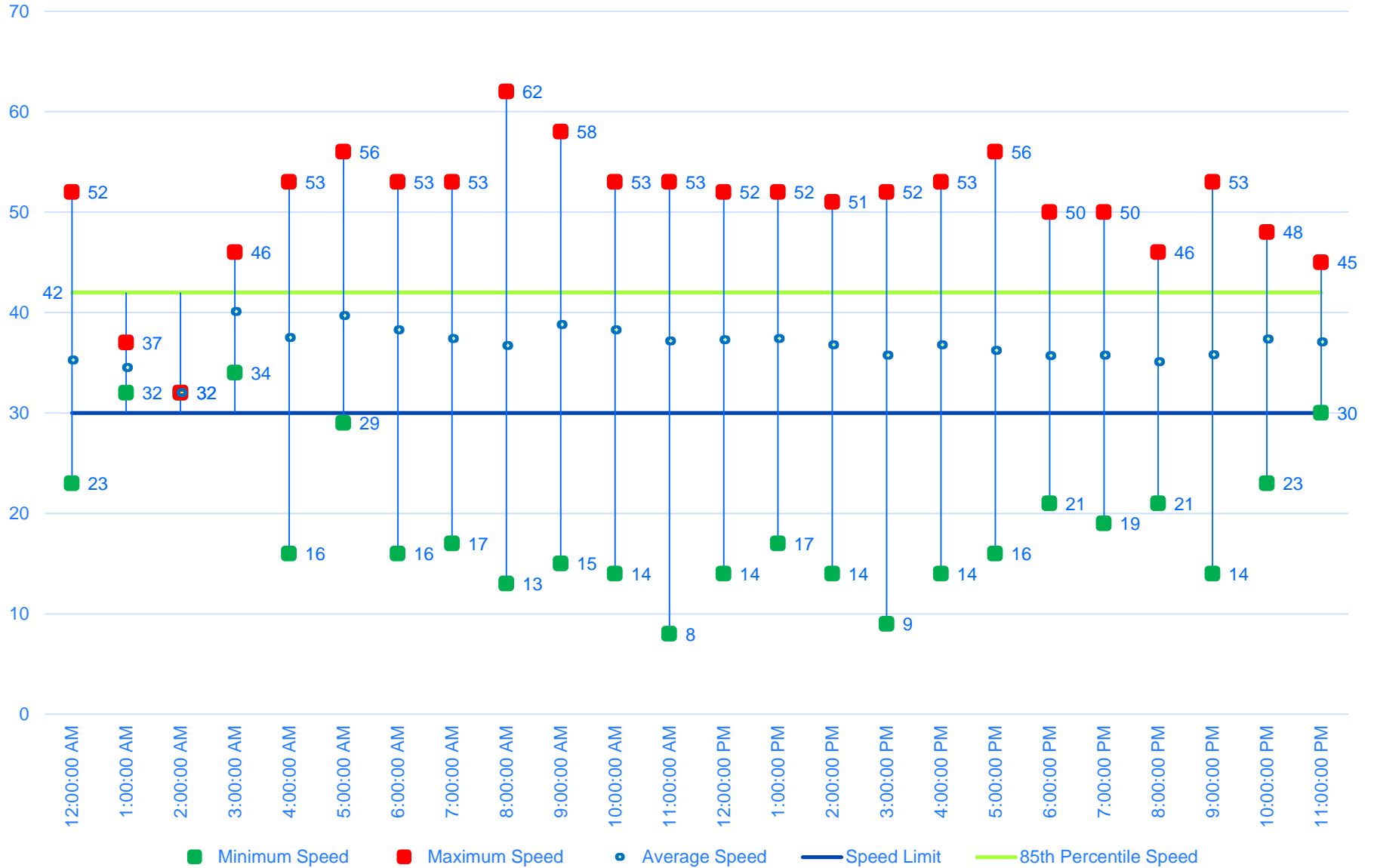


## Albany Avenue: Traveling from Route 9 to Sunset Avenue Exiting the Village

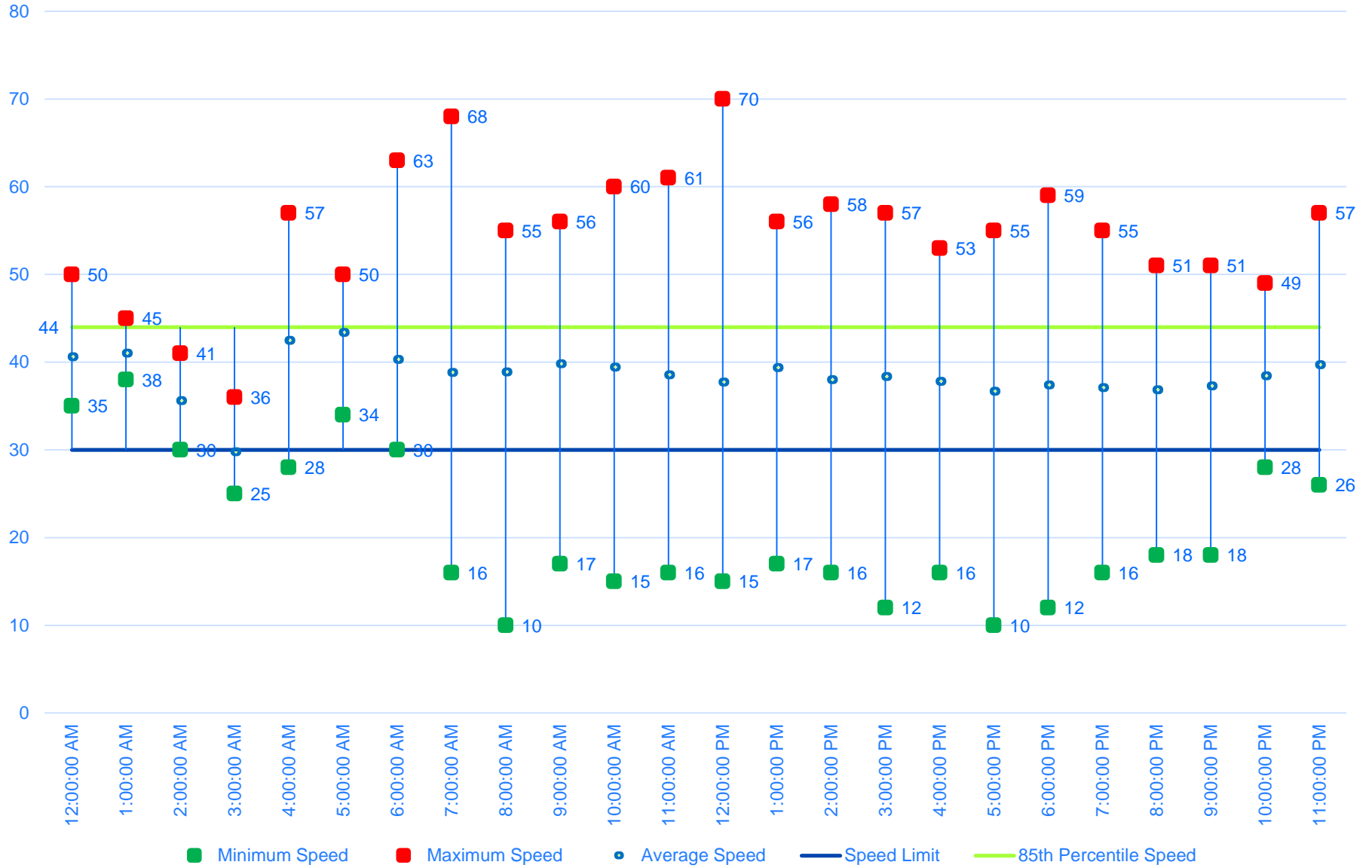




## Albany Avenue: Traveling from Best Road to Sunset Avenue Entering the Village

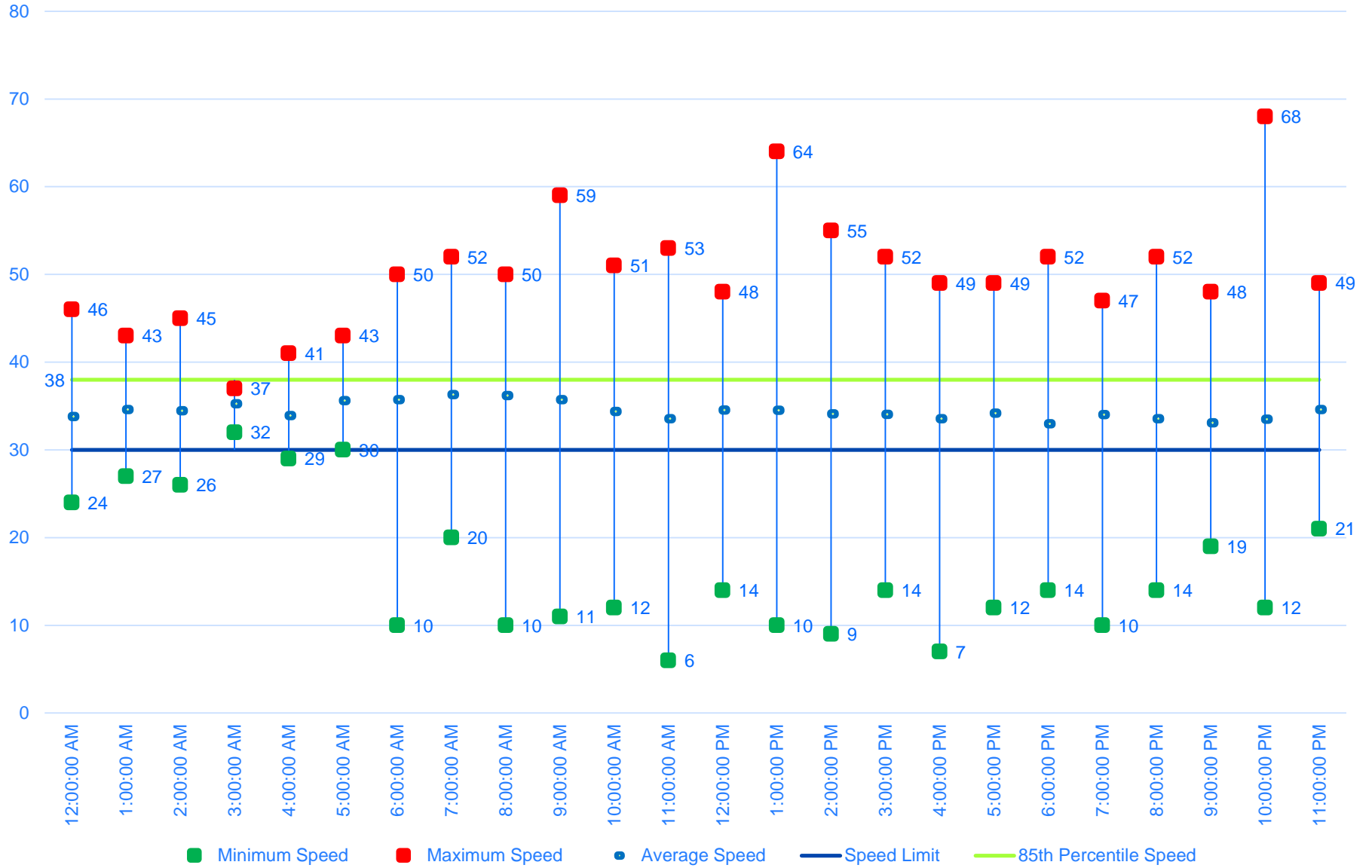


## Albany Avenue: Traveling from Sunset Avenue to Best Road Exiting the Village

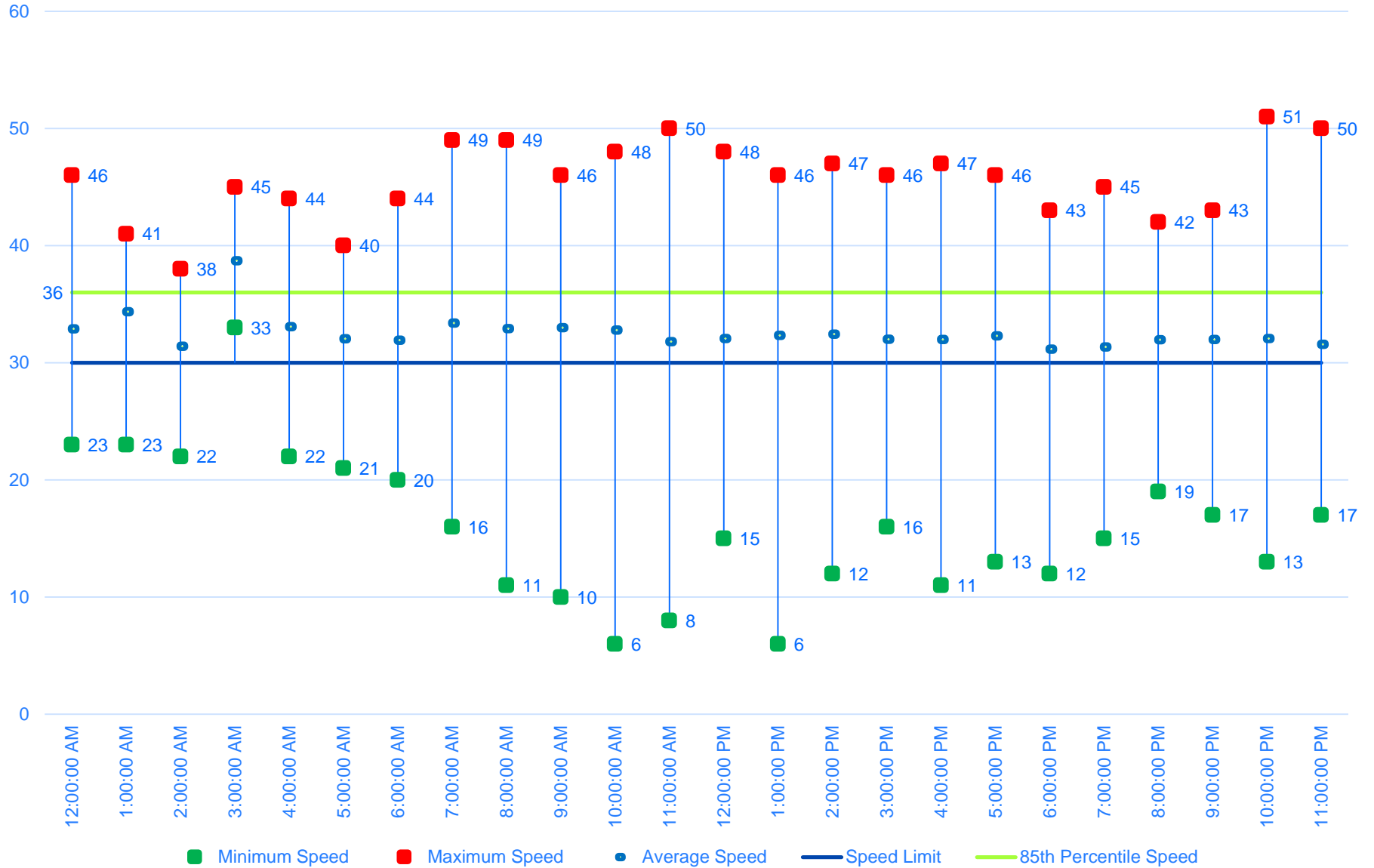




## Hudson Street: Traveling from the Village Line to Route 9 Entering the Village

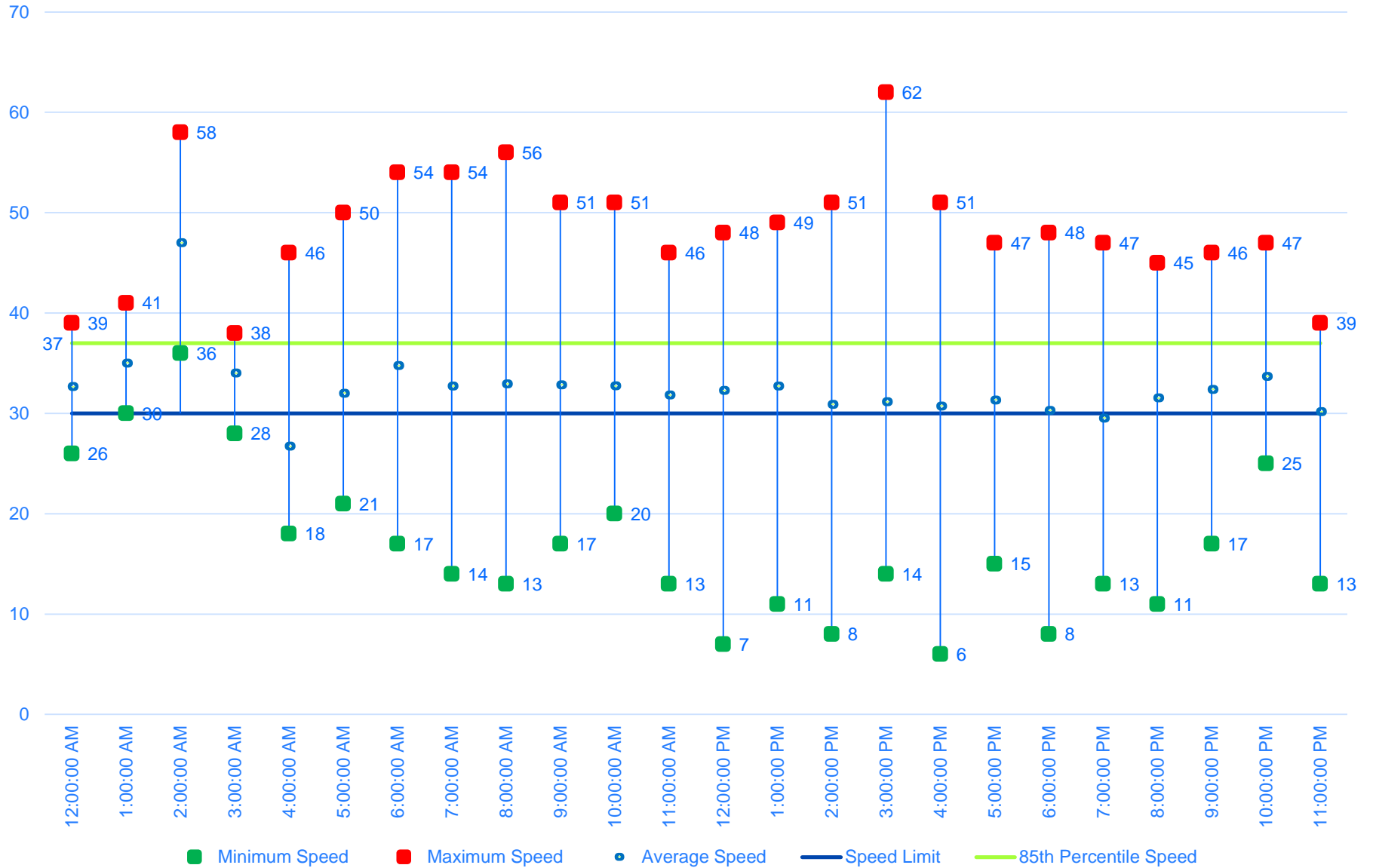


## Hudson Street: Traveling from Route 9 to the Village Line Exiting the Village

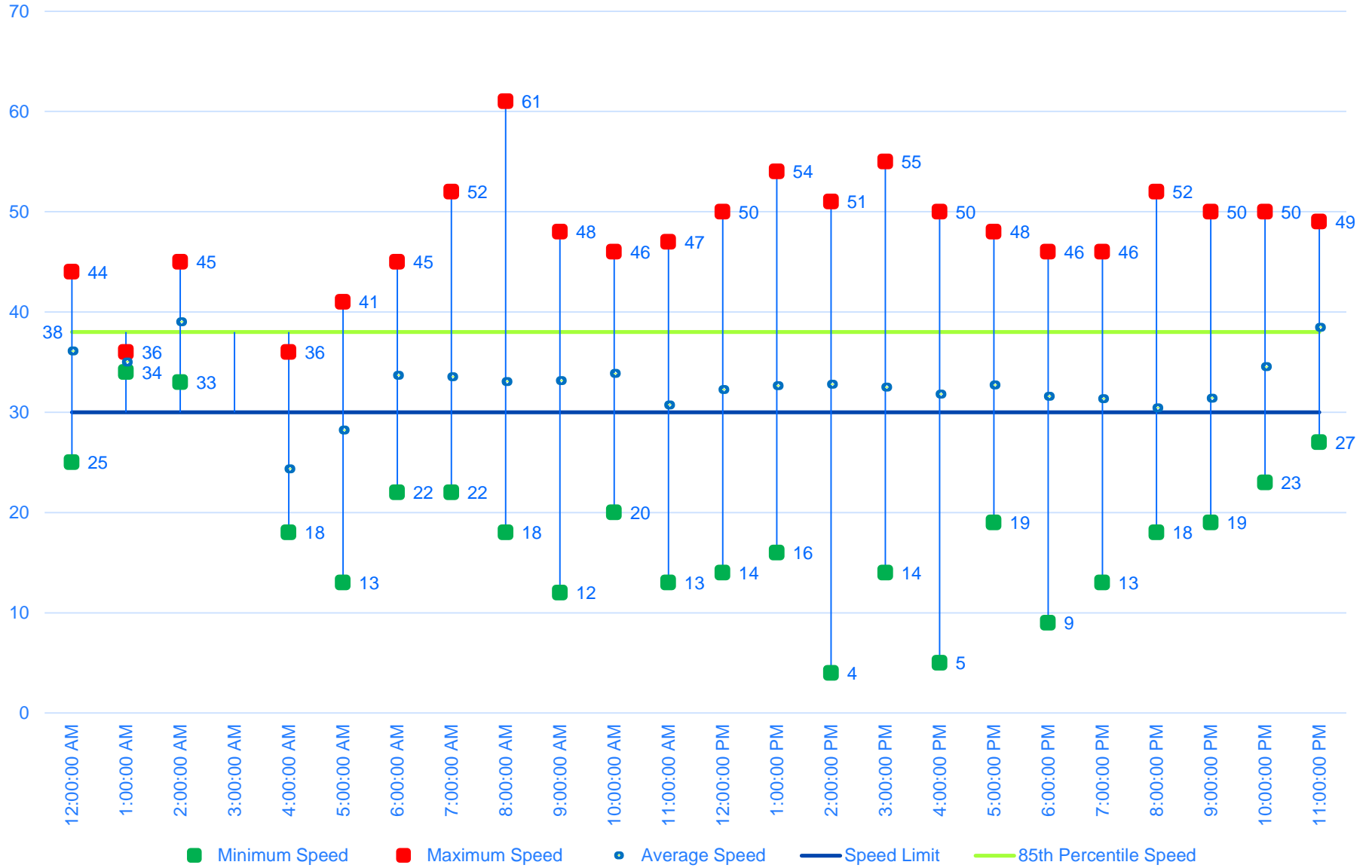




## Eichybush Road: Traveling from Gaffney Lane to Route 9 Entering the Village

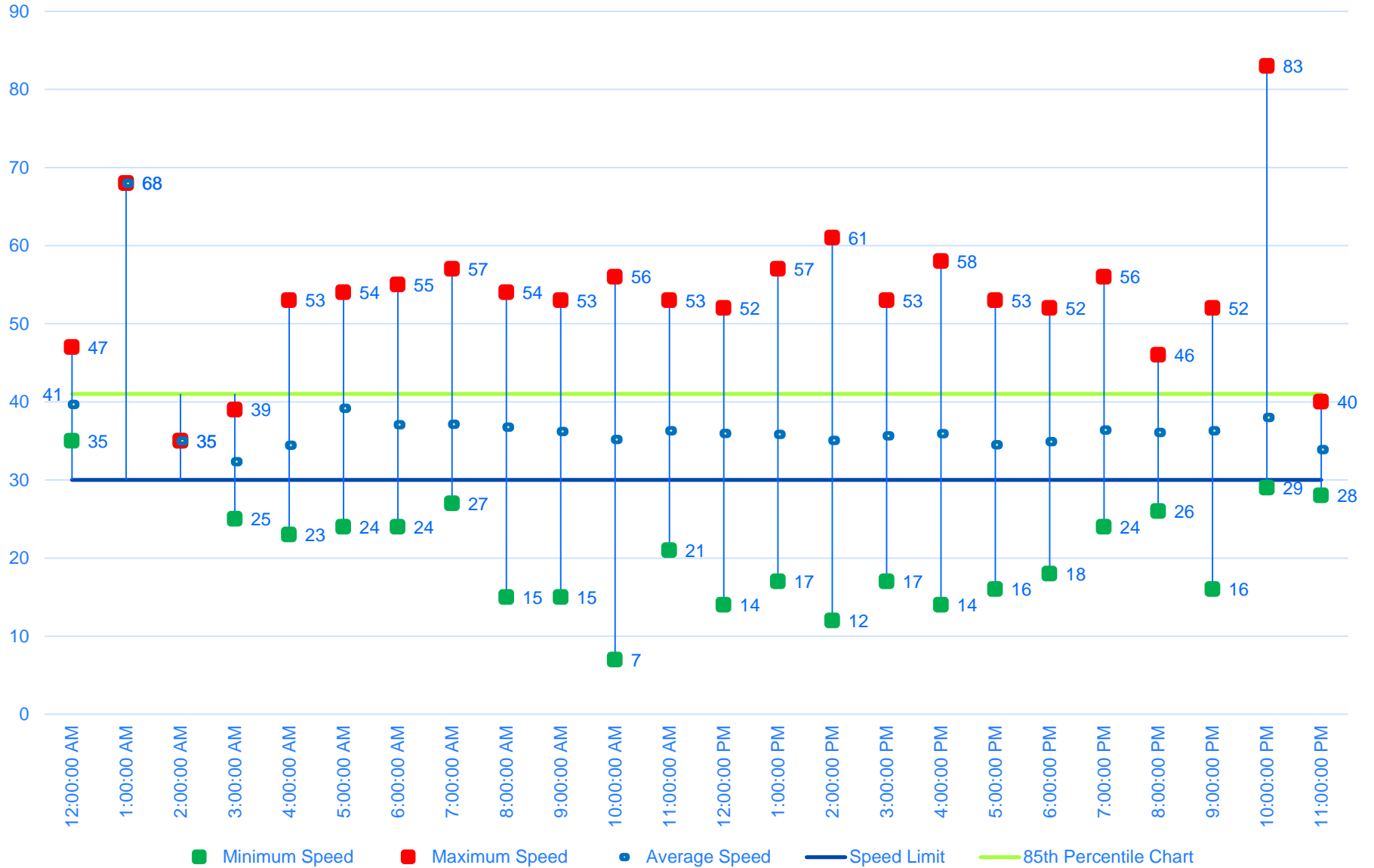


## Eichybush Road: Traveling from Route 9 to Gaffney Lane Exiting the Village



■ Minimum Speed    
 ■ Maximum Speed    
 ● Average Speed    
 — Speed Limit    
 — 85th Percentile Speed

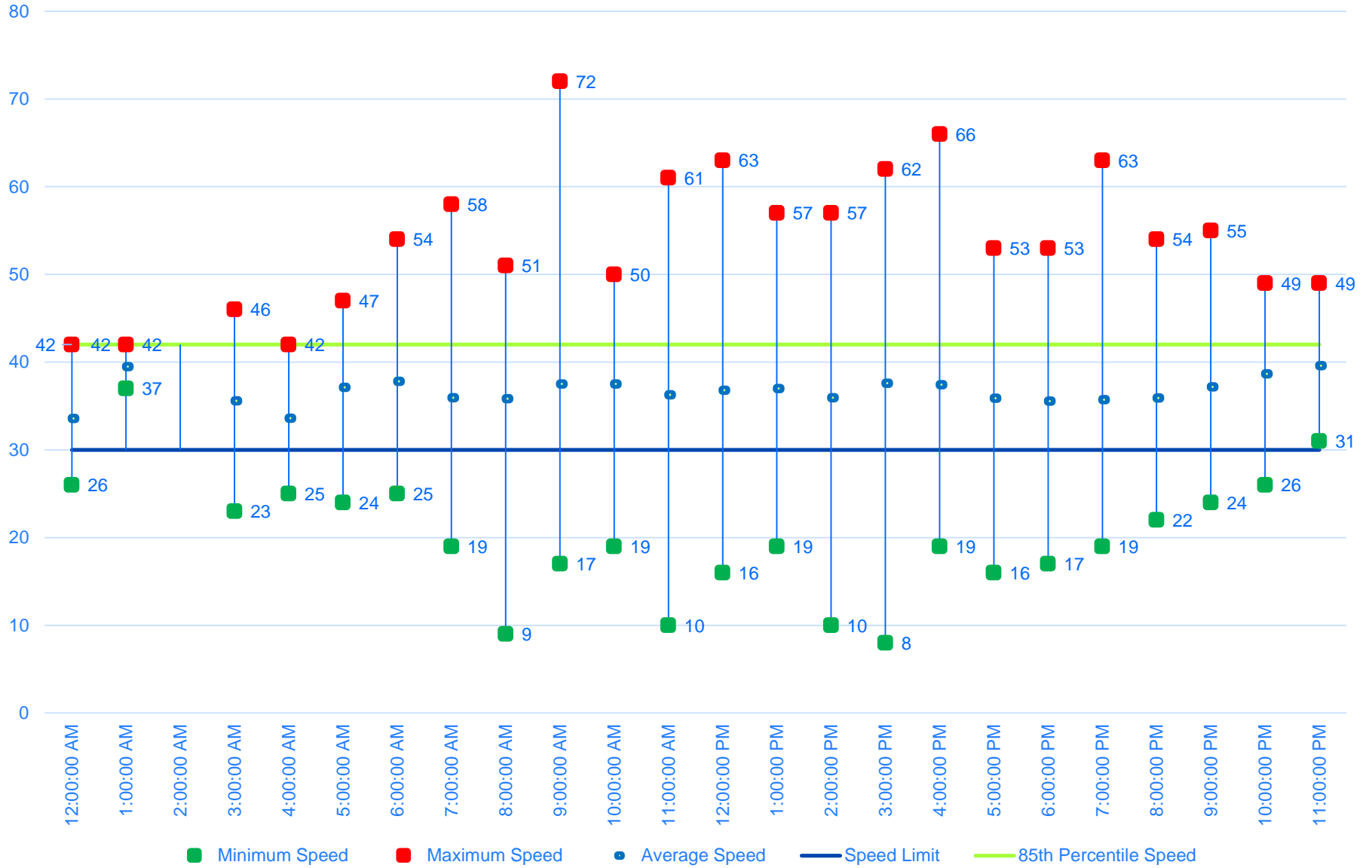
## Eichybush Road: Traveling from Best Road to Gaffney Lane Entering the Village



■ Minimum Speed    
 ■ Maximum Speed    
 ● Average Speed    
 — Speed Limit    
 — 85th Percentile Chart

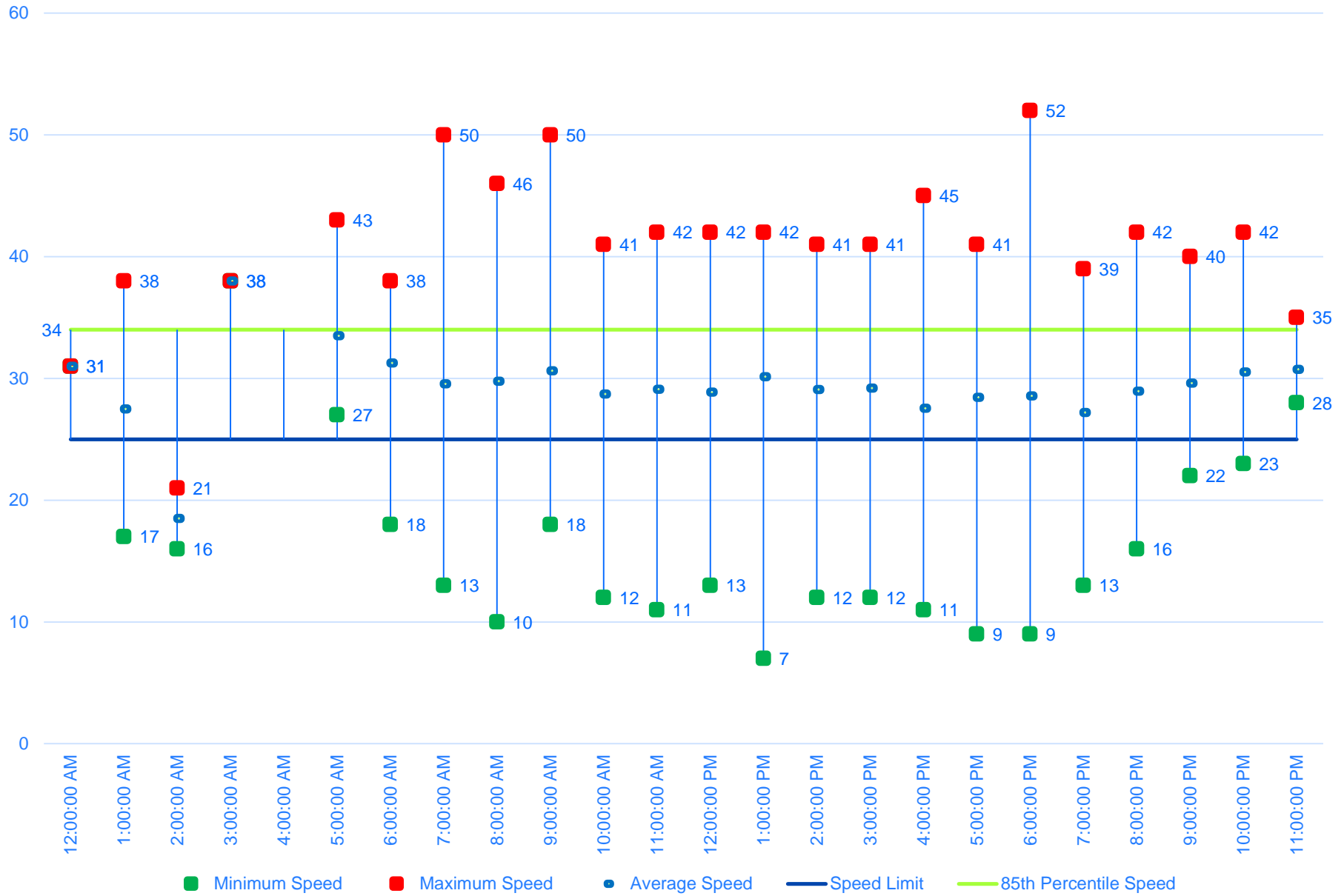


## Eichybush Road: Traveling from Gaffney Lane to Best Road Exiting the Village

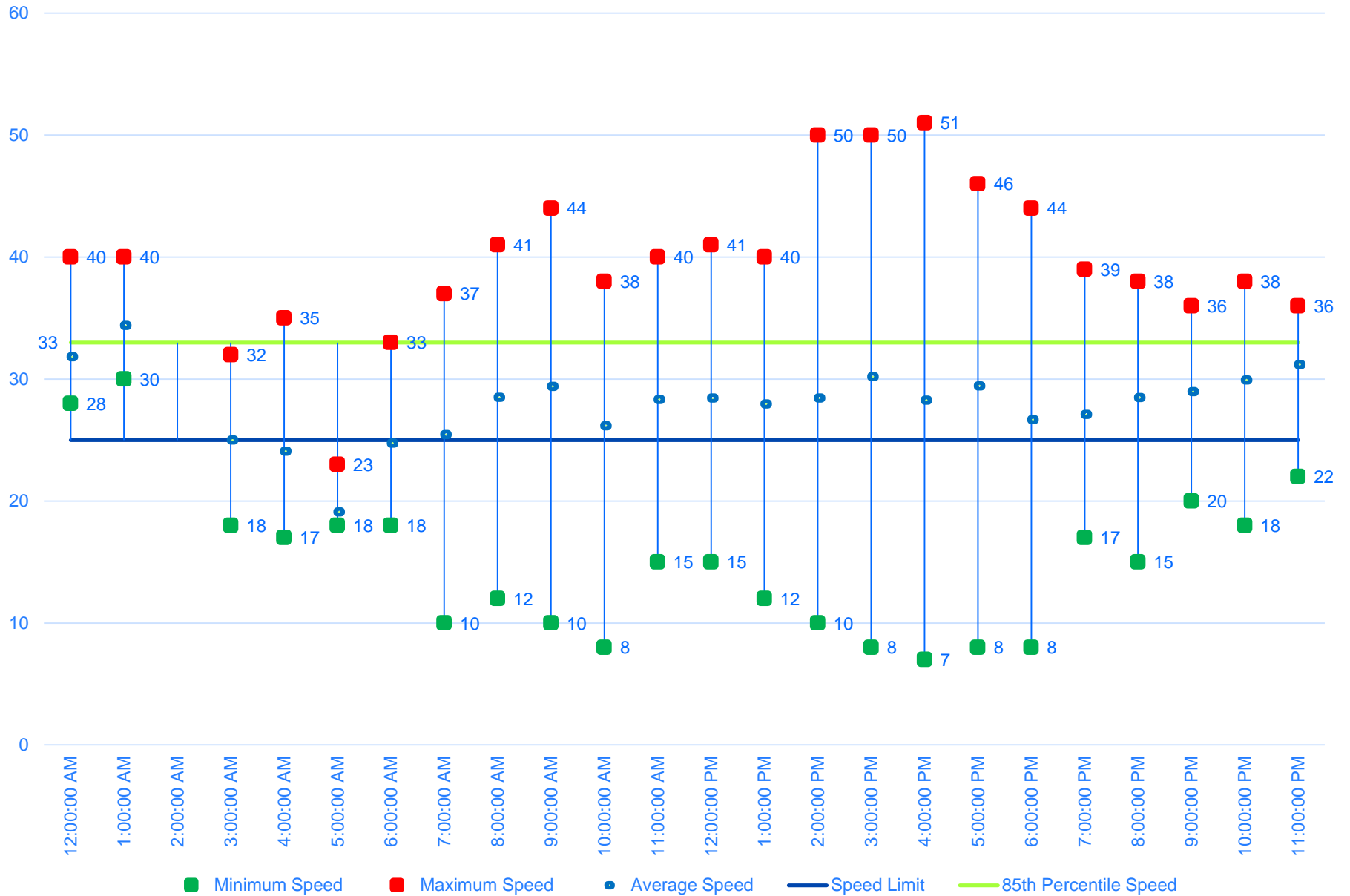


■ Minimum Speed    ■ Maximum Speed    ● Average Speed    — Speed Limit    — 85th Percentile Speed

## Gaffney Lane: Traveling from Eichybush Road to Route 9



# Gaffney Lane: Traveling from Route 9 to Eichybusch Road



Minimum Speed Maximum Speed Average Speed Speed Limit 85th Percentile Speed

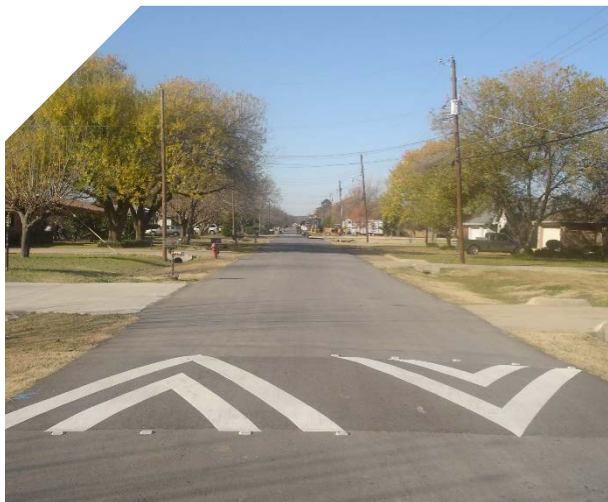


# TRAFFIC CALMING MEASURES

Traffic Calming Measures	Average Speed Reduction (MPH)	Albany Avenue: Route 9 to Sunset Avenue	Albany Avenue: Sunset Avenue to Village Line	Hudson Street	Eichybush Road: Route 9 to Gaffney Lane	Eichybush Road: Gaffney Lane to Village Line	Gaffney Lane	Williams Street
Speed Humps	-7							
Bulb-Out	-3							
Reduce Lane Width with Markings	-1							
Converging Chevrons	-4							
Optical Speed Bars	-2							
Speed Activated Speed Limit Sign	-5							
Speed Feedback Sign	-4							
Speed Feedback Sign with Action Message	-3							
Entrance Treatments	-7							

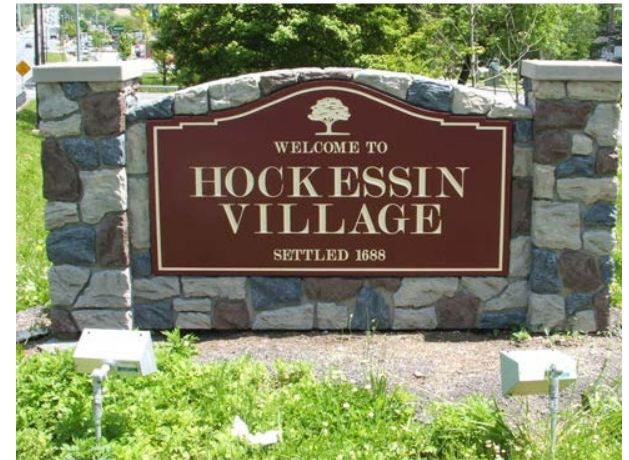
Recommended Measures	
Measures under Consideration	

# TRAFFIC CALMING MEASURES





# TRAFFIC CALMING MEASURES – ENTRANCE TREATMENTS





# RECOMMENDED TRAFFIC CALMING MEASURES

## Short Term

- **Portable Speed Signs (\$4500 Each)**
  - Set up at various areas around the Village
  - Traffic data to be collected while in use to determine effectiveness
- **Entrance Treatments near Village Line (\$700 Each)**
  - Albany Avenue
  - Hudson Street
  - Eichybush Road
- **Larger and more frequent speed limit signs (\$250 Each)**

## Future

- **Permanent speed feedback signs for vehicles entering the Village (\$4000 Each)**
  - Albany Avenue near Best Road
  - Hudson Street near Kinderhook Creek
  - Eichybush Road near Best Road
- **Removable Speed Humps (\$5200 Each)**
  - Installed on Gaffney Lane and Eichybush Road between Gaffney Lane and US 9
  - Removed in winter to facilitate the use of snow plows
- **Bulb-Outs on Hudson Street at intersections (\$2000 Each)**

# SUMMARY

- **Scope of the Study**
- **Data Collection**
- **Findings**
- **Traffic Calming Measures**



# QUESTIONS AND ANSWERS



Thank you!

Village Committee

Mayor Jim Dunham

Brian Murphy

Laura Darman

Jeff Richards

WSP | Parsons Brinckerhoff

Brian Doherty, PE

Ben Wolfe, PE