



April 29, 2024

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One Citizens Plaza, 8th Floor
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**RE: New Shoreham (Block Island) Safety Study
Task 2 – Traffic Volume Analysis
New Shoreham, Rhode Island**

Dear Beth:

Bowman (previously McMahon) is pleased to submit this memorandum, the purpose of which is to review the traffic volume growth patterns on primary roadways throughout the Town of New Shoreham (Block Island), Rhode Island. The changes in traffic volumes during the peak season in a recent six-year period, which includes 2016 through 2021, have been evaluated.

Bowman previously submitted a memorandum (as McMahon) dated May 3, 2021, that reviewed and summarized moped related crashes throughout Block Island for 2015 through 2020 to identify crash patterns and trends. As presented in the memo, approximately 50% of the reported crashes reviewed occurred during the peak summer month of July, with a large majority reported on a Friday, Saturday or Sunday. Based on the crash data reviewed, the corridors with the highest number of crashes throughout Block Island included Water Street, Beach Avenue, Corn Neck Road, and Spring Street.

Traffic Volume Data

To evaluate traffic volume patterns throughout Block Island over a recent six-year period, StreetLight data collected on primary corridors during the peak season was reviewed.

StreetLight is a digital platform that enables users to collect and analyze traffic volume data throughout the continental United States using anonymous location data from smartphones and navigational devices and validated with actual count data at strategic locations. StreetLight data is currently available for December 2016 through May 2023.

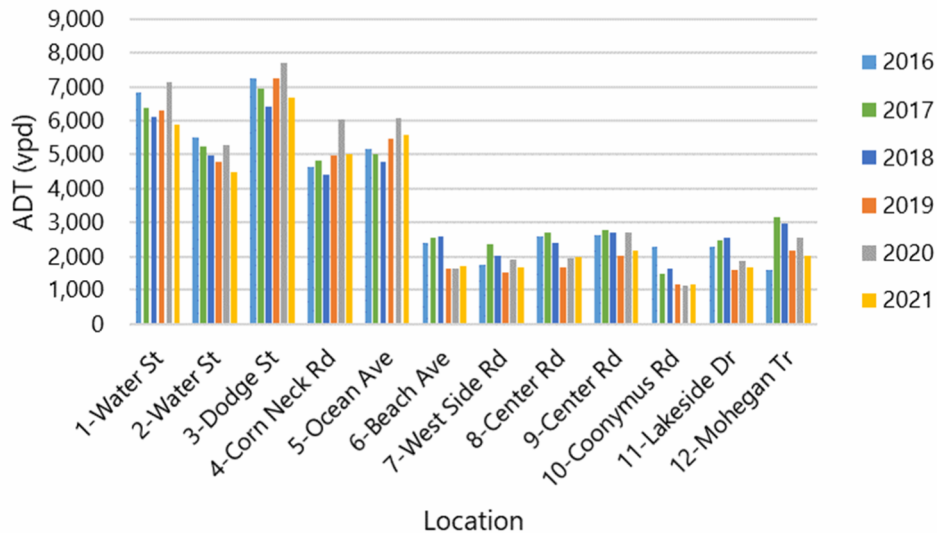
StreetLight data was reviewed for traffic volumes collected on Friday, Saturday and Sunday in the peak summer month of July for 2016 through 2022, however in 2022 StreetLight changed their data collection methods to use connected vehicle data. The 2022 data was reviewed and due to the small sample size of connected vehicles on Block Island, was determined to be insufficient. Data for 2023 was not included since StreetLight data is not yet available beyond May of 2023. Therefore, the data for 2016 through 2021 was summarized for daily traffic volumes collected on Friday, Saturday and Sunday in the peak summer month of July for 12 roadway segments throughout Block Island. The roadway segment locations analyzed are listed below and are shown graphically in Figure 1. As noted previously, the locations identified in our

previous study with the highest number of crashes were selected. Additional locations were included to fairly represent the island’s major roadway system.

1. Water Street – south of Chapel Street
2. Water Street – north of High Street
3. Dodge Street – west of Water Street
4. Corn Neck Road – north of Beach Avenue
5. Ocean Avenue – west of Dodge Street
6. Beach Avenue – west of Ocean Avenue
7. West Side Road – west of Center Road
8. Center Road – north of Beach Avenue
9. Center Road – south of Beach Avenue
10. Coonymus Road – west of Center Road
11. Lakeside Drive – south of Cooneymus Road
12. Spring Street – south of Water Street

The average daily traffic (ADT) expressed in vehicles per day (vpd) for each study roadway segment were summarized for the six years analyzed. A comparison of the daily traffic volumes is shown in Table 1 below and are provided as an attachment.

Table 1: ADT Comparison



Based on an ADT data, yearly growth rates were calculated for each roadway segment analyzed. The average annual growth rate for each roadway segment between 2016 and 2021 is presented in Table 2.

Table 2: Annual Growth Rate Summary

ID	Roadway	Location	Average Annual Growth Rate
1	Water Street	South of Chapel Street	-2%
2	Water Street	North of High Street	-4%
3	Dodge Street	West of Water Street	-1%
4	Corn Neck Road	North of Beach Ave	2%
5	Ocean Ave	West of Dodge Street	2%
6	Beach Ave	West of Ocean Ave	-5%
7	West Side Road	West of Center Road	2%
8	Center Road	North of Beach Ave	-4%
9	Center Road	South of Beach Ave	-2%
10	Coonymus Road	West of Center Road	-7%
11	Lakeside Drive	South of Cooneymus	-4%
12	Spring Street	South of Water Street	-6%

(1) Average annual growth rate between 2016 and 2021.

As shown in Tables 1 and 2, primary corridors throughout Block Island have seen an overall decrease in daily traffic between 2016 and 2021. Ocean Road, Corn Neck Road, and West Side Road have seen a slight increase in peak summer traffic, however the remaining primary roadways have all see a decrease in ADT between 2016 and 2021.

Conclusions

Based on a review of the traffic volume growth trends on primary roadways throughout Block Island, the overall traffic volumes have decreased over the six-year period (2016 through 2021). Bowman plans to provide an update to the prior study on the crash data for Block Island. This analysis will be supplemental to the crash data update. Based on this review, Bowman concludes that the traffic volumes on the major roadways in Block Island have not increased and have in fact shown a decrease in volume over the recent six-year period from 2016-2021.

Sincerely,



Maureen Chlebek, P.E., PTOE
NE Regional Manager

Attachments

- Figures
- StreetLight Data Summary

LEGEND

STREETLIGHT ZONE ID

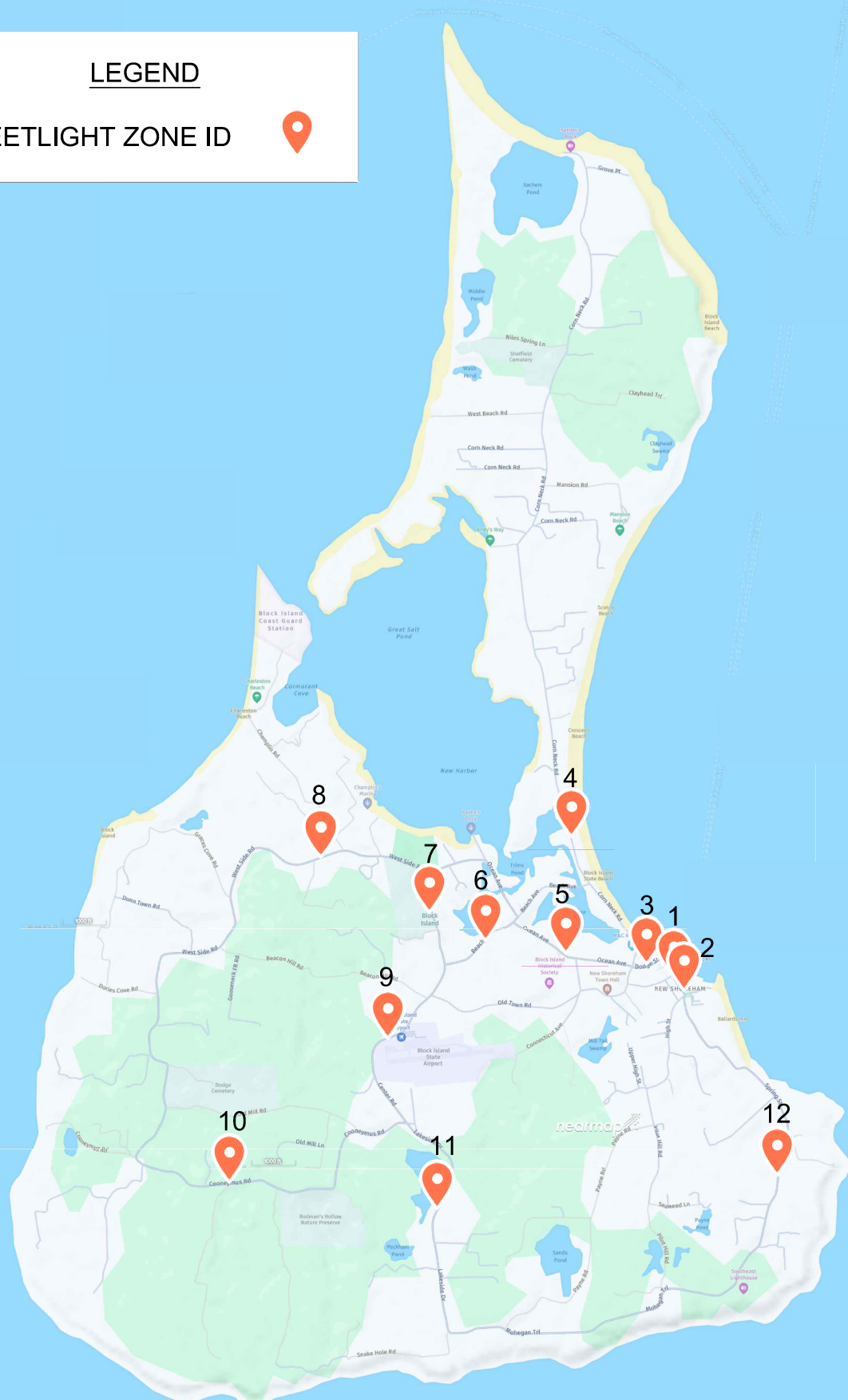


FIGURE 1
TRAFFIC VOLUME LOCATIONS

TRAFFIC VOLUME ANALYSIS
BLOCK ISLAND, RI



StreetLight Data Summary

	Roadway	Location	Direction	ADT (vehicles per day)					
				2016	2017	2018	2019	2020	2021
1	Water Street	South of Chapel Street	NB	3,062	2,752	2,978	2,927	3,224	2,671
			SB	3,775	3,629	3,131	3,363	3,897	3,224
			TOTAL	6,837	6,381	6,109	6,290	7,121	5,895
2	Water Street	North of High Street	NB	2,537	2,202	2,299	2,029	2,322	2,404
			SB	2,956	3,025	2,679	2,750	2,955	2,101
			TOTAL	5,493	5,227	4,978	4,779	5,277	4,505
3	Dodge Street	West of Water Street	EB	4,097	3,959	3,634	4,264	4,629	3,973
			WB	3,168	2,972	2,797	2,968	3,067	2,709
			TOTAL	7,265	6,931	6,431	7,232	7,696	6,682
4	Corn Neck Road	North of Beach Ave	NB	2,720	2,317	2,385	2,928	3,527	2,771
			SB	1,939	2,524	2,016	2,049	2,496	2,260
			TOTAL	4,659	4,841	4,401	4,977	6,023	5,031
5	Ocean Ave	West of Dodge Street	EB	2,592	2,653	2,509	2,836	3,156	2,988
			WB	2,559	2,373	2,287	2,633	2,922	2,584
			TOTAL	5,151	5,026	4,796	5,469	6,078	5,572
6	Beach Ave	West of Ocean Ave	EB	1,170	1,315	1,227	809	675	789
			WB	1,251	1,240	1,361	849	999	952
			TOTAL	2,421	2,555	2,588	1,658	1,674	1,741
7	West Side Road	West of Center Road	EB	823	1,257	976	719	928	798
			WB	930	1,108	1,046	824	1,003	896
			TOTAL	1,753	2,365	2,022	1,543	1,931	1,694
8	Center Road	North of Beach Ave	NB	1,333	1,649	1,505	920	1,151	1,206
			SB	1,277	1,078	891	786	794	772
			TOTAL	2,610	2,727	2,396	1,706	1,945	1,978
9	Center Road	South of Beach Ave	NB	1,205	1,547	1,487	1,066	1,375	1,147
			SB	1,441	1,240	1,237	984	1,331	1,038
			TOTAL	2,646	2,787	2,724	2,050	2,706	2,185
10	Coonymus Road	West of Center Road	EB	808	618	686	622	598	578
			WB	1,050	876	970	555	532	600
			TOTAL	1,858	1,494	1,656	1,177	1,130	1,178
11	Lakeside Drive	South of Cooneymus Road	NB	926	1,487	1,400	745	839	902
			SB	1,389	982	1,174	888	1,039	809
			TOTAL	2,315	2,469	2,574	1,633	1,878	1,711
12	Spring Street	South of Water Street	NB	1,386	945	1,195	1,040	1,204	991
			SB	1,620	2,240	1,783	1,140	1,342	1,051
			TOTAL	3,006	3,185	2,978	2,180	2,546	2,042