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**MEMORANDUM**

**TO:** Rosanna Sfraga, Town Clerk

**CC:** Robert Magrino, Town Attorney  
Edmund Lane

**FROM:** Donald Brenner

**DATE:** December 6, 2024

**RE:** Zone Change  
Western Hwy and Ellsworth Dr.  
In the Hamlet of Blauvelt  
Section 70.15, Block 1 and Lot(s) 14.1, 14.2, 17.1  
24-1431D-6A

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As related to the zone change hearing scheduled on December 17, 2024, enclosed herewith please find 3 copies of a traffic study the Board requested.

DB/hi

Z:\Docs\1 - Client\1431D-6A - Ellsworth Drive Estate - Zone Change\MEMO - Town Clerk encl. traffic study 12.6.24.wpd



TOWN BOARD  
TOWN OF ORANGETOWN

HEGARTY HOMES, INC

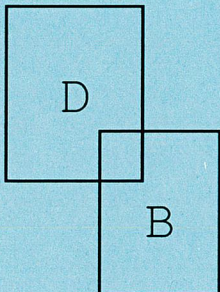
AND

HUDSON VALLEY NURSERY, INC.

WESTERN HIGHWAY and ELLSWORTH DRIVE  
IN THE HAMLET OF BLAUVELT

TRAFFIC STUDY  
(Harry Baker & Associates)

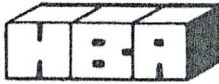
DECEMBER 2024



DONALD BRENNER, P.E., LL.B.

4 INDEPENDENCE AVENUE, TAPPAN, NEW YORK 10983 (845) 359-2210





November 30, 2024

Town Board of the Town of Orangetown.  
 26 Orangeburg Road  
 Orangeburg, NY 10962

**Re: Traffic Report for Zone Change – Western Highway and Ellsworth Drive**

Dear Town Board Members:

The Honorable Board has a petition before them for property located at Western Hwy and Ellsworth Dr. in the Hamlet of Blauvelt in Section 70.15, Block 1 and Lot(s) 14.1, 14.2, 17.1 24-1431D-6A to change the zone from R-80 to R-15. Under this proposal, the owner would be permitted to construct 12 lots as opposed to three lots. To determine the impact to Western Highway, we calculated the number of vehicle trips that would be generated by the R-80 and R-15 zoning. The comparison is shown in the tables below

<b>TABLE 1- Calculation of Weekday Peak Hour Trips</b>	
Single Family Detached Housing (Land Use 210) – 3 units R-80 Zoning	
Morning Peak Hour	Afternoon Peak Hour
Total Trips = $1.00 \times 3 \text{ units} = 3 \text{ trips}$	Total Trips = $1.67 \times 3 \text{ units} = 5 \text{ trips}$
Trips Entering = $0.26 \times 2 \text{ trips} = 1 \text{ trip}$	Trips Entering = $0.63 \times 5 \text{ trips} = 3 \text{ trips}$
Trips Exiting = $0.74 \times 2 \text{ trips} = 2 \text{ trips}$	Trips Exiting = $0.37 \times 5 \text{ trips} = 2 \text{ trips}$

<b>TABLE 2- Calculation of Weekday Peak Hour Trips</b>	
Single Family Detached Housing (Land Use 210) – 12 units R-15 Zoning	
Morning Peak Hour	Afternoon Peak Hour
Total Trips = $0.92 \times 12 \text{ units} = 11 \text{ trips}$	Total Trips = $1.17 \times 12 \text{ units} = 14 \text{ trips}$
Trips Entering = $0.26 \times 11 \text{ trips} = 3 \text{ trips}$	Trips Entering = $0.63 \times 14 \text{ trips} = 9 \text{ trips}$
Trips Exiting = $0.74 \times 11 \text{ trips} = 8 \text{ trips}$	Trips Exiting = $0.37 \times 14 \text{ trips} = 5 \text{ trips}$

To determine the impact to the traffic conditions to Western Highway, we found on the NYSDOT Traffic Viewer site, Count Station 850104 which is located adjacent to the proposed site. In 2023, the Average Annual Daily Traffic (AADT) was 3,257 and the northbound AADT as 1,696 and the southbound AADT was 1,650.

We then were able to find the 2023 northbound and southbound hourly counts for this location. **Table 3** summarizes the traffic volumes from 7 am to 9 am and 4 pm to 6 pm for the northbound and southbound directions.

<b>TABLE 3 - Weekday Peak Hour Traffic Volumes</b>		
	Northbound	Southbound
7 am	88	100
8 am	101	135
9 am	111	132
4 pm	149	127
5 pm	136	125
6 pm	113	99

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 November 30, 2024

To determine the percentage of the increase in traffic for each hour, we added the proposed vehicle trips for each condition to the existing traffic and then calculated the percentage increase. **Table 4** shows the percentage increase for each hour for the existing zoning. We have assumed that half the traffic will proceed northbound and half southbound on Western Highway.

<b>TABLE 4 - Weekday Percentage Increase in Traffic – Existing Zone</b>		
	Northbound	Southbound
7 am	1.15%	1.00%
8 am	0.99%	0.735%
9 am	0.90%	0.760%
%4 pm	1.005%	1.18%
5 pm	1.10%	1.20%
6 pm	1.325%	1.515%

**Table 5** shows the percentage increase for each hour for the proposed zoning. We have assumed that half the traffic will proceed northbound and half southbound on Western Highway.

<b>TABLE 5 - Weekday Percentage Increase in Traffic – Proposed Zone</b>		
	Northbound	Southbound
7 am	6.82%	5.00%
8 am	5.94%	3.70%
9 am	5.41%	3.79%
4 pm	4.70%	5.51%
5 pm	5.15%	5.60%
6 pm	6.19%	7.07%

As shown in **Table 5**, the percentage increases are small and the drivers on Western Highway would not see an degradation of the traffic Level of Service.

The project layout shows that five homes would have direct access to Western Highway while the remaining seven would be from a new street that would be a cul-de-sac. The intersection sight distance requirement based on the 85<sup>th</sup> percentile speed of 42 mph is as follows:

- Case B1 – Left Turn from stop – 457.5 feet
- Case B2 – Right Turn from Stop – 403 feet
- Base F – Left Turn from Major Road – 341 feet

The stopping sight distance required is 327 feet. These distances should be checked in the field. There shall be no shrubbery within the sight triangle that is higher than two feet. Preferably, there should be no shrubbery or landscaping within the sight triangle.

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**CONCLUSION**

The proposed zone change will generate a minimal number of additional vehicle trips. The change to the Level of Service on Western Highway will be negligible and not noticed by drivers using this section of Western Highway.

Sincerely yours,

*Harry Baker*

Harry Baker

Cc: Donald Brenner, P.E. Esq.