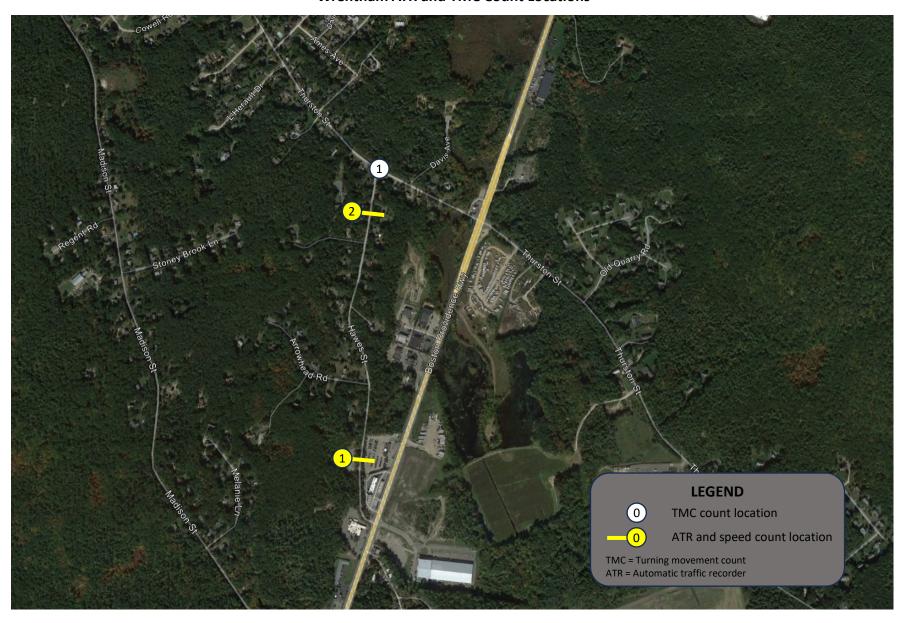
Appendix A Requested Automatic Traffic Recorder and Turning Movement Count Locations

Wrentham ATR and TMC Count Locations



List of Turning Movement Count Locations

Location ID	Intersection	Weekday Morning Period	Weekday Afternoon Period	Traffic Control
1	Hawes Street at Thurston Street	6 AM - 9 AM	3 PM - 6 PM	Unsignalized

List of Automatic Traffic Recorder, Classification, and Spot Speed Count Locations

Location ID	Location	Count Type
1	Hawes Street south of Thurston Street	ATR, classification, and speed
2	Hawes Street south of Arrowhead Road	ATR classification, and speed

October 15, 2024

Appendix B Automatic Traffic Recorder Data

WEEKLY SUMMARY FOR LANE 1

Starting: 1/30/2024

Station #: 240010000136

Site ID: 00000000101

Location: Hawes St. NB, south of Arrowhead Rd.

Direction: NORTH

STA. INB File: D0130007.prn City: Wrentham

County: class

Page: 1

TIME	MON	TUE 30	WED 31	THU 1	FRI 2	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
					4	7			7	20
01:00			8 0	8 1	4 2	7 1			1	3
02:00 03:00			2	2		1			1	4
04:00			3	2	0	2			2	5
05:00			1	1	0	1			1	2
06:00			8	9	7	8			8	24
07:00			14	13	13	13			13	40
08:00			30	29	25	28			28	84
09:00			31	33	30	31			31	94
10:00			19	39	24	27			27	82
11:00		17	24	21	18	20			20	80
12:00		13	15	15		14			14	43
13:00		19	21	21		20			20	61
14:00		17	15	16		16			16	48
15:00		23	24	27		25			25	74
16:00		30	33	35		33			33	98
17:00		35	36	35		35			35	106
18:00		35	16	41		31			31	92
19:00		28	21	35		28			28	84
20:00		21	28	27		25			25	76
21:00		30	17	17		21			21	64
22:00		14	15	22		17			17	51
23:00		13	10	16		13			13 8	39
24:00		10	6	9		8			8	25
TOTALS		305	397	474	123	425			425	1299
% AVG WKDY % AVG WEEK		71.8 71.8		111.5 111.5	28.9 28.9					
AM Times AM Peaks		11:00 17	09:00 31	10:00 39	09:00 30	09:00 31			09:00 31	
PM Times PM Peaks		17:00 35	17:00 36	18:00 41		17:00 35			17:00 35	

47

Tph= 7%

Tad = 3%

NB 425 53 473 COMB AND 8 9 8
FA-C 1.00
COMB ADT 900 WEEKLY SUMMARY FOR LANE 1 Starting: 1/30/2024

Station #: 240010000076

Site ID: 00000000102

Location: Hawes St. SB, south of Arrowhead Rd.

Direction: SOUTH

STA. ISB

File: D0130011.prn City: Wrentham

Page: 1

County: speed

TIME	MON	TUE 30	WED 31	THU 1	FRI 2	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
				4					2	2
01:00			0	1		1			1 1	3 4
02:00			2	2 2	0	1 2			2	5
03:00			1	1	0	1			1	2
04:00 05:00			9	9	7	8			8	25
06:00			13	13	12	13			13	38
07:00			34	31	27	31			31	92
08:00			36	34	39	36			36	109
09:00			21	42	28	30			30	91
10:00		19	27	24		23			23	70
11:00		14	15	16		15			15	45
12:00		21	24	21		22			22	66
13:00		20	20	22		21			21	62
14:00		26	25	30		27			27	81
15:00		36	41	41		39			39	118
16:00		42	42	36		40			40	120
17:00		40	17	40		32			32	97
18:00		30	24	40		31			31	94
19:00		23	29	32		28			28	84
20:00		29	20	19		23			23	68
21:00		15	14	24		18			18	53
22:00		13	12	19		15			15	44
23:00		12	8	10		10			10	30
24:00		7	7	3		6			6	17
TOTALS		347	444		115	473			473	1418
% AVG WKDY		73.4	93.9	108.2	24.3					
% AVG WEEK		73.4	93.9	108.2	24.3					
AM Times			08:00		08:00				08:00	
AM Peaks		21	36	42	39	36			36	
PM Times		16:00	16:00	15:00					16:00	
PM Peaks		42	42	41		40			40	

WEEKLY SUMMARY FOR LANE 1 Starting: 1/30/2024

Site ID: 000000000201 Location: Hawes St. NB, south of Thurston St.

Direction: NORTH

Station #: 240010000029

STA.2 NB File: D0130001.prn City: Wrentham City: Wrentham County: class

Page: 1

TIME	MON	TUE 30	WED 31	THU 1	FRI 2	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00 02:00 03:00			2 0 1	1 1 2	1 0 0	1 0 1			1 0 1	4 1 3
04:00 05:00 06:00			3 9 13	1 10 12	1 8 11	2 9 12			2 9 12	5 27 36
07:00 08:00 09:00		٥٢	42 41 22	40 32 34	37 38 29	40 37 28			40 37 28 25	119 111 85 75
10:00 11:00 12:00 13:00		25 19 24 27	29 20 24 23	21 18 18 20		25 19 22 23			19 22 23	57 66 70
14:00 15:00 16:00		26 38 32	28 36 37	36 29 32		30 34 34			30 34 34	90 103 101 96
17:00 18:00 19:00 20:00		27 26 20 20	26 33 32 16	43 33 24 18		32 31 25 18			32 31 25 18	96 92 76 54
21:00 22:00 23:00		12 12 12	13 12 7	16 15 9		14 13 9 4			14 13 9 4	41 39 28 12
24:00 TOTALS		5 325	6 475	1 466	125	463			463	1391
% AVG WKDY % AVG WEEK		70.2 70.2	102.6 102.6	100.6 100.6	27.0 27.0					
AM Times AM Peaks		10:00 25	07:00 42	07:00 40	08:00 38	07:00 40			07:00	
PM Times PM Peaks		15:00 38	16:00 37	17:00 43		15:00 34			15:00 34	

47

NB 463 58 525 COMBAND 988 FAC 1,00 COMBADT 990 WEEKLY SUMMARY FOR LANE 1 Starting: 1/30/2024

Station #: 240010000135

Site ID: 000000000202

Location: Hawes St. SB, south of Thurston St.

Direction: SOUTH

STA.2 SB

File: D0130003.prn

Page: 1

City: Wrentham County: class

TIME	MON		WED 31	1		WKDAY AVG	SUN	WEEK AVG	TOTAL
							 	2	7
01:00			2 0	3 0	2	2		0	0
02:00			1	2	0	1		1	3
03:00 04:00			3	1	1	2		2	5
04:00			11	11	9	10		10	31
06:00			17	15	11	14		14	43
07:00			45	46	28	40		40	119
08:00			44	41	29	38		38	114
09:00			26	43	26	32		32	95
10:00		26	32	29		29		29	87
11:00		20	22	20		21		21	62
12:00		30	25	20		25		25	75
13:00		27	26	14		22		22	67
14:00		34	33	32		33		33	99
15:00		40	49	35		41		41	124
16:00		38	50	44		44		44	132
17:00		43	33	37		38		38	113
18:00		36	38	33		36		36	107
19:00		27	35	19		27		27	81
20:00		30	26	18		25		25	74
21:00		15	18	11		15		15	44
22:00		13	12	15		13		13	40
23:00		13	8	13		11		11	34
24:00		7	8	4		6 	 	6	19
TOTALS		399	564	506	106	525		525	1575
				96.4	20.2				
% AVG WEEK		76.0	107.4	96.4	20.2				
AM Times		12:00	07:00	07:00	08:00	07:00		07:00	
AM Peaks		30	45	46	29	40		40	
PM Times		17:00	16:00	16:00		16:00		16:00	
PM Peaks		43	50	44		44		44	

October 15, 2024

Appendix C Turning Movement Counts: Hawes Street at Thurston Street

249819-A (Hawes Street at Thurston Street) T... - TMC

Wed Jan 31, 2024

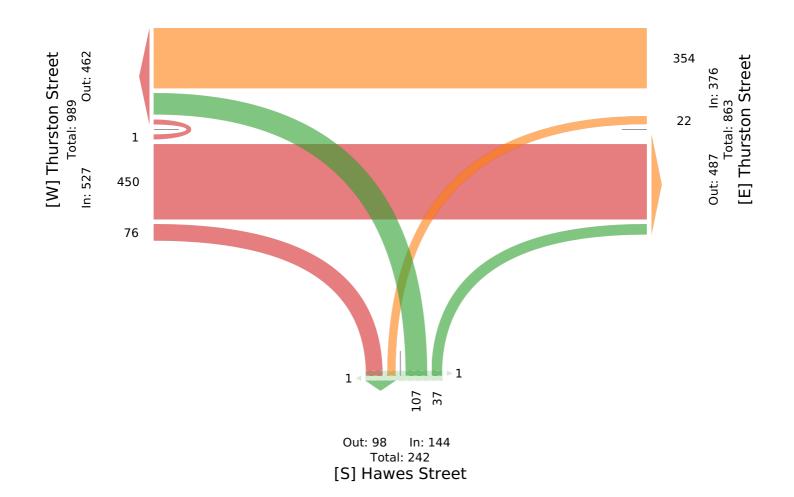
Full Length (6 AM-9 AM, 3 PM-6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

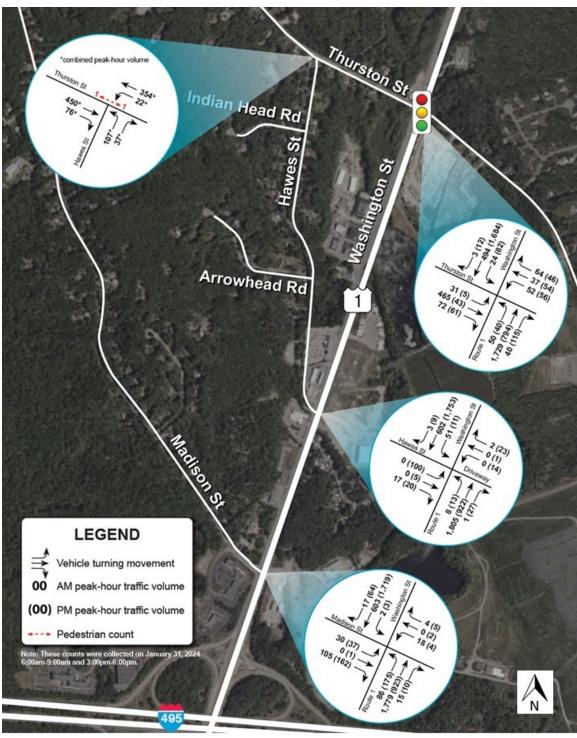
All Movements

ID: 1148439, Location: 42.056056, -71.302783

Provided by: Precision Data Industries, LLC (PDI) 157 Washington Street, 2, Hudson, MA, 01749, US



Appendix D
Turning Movement Counts: Hawes Street at Thurston Street and Adjacent
Intersections



Note: Boston Region MPO staff collected the TMCs for Hawes Street at Thurston Street. TMCs for other locations are from another 2022 report by McMahon Associates. Both of these counts are combined in this figure for comparison.

Source: Boston Region MPO staff and McMahon Associates. Edited by MPO staff.

Appendix E Speed Data

Page: 1

SPEED SUMMARY Tue 1/30/2024

STA.INB

Station #: 240010000136

Site ID: 00000000101

Location: Hawes St. NB, south of Arrowhead Rd.

Direction: NORTH

Lane: 1

File: D0130008.prn City: Wrentham County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
11:00	0	0	3	6	2	4	2	0	0	0	0	0	0	0	17
12:00	0	0	2	4	6	1	0	0	0	0	0	0	0	0	13
13:00	0	1	4	6	4	3	1	0	0	0	0	0	0	0	19
14:00	0	0	1	2	11	1	1	1	0	0	0	0	0	0	17
15:00	1	1	1	5	12	3	0	0	0	0	0	0	0	0	23
16:00	0	0	4	11	6	5	3	1	0	0	0	0	0	0	30
17:00	0	0	6	10	13	4	2	0	0	0	0	0	0	0	35
18:00	4	1	1	5	10	13	1	0	0	0	0	0	0	0	35
19:00	0	0	1	4	13	8	2	0	0	0	0	0	0	0	28
20:00	0	0	2	5	5	8	1	0	0	0	0	0	0	0	21
21:00	0	3	3	4	12	7	1	0	0	0	0	0	0	0	30
22:00	0	0	1	5	6	2	0	0	0	0	0	0	0	0	14
23:00	0	0	0	1	9	1	1	0	1	0	0	0	0	0	13
24:00	0	0	1	1	5	2	1	0	0	0	0	0	0	0	10
DAY TOTAL PERCENTS	5 1.6%	6 2.0%	30 9.8%	69 22.6%	114 37.4%	62 20.3%	16 5.2%	2 0.7%	1 0.3%	0.0%	0.0%	0 0.0%	0 0.0%	0.0%	305 100.0%

Statistical Information...

15th Percentile Speed 20.7 mph

Median Speed 27.0 mph

10 MPH Pace Speed
20 mph to 30 mph
183 vehicles in pace
Representing 61.0% of the total vehicles

85th Percentile Speed 32.9 mph

Average Speed 26.8 mph

Vehicles > 65 MPH 0 0.0%

SPEED SUMMARY Wed 1/31/2024

Station #: 240010000136 Site ID: 000000000101

Location: Hawes St. NB, south of Arrowhead Rd.

Direction: NORTH

Lane: 1

File: D0130008.prn City: Wrentham County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	1	2	3	2	0	0	0	0	0	0	0	8
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
04:00	0	0	0	0	2	1	0	0	0	0	0	0	0	0	3
05:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
06:00	0	0	0	2	1	4	1	0	0	0	0	0	0	0	8
07:00	0	0	0	0	6	5	3	0	0	0	0	0	0	0	14
08:00	1	0	3	4	11	7	4	0	0	0	0	0	0	0	30
09:00	2	1	0	5	10	13	0	0	0	0	0	0	0	0	31
10:00	0	0	4	2	6	5	1	1	0	0	0	0	0	0	19
11:00	0	1	1	6	10	4	1	1	0	0	0	0	0	0	24
12:00	0	0	2	5	5	3	0	0	0	0	0	0	0	0	15
13:00	0	0	2	5	2	9	3	0	0	0	0	0	0	0	21
14:00	0	0	0	2	6	5	2	0	0	0	0	0	0	0	15
15:00	1	0	4	6	7	5	1	0	0	0	0	0	0	0	24
16:00	0	0	0	7	9	9	4	2	0	0	0	2	0	0	33
17:00	3	0	1	6	16	8	2	0	0	0	0	0	0	0	36
18:00	0	1	0	3	6	4	2	0	0	0	0	0	0	0	16
19:00	2	1	0	0	16	1	1	0	0	0	0	0	0	0	21
20:00	1	0	1	5	11	9	1	0	0	0	0	0	0	0	28
21:00	0	0	0	3	7	6	1	0	0	0	0	0	0	0	17
22:00	0	0	0	2	11	2	0	0	0	0	0	0	0	0	15
23:00	0	0	0	1	6	1	2	0	0	0	0	0	0	0	10
24:00	0	0	0	1	2	1	2	0	0	0	0	0	0	0	6
DAY TOTAL PERCENTS	10 2.5%	4 1.0%	18 4.5%	66 16.6%	153 38.5%	107 27.0%	33 8.3%	4 1.0%	0 0.0%	0	0 0.0%	2 0.5%	0.0%	0 0.0%	397 100.0%

Statistical Information...

15th Percentile Speed 22.7 mph

Median Speed 28.5 mph

10 MPH Pace Speed
25 mph to 35 mph
260 vehicles in pace
Representing 67.2% of the total vehicles

85th Percentile Speed 34.1 mph

Average Speed 28.6 mph

 $\begin{array}{c} \text{Vehicles} > 65 \text{ MPH} \\ 0 \\ 0.0 \% \end{array}$

SPEED SUMMARY Thu 2/1/2024

File: D0130008.prn Station #: 240010000136 City: Wrentham Site ID: 000000000101 County: speed

Direction: NORTH

Location: Hawes St. NB, south of Arrowhead Rd.

Lane: 1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	1	0	2	3	0	0	0	2	0	0	0	0	8
02:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
03:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
04:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
05:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
06:00	0	0	1	1	2	4	1	0	0	0	0	0	0	0	9
07:00	0	0	0	1	6	4	2	0	0	0	0	0	0	0	13
08:00	0	0	3	5	11	9	1	0	0	0	0	0	0	0	29
09:00	0	0	3	4	7	11	5	2	0	1	0	0	0	0	33
10:00	0	0	4	7	15	7	6	0	0	0	0	0	0	0	39
11:00	0	1	2	5	2	4	7	0	0	0	0	0	0	0	21
12:00	0	2	1	1	7	3	1	0	0	0	0	0	0	0	15
13:00	1	2	3	5	6	4	0	0	0	0	0	0	0	0	21
14:00	0	0:	2	4	5	3	1	1	0	0	0	0	0	0	16
15:00	0	1	5	9	7	5	0	0	0	0	0	0	0	0	27
16:00	0	0	3	9	9	10	4	0	0	0	0	0	0	0	35
17:00	0	0	5	8	11	8	1	1	1	0	0	0	0	0	35
18:00	0	0	1	6	20	11	1	0	0	2	0	0	0	0	41
19:00	0	6	6	4	13	5	1	0	0	0	0	0	0	0	35
20:00	0	1	5	1	15	4	1	0	0	0	0	0	0	0	27
21:00	0	0	1	2	7	7	0	0	0	0	0	0	0	0	17
22:00	0	0	4	3	10	4	1	0	0	0	0	0	0	0	22
23:00	0	1	1	3	8	2	1	0	0	0	0	0	0	0	16
24:00	0	0	2	1	2	1 	3	0	0	0	0	0	0	0	9
DAY TOTAL	1	14	53	81	165	112	38	4	1	5	0	0	0	0	474
PERCENTS	0.2%	3.0%	11.2%	17.1%	34.8%	23.6%	8.0%	0.8%	0.2%	1.1%	0.0%	0.0%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed 20.3 mph

Median Speed 27.7 mph

10 MPH Pace Speed 25 mph to 35 mph 277 vehicles in pace Representing 58.6% of the total vehicles 85th Percentile Speed 34.0 mph

Average Speed 27.5 mph

Vehicles > 65 MPH 0.0%

Page: 3

SPEED SUMMARY

Fri 2/2/2024

Site ID: 000000000101

Location: Hawes St. NB, south of Arrowhead Rd.

Direction: NORTH

Station #: 240010000136

Lane: 1

File: D0130008.prn City: Wrentham County: speed

Page: 4

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	0	3	1	0	0	0	0	0	0	0	4
02:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	3	2	2	0	0	0	0	0	0	0	7
07:00	0	0	0	0	8	3	1	1	0	0	0	0	0	0	13
08:00	0	0	0	4	9	8	3	1	0	0	0	0	0	0	25
09:00	3	0	0	6	7	10	3	1	0	0	0	0	0	0	30
10:00	0	0	1	4	9	9	1	0	0	0	0	0	0	0	24
11:00	4	1	2	1	4	1	0	0	0	0	0	0	0	5	18
DAY TOTAL	7	1	3	15	41	37	11	3	0	0	0	0	0	5	123
PERCENTS	5.7%	0.8%	2.4%	12.2%	33.3%	30.1%	8.9%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	100.0%

Statistical Information...

15th Percentile Speed 24.2 mph

Median Speed 29.5 mph

10 MPH Pace Speed 25 mph to 35 mph 78 vehicles in pace Representing 70.3% of the total vehicles 85th Percentile Speed 34.7 mph

Average Speed 29.5 mph

Vehicles > 65 MPH 0 0.0%

SPEED SUMMARY Tue 1/30/2024

STA 115B

File: D0130012.prn City: Wrentham

County: speed

Station #: 240010000076 Site ID: 00000000102

Location: Hawes St. SB, south of Arrowhead Rd.

Direction: SOUTH

Lane: 1

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
10:00	0	0	2	8	3	5	1	0	0	0	0	0	0	0	19
11:00	0	1	4	3	6	0	0	0	0	0	0	0	0	0	14
12:00	0	1	4	7	5	0	3	1	0	0	0	0	0	0	21
13:00	0	0	1	4	12	1	2	0	0	0	0	0	0	0	20
14:00	1	1	1	7	12	4	0	0	0	0	0	0	0	0	26
15:00	0	1	3	12	7	8	5	0	0	0	0	0	0	0	36
16:00	0	2	6	11	13	9	1	0	0	0	0	0	0	0	42
17:00	4	0	1	8	18	6	3	0	0	0	0	0	0	0	40
18:00	0	0	2	6	11	9	2	0	0	0	0	0	0	0	30
19:00	0	0	3	5	7	7	1	0	0	0	0	0	0	0	23
20:00	0	3	2	6	7	10	1	0	0	0	0	0	0	0	29
21:00	0	0	1	5	6	1	2	0	0	0	0	0	0	0	15
22:00	0	0	0	1	6	4	0	2	0	0	0	0	0	0	13
23:00	0	0	1	2	2	4	3	0	0	0	0	0	0	0	12
24:00	0	0	0	0	3	4	0	0	0	0	0	0	0	0	7
DAY TOTAL PERCENTS	5 1.4%	9	31 8.9%	85 24.5%	118 34.0%	72 20.7%	24 6.9%	3	0.0%	0	0 0.0%	0	0 0.0%	0.0%	347 100.0%
LUKCHNIO	T - 40	2.00	0.00	21.50	21.00	20.70	0.00	0.00	0.00	0.00	5.00			- /	

Statistical Information...

15th Percentile Speed 20.7 mph

Median Speed 27.0 mph

10 MPH Pace Speed 20 mph to 30 mph 203 vehicles in pace Representing 59.4% of the total vehicles 85th Percentile Speed 33.3 mph

Average Speed 26.9 mph

Vehicles > 65 MPH 0 0.0%

Page: 1

Page: 2 Wed 1/31/2024

Site ID: 00000000102 Location: Hawes St. SB, south of Arrowhead Rd.

Direction: SOUTH

Station #: 240010000076

Lane: 1

File: D0130012.prn City: Wrentham County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01 00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	1 2	0	1	0	0	0	0	0	0	Ö	3
03:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
04:00	0	0	0	3	2	2	1	1	0	0	0	0	0	0	9
05:00	0	0	0	0	5	4	4	0	0	0	0	0	0	0	13
06:00	=	0	3	4	11	11	2	2	0	0	0	0	0	0	34
07:00	1 3	0	1	6	17	7	2	0	0	0	0	0	0	0	36
08:00 09:00	0	0	2	4	10	2	2	1	0	0	0	0	0	Ö	21
10:00	2	1	1	7	14	1	1	0	0	0	0	0	0	0	27
11:00	0	0	1	3	8	2	1	0	0	0	0	0	0	ő	15
12:00	1	0	2	4	9	6	2	0	0	0	0	Ö	0	Ö	24
13:00	0	0	1	1	10	6	0	2	0	0	0	Ö	Ö	Ö	20
14:00	1	0	3	6	9	3	2	0	1	0	0	0	Ö	Õ	25
15:00	0	0	6	3	11	14	5	1	1	0	Ő	Ö	Ö	ō	41
16:00	5	1	0	8	13	15	0	Ō	0	0	0	Ö	Ö	Õ	42
17:00	0	1	0	4	5	7	0	Ő	Õ	Ö	Ö	Ö	Ö	Õ	17
18:00	2	1	0	4	12	4	Ö	1	0	0	0	Õ	Ō	0	24
19:00	0	0	2	7	10	9	1	0	0	0	0	Ō	0	0	29
20:00	0	ő	0	5	6	9	0	Ö	0	0	0	0	0	0	20
21:00	0	0	1	2	6	4	1	0	0	0	0	0	0	0	14
22:00	0	0	0	0	7	4	1	Õ	0	0	0	0	0	0	12
23:00	0	ő	ŏ	1	2	1	2	2	0	0	0	0	0	0	8
24:00	0	0	1	ō	1	5	0	0	0	0	0	0	0	0	7
DAY TOTAL	15	4	24	72	171	118	28	10	2	0	0	0	0	0	444
PERCENTS	3.4%	0.9%	5.4%	16.2%	38.5%	26.6%	6.3%	2.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed 22.5 mph

Median Speed 28.4 mph

10 MPH Pace Speed 25 mph to 35 mph 289 vehicles in pace Representing 67.4% of the total vehicles 85th Percentile Speed 34.0 mph

Average Speed 28.4 mph

Vehicles > 65 MPH 0.0%

SPEED SUMMARY Thu 2/1/2024

Page: 3

Station #: 240010000076

Site ID: 00000000102

Location: Hawes St. SB, south of Arrowhead Rd.

Direction: SOUTH

Lane: 1

18:00

19:00

20:00

21:00

22:00

23:00

24:00

DAY TOTAL

PERCENTS

250 Total TIME 10 15 20 Ω 01:00 Ω 02:00 Ω 03:00 0 0 Ω 0 0 0 0 0 1 0 0 0 04:00 Ο 05:00 Ω 06:00 07:00 08:00 4 12 Ω 09:00 10:00 Ω Ω 11:00 Ω Ω 12:00 13:00 Ω 14:00 6 10 10 15:00 Ω 16:00 Ω 17:00

171 115

3 7

n

1.0% 2.5% 11.3% 20.3% 33.4% 22.5% 7.6% 1.2% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 100.0%

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Ω

Ω

Statistical Information...

15th Percentile Speed 20.3 mph

Ω

Median Speed 27.3 mph

10 MPH Pace Speed 25 mph to 35 mph 286 vehicles in pace Representing 56.4% of the total vehicles

5 13 58 104

85th Percentile Speed 33.7 mph

Ω

Ω

Average Speed 27.1 mph

File: D0130012.prn

City: Wrentham

County: speed

Vehicles > 65 MPH 0.0%

SPEED SUMMARY Fri 2/2/2024

Station #: 240010000076 File: D0130012.prn

Location: Hawes St. SB, south of Arrowhead Rd.

Direction: SOUTH

Site ID: 000000000102

Lane: 1

City: Wrentham
County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	3	1	2	1	0	0	0	0	0	0	7
06:00	0	0	0	1	5	3	3	0	0	0	0	0	0	0	12
07:00	0	0	0	3	9	6	8	1	0	0	0	0	0	0	27
08:00	2	0	1	5	11	16	2	2	0	0	0	0	0	0	39
09:00	0	0	2	3	20	2	1	0	0	0	0	0	0	0	28
DAY TOTAL	2	0	3	12	49	28	17	4	0	0	0	0	0	0	115
PERCENTS	1.7%	0.0%	2.6%	10.4%	42.6%	24.3%	14.8%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed 25.2 mph

Median Speed 29.2 mph

10 MPH Pace Speed
25 mph to 35 mph
77 vehicles in pace
Representing 68.1% of the total vehicles

85th Percentile Speed 36.2 mph

Average Speed 30.0 mph

Vehicles > 65 MPH 0 0.0%

Page: 4

SPEED SUMMARY Tue 1/30/2024

STA, 2NB

Page: 1

Station #: 240010000029

Site ID: 000000000201

Location: Hawes St. NB, south of Thurston St.

Direction: NORTH

Lane: 1

File: D0130002.prn City: Wrentham County: speed

Lanc. 1															
TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
10:00	2	1	1	1	8	4	5	1	2	0	0	0	0	0	25
11:00	0	1	3	3	7	4	1	0	0	0	0	0	0	0	19
12:00	1	3	3	2	6	7	2	0	0	0	0	0	0	0	24
13:00	1	2	3	8	1	6	2	3	0	1	0	0	0	0	27
14:00	2	1	0	5	10	6	1	1	0	0	0	0	0	0	26
15:00	4	0	1	3	10	10	7	2	1	0	0	0	0	0	38
16:00	1	0	4	9	4	10	3	1	0	0	0	0	0	0	32
17:00	0	0	2	3	13	5	4	0	0	0	0	0	0	0	27
18:00	0	0	0	6	3	12	4	1	0	0	0	0	0	0	26
19:00	3	0	1	0	5	10	1	0	0	0	0	0	0	0	20
20:00	1	0	2	1	9	3	3	1	0	0	0	0	0	0	20
21:00	2	0	1	1	1	6	0	1	0	0	0	0	0	0	12
22:00	0	0	0	1	3	7	1	0	0	0	0	0	0	0	12
23:00	0	0	0	0	1	5	3	3	0	0	0	0	0	0	12
24:00	0	0	0	0	1	1	3	0	0	0	0	0	0	0	5
DAY TOTAL PERCENTS	17 5.2%	8 2.5%	21 6.5%	43 13.2%	82 25.2%	96 29.5%	40 12.3%	14 4.3%	3 0.9%	1	0.0%	0	0 0.0%	0.0%	325 100.0%
EPICPIATO	9.20	2.00	0.00	10.20	20.20	27.00									

Statistical Information...

15th Percentile Speed 22.0 mph

Median Speed 30.0 mph

10 MPH Pace Speed 25 mph to 35 mph 178 vehicles in pace Representing 57.8% of the total vehicles 85th Percentile Speed 36.5 mph

Average Speed 29.6 mph

Vehicles > 65 MPH 0 0.0%

SPEED SUMMARY Wed 1/31/2024

Station #: 240010000029

Site ID: 000000000201

Location: Hawes St. NB, south of Thurston St.

Direction: NORTH

Lane: 1

File: D0130002.prn City: Wrentham County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
01.00			0	0	0	0	2	0	0	0	0	0	0	0	2
01:00	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	_	1	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	1	0	0	0	0	0	0	0	Ö	3
04:00	0	0	Τ	1	1		_	1	0	0	0	0	0	0	9
05:00	Τ	0	0	0	2	4 5	2 2	2	0	0	0	0	0	0	13
06:00	0	0	1		10	13		0	0	0	0	0	0	0	42
07:00	0	0	Ţ	9		13 7	9 8	0	0	0	0	0	0	0	41
08:00	2	2	5	4	13	7	2	0	0	0	0	0	0	0	22
09:00	0	0	0	2	11			-	0	0	0	0	0	0	29
10:00	0	3	Τ	8	9	5 5	2 2	1 0	0	0	0	0	0	0	20
11:00	0	0	2	6	5			_	0	0	0	0	0	0	24
12:00	1	1	1	2	9	6	2	2 2	0	0	0	0	0	0	23
13:00	1	Ţ	1	7	6	9	2		0	0	0	0	0	0	28
14:00	1	1	2	2	11	6		2		•	0	0	0	0	36
15:00	0	1	2	2	12	12	7	0	0	0	0	0	0	0	37
16:00	4	0	1	5	10	10	6	1	0	0	0	0	0	0	26
17:00	3	1	0	4	7	7	3	1	0	•	~	0	0	0	33
18:00	3	3	1	3	15	3	5	0	0	0	0		0	0	32
19:00	3	0	2	2	10	9	5	1	0	0	0	0	-	0	16
20:00	2	0	1	1	4	7	1	0	0	0	0	0	0	0	13
21:00	0	0	0	0	4	5	4	0	0	0	0	0	0	0	12
22:00	0	0	0	2	4	4	2	0	0	0	0	0		-	1 Z
23:00	0	0	0	0	0	4	1	Ţ	1	0	0	0	0	0	,
24:00	0	0	0	1 	3	2	0	0	0	0	0	0	0	0	6
DAY TOTAL	21	13	22	56	146	132	70	14	1	0	0	0	0	0	475
PERCENTS	4.4%	2.7%	4.6%	11.8%	30.7%			2.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed 23.0 mph

Median Speed 29.7 mph

10 MPH Pace Speed
25 mph to 35 mph
278 vehicles in pace
Representing 61.2% of the total vehicles

85th Percentile Speed 36.2 mph

Average Speed 29.5 mph

Vehicles > 65 MPH 0 0.0%

SPEED SUMMARY Thu 2/1/2024

Station #: 240010000029

Site ID: 000000000201

Location: Hawes St. NB, south of Thurston St.

Direction: NORTH

Lane: 1

File: D0130002.prn City: Wrentham County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	250	Total
												0	0	0	1
01:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
02:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	1	0	0	Τ	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	1	0	0	0	0	-	0	10
05:00	0	0	0	0	1	4	1	4	0	0	0		0	0	12
06:00	0	0	0	2	2	4	4	0	0	0	0	0	0	0	40
07:00	0	0	0	5	12	15	6	2	0	0	0	0	0	0	32
08:00	2	0	3	5	10	6	4	2	0	0	0	0	0	0	34
09:00	0	0	1	8	9	11	4	Ι	0	0	0	0	0	-	21
10:00	0	1	3	5	4	4	3	1	0	0	0	0	0	0	18
11:00	0	0	0	6	2	7	3	0	0	0	0	0	0	0	18
12:00	3	2	0	2	6	3	2	0	0	0	0	0	0	0	
13:00	1	0	2	1	9	3	4	0	0	0	0	0	0	0	20
14:00	6	2	6	8	5	4	3	0	0	0	0	2	0	0	36
15:00	2	0	0	2	10	7	3	1	0	0	2	2	0	0	29
16:00	4	3	2	5	5	8	5	0	0	0	0	0	0	0	32
17:00	3	1	7	7	10	7	2	0	0	0	0	6	0	0	43
18:00	0	0	5	5	11	4	5	0	0	0	0	0	3	0	33
19:00	0	3	1	1	6	8	4	1	0	0	0	0	0	0	24
20:00	2	1	2	0	2	7	4	0	0	0	0	0	0	0	18
21:00	1	0	0	2	4	7	2	0	0	0	0	0	0	0	16
22:00	1	0	1	3	6	4	0	0	0	0	0	0	0	0	15
23:00	0	0	2	0	2	2	1	2	0	0	0	0	0	0	9
24:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
DAY TOTAL	26	13	35	67	117	117	60	16	0	0	2	10	3	0	466
PERCENTS	5.6%	2.8%	7.5%	14.4%	25.1%	25.1%	12.9%	3.4%	0.0%	0.0%	0.4%	2.1%	0.6%	0.0%	100.0%

Statistical Information...

15th Percentile Speed 21.4 mph

Median Speed 29.5 mph

10 MPH Pace Speed
25 mph to 35 mph
234 vehicles in pace
Representing 53.2% of the total vehicles

85th Percentile Speed 37.1 mph

Average Speed 30.0 mph

Vehicles > 65 MPH 3 0.7%

SPEED SUMMARY Fri 2/2/2024

Station #: 240010000029

Site ID: 000000000201

Location: Hawes St. NB, south of Thurston $\operatorname{St}_{\boldsymbol{\theta}}$

Direction: NORTH

Lane: 1

File: D0130002.prn City: Wrentham County: speed

TIME	10	15	20	25	30	35	40	45	50	55	60	65 	70	250	Total
01:00 02:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00 04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 06:00	0	2	0	0 2	0 2	3	2 2	0 2	1 0	0	0	0	0	0	8 11
07:00 08:00	0	0 1	0	3 5	13 15	12 9	8	0 2	0	0 0	0	0 0	1 0	0 0	37 38
09:00	1	0	2	6 	8	8	2	0	0	0	0	2	0	0	29
DAY TOTAL PERCENTS	1 0.8%	3 2.4%	4 3.2%	17 13.6%	38 30.4%	36 28.8%	18 14.4%	4 3.2%	1 0.8%	0 0.0%	0 0.0%	2 1.6%	1 0.8%	0 0.0%	125 100.0%

Statistical Information...

15th Percentile Speed 23.4 mph

Median Speed

30.0 mph

10 MPH Pace Speed

25 mph to 35 mph 74 vehicles in pace

Representing 59.7% of the total vehicles

85th Percentile Speed 37.1 mph

Average Speed 30.6 mph

Vehicles > 65 MPH 1 0.8% SPEED SUMMARY Tue 1/30/2024

STA.25B

File: D0130004.prn City: Wrentham

County: speed

Location: Hawes St. SB, south of Thurston St. Direction: SOUTH

Station #: 240010000135

Site ID: 000000000202

Lane: 1

TIME	* 30	35	40	45	50	55	60	65	70	75	80	85	90	250	Total
10:00	20	3	1	1	1	0	0	0	0	0	0	0	0	0	26
11:00	18	0	2	0	0	0	0	0	0	0	0	0	0	0	20
12:00	21	9	0	0	0	0	0	0	0	0	0	0	0	0	30
13:00	12	4	10	0	1	0	0	0	0	0	0	0	0	0	27
14:00	29	5	0	0	0	0	0	0	0	0	0	0	0	0	34
15:00	27	7	1	5	0	0	0	0	0	0	0	0	0	0	40
16:00	17	18	0	0	0	0	3	0	0	0	0	0	0	0	38
17:00	29	8	6	0	0	0	0	0	0	0	0	0	0	0	43
18:00	13	21	2	0	0	0	0	0	0	0	0	0	0	0	36
19:00	20	4	3	0	0	0	0	0	0	0	0	0	0	0	27
20:00	15	9	5	1	0	0	0	0	0	0	0	0	0	0	30
21:00	11	3	1	0	0	0	0	0	0	0	0	0	0	0	15
22:00	0	5	8	0	0	0	0	0	0	0	0	0	0	0	13
23:00	1	6	2	4	0	0	0	0	0	0	0	0	0	0	13
24:00	1	2	3	1	0	0	0	0	0	0	0	0	0	0	7
DAY TOTAL	234	104	44	12	2	0	3	0	0	0	0	0	0	0	399
PERCENTS	58.6%	26.1%	11.0%	3.0%	0.5%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed 31.2 mph

Median Speed 34.0 mph

10 MPH Pace Speed
30 mph to 40 mph
148 vehicles in pace
Representing 89.7% of the total vehicles

85th Percentile Speed 39.1 mph

Average Speed 35.2 mph

Vehicles > 65 MPH 0 0.0%

* PROPER @ 30 MPH

Page: 1

SPEED SUMMARY Wed 1/31/2024

Station #: 240010000135

Site ID: 000000000202

Location: Hawes St. SB, south of Thurston St.

Direction: SOUTH

Lane: 1

File: D0130004.prn City: Wrentham County: speed

TIME	30	35	40	45	50	55	60	65	70	75	80	85	90	250	Total
01:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3
05:00	6	2	2	0	1	0	0	0	0	0	0	0	0	0	11
06:00	2	9	5	1	0	0	0	0	0	0	0	0	0	0	17
07:00	16	15	14	0	0	0	0	0	0	0	0	0	0	0	45
08:00	30	1	9	0	0	0	4	0	0	0	0	0	0	0	44
09:00	21	2	3	0	0	0	0	0	0	0	0	0	0	0	26
10:00	24	6	1	1	0	0	0	0	0	0	0	0	0	0	32
11:00	13	8	1	0	0	0	0	0	0	0	0	0	0	0	22
12:00	17	7	1	0	0	0	0	0	0	0	0	0	0	0	25
13:00	15	10	1	0	0	0	0	0	0	0	0	0	0	0	26
14:00	20	11	2	0	0	0	0	0	0	0	0	0	0	0	33
15:00	29	8	6	4	0	0	0	2	0	0	0	0	0	0	49
16:00	17	17	10	3	0	0	3	0	0	0	0	0	0	0	50
17:00	24	3	1	2	0	0	3	0	0	0	0	0	0	0	33
18:00	23	10	5	0	0	0	0	0	0	0	0	0	0	0	38
19:00	23	3	7	0	0	0	0	0	2	0	0	0	0	0	35
20:00	13	9	2	0	0	0	0	0	2	0	0	0	0	0	26
21:00	9	4	3	0	0	0	0	2	0	0	0	0	0	0	18
22:00	7	3	2	0	0	0	0	0	0	0	0	0	0	0	12
23:00	3	2	1	0	2	0	0	0	0	0	0	0	0	0	8
24:00	3	4	1	0	0	0	0	0	0	0	0	0	0	0	8
DAY TOTAL	320	134	77	12	3	0	10	4	4	0	0	0	0	0	564
PERCENTS	56.7%	23.8%	13.7%	2.1%	0.5%	0.0%	1.8%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed 31.4 mph

Median Speed 34.6 mph

10 MPH Pace Speed
30 mph to 40 mph
211 vehicles in pace
Representing 86.5% of the total vehicles

85th Percentile Speed 39.8 mph

Average Speed 36.9 mph

Vehicles > 65 MPH 4 1.6%

SPEED SUMMARY Thu 2/1/2024

Page: 3

Station #: 240010000135

Site ID: 000000000202

Location: Hawes St. SB, south of Thurston St.

Direction: SOUTH

Lane: 1

File: D0130004.prn City: Wrentham County: speed

Lane: I															
TIME	30	35	40	45	50	55	60	65	70	75	80	85	90	250	Total
												•	0	0	2
01:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3 0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1 1
05:00	2	5	3	1	0	0	0	0	0	0	0	0	0	0	11
06:00	4	6	5	0	0	0	0	0	0	0	0	0	0	0	15
07:00	21	23	1	1	0	0	0	0	0	0	0	0	0	0	46
08:00	20	7	11	2	1	0	0	0	0	0	0	0	0	0	41
09:00	33	4	0	1	0	0	2	3	0	0	0	0	0	0	43
10:00	14	7	2	3	0	0	0	0	0	3	0	0	0	0	29
11:00	10	9	0	1	0	0	0	0	0	0	0	0	0	0	20
12:00	16	4	0	0	0	0	0	0	0	0	0	0	0	0	20
13:00	10	2	1	1	0	0	0	0	0	0	0	0	0	0	14
14:00	22	8	2	0	0	0	0	0	0	0	0	0	0	0	32
15:00	22	4	2	4	0	0	0	3	0	0	0	0	0	0	35
16:00	26	7	5	2	0	0	0	4	0	0	0	0	0	0	44
17:00	30	2	3	0	0	0	0	0	2	0	0	0	0	0	37
18:00	24	2	5	0	0	0	2	0	0	0	0	0	0	0	33
19:00	12	7	0	0	0	0	0	0	0	0	0	0	0	0	19
20:00	11	5	2	0	0	0	0	0	0	0	0	0	0	0	18
21:00	7	2	2	0	0	0	0	0	0	0	0	0	0	0	11
22:00	11	2	0	0	0	0	0	2	0	0	0	0	0	0	15
23:00	4	3	2	2	0	0	0	0	2	0	0	0	0	0	13
24:00	1	2	1	0	0	0	0	0	0	0	0	0	0 ~	0	4
DAY TOTAL PERCENTS	305 60.3%	112 22.1%	47 9.3%	18 3.6%	1	0.0%	4	12 2.4%	4 0.8%	3 0.6%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	506 100.0%

Statistical Information...

15th Percentile Speed 31.4 mph

Median Speed 34.5 mph

10 MPH Pace Speed
30 mph to 40 mph
159 vehicles in pace
Representing 79.1% of the total vehicles

85th Percentile Speed 43.3 mph

Average Speed 38.2 mph

Vehicles > 65 MPH 7 3.5%

SPEED SUMMARY Fri 2/2/2024

Station #: 240010000135

Site ID: 000000000202

Location: Hawes St. SB, south of Thurston St.

Direction: SOUTH

Lane: 1

File: D0130004.prn City: Wrentham County: speed

TIME	30	35	40	45	50	55	60	65	70	75	80	85	90	250	Total
01:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00	2	4	2	1	0	0	0	0	0	0	0	0	0	0	9
06:00	4	3	2	2	0	0	0	0	0	0	0	0	0	0	11
07:00	12	5	9	0	2	0	0	0	0	0	0	0	0	0	28
08:00	14	4	9	0	2	0	0	0	0	0	0	0	0	0	29
09:00	22	1	1	0	0	0	0	2	0	0	0	0	0	0	26
DAY TOTAL	56	18	23	3	4	0	0	2	0	0	0	0	0	0	106
PERCENTS	52.8%	17.0%	21.7%	2.8%	3.8%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Statistical Information...

15th Percentile Speed 32.1 mph

Median Speed 36.5 mph

10 MPH Pace Speed 30 mph to 40 mph 41 vehicles in pace

Representing 82.0% of the total vehicles

85th Percentile Speed 42.5 mph

Average Speed 37.8 mph

Vehicles > 65 MPH 0 0.0%

Appendix F Summary of Crashes in Tables 2 and 3

Crashes near Hawes Street at Thurston Street (n = 1)

 In 2021, a car travelling east on Thurston Street (around 7:20 PM) hit something near the Hawes Street intersection. Based on the available evidence, it was found that the car hit a deer.

Crashes near Hawes Street at Washington Street (n = 6)

- In 2023, a crash involving two cars travelling northbound on Washington Street was reported. One vehicle stopped to execute a left turn into the parking lot of Luciano's Restaurant from the left northbound lane and was rear-ended by another vehicle behind.
- In 2022, a crash involving three cars travelling southbound on Washington Street was reported. Vehicle 1 stopped to allow a car travelling northbound into Luciano's parking lot. Vehicle 2, which was behind Vehicle 1, stopped as well. However, Vehicle 3, behind Vehicle 2, rear-ended Vehicle 2, which resulted in Vehicle 2 rear-ending Vehicle 1.
- In 2022, there was a crash involving a car and a pedestrian near Luciano's Restaurant. However, additional information about the crash was not available. It was not reported whether the crash was within the parking lot or at the intersection of Hawes Street at Washington Street.
- In 2021, a crash involving three cars, and a motorcycle was reported (around 7:09 PM). Vehicle 1 was travelling southbound on the right travel lane of Washington Street, while vehicle 2 was also travelling southbound on the left travel lane of Washington Street. A motorcycle trying to take a left lane came into conflict with the vehicles travelling southbound.
- In 2020, a crash involving two cars took place (around 7:15 PM) at the
 intersection of Hawes Street at Thurston Street. Vehicle 1 was stopped at the
 northbound left lane waiting to take a left onto Hawes Street. Vehicle 2 failed
 to stop and rear-ended Vehicle 1. The reported weather during the crash was
 light rain, which could have been a contributory factor.
- In 2020, a crash was reported near Supercharger at Washington Street (around 7:18 PM). Additional information is not available about this crash.

October 15, 2024

Appendix G Summary of Potential Safety Enhancements

Table G-1
Estimated Time Frame and Costs Breakdown

Time Fram	ne
Short-term	Less than one year
Medium-term	One to three years
Long-term	More than three years

Costs	
Low	Less than \$10,000
Medium	\$10,000 to \$50,000
High	Greater than \$50,000

Source: Boston Region MPO staff.

Table G-2
Potential Safety Enhancement Summary

Safety Issue	Potential Safety	Jurisdictio n	Safety Payoff	Time Frame	Cost	Next steps for the
	Enhanceme					Town
	nt					
Speeding	Reduction of	Town of	Low	Short-	Low	Town staff
	Posted	Wrentham		term		can submit
	Speed Limit					a request to
	on Hawes					MassDOT
	Street to 25					Highway's
	mph and					Traffic and
	installation of					Safety
	speed limit					Engineering
	signs at					Department
	suitable					. MassDOT
	locations					will provide
						an approval
						or denial
						decision
						after
						review.
Cut-	Coordination	Town of	Low	Short-	Low	Town staff
through	with the	Wrentham		term		can reach
traffic	navigation					out to
	applications					navigation

Safety Issue	Potential Safety Enhanceme nt	Jurisdictio n	Safety Payoff	Time Frame	Cost	Next steps for the Town
	to remove Hawes Street as a route to get to Thurston Street from Washington Street					companies requesting them to remove Hawes Street as a route suggestion. Staff could seek guidance from the City of Plainville since they already have experience with this.
Sight distance issues	Clearing outgrown vegetation from the sides of road	Town of Wrentham (requires coordinatio n with property owners)	Mediu m	Short- term (needs to be maintaine d)	Low	Identify blind spots along Hawes Street and coordinate with property owners to trim vegetation and maintenanc e.
Inform drivers	Signage installation: o Left T intersection	Town of Wrentham	Low to High	Short- term	Low	Follow Town's procedure and install signage.

Safety Issue	Potential Safety Enhanceme nt	Jurisdictio n	Safety Payoff	Time Frame	Cost	Next steps for the Town
	signage in Hawes Street School Bus Stop Ahead School Bus Turn Ahead Animal crossing signage on Thurston Street Eastboun d Left Turn Must Turn Left sign on Thurston Street Eastboun d Street Eastboun d					
Roadway visibility	Replacement of stop signs with a flashing stop sign (with an LED border)	Town of Wrentham	Mediu m	Short- term	Mediu m	Follow Town's procedure and install signage.
Driver attentivene ss and visibility at night	Addition of road markings such as highly visible and retroreflectiv	Town of Wrentham	Mediu m	Short- term	Low	Follow Town's procedure and add pavement markings, rumble

Safety Issue	Potential Safety Enhanceme nt	Jurisdictio n	Safety Payoff	Time Frame	Cost	Next steps for the Town
	e edge lines, center lines, rumble strips and/or reflectors on Hawes Street					strips and reflectors.
Safety	Assessment and repavement of Hawes Street with uniform width. Assessment of existing drains along the roadway to be considered.	Town of Wrentham	High	Long-term	High	Town's Public Works Department can assess and repave Hawes Street.
Overall safety and reduction of cut-through traffic	Conversion of Hawes Street to a dead-end	Town of Wrentham (requires coordinatio n with property owners)	High	Long-term	High	Coordinate with MassDOT and property owners

Note: Improvements for Washington Street, although discussed in this memorandum as an inference from the analysis, were not the focus of this study.

Source: Boston Region MPO staff.

October 15, 2024

Appendix H MassDOT Highway Division Project Development Process

Appendix H: MassDOT Highway Division Project Development Process

Overview of the Project Development Process

Transportation decision-making is complex and can be influenced by legislative mandates, environmental regulations, financial limitations, agency programmatic commitments, and partnering opportunities. Decision-makers and reviewing agencies, when consulted early and often throughout the project development process, can ensure that all participants understand the potential impact these factors can have on project implementation. Project development is the process that takes a transportation improvement from concept through construction.

The MassDOT Highway Division has developed a comprehensive project development process which is contained in Chapter 2 of the *MassDOT Highway Division's Project Development and Design Guide*. The eight-step process covers a range of activities extending from identification of a project need, through completion of a set of finished contract plans, to construction of the project. The sequence of decisions made through the project development process progressively narrows the project focus and, ultimately, leads to a project that addresses the identified needs. The descriptions provided below are focused on the process for a highway project, but the same basic process will need to be followed for non-highway projects as well.

1. Needs Identification

For each of the locations at which an improvement is to be implemented, MassDOT leads an effort to define the problem, establishes project goals and objectives, and defines the scope of the planning needed for implementation. To that end, it has to complete a Project Need Form (PNF), which states in general terms the deficiencies or needs related to the transportation facility or location. The PNF documents the problems and explains why corrective action is needed. For this study, the information defining the need for the project will be drawn primarily, perhaps exclusively, from the present report. Also, at this point in the process, MassDOT meets with potential participants, such as the Metropolitan Planning Organization (MPO) and community members, to allow for an informal review of the project.

The PNF is reviewed by the MassDOT Highway Division district office whose jurisdiction includes the location of the proposed project. MassDOT also sends the PNF to the MPO, for informational purposes. The outcome of this step determines whether the project requires further planning, whether it is already well supported by prior planning studies, and, therefore, whether it is ready to move forward into the design phase, or whether it should be dismissed from further consideration.

2. Planning

This phase will likely not be required for the implementation of the improvements proposed in this planning study, as this planning report should constitute the outcome of this step. However, in general, the purpose of this implementation step is for the project proponent to identify issues, impacts, and approvals that may need to be obtained, so that the subsequent design and permitting processes are understood.

The level of planning needed will vary widely, based on the complexity of the project. Typical tasks include: define the existing context, confirm project need, establish goals and objectives, initiate public outreach, define the project, collect data, develop and analyze alternatives, make recommendations, and provide documentation. Likely outcomes include consensus on the project definition to enable it to move forward into environmental documentation (if needed) and design, or a recommendation to delay the project or dismiss it from further consideration.

3. Project Initiation

At this point in the process, the proponent, MassDOT Highway Division, fills out a Project Initiation Form (PIF) for each improvement, which is reviewed by its Project Review Committee (PRC) and the MPO. The PRC is composed of the Chief Engineer, each District Highway Director, and representatives of the Project Management, Environmental, Planning, Right-of-Way, Traffic, and Bridge departments, and the MassDOT Federal Aid Program Office (FAPO). The PIF documents the project type and description, summarizes the project planning process, identifies likely funding and project management responsibility, and defines a plan for interagency and public participation. First the PRC reviews and evaluates the proposed project based on the MassDOT's statewide priorities and criteria. If the result is positive, MassDOT Highway Division moves the project forward to the design phase, and to programming review by the MPO. The PRC may provide a Project Management Plan to define roles and responsibilities for subsequent steps. The MPO review includes project evaluation based on the MPO's regional priorities and criteria. The MPO may assign project evaluation criteria score, a Transportation Improvement Program (TIP) year, a tentative project category, and a tentative funding category.

4. Environmental Permitting, Design, and Right-of-Way Process

This step has four distinct but closely integrated elements: public outreach, environmental documentation and permitting (if required), design, and right-of-way acquisition (if required). The outcome of this step is a fully designed and permitted project ready for construction. However, a project does not have to be fully designed in order for the MPO to program it in the TIP. The sections below provide more detailed information on the four elements of this step of the project development process.

Public Outreach

Continued public outreach in the design and environmental process is essential to maintain public support for the project and to seek meaningful input on the design elements. The public outreach is often in the form of required public hearings, but can also include less formal dialogues with those interested in and affected by a proposed project.

Environmental Documentation and Permitting

The project proponent, in coordination with the Environmental Services section of the MassDOT Highway Division, will be responsible for identifying and complying with all applicable federal, state, and local environmental laws and requirements. This includes determining the appropriate project category for both the Massachusetts Environmental Protection Act (MEPA) and the National Environmental Protection Act (NEPA). Environmental documentation and permitting is often completed in conjunction with the **Preliminary Design** phase described below.

Design

There are three major phases of design. The first is **Preliminary Design**, which is also referred to as the 25-percent submission. The major components of this phase include full survey of the project area, preparation of base plans, development of basic geometric layout, development of preliminary cost estimates, and submission of a functional design report. Preliminary Design, although not required to, is often completed in conjunction with the Environmental Documentation and Permitting. The next phase is **Final Design**, which is also referred to as the 75-percent and 100-percent submission. The major components of this phase include preparation of a subsurface exploratory plan (if required), coordination of utility relocations, development of traffic management plans through construction zones, development of final cost estimates, and refinement and finalization of the construction plans. Once Final Design is complete, a full set of **Plans, Specifications, and Estimates (PS&E)** is developed for the project.

Right-of-Way Acquisition

A separate set of Right-of-Way plans are required for any project that requires land acquisition or easements. The plans must identify the existing and proposed layout lines, easements, property lines, names of property owners, and the dimensions and areas of estimated takings and easements.

5. Programming (Identification of Funding)

Programming, which typically begins during the design phase, can actually occur at any time during the process, from planning to design. In this step, which is distinct from project initiation, the proponent requests that the MPO place the project in the region's Transportation Improvement Program (TIP). The proponent requesting the project's listing on the TIP can be the community or it can be one of the MPO member agencies (the Regional Planning Agency, MassDOT, and the Regional Transit Authority). The MPO then considers the project in terms of state and regional needs, evaluation criteria, and compliance with the regional Transportation Plan and decides whether to place it in the draft TIP for public review and then in the final TIP.

6. Procurement

Following project design and programming of a highway project, the MassDOT Highway Division publishes a request for proposals. It then reviews the bids and awards the contract to the qualified bidder with the lowest bid.

7. Construction

After a construction contract is awarded, MassDOT Highway Division and the contractor develop a public participation plan and a management plan for the construction process.

8. Project Assessment

The purpose of this step is to receive constituents' comments on the project development process and the project's design elements. MassDOT Highway Division can apply what is learned in this process to future projects.

Project Development Schematic Timetable

Description	Schedule Influence	Typical Duration
Step I: Problem/Need/Opportunity Identification The proponent completes a Project Need Form (PNF). This form is then reviewed by the MassDOT District office which provides guidance to the proponent on the subsequent steps	The Project Need Form has been developed so that it can be prepared quickly by the proponent, including any supporting data that is readily available. The District office shall return comments	1 to 3 months
of the process. Step II: Planning Project planning can range from agreement that the problem should be addressed through a clear solution to a detailed analysis of alternatives and their impacts.	to the proponent within one month of PNF submission. For some projects, no planning beyond preparation of the Project Need Form is required. Some projects require a planning study centered on specific project issues associated with the	Project Planning Report: 3 to 24+ months
	proposed solution or a narrow family of alternatives. More complex projects will likely require a detailed alternatives analysis.	
Step III: Project Initiation The proponent prepares and submits a Project Initiation Form (PIF) and a Transportation Evaluation Criteria (TEC) form in this step. The PIF and TEC are informally reviewed by the Metropolitan Planning Organization (MPO) and MassDOT District office, and formally reviewed by the PRC.	The PIF includes refinement of the preliminary information contained in the PNF. Additional information summarizing the results of the planning process, such as the Project Planning Report, are included with the PIF and TEC. The schedule is determined by PRC staff review (dependent on project complexity) and meeting schedule.	1 to 4 months
Step IV: Design, Environmental, and Right of Way The proponent completes the project design. Concurrently, the proponent completes necessary environmental permitting analyses and files applications for permits. Any right of way needed for the project is identified and the acquisition process begins.	The schedule for this step is dependent upon the size of the project and the complexity of the design, permitting, and right-of-way issues. Design review by the MassDOT district and appropriate sections is completed in this step.	3 to 48+ months
Step V: Programming The MPO considers the project in terms of its regional priorities and determines whether or not to include the project in the draft Regional Transportation Improvement Program (TIP) which is then made available for public comment. The TIP includes a project description and funding source.	The schedule for this step is subject to each MPO's programming cycle and meeting schedule. It is also possible that the MPO will not include a project in its Draft TIP based on its review and approval procedures.	3 to 12+ months
Step VI: Procurement The project is advertised for construction and a contract awarded.	Administration of competing projects can influence the advertising schedule.	1 to 12 months
Step VII: Construction The construction process is initiated including public notification and any anticipated public involvement. Construction continues to project completion.	The duration for this step is entirely dependent upon project complexity and phasing.	3 to 60+ months
Step VIII: Project Assessment The construction period is complete and project elements and processes are evaluated on a voluntary basis. Source: Mass DOT Highway Division Project Days	The duration for this step is dependent upon the proponent's approach to this step and any follow-up required.	1 month

Source: MassDOT Highway Division Project Development and Design Guide

Appendix I MassDOT's comments on the client review draft of the memo

2024-09-05 CTPS Wrentham Memo.pdf Markup Summary

HQ Traffic - Amitai Lipton (27)

Subject: Text Box Page Label: 1

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 12:59:58 PM

TECHNIC

Status: Color: Layer: Space: Note: Most appendices are missing.



Subject: Re: Callout

Page Label: 2

Author: HQ Traffic - Amitai Lipton Date: 9/25/2024 1:45:43 PM

Status: Color: Layer: Space: Can this comment be combined with the other speed limit comment? (Can use 2 leader arrows)



Subject: Re: Callout

Page Label: 4

Author: HQ Traffic - Amitai Lipton Date: 9/25/2024 1:45:13 PM

Status: Color: Layer: Space: (please "Group" related comments) Yes, providing a dedicated left-turn lane allows turning traffic to wait outside the path of high-speed thru traffic. It is a known safety benefit. In the context of this analysis, I do not think we need to ask CTPS to

explain further.



Subject: Callout Page Label: 6

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 8:41:24 AM

Status: Color: Layer: Space: "to" is incorrect; should this be "from" or "on"?



Subject: Group Page Label: 11

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 8:46:26 AM

Status: Color: Layer: Space: This inference is not explained. What data, exactly, suggested that a significant number of drivers are using Hawes as a cut-through? Did the TMCs capture license plate or other data that allowed the analysts to determine that the vehicles were not going to or from a location along the Hawes corridor?



Subject: Text Box Page Label: 11

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 8:48:03 AM

Status: Color: Layer: Space: The AM and PM peak hours should not be combined, as this information is not useful for analysis purposes. Separate volume data for the two peak hours should be provided instead.



Subject: Group Page Label: 13

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 8:50:48 AM

Status: Color: Layer: Space: One approach to counteracting this behavior could

be

to reduce the speed limit to 25 mph as Hawes

Street is a local residential street.



Subject: Cloud+ Page Label: 18

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 8:55:29 AM

Status: Color: Layer: Space: Has a preferred alternative been identified?

Control of the State Office of the State Offic

Subject: Text Box Page Label: 18

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 1:05:12 PM

Status: Color: Layer: Space: Proposed development opposite Hawes is not mentioned in this memo until page 28, in passing. This development is proposing to signalized US-1/Hawes and widen US-1 to provide left-turn lanes. Suggest discussing the project, and its proposed mitigation, earlier in this memo.

The manufacture of the manufactu

Subject: Cloud+ Page Label: 19

Author: HQ Traffic - Amitai Lipton **Date:** 9/17/2024 8:55:53 AM

Status: Color: E Layer: Space: Has a preferred alternative been identified?

from sight

ng the stop

V2-20 signs owhead ersection typo Subject: Group Page Label: 19

Author: HQ Traffic - Amitai Lipton **Date:** 9/17/2024 1:06:45 PM

Status: Color: Layer: Space: typo

In contrast to the contrast to

Subject: Group Page Label: 19

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 1:06:25 PM

Status: Color: Layer: Space: see comment on page 13

h there may not be any reported in miss conflicts can steen from sight if "Right T Intersection" (W2-20) signs e-legi intersections on Arrowhead at the presence of an intersection (See Figure 7.) — incs ind stop baseful replacing the stop in LED border) at both the Indian ersections to improve visibility. (See

Subject: Group Page Label: 19

Page Label: 20

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 1:06:41 PM

Status: Color: ■ Layer: Space:

Subject: Text Box

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 8:59:20 AM

Status: Color: Layer: Space: Adding pavement markings may result in higher operating speeds. Markings would need to be maintained by the Town in compliance with MUTCD Retroreflectivity requirements.

had only all and a second or a

Subject: Group Page Label: 26

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:03:04 AM

Status: Color: Layer: Space: If the Hawes St were to be severed, it should be closed (with a gate for emergency services) approximately 1000 ft north of the US-1 intersection. This would maintain access to the commercial/industrial sites from US-1, while the remaining residential parcels would be accessible

from Thurston.

בבט טטועכון וטו טכונכ

be installed on Thurston 14.) Should be discussed; the report does not provide justification. Subject: Text Box Page Label: 26

Author: HQ Traffic - Amitai Lipton **Date:** 9/17/2024 9:03:37 AM

Status: Color: Layer: Space: Should be discussed; the report does not provide justification.

Subject: Line
Page Label: 26
Page Nathor: HO Tra

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:03:41 AM

C I C I St

Status: Color: Layer: Space:

Out in the Total Day.

* (R3-7L) sign at this, Three is a format (See Figure 5). Three is a directly and-dight lane, however these chooses and-dight lane, however these vance. Godgle Smell range (see 2019 a vance. Godgle Smell range) and the control of t

Subject: Text Box Page Label: 27

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:05:02 AM

Status: Color: E Layer: Space: Google StreetView images from 2019 and 2023 show R3-7L signs installed on both US-1 approaches to the Thurston St intersection.



Subject: Text Box Page Label: 27

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:06:32 AM

Status: Color: Layer: Space: Was a signal warrants analysis conducted? Consider the impact of the proposed development on Commerce Blvd. Factor in redirected traffic that would be induced to turn left from US-1 NB onto Hawes once a protected left-turn signal and turn

lane are provided.

I Visite al between Files and project, we recommend the Department of Department o

Subject: Text Box Page Label: 28

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:07:43 AM

Status: Color: Layer: Space: How would a potential signal at Hawes affect traffic flow at Interstate Plaza?

1) harring lief from Washington Street to Internation Fluxus are Vashingtington Steet toom Internation Fluxus are Vashingtington Steet toom Internation Fluxus are all parking lier not provided could be (1) to connect with the up to lipopounds Steet Washington Steets (7) to break size are ling just station and conveniences atten as 550° Thurston amount can be considered to provide clare directions to one sitemaged gas stations in the areas and provide easier a bucks. What they do convenience above integrap is being propagate? AUT CO does not export the type of our acSubject: Callout Page Label: 28

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:08:56 AM

Status: Color: Layer: Space: What type of convenience store signage is being proposed? MUTCD does not support this type of

use.

Subject: Text Box Page Label: 29

Author: HQ Traffic - Amitai Lipton **Date:** 9/17/2024 9:09:40 AM

Status: Color: Layer: Space: Confirm with D5 -- there should be no vertical obstructions on US-1?

Section and the section of the secti

Subject: Callout Page Label: 30

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:11:36 AM

Status: Color: Layer: Space: Replace with W1-7 (two-direction large arrow) sign. This use of OM1-1 markers is inconsistent

with the MUTCD.



Subject: Callout Page Label: 30

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:12:18 AM

Status: Color: Layer: Space: If Hawes St is cut short, it should be done here, at the transition between residential and commercial

land uses.

Subject: Text Box Page Label: 30

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:13:46 AM

Status: Color: Layer: Space:

(Short- and Long-Term)



Subject: Cloud+ Page Label: 36

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:15:34 AM

Status: Color: Layer: Space:

Please double-check to confirm this is accurate (Hawes St EB LT volumes)



Subject: Text Box Page Label: 38

Author: HQ Traffic - Amitai Lipton Date: 9/17/2024 9:18:22 AM

Status: Color: Layer: Space:

If a signal with protected left turns were installed at the Hawes/US-1 intersection, would that provide a safety improvement to potentially mitigate the concerns that these crashes bring up?

HQ Traffic Everlyn Galloway (5)

Subject: Callout Page Label: 2

Author: HQ Traffic Everlyn Galloway

Date: 9/25/2024 2:07:59 PM

Status: Color: Layer: Space:

Verify if there is a posted speed limit in both directions. Is the 25mph speed limit Regulatory or Statutory?



Subject: Group Page Label: 6

Author: HQ Traffic Everlyn Galloway

Date: 9/25/2024 2:09:31 PM

Status: Color: Layer: Space:

Is one lane serving all traffic on Thurston? Google view from September 2023, shows 2 lanes on the Thurston St. One left turn only and one serving through and right turning traffic.

Subject: Callout Page Label: 8

Author: HQ Traffic Everlyn Galloway

Date: 9/25/2024 2:11:09 PM

Status: Color: Layer: Space:

It would be helpful to include crash diagram.



Subject: Callout **Page Label:** 19

Author: HQ Traffic Everlyn Galloway

Date: 9/20/2024 8:31:43 AM

Status: Color: Layer: Space: Confusion because google image as of 2023 shows exclusive left turn from Thurston St on both

approaches to Rte 1. Please Confirm.

Will CTPS be recommending any After having eval physical changes to recommendation reduce speeds more long term? 7.1 Recommende:

Short-term Rec

Consider installing is

Subject: Callout **Page Label:** 19

Author: HQ Traffic Everlyn Galloway

Date: 9/25/2024 2:17:57 PM

Status: Color: Layer: Space: Will CTPS be recommending any physical changes to reduce speeds more long term?

HQ Traffic Fangyun Xi (1)



Subject: Callout Page Label: 9

Author: HQ Traffic Fangyun Xi Date: 9/25/2024 2:17:36 PM

Status: Color: Layer: Space: Have there been follow-on conversations with the town about the truck concern after CTPS did the study?