

median. An approximately four-foot-wide cement concrete sidewalk with vertical granite curbing runs along both sides of Route 12 and the sidewalk is separated from the curb by a grass strip. There are no posted speed limit signs along Route 12 facing drivers approaching the study intersection.

Land use is predominantly residential on the west side of Route 12 south of the study intersection and primarily commercial on the west side of Route 12 north of the intersection. The east side of Route 12 is the project site, which is currently wooded and undeveloped.

The I-190 ramp intersection is controlled by a traffic signal which operates with three (3) phases. The phases include: a protected Route 12 northbound left-turn phase which operates concurrently with the northbound through movement; a concurrent Route 12 northbound/southbound through phase; and an eastbound left-turn phase. There is no existing pedestrian signal equipment. Loop detectors were only observed on the Route 12 northbound approach although record signal plans indicate that loop detectors were also installed on the eastbound and southbound approaches. The signal heads are mounted on span wire in a box layout. The protected-only northbound left-turn signal head is optically programmed and includes a red ball indication, a yellow ball indication, and a green left-turn arrow indication. All other signal heads have red/yellow/green ball indications.

TRAFFIC COUNTING

Traffic count data were collected from 7-9 AM and 4-6 PM on Thursday, August 24, 2018 and from 11 AM-1 PM on Saturday, August 26, 2018. The count program included turning movement counts (TMCs) at the existing signalized intersection of Route 12 with the I-190 Exit 4 ramps and the unsignalized intersection of Route 12 with Jersey Drive/West Boylston Street. In addition, a 72-hour automatic traffic recorder (ATR) count was conducted on Route 12 north of the intersection with the I-190 Exit 4 ramps from Thursday, September 6, 2018 through Saturday, September 8, 2018. The ATR data are summarized in Table 1. The TMC data are illustrated in Figures 2 through 4 for the weekday AM, weekday PM, and Saturday Midday peak hours, respectively.

Table 1 – Summary of Route 12 Traffic Volumes

	WEEKDAY AVERAGE	AM PEAK HOUR	PM PEAK HOUR	SATURDAY AVERAGE	SATURDAY MIDDAY PEAK HOUR
Time Period	Daily	7:15-8:15	4:45-5:45	Daily	11:45-12:45
Traffic Volume ¹	17,492 vpd	1,070 vph	1,347 vph	16,467 vpd	1,391 vph
K-Factor ²	-	6.1%	7.7%	-	8.4%
Directional Distribution	52.5% SB	62.5% SB	52.8% NB	52.2% SB	51.5% SB
Average Speed	32 MPH NB / 31 MPH SB			33 MPH NB/30 MPH SB	
85th %-ile Speed	38 MPH NB /37 MPH SB			38 MPH NB/36 MPH SB	

¹ vpd = volume per day, vph = volume per hour

² percent of daily traffic that occurs during the peak hour

The average weekday traffic volume on Route 12 is approximately 17,500 vehicles per day on a typical weekday and 16,500 on a typical Saturday. On a weekday, 6.1% of the traffic occurs during the AM peak hour and 7.7% occurs during the PM peak hour. On a Saturday, 8.4% of traffic occurs during the midday peak hour. The directional distribution of traffic is approximately 52% SB/48% NB on a daily basis and during the Saturday midday peak hour. During the weekday AM peak hour, approximately 63% of traffic travels southbound and during the weekday PM peak hour, approximately 53% of traffic travels northbound.