

APPENDIX N

**Preliminary Traffic Signal Needs Analysis
Washington Street at High Street**

**Table 1
Summary of Hourly Volumes and Signal Needs Analysis
Washington Street at High Street, Canton**

Hourly period starting	Washington Street (main street)		High Street (minor street)	Sum of main street	Maximum of minor street	Volumes above the required minimum on main/minor street		
	NB	SB	EB			Warrant 1	Warrant 2	Warrant 7
6:00	578	178	44	756	44			In the recent 12-month period in 2015, three crashes are considered correctable by a traffic signal.
7:00	786	378	93	1164	93	√	√	
8:00	740	539	102	1279	102	√	√	
9:00	622	537	84	1159	84	√	√	
10:00	622	618	86	1240	86	√	√	
11:00	621	684	102	1305	102	√	√	
12:00	744	763	124	1507	124	√	√	
13:00	685	773	106	1458	106	√	√	
14:00	674	836	116	1510	116	√	√	
15:00	694	981	130	1675	130	√	√	
16:00	669	1033	133	1702	133	√	√	
17:00	672	1040	128	1712	128	√	√	
18:00	549	815	81	1364	81	√	√	
19:00	399	494	50	893	50			

MET MET NOT MET

Note: The hourly volumes of the intersection approaches were obtained from the weekday average of Automatic Traffic Recorder (ATR) counts collected in the period of 11/29-12/3/2021 for this study.

Warrants 1, 2, and 7 in MUTCD Chapter 4C were applied to this intersection.

Warrant 1 (8-Hour Volume) is fulfilled under Condition B. It requires that the traffic conditions (observed vehicular volumes higher than the specified minimum volumes) exist for each of any 8 hours of an average day. The interruption of continuous traffic (Condition B) was applied in this case. The volume threshold for a major street (assuming one lane) is 750 vehicles per hour (vph) and for a minor street of one lane is 75 vph.

Warrant 2 (4-Hour Volume) is fulfilled. It requires that the traffic conditions (main street combined/minor street maximum volume falling above an applicable curve) exist for each of any 4 hours of an average day. The lower threshold volume for a minor street of one lane is 80 vph.

Warrant 7 (Crash Experience) is not fulfilled. Only 3 correctable crashes were observed between April 2016 and March 2017, the most recent 12 months for which data is available