

December 16, 2016

Honorable James Dunham, Mayor  
Village of Kinderhook  
6 Chatham Street  
PO Box 325  
Kinderhook, NY 12106

*Re: Village of Kinderhook Traffic Calming Study*

Dear Mr. Dunham:

The Village of Kinderhook engaged WSP | Parsons Brinckerhoff to conduct a Traffic Calming Study on five streets within the village – Albany Ave., Hudson Street, William Street, Eichybush Road and Gaffney Lane. The need for the study was identified by resident complaints about speeding, noise and vibration from trucks, and increases in traffic volumes.

The study consisted of the following elements:

- Traffic counts
  - Automatic Traffic Recorder (ATR) counts on each street
  - Manual turn counts at select intersections
- Analysis of the traffic data
- An assessment of traffic calming measures
- Potential impacts associated with recommended traffic calming measures
- Estimating the cost of implementation

Given the minor number of accidents on the roads to be studied, it was decided by Village representatives that an accident analysis was not warranted.

The speed limit within the village is 30 MPH, unless otherwise signed, and several residents have complained about speeding vehicles on some of the local roads. William Street and Gaffney Lane are both signed for 25 MPH and NYS Route 9 is signed for 35 MPH. After discussions with the Village and field observations, WSP | Parsons Brinckerhoff has determined that speed, volume, and vehicle class data was needed to best determine the appropriate traffic calming method for each location.

### **Traffic Counts and Analysis:**

Automatic Traffic Recorders (ATRs) were placed on Albany Avenue, Hudson Street, William Street, Eichybush Road, and Gaffney Lane, for seven days to record volumes, speeds, and vehicle class data. The table below summarizes the data that was gathered. The 85<sup>th</sup> Percentile Speed is the speed that 85% of vehicles do not exceed. The ATR speed and volume data can be found in Appendix A.

ATR Location (Posted Speed -mph)	Direction	Total Volume	85th Percentile Speed	Vehicles Traveling 30 MPH to 40 MPH		Vehicles Traveling 41 MPH and Faster		Max Speed Recorded
				Volume	%	Volume	%	
Albany Street Between Route 9 and Sunset Avenue (30)	WB	4,435	34	2,818	64%	84	2%	50
	EB	4,491	35	2,960	66%	179	4%	52
Albany Street West of Sunset Avenue (30)	WB	3,172	44	1,885	59%	1,107	35%	70
	EB	3,205	42	2,079	65%	886	28%	62
Hudson Street (30)	EB	6,635	36	5,153	78%	213	3%	51
	WB	7,453	38	6,074	81%	608	8%	68
Eichybush Road Between Route 9 and Gaffney Lane (30)	WB	1,989	38	1,284	65%	187	9%	61
	EB	2,202	37	1,425	65%	185	8%	62
Eichybush Road West of Gaffney Lane (30)	WB	2,006	42	1,299	65%	514	26%	72
	EB	2,163	41	1,540	71%	412	19%	83
ATR Location	Direction	Total Volume	85th Percentile Speed	Vehicles Traveling 25 MPH to 35 MPH		Vehicles Traveling 36 MPH and Faster		Max Speed Recorded
				Volume	%	Volume	%	
William Street (25)	WB	1,193	27	372	31%	66	6%	45
	EB	941	27	323	34%	6	1%	39
Gaffney Lane (25)	WB	1,208	33	737	61%	148	12%	51
	EB	1,180	34	714	61%	204	17%	52

**Albany Avenue:** Based on our observations it was decided to place 2 ATRs on Albany Avenue with Sunset Avenue being the dividing line between the two sections. The section between Route 9 and Sunset Avenue is densely populated with residential and some commercial sites, and has 8’ to 10’ shoulders for parking. The section of Albany Avenue west of Sunset Avenue has no shoulders, very few driveways, and is relatively straight. Beyond the village limit, the road becomes a county highway and the speed limit increases to 55 mph.

As anticipated the ATR data shows a difference between these sections. Most people travel within 10 MPH of the village speed limit between Route 9 and Sunset Avenue. The section past Sunset Avenue has a speeding problem with 35% of the vehicles heading out of the Village traveling over 40 MPH with a maximum recorded speed of 70. Vehicles traveling into the Village are also speeding with 28% traveling over 40 MPH and a maximum recorded speed of 62 MPH.

**Hudson Street:** This ATR was placed on Hudson Street west of William Street. Heading into the Village the majority of vehicles (78%) are traveling within 10 MPH of the speed limit with a maximum recorded speed of 51 MPH. Heading out of the Village 81% of vehicles are traveling within 10 MPH of the speed limit with a maximum recorded speed of 68 MPH. Beyond the village limit, the road becomes a county highway and the speed limit increases to 35 mph.

**Eichybush Road:** Based on our observations it was decided to place 2 ATRs on Eichybush Road with Gaffney Lane being the dividing line between the two sections. The section between Route 9 and Gaffney Lane is densely populated with residential houses. The section of Eichybush Road west of Gaffney Lane has fewer driveways and they are concentrated on one side. The other side, with the exception of one home, is farm land. Beyond the village limit, the speed limit increases to 40 mph.

As expected, the ATR data shows a difference between these sections. Most people travel within 10 MPH of the village speed limit between Route 9 and Gaffney Lane. The section past Gaffney Lane has a speeding problem with 26% of the vehicles heading out of the Village traveling over 40 MPH with a maximum recorded speed of 72, while vehicles traveling into the Village are also speeding with 19% traveling over 40 MPH and a maximum recorded speed of 83 MPH.

**William Street:** This ATR was placed on William Street just east of Kinderhook Drive. There is no significant issue with speeding on William Street. The maximum recorded speed was 45 MPH in either direction with less than 4% of the vehicles traveling faster than 35 MPH.

**Gaffney Lane:** This ATR was placed on Gaffney Lane between Catskill View Drive and Cortland Drive. There is a speeding issue on Gaffney Lane. The maximum recorded speed was 52 MPH in either direction with 15% of the vehicles traveling faster than 35 MPH.

The ATRs were also used to determine the amount of truck traffic present on the roadways. The table below shows the total number of heavy vehicles counted and the percentage of the total volume that the heavy vehicles represent on the roadway. A heavy vehicle is defined as a vehicle having 3 axles. The ATR vehicle classification data can be found in Appendix B.

ATR Location	Total Heavy Vehicles	Heavy Vehicle %
Albany Street Between Route 9 and Sunset Avenue	95	1.064%
Albany Street West of Sunset Avenue	78	1.259%
Hudson Street	174	1.235%
Eichybush Road Between Route 9 and Gaffney Lane	35	0.835%
Eichybush Road West of Gaffney Lane	27	0.648%

None of the roadways has a heavy vehicle percentage over 1.3%. As a comparative measure NYS Route 9 through the Village of Kinderhook has a heavy vehicle percentage of 8.14%. Discussions for rerouting any heavy vehicles off of the local roads would need to be done at the county or state level. Due to the relatively low volumes of heavy vehicles it is unlikely any significant changes would be made.

A traffic count program was set up to determine if William Street was being used as a cut through to avoid the signalized intersection of Hudson Street with Route 9. The manual turning counts were done during AM and PM peak periods. After reviewing the number of vehicles turning onto and out of William Street at each end it does not appear that William Street is being used as a cut through by a significant amount of vehicles. No mitigation is recommended to reduce or prevent cut through traffic along William Street. The traffic counts can be found in Appendix C.