

Appendix for Traffic Impact Study

Proposed Retail Marijuana Dispensary

240 Bridge Street
Fairhaven, MA

Prepared by
McMahon Associates, Inc.
350 Myles Standish Boulevard Suite 103
Taunton, MA 02780
508-823-2245

Prepared for
SRN

May 2022

APPENDIX A
Manual Turning Movement Count Data

Transportation Data Corporation
 Mario Perone, mperone1@verizon.net
 tel (781) 587-0086 cell (781) 439-4999

N/S: Alden Road
 E/W: Bridge Street
 City, State: Fairhaven, MA
 Client: McM/L. Young

File Name : 05536A
 Site Code : Y21A5412
 Start Date : 3/24/2022
 Page No : 1

Groups Printed- Cars & Peds

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	43	79	53	0	56	59	34	0	46	70	16	0	7	56	38	0	557
04:15 PM	29	66	47	0	61	63	38	0	24	46	14	0	12	52	41	0	493
04:30 PM	38	57	35	0	75	64	37	0	26	67	7	0	5	59	48	0	518
04:45 PM	32	54	36	1	49	64	53	0	27	48	1	0	6	52	35	0	458
Total	142	256	171	1	241	250	162	0	123	231	38	0	30	219	162	0	2026
05:00 PM	36	66	45	0	64	70	42	0	27	42	3	0	8	51	40	0	494
05:15 PM	33	52	35	0	48	56	46	0	43	37	5	0	6	45	28	0	434
05:30 PM	27	59	38	0	42	34	26	0	31	57	6	0	5	39	20	0	384
05:45 PM	26	58	31	0	39	31	28	0	20	49	9	0	3	41	29	0	364
Total	122	235	149	0	193	191	142	0	121	185	23	0	22	176	117	0	1676
Grand Total	264	491	320	1	434	441	304	0	244	416	61	0	52	395	279	0	3702
Apprch %	24.5	45.6	29.7	0.1	36.8	37.4	25.8	0	33.8	57.7	8.5	0	7.2	54.4	38.4	0	
Total %	7.1	13.3	8.6	0	11.7	11.9	8.2	0	6.6	11.2	1.6	0	1.4	10.7	7.5	0	

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total				
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds					
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	43	79	53	0	175	56	59	34	0	149	46	70	16	0	132	7	56	38	0	101	557
04:15 PM	29	66	47	0	142	61	63	38	0	162	24	46	14	0	84	12	52	41	0	105	493
04:30 PM	38	57	35	0	130	75	64	37	0	176	26	67	7	0	100	5	59	48	0	112	518
04:45 PM	32	54	36	1	123	49	64	53	0	166	27	48	1	0	76	6	52	35	0	93	458
Total Volume	142	256	171	1	570	241	250	162	0	653	123	231	38	0	392	30	219	162	0	411	2026
% App. Total	24.9	44.9	30	0.2		36.9	38.3	24.8	0		31.4	58.9	9.7	0		7.3	53.3	39.4	0		
PHF	.826	.810	.807	.250	.814	.803	.977	.764	.000	.928	.668	.825	.594	.000	.742	.625	.928	.844	.000	.917	.909

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Groups Printed- Trucks & Buses

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	1	1	0	0	2	1	2	0	0	0	0	0	0	1	0	0	8
04:15 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	2	0	0	5
04:30 PM	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	4
Total	1	3	3	0	4	3	2	0	0	0	0	0	0	4	0	0	20
05:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
05:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	1	2	0	0	0	0	0	0	0	2	0	0	5
Grand Total	1	3	3	0	5	5	2	0	0	0	0	0	0	6	0	0	25
Apprch %	14.3	42.9	42.9	0	41.7	41.7	16.7	0	0	0	0	0	0	100	0	0	
Total %	4	12	12	0	20	20	8	0	0	0	0	0	0	24	0	0	

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:00 PM																		
04:00 PM	1	1	0	0	2	2	1	2	0	5	0	0	0	0	0	0	1	8
04:15 PM	0	1	1	0	2	1	0	0	0	1	0	0	0	0	0	0	2	5
04:30 PM	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	0	3
04:45 PM	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	0	1	4
Total Volume	1	3	3	0	7	4	3	2	0	9	0	0	0	0	0	0	4	20
% App. Total	14.3	42.9	42.9	0	44.4	33.3	22.2	0	0	44.4	0	0	0	0	0	0	100	
PHF	.250	.750	.750	.000	.875	.500	.750	.250	.000	.450	.000	.000	.000	.000	.000	.000	.500	.625

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Groups Printed- Bikes by Direction

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %																	

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

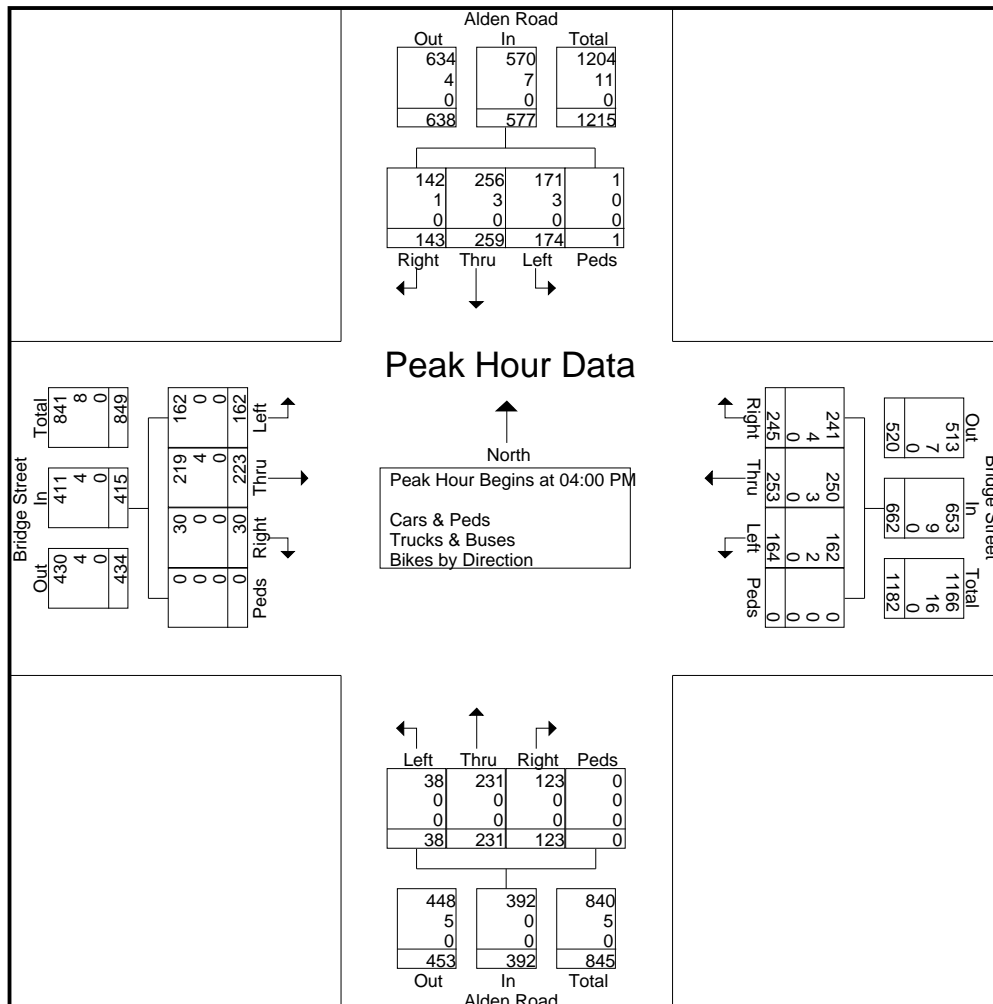
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Start Time	Alden Road From North					Bridge Street From East					Alden Road From South					Bridge Street From West					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 04:00 PM																						
04:00 PM	44	80	53	0	177	58	60	36	0	154	46	70	16	0	132	7	57	38	0	102	565	
04:15 PM	29	67	48	0	144	62	63	38	0	163	24	46	14	0	84	12	54	41	0	107	498	
04:30 PM	38	57	36	0	131	76	65	37	0	178	26	67	7	0	100	5	59	48	0	112	521	
04:45 PM	32	55	37	1	125	49	65	53	0	167	27	48	1	0	76	6	53	35	0	94	462	
Total Volume	143	259	174	1	577	245	253	164	0	662	123	231	38	0	392	30	223	162	0	415	2046	
% App. Total	24.8	44.9	30.2	0.2		37	38.2	24.8	0		31.4	58.9	9.7	0		7.2	53.7	39	0			
PHF	.813	.809	.821	.250	.815	.806	.973	.774	.000	.930	.668	.825	.594	.000	.742	.625	.945	.844	.000	.926	.905	
Cars & Peds	142	256	171	1	570	241	250	162	0	653	123	231	38	0	392	30	219	162	0	411	2026	
% Cars & Peds	99.3	98.8	98.3	100	98.8	98.4	98.8	98.8	0	98.6	100	100	100	0	100	100	98.2	100	0	99.0	99.0	
Trucks & Buses	1	3	3	0	7	4	3	2	0	9	0	0	0	0	0	0	4	0	0	0	4	20
% Trucks & Buses	0.7	1.2	1.7	0	1.2	1.6	1.2	1.2	0	1.4	0	0	0	0	0	0	1.8	0	0	1.0	1.0	
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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 Site Code : Y21A5412
 Start Date : 3/26/2022
 Page No : 1

Groups Printed- Cars & Peds

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
11:00 AM	47	84	44	0	55	59	44	0	35	54	9	0	12	48	55	0	546
11:15 AM	49	95	53	0	45	51	25	1	45	67	7	0	7	60	51	0	556
11:30 AM	56	76	39	0	39	53	46	0	38	68	6	0	8	50	52	0	531
11:45 AM	37	88	43	0	25	54	35	0	54	72	6	0	9	55	41	0	519
Total	189	343	179	0	164	217	150	1	172	261	28	0	36	213	199	0	2152
12:00 PM	48	64	33	0	46	48	37	0	59	75	7	0	9	46	51	0	523
12:15 PM	45	103	43	0	46	54	31	0	47	79	7	0	4	53	29	0	541
12:30 PM	39	81	47	0	59	49	49	2	47	65	3	0	13	47	49	0	550
12:45 PM	37	69	37	0	43	35	39	0	45	67	4	0	6	58	49	0	489
Total	169	317	160	0	194	186	156	2	198	286	21	0	32	204	178	0	2103
01:00 PM	28	94	26	0	36	36	42	0	41	53	8	0	6	39	48	0	457
01:15 PM	33	76	49	0	42	56	44	0	48	56	7	0	3	57	44	0	515
01:30 PM	40	72	44	2	29	48	39	0	48	61	8	0	6	40	43	0	480
01:45 PM	32	80	23	0	49	54	26	0	37	64	7	0	9	45	48	0	474
Total	133	322	142	2	156	194	151	0	174	234	30	0	24	181	183	0	1926
Grand Total	491	982	481	2	514	597	457	3	544	781	79	0	92	598	560	0	6181
Apprch %	25.1	50.2	24.6	0.1	32.7	38	29.1	0.2	38.7	55.6	5.6	0	7.4	47.8	44.8	0	
Total %	7.9	15.9	7.8	0	8.3	9.7	7.4	0	8.8	12.6	1.3	0	1.5	9.7	9.1	0	

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		
11:00 AM	47	84	44	0	55	59	44	0	35	54	9	0	12	48	55	0	546	
11:15 AM	49	95	53	0	45	51	25	1	45	67	7	0	7	60	51	0	118	
11:30 AM	56	76	39	0	39	53	46	0	38	68	6	0	8	50	52	0	110	
11:45 AM	37	88	43	0	25	54	35	0	54	72	6	0	9	55	41	0	105	
Total Volume	189	343	179	0	164	217	150	1	172	261	28	0	36	213	199	0	448	
% App. Total	26.6	48.2	25.2	0	30.8	40.8	28.2	0.2	37.3	56.6	6.1	0	8	47.5	44.4	0		
PHF	.844	.903	.844	.000	.745	.919	.815	.250	.842	.796	.906	.778	.000	.873	.750	.888	.905	.949

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 11:00 AM

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Groups Printed- Trucks & Buses

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
11:00 AM	0	0	0	0	1	2	0	0	0	0	0	0	0	2	0	0	5
11:15 AM	0	0	1	0	1	3	0	0	0	0	0	0	0	1	0	0	6
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11:45 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	5
Total	0	0	1	0	2	8	0	0	0	0	0	0	0	6	0	0	17
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	4
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Total	0	0	0	0	0	3	0	0	0	1	0	0	0	3	0	0	7
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
01:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
01:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
01:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0	0	9
Grand Total	0	0	1	0	2	15	0	0	0	1	0	0	0	14	0	0	33
Apprch %	0	0	100	0	11.8	88.2	0	0	0	100	0	0	0	100	0	0	
Total %	0	0	3	0	6.1	45.5	0	0	0	3	0	0	0	42.4	0	0	

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
11:00 AM	0	0	0	0	1	2	0	0	0	0	0	0	0	2	0	0	5
11:15 AM	0	0	1	0	1	3	0	0	0	0	0	0	0	1	0	0	6
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11:45 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	5
Total Volume	0	0	1	0	2	8	0	0	0	0	0	0	0	6	0	0	17
% App. Total	0	0	100	0	20	80	0	0	0	0	0	0	0	100	0	0	
PHF	.000	.000	.250	.000	.500	.667	.000	.000	.000	.000	.000	.000	.000	.750	.000	.750	.708

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 11:00 AM

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Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	

Start Time	Alden Road From North				Bridge Street From East				Alden Road From South				Bridge Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 11:00 AM

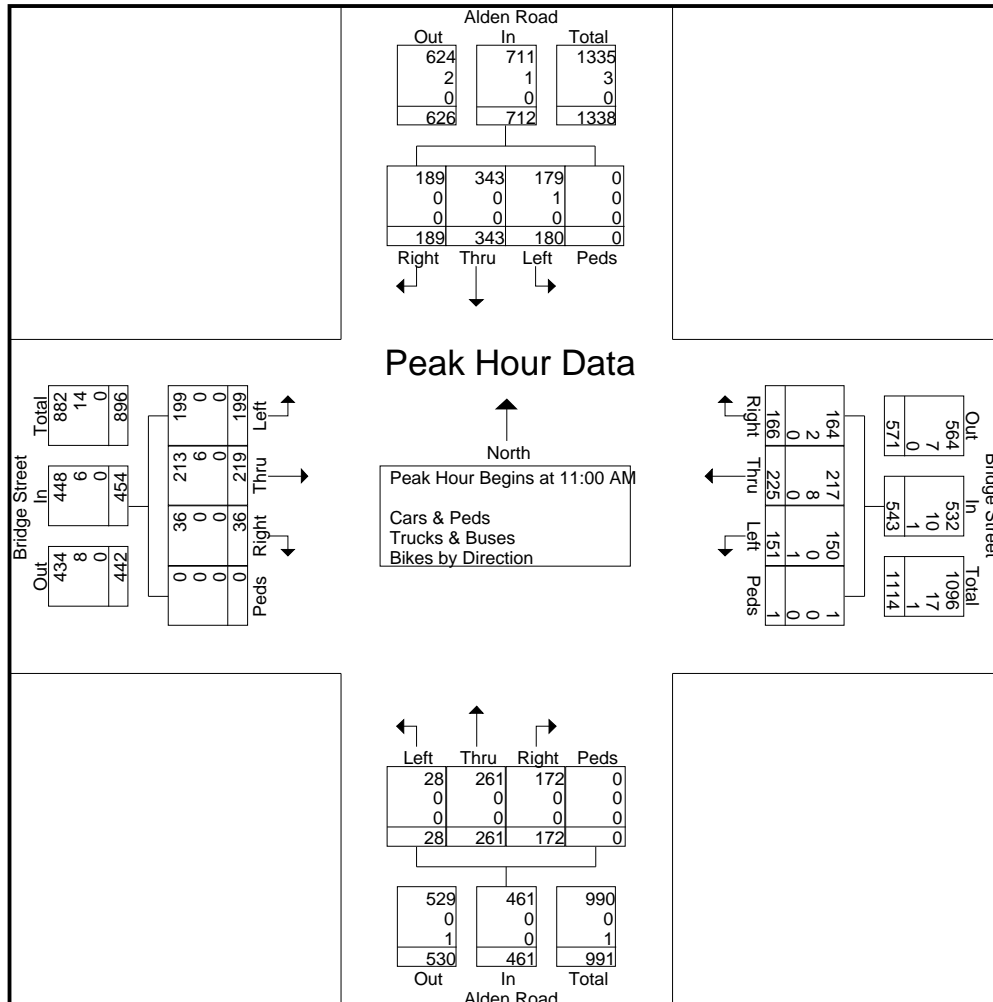
Transportation Data Corporation

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N/S: Alden Road
E/W: Bridge Street
City, State: Fairhaven, MA
Client: McM/L. Young

File Name : 05536AA
Site Code : Y21A5412
Start Date : 3/26/2022
Page No : 1

Start Time	Alden Road From North					Bridge Street From East					Alden Road From South					Bridge Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	47	84	44	0	175	56	61	44	0	161	35	54	9	0	98	12	50	55	0	117	551
11:15 AM	49	95	54	0	198	46	54	26	1	127	45	67	7	0	119	7	61	51	0	119	563
11:30 AM	56	76	39	0	171	39	53	46	0	138	38	68	6	0	112	8	51	52	0	111	532
11:45 AM	37	88	43	0	168	25	57	35	0	117	54	72	6	0	132	9	57	41	0	107	524
Total Volume	189	343	180	0	712	166	225	151	1	543	172	261	28	0	461	36	219	199	0	454	2170
% App. Total	26.5	48.2	25.3	0		30.6	41.4	27.8	0.2		37.3	56.6	6.1	0		7.9	48.2	43.8	0		
PHF	.844	.903	.833	.000	.899	.741	.922	.821	.250	.843	.796	.906	.778	.000	.873	.750	.898	.905	.000	.954	.964
Cars & Peds	189	343	179	0	711	164	217	150	1	532	172	261	28	0	461	36	213	199	0	448	2152
% Cars & Peds	100	100	99.4	0	99.9	98.8	96.4	99.3	100	98.0	100	100	100	0	100	100	97.3	100	0	98.7	99.2
Trucks & Buses	0	0	1	0	1	2	8	0	0	10	0	0	0	0	0	0	6	0	0	0	6
% Trucks & Buses	0	0	0.6	0	0.1	1.2	3.6	0	0	1.8	0	0	0	0	0	0	2.7	0	0	1.3	0.8
Bikes by Direction	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
% Bikes by Direction	0	0	0	0	0	0	0	0.7	0	0.2	0	0	0	0	0	0	0	0	0	0	0.0



Transportation Data Corporation
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N: #240-244 Site Driveway
 E/W: Bridge Street
 City, State: Fairhaven, MA
 Client: McM/L. Young

File Name : 05536B
 Site Code : Y21A5412
 Start Date : 3/24/2022
 Page No : 1

Groups Printed- Cars & Peds - Trucks & Buses - Bikes by Direction

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North			Bridge Street From East			Bridge Street From West			Int. Total
	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	
04:00 PM	1	0	0	2	149	0	155	1	0	308
04:15 PM	1	1	0	0	165	0	125	1	0	293
04:30 PM	1	1	0	0	177	0	118	0	0	297
04:45 PM	1	0	0	2	169	0	122	0	0	294
Total	4	2	0	4	660	0	520	2	0	1192
05:00 PM	1	1	0	1	173	0	125	1	0	302
05:15 PM	3	2	0	3	151	0	120	3	0	282
05:30 PM	0	1	0	3	101	0	107	0	0	212
05:45 PM	0	0	0	2	99	0	95	0	0	196
Total	4	4	0	9	524	0	447	4	0	992
Grand Total	8	6	0	13	1184	0	967	6	0	2184
Apprch %	57.1	42.9	0	1.1	98.9	0	99.4	0.6	0	
Total %	0.4	0.3	0	0.6	54.2	0	44.3	0.3	0	
Cars & Peds	8	6	0	13	1172	0	958	6	0	2163
% Cars & Peds	100	100	0	100	99	0	99.1	100	0	99
Trucks & Buses	0	0	0	0	12	0	9	0	0	21
% Trucks & Buses	0	0	0	0	1	0	0.9	0	0	1
Bikes by Direction	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North				Bridge Street From East				Bridge Street From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
04:00 PM	1	0	0	1	2	149	0	151	155	1	0	156	308
04:15 PM	1	1	0	2	0	165	0	165	125	1	0	126	293
04:30 PM	1	1	0	2	0	177	0	177	118	0	0	118	297
04:45 PM	1	0	0	1	2	169	0	171	122	0	0	122	294
Total Volume	4	2	0	6	4	660	0	664	520	2	0	522	1192
% App. Total	66.7	33.3	0		0.6	99.4	0		99.6	0.4	0		
PHF	1.00	.500	.000	.750	.500	.932	.000	.938	.839	.500	.000	.837	.968
Cars & Peds	4	2	0	6	4	650	0	654	513	2	0	515	1175
% Cars & Peds	100	100	0	100	100	98.5	0	98.5	98.7	100	0	98.7	98.6
Trucks & Buses	0	0	0	0	0	10	0	10	7	0	0	7	17
% Trucks & Buses	0	0	0	0	0	1.5	0	1.5	1.3	0	0	1.3	1.4
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

Transportation Data Corporation
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N: #240-244 Site Driveway
 E/W: Bridge Street
 City, State: Fairhaven, MA
 Client: McM/L. Young

File Name : 05536B
 Site Code : Y21A5412
 Start Date : 3/24/2022
 Page No : 1

Groups Printed- Cars & Peds

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North			Bridge Street From East			Bridge Street From West			Int. Total
	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	
04:00 PM	1	0	0	2	144	0	154	1	0	302
04:15 PM	1	1	0	0	164	0	123	1	0	290
04:30 PM	1	1	0	0	175	0	116	0	0	293
04:45 PM	1	0	0	2	167	0	120	0	0	290
Total	4	2	0	4	650	0	513	2	0	1175
05:00 PM	1	1	0	1	172	0	125	1	0	301
05:15 PM	3	2	0	3	151	0	119	3	0	281
05:30 PM	0	1	0	3	100	0	107	0	0	211
05:45 PM	0	0	0	2	99	0	94	0	0	195
Total	4	4	0	9	522	0	445	4	0	988
Grand Total	8	6	0	13	1172	0	958	6	0	2163
Apprch %	57.1	42.9	0	1.1	98.9	0	99.4	0.6	0	
Total %	0.4	0.3	0	0.6	54.2	0	44.3	0.3	0	

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North				Bridge Street From East				Bridge Street From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
04:00 PM	1	0	0	1	2	144	0	146	154	1	0	155	302
04:15 PM	1	1	0	2	0	164	0	164	123	1	0	124	290
04:30 PM	1	1	0	2	0	175	0	175	116	0	0	116	293
04:45 PM	1	0	0	1	2	167	0	169	120	0	0	120	290
Total Volume	4	2	0	6	4	650	0	654	513	2	0	515	1175
% App. Total	66.7	33.3	0		0.6	99.4	0		99.6	0.4	0		
PHF	1.00	.500	.000	.750	.500	.929	.000	.934	.833	.500	.000	.831	.973

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

Transportation Data Corporation
 Mario Perone, mperone1@verizon.net
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N: #240-244 Site Driveway
 E/W: Bridge Street
 City, State: Fairhaven, MA
 Client: McM/L. Young

File Name : 05536B
 Site Code : Y21A5412
 Start Date : 3/24/2022
 Page No : 1

Groups Printed- Trucks & Buses

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North			Bridge Street From East			Bridge Street From West			Int. Total
	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	
04:00 PM	0	0	0	0	5	0	1	0	0	6
04:15 PM	0	0	0	0	1	0	2	0	0	3
04:30 PM	0	0	0	0	2	0	2	0	0	4
04:45 PM	0	0	0	0	2	0	2	0	0	4
Total	0	0	0	0	10	0	7	0	0	17
05:00 PM	0	0	0	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	1	0	0	1
05:30 PM	0	0	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	2	0	2	0	0	4
Grand Total	0	0	0	0	12	0	9	0	0	21
Apprch %	0	0	0	0	100	0	100	0	0	
Total %	0	0	0	0	57.1	0	42.9	0	0	

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North				Bridge Street From East				Bridge Street From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	5	0	5	1	0	0	1	6
04:15 PM	0	0	0	0	0	1	0	1	2	0	0	2	3
04:30 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
04:45 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
Total Volume	0	0	0	0	0	10	0	10	7	0	0	7	17
% App. Total	0	0	0	0	0	100	0	100	100	0	0	0	
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.875	.000	.000	.875	.708

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Transportation Data Corporation
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N: #240-244 Site Driveway
 E/W: Bridge Street
 City, State: Fairhaven, MA
 Client: McM/L. Young

File Name : 05536B
 Site Code : Y21A5412
 Start Date : 3/24/2022
 Page No : 1

Groups Printed- Bikes by Direction

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North			Bridge Street From East			Bridge Street From West			Int. Total
	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Aprch %	0	0	0	0	0	0	0	0	0	0
Total %										

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North				Bridge Street From East				Bridge Street From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

Transportation Data Corporation

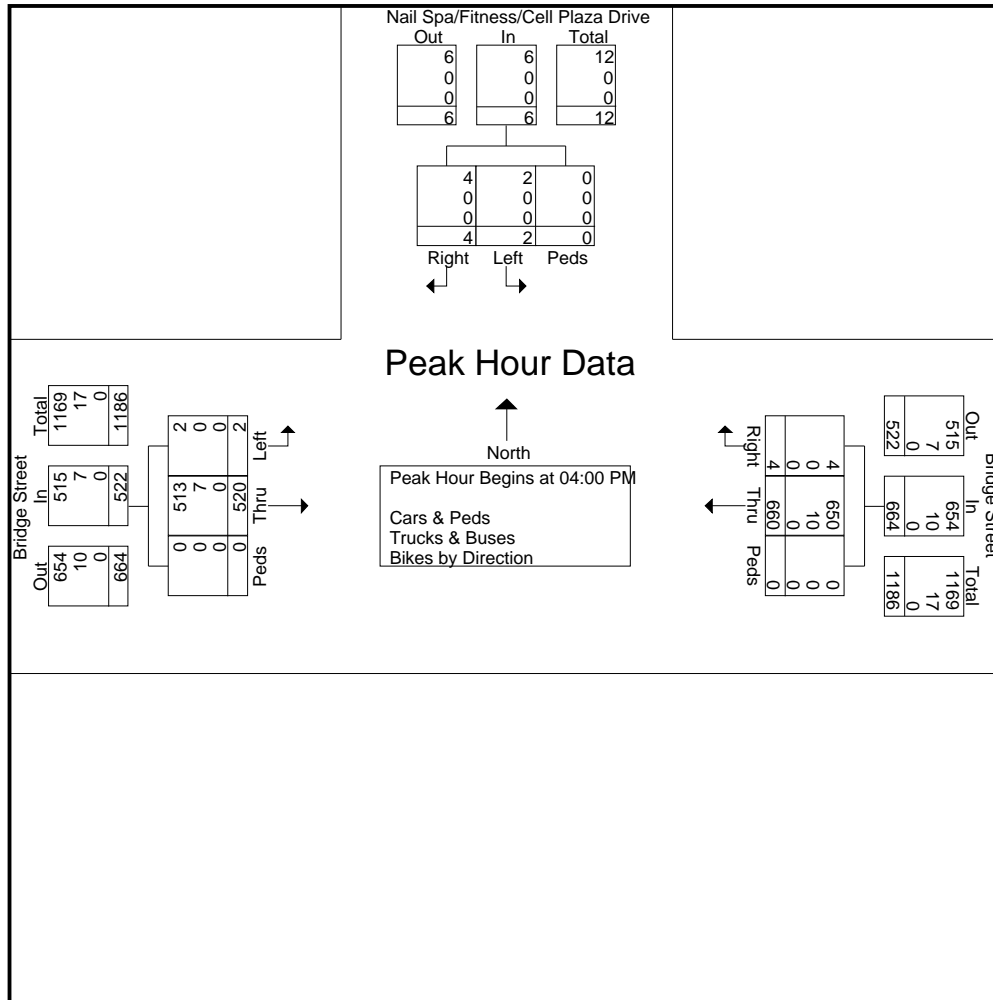
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N: #240-244 Site Driveway
 E/W: Bridge Street
 City, State: Fairhaven, MA
 Client: McM/L. Young

File Name : 05536B
 Site Code : Y21A5412
 Start Date : 3/24/2022
 Page No : 1

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North				Bridge Street From East				Bridge Street From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	1	0	0	1	2	149	0	151	155	1	0	156	308
04:15 PM	1	1	0	2	0	165	0	165	125	1	0	126	293
04:30 PM	1	1	0	2	0	177	0	177	118	0	0	118	297
04:45 PM	1	0	0	1	2	169	0	171	122	0	0	122	294
Total Volume	4	2	0	6	4	660	0	664	520	2	0	522	1192
% App. Total	66.7	33.3	0		0.6	99.4	0		99.6	0.4	0		
PHF	1.00	.500	.000	.750	.500	.932	.000	.938	.839	.500	.000	.837	.968
Cars & Peds	4	2	0	6	4	650	0	654	513	2	0	515	1175
% Cars & Peds	100	100	0	100	100	98.5	0	98.5	98.7	100	0	98.7	98.6
Trucks & Buses	0	0	0	0	0	10	0	10	7	0	0	7	17
% Trucks & Buses	0	0	0	0	0	1.5	0	1.5	1.3	0	0	1.3	1.4
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0



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N: #240-244 Site Driveway
 E/W: Bridge Street
 City, State: Fairhaven, MA
 Client: McM/L. Young

File Name : 05536BB
 Site Code : Y21A5412
 Start Date : 3/26/2022
 Page No : 1

Groups Printed- Cars & Peds

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North			Bridge Street From East			Bridge Street From West			Int. Total
	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	
11:00 AM	1	1	0	0	160	0	127	1	0	290
11:15 AM	1	0	0	0	122	0	155	0	0	278
11:30 AM	3	1	0	2	135	0	128	1	0	270
11:45 AM	1	1	0	2	113	0	150	1	0	268
Total	6	3	0	4	530	0	560	3	0	1106
12:00 PM	2	0	0	1	130	0	138	0	0	271
12:15 PM	1	0	0	3	129	0	144	0	0	277
12:30 PM	0	0	0	2	155	0	145	0	0	302
12:45 PM	2	5	0	2	116	0	138	1	0	264
Total	5	5	0	8	530	0	565	1	0	1114
01:00 PM	0	0	0	0	117	0	108	0	0	225
01:15 PM	0	1	0	4	140	0	152	0	0	297
01:30 PM	0	2	0	3	119	0	133	0	0	257
01:45 PM	1	0	0	1	126	0	104	0	0	232
Total	1	3	0	8	502	0	497	0	0	1011
Grand Total	12	11	0	20	1562	0	1622	4	0	3231
Apprch %	52.2	47.8	0	1.3	98.7	0	99.8	0.2	0	
Total %	0.4	0.3	0	0.6	48.3	0	50.2	0.1	0	

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North				Bridge Street From East				Bridge Street From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
11:45 AM	1	1	0	2	2	113	0	115	150	1	0	151	268
12:00 PM	2	0	0	2	1	130	0	131	138	0	0	138	271
12:15 PM	1	0	0	1	3	129	0	132	144	0	0	144	277
12:30 PM	0	0	0	0	2	155	0	157	145	0	0	145	302
Total Volume	4	1	0	5	8	527	0	535	577	1	0	578	1118
% App. Total	80	20	0		1.5	98.5	0		99.8	0.2	0		
PHF	.500	.250	.000	.625	.667	.850	.000	.852	.962	.250	.000	.957	.925

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:45 AM

Transportation Data Corporation
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N: #240-244 Site Driveway
 E/W: Bridge Street
 City, State: Fairhaven, MA
 Client: McM/L. Young

File Name : 05536BB
 Site Code : Y21A5412
 Start Date : 3/26/2022
 Page No : 1

Groups Printed- Trucks & Buses

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North			Bridge Street From East			Bridge Street From West			Int. Total
	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	
11:00 AM	0	0	0	0	3	0	2	0	0	5
11:15 AM	0	0	0	0	4	0	2	0	0	6
11:30 AM	0	0	0	0	1	0	1	0	0	2
11:45 AM	0	0	0	0	2	0	1	0	0	3
Total	0	0	0	0	10	0	6	0	0	16
12:00 PM	0	0	0	0	0	0	1	0	0	1
12:15 PM	0	0	0	0	2	0	1	0	0	3
12:30 PM	0	0	0	0	0	0	1	0	0	1
12:45 PM	0	0	0	0	1	0	1	0	0	2
Total	0	0	0	0	3	0	4	0	0	7
01:00 PM	0	0	0	0	0	0	1	0	0	1
01:15 PM	0	0	0	0	1	0	2	0	0	3
01:30 PM	0	0	0	0	2	0	2	0	0	4
01:45 PM	0	0	0	0	2	0	0	0	0	2
Total	0	0	0	0	5	0	5	0	0	10
Grand Total	0	0	0	0	18	0	15	0	0	33
Apprch %	0	0	0	0	100	0	100	0	0	
Total %	0	0	0	0	54.5	0	45.5	0	0	

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North				Bridge Street From East				Bridge Street From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
11:00 AM	0	0	0	0	0	3	0	3	2	0	0	2	5
11:15 AM	0	0	0	0	0	4	0	4	2	0	0	2	6
11:30 AM	0	0	0	0	0	1	0	1	1	0	0	1	2
11:45 AM	0	0	0	0	0	2	0	2	1	0	0	1	3
Total Volume	0	0	0	0	0	10	0	10	6	0	0	6	16
% App. Total	0	0	0	0	0	100	0	100	100	0	0	0	0
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.750	.000	.000	.750	.667

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:00 AM

Transportation Data Corporation

Mario Perone, mperone1@verizon.net
tel (781) 587-0086 cell (781) 439-4999

N: #240-244 Site Driveway
E/W: Bridge Street
City, State: Fairhaven, MA
Client: McM/L. Young

File Name : 05536BB
Site Code : Y21A5412
Start Date : 3/26/2022
Page No : 1

Groups Printed- Bikes by Direction

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North			Bridge Street From East			Bridge Street From West			Int. Total
	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	
11:00 AM	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	0
Total %										

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North				Bridge Street From East				Bridge Street From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:00 AM

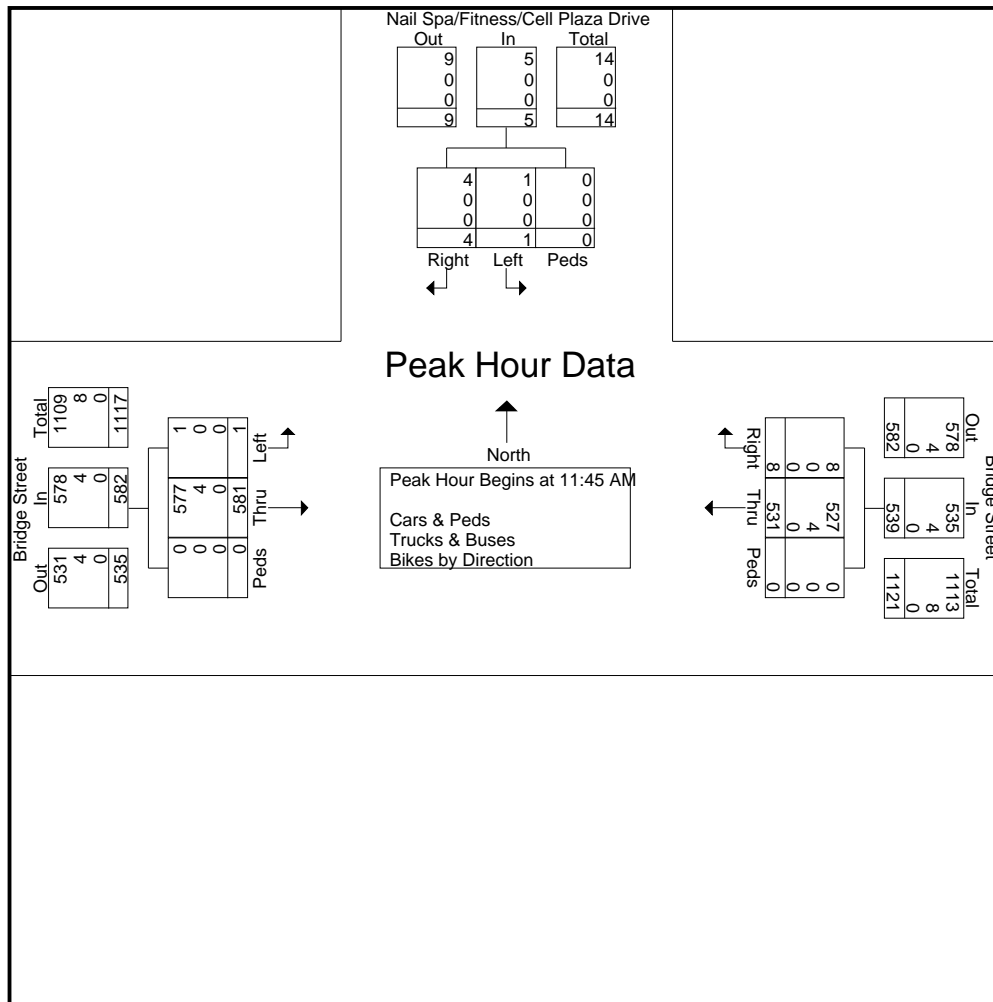
Transportation Data Corporation

Mario Perone, mperone1@verizon.net
tel (781) 587-0086 cell (781) 439-4999

N: #240-244 Site Driveway
E/W: Bridge Street
City, State: Fairhaven, MA
Client: McM/L. Young

File Name : 05536BB
Site Code : Y21A5412
Start Date : 3/26/2022
Page No : 1

Start Time	Nail Spa/Fitness/Cell Plaza Drive From North				Bridge Street From East				Bridge Street From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:45 AM													
11:45 AM	1	1	0	2	2	115	0	117	151	1	0	152	271
12:00 PM	2	0	0	2	1	130	0	131	139	0	0	139	272
12:15 PM	1	0	0	1	3	131	0	134	145	0	0	145	280
12:30 PM	0	0	0	0	2	155	0	157	146	0	0	146	303
Total Volume	4	1	0	5	8	531	0	539	581	1	0	582	1126
% App. Total	80	20	0		1.5	98.5	0		99.8	0.2	0		
PHF	.500	.250	.000	.625	.667	.856	.000	.858	.962	.250	.000	.957	.929
Cars & Peds	4	1	0	5	8	527	0	535	577	1	0	578	1118
% Cars & Peds	100	100	0	100	100	99.2	0	99.3	99.3	100	0	99.3	99.3
Trucks & Buses	0	0	0	0	0	4	0	4	4	0	0	4	8
% Trucks & Buses	0	0	0	0	0	0.8	0	0.7	0.7	0	0	0.7	0.7
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0



Transportation Data Corporation

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N/S: Alden Road
E: #240-244 Bridge Street Site Drive
City, State: Fairhaven, MA
Client: McM/L. Young

File Name : 05536C
Site Code : Y21A5412
Start Date : 3/24/2022
Page No : 1

Groups Printed- Cars & Peds

Start Time	Alden Road From North			Nail Spa/Fitness/Cell Plaza Drive From East			Alden Road From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
04:00 PM	172	0	0	1	1	0	0	164	0	338
04:15 PM	148	0	0	0	0	0	2	147	0	297
04:30 PM	127	1	0	0	3	0	0	188	0	319
04:45 PM	125	0	0	1	0	0	2	135	0	263
Total	572	1	0	2	4	0	4	634	0	1217
05:00 PM	140	0	0	0	0	0	0	145	0	285
05:15 PM	122	1	0	1	2	0	0	116	0	242
05:30 PM	121	0	0	1	0	0	0	117	0	239
05:45 PM	119	1	0	0	1	0	0	115	0	236
Total	502	2	0	2	3	0	0	493	0	1002
Grand Total	1074	3	0	4	7	0	4	1127	0	2219
Apprch %	99.7	0.3	0	36.4	63.6	0	0.4	99.6	0	
Total %	48.4	0.1	0	0.2	0.3	0	0.2	50.8	0	

Start Time	Alden Road From North				Nail Spa/Fitness/Cell Plaza Drive From East				Alden Road From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	172	0	0	172	1	1	0	2	0	164	0	164	338
04:15 PM	148	0	0	148	0	0	0	0	2	147	0	149	297
04:30 PM	127	1	0	128	0	3	0	3	0	188	0	188	319
04:45 PM	125	0	0	125	1	0	0	1	2	135	0	137	263
Total Volume	572	1	0	573	2	4	0	6	4	634	0	638	1217
% App. Total	99.8	0.2	0		33.3	66.7	0		0.6	99.4	0		
PHF	.831	.250	.000	.833	.500	.333	.000	.500	.500	.843	.000	.848	.900

Transportation Data Corporation

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N/S: Alden Road
E: #240-244 Bridge Street Site Drive
City, State: Fairhaven, MA
Client: McM/L. Young

File Name : 05536C
Site Code : Y21A5412
Start Date : 3/24/2022
Page No : 1

Groups Printed- Trucks & Buses

Start Time	Alden Road From North			Nail Spa/Fitness/Cell Plaza Drive From East			Alden Road From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
04:00 PM	3	0	0	0	0	0	0	2	0	5
04:15 PM	1	0	0	0	0	0	0	1	0	2
04:30 PM	1	0	0	0	0	0	0	1	0	2
04:45 PM	2	0	0	0	0	0	0	0	0	2
Total	7	0	0	0	0	0	0	4	0	11
05:00 PM	0	0	0	0	0	0	0	1	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1
Grand Total	7	0	0	0	0	0	0	5	0	12
Apprch %	100	0	0	0	0	0	0	100	0	
Total %	58.3	0	0	0	0	0	0	41.7	0	

Start Time	Alden Road From North				Nail Spa/Fitness/Cell Plaza Drive From East				Alden Road From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
04:00 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
04:15 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
04:45 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
Total Volume	7	0	0	7	0	0	0	0	0	4	0	4	11
% App. Total	100	0	0		0	0	0		0	100	0		
PHF	.583	.000	.000	.583	.000	.000	.000	.000	.000	.500	.000	.500	.550

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:00 PM

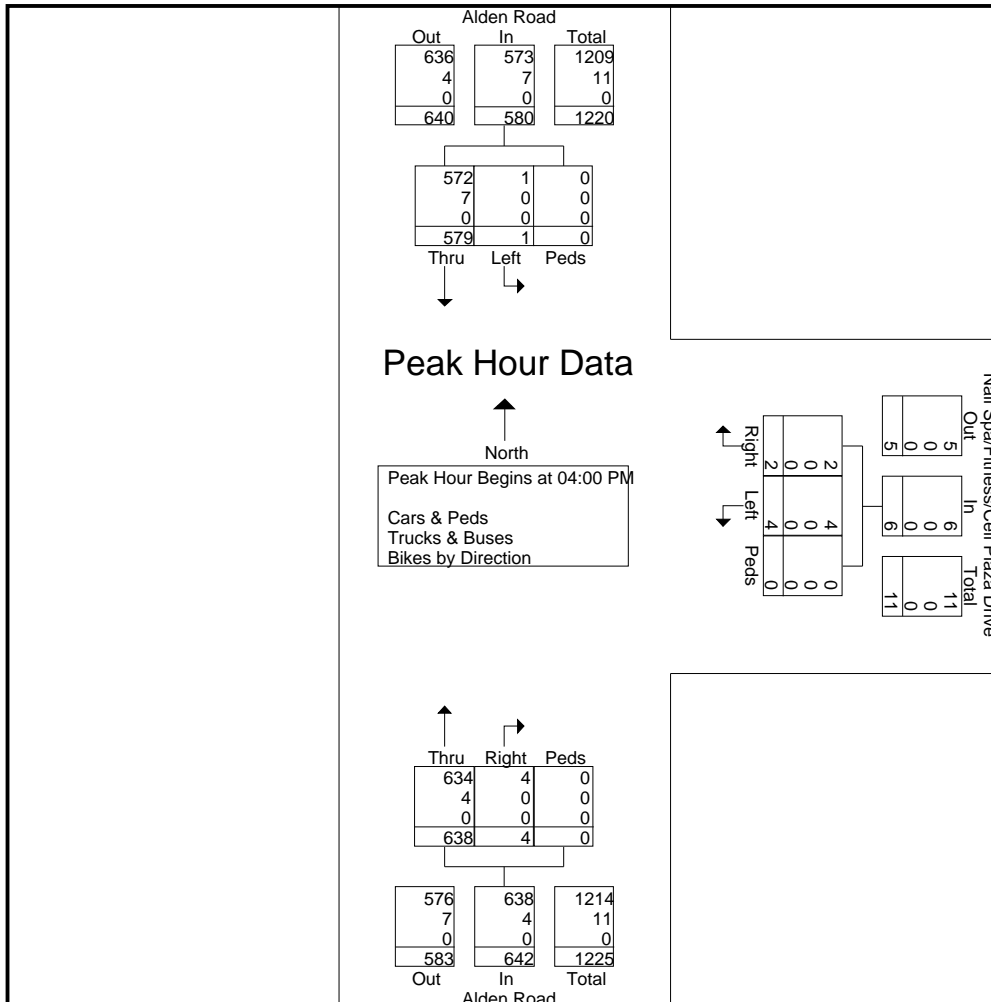
Transportation Data Corporation

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N/S: Alden Road
E: #240-244 Bridge Street Site Drive
City, State: Fairhaven, MA
Client: McM/L. Young

File Name : 05536C
Site Code : Y21A5412
Start Date : 3/24/2022
Page No : 1

Start Time	Alden Road From North				Nail Spa/Fitness/Cell Plaza Drive From East				Alden Road From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	175	0	0	175	1	1	0	2	0	166	0	166	343
04:15 PM	149	0	0	149	0	0	0	0	2	148	0	150	299
04:30 PM	128	1	0	129	0	3	0	3	0	189	0	189	321
04:45 PM	127	0	0	127	1	0	0	1	2	135	0	137	265
Total Volume	579	1	0	580	2	4	0	6	4	638	0	642	1228
% App. Total	99.8	0.2	0		33.3	66.7	0		0.6	99.4	0		
PHF	.827	.250	.000	.829	.500	.333	.000	.500	.500	.844	.000	.849	.895
Cars & Peds	572	1	0	573	2	4	0	6	4	634	0	638	1217
% Cars & Peds	98.8	100	0	98.8	100	100	0	100	100	99.4	0	99.4	99.1
Trucks & Buses	7	0	0	7	0	0	0	0	0	4	0	4	11
% Trucks & Buses	1.2	0	0	1.2	0	0	0	0	0	0.6	0	0.6	0.9
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0



Transportation Data Corporation
 Mario Perone, mperone1@verizon.net
 tel (781) 587-0086 cell (781) 439-4999

N/S: Alden Road
 E: #240-244 Bridge Street Site Drive
 City, State: Fairhaven, MA
 Client: McM/L. Young

File Name : 05536CC
 Site Code : Y21A5412
 Start Date : 3/26/2022
 Page No : 1

Groups Printed- Cars & Peds

Start Time	Alden Road From North			Nail Spa/Fitness/Cell Plaza Drive From East			Alden Road From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
11:00 AM	178	0	0	2	0	0	0	162	0	342
11:15 AM	196	0	0	1	0	0	2	161	0	360
11:30 AM	172	0	0	0	0	0	2	160	0	334
11:45 AM	168	3	0	0	2	0	0	140	0	313
Total	714	3	0	3	2	0	4	623	0	1349
12:00 PM	149	0	0	1	0	0	0	171	0	321
12:15 PM	190	0	0	0	0	0	0	156	0	346
12:30 PM	166	0	0	0	0	0	0	171	0	337
12:45 PM	142	2	0	3	3	0	2	157	0	309
Total	647	2	0	4	3	0	2	655	0	1313
01:00 PM	145	1	0	0	0	0	0	138	0	284
01:15 PM	160	0	0	0	0	0	0	142	0	302
01:30 PM	155	0	0	0	2	0	0	135	0	292
01:45 PM	134	1	0	1	0	0	0	160	0	296
Total	594	2	0	1	2	0	0	575	0	1174
Grand Total	1955	7	0	8	7	0	6	1853	0	3836
Apprch %	99.6	0.4	0	53.3	46.7	0	0.3	99.7	0	
Total %	51	0.2	0	0.2	0.2	0	0.2	48.3	0	

Start Time	Alden Road From North				Nail Spa/Fitness/Cell Plaza Drive From East				Alden Road From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
11:00 AM	178	0	0	178	2	0	0	2	0	162	0	162	342
11:15 AM	196	0	0	196	1	0	0	1	2	161	0	163	360
11:30 AM	172	0	0	172	0	0	0	0	2	160	0	162	334
11:45 AM	168	3	0	171	0	2	0	2	0	140	0	140	313
Total Volume	714	3	0	717	3	2	0	5	4	623	0	627	1349
% App. Total	99.6	0.4	0		60	40	0		0.6	99.4	0		
PHF	.911	.250	.000	.915	.375	.250	.000	.625	.500	.961	.000	.962	.937

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:00 AM

Transportation Data Corporation

Mario Perone, mperone1@verizon.net
tel (781) 587-0086 cell (781) 439-4999

N/S: Alden Road
E: #240-244 Bridge Street Site Drive
City, State: Fairhaven, MA
Client: McM/L. Young

File Name : 05536CC
Site Code : Y21A5412
Start Date : 3/26/2022
Page No : 1

Groups Printed- Trucks & Buses

Start Time	Alden Road From North			Nail Spa/Fitness/Cell Plaza Drive From East			Alden Road From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
11:00 AM	0	0	0	0	0	0	0	1	0	1
11:15 AM	1	0	0	0	0	0	0	1	0	2
11:30 AM	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	2	0	3
12:00 PM	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	0	0	0	0	3	0	4
Apprch %	100	0	0	0	0	0	0	100	0	
Total %	25	0	0	0	0	0	0	75	0	

Start Time	Alden Road From North				Nail Spa/Fitness/Cell Plaza Drive From East				Alden Road From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
11:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
11:15 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	0	0	0	2	0	2	3
% App. Total	100	0	0	1.000	0	0	0	0.000	0	100	0	2.000	3.000
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.375

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:00 AM

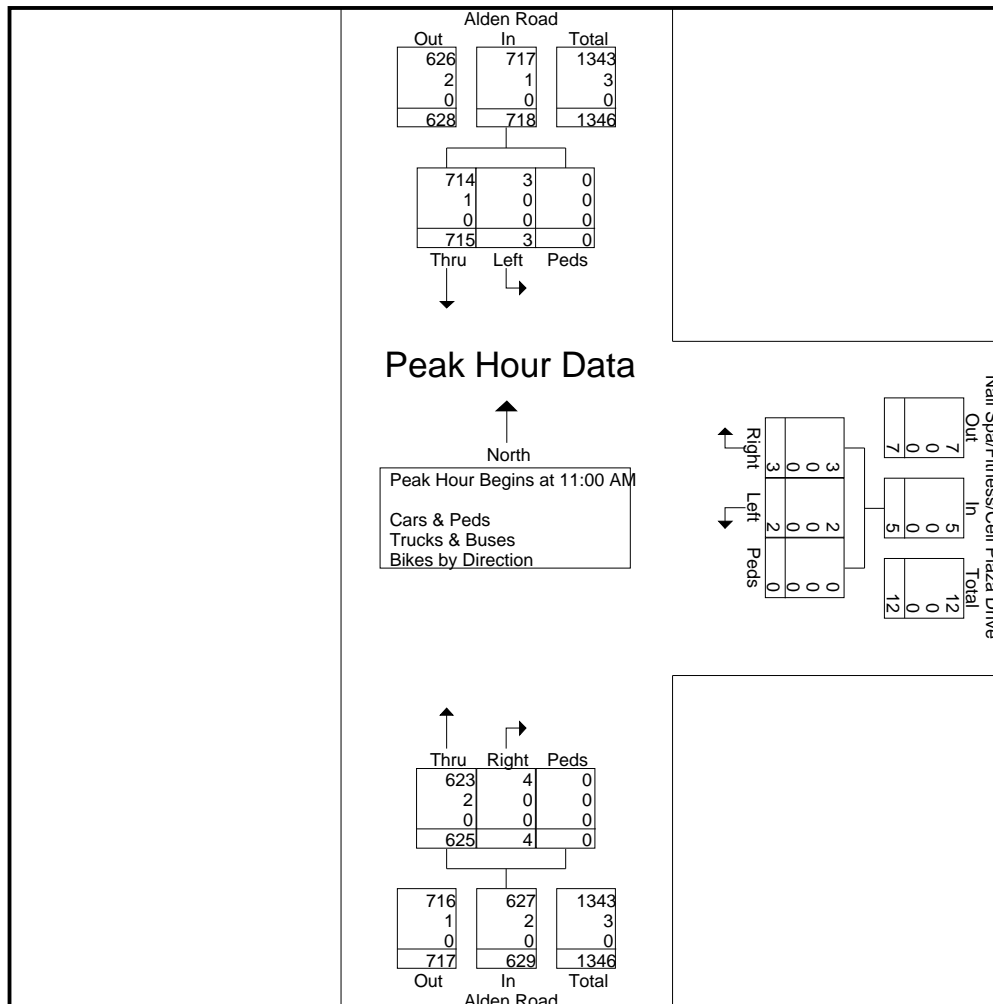
Transportation Data Corporation

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N/S: Alden Road
E: #240-244 Bridge Street Site Drive
City, State: Fairhaven, MA
Client: McM/L. Young

File Name : 05536CC
Site Code : Y21A5412
Start Date : 3/26/2022
Page No : 1

Start Time	Alden Road From North				Nail Spa/Fitness/Cell Plaza Drive From East				Alden Road From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:00 AM													
11:00 AM	178	0	0	178	2	0	0	2	0	163	0	163	343
11:15 AM	197	0	0	197	1	0	0	1	2	162	0	164	362
11:30 AM	172	0	0	172	0	0	0	0	2	160	0	162	334
11:45 AM	168	3	0	171	0	2	0	2	0	140	0	140	313
Total Volume	715	3	0	718	3	2	0	5	4	625	0	629	1352
% App. Total	99.6	0.4	0		60	40	0		0.6	99.4	0		
PHF	.907	.250	.000	.911	.375	.250	.000	.625	.500	.959	.000	.959	.934
Cars & Peds	714	3	0	717	3	2	0	5	4	623	0	627	1349
% Cars & Peds	99.9	100	0	99.9	100	100	0	100	100	99.7	0	99.7	99.8
Trucks & Buses	1	0	0	1	0	0	0	0	0	2	0	2	3
% Trucks & Buses	0.1	0	0	0.1	0	0	0	0	0	0.3	0	0.3	0.2
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0



APPENDIX B
Crash Summary

CRASH SUMMARY

Fairhaven RMD

240 Bridge Street, Fairhaven, MA

	Alden Road at Bridge Street	Bridge Street at Site Driveway	Alden Road at Site Driveway
Year			
2015	14	0	0
2016	16	0	0
2017	15	0	0
2018	18	0	0
2019	22	0	0
Type			
Angle	14	0	0
Rear-end	62	0	0
Sideswipe	6	0	0
Head-on	0	0	0
Pedestrian	0	0	0
Single Vehicle	3	0	0
Severity			
Property Damage	71	0	0
Personal Injury	10	0	0
Fatality	0	0	0
Unknown	4	0	0
Weather			
Clear	53	0	0
Cloudy	21	0	0
Rain	9	0	0
Snow	1	0	0
Other	1	0	0
Road Surface			
Dry	68	0	0
Wet	13	0	0
Ice	1	0	0
Snow	1	0	0
Unknown	2	0	0
Time			
7:00 AM to 9:00 AM	5	0	0
9:00 AM to 4:00 PM	52	0	0
4:00 PM to 6:00 PM	15	0	0
6:00 PM to 7:00 AM	13	0	0
Total	85	0	0
Crash Rate	1.90	0.00	0.00
State Average	0.78	0.57	0.57
District 5 Average	0.75	0.57	0.57

Source: MassDOT

APPENDIX C
Traffic Projection Model

TRAFFIC PROJECTION MODEL

**Weekday Afternoon Peak Hour
Fairhaven RMD
240 Bridge Street, Fairhaven, MA**

Intersection	Dir.	Turn	2022 Counted Volumes	Volume Balancing	2022 Existing Volumes	Background Growth 7 yrs (at 2.0% per year)	2029 No Build Volumes	New Project Trips PERCENT ENTER	New Project Trips ENTER	New Project Trips PERCENT EXIT	New Project Trips EXIT	New Project Trips TOTAL	Re-distribute Existing Trips	2029 Build Volumes	
Alden Road at Bridge Street	EB	L	162	1	163	24	187	10%	1		0	1		188	
		T	223	1	224	33	257	10%	2		0	2		259	
	WB	R	30		30	4	34		0			0	0		34
		L	164		164	24	188		0	10%	2	2		190	
	NB	T	253	1	254	37	291		0	20%	3	3		294	
		R	245	2	247	36	283		0		0	0		283	
	SB	L	38		38	6	44		0			0	0		44
		T	231	1	232	35	267	10%	2		0	2		269	
	Bridge Street at Site Driveway	EB	R	123		123	18	141	10%	2		0	2		143
			L	174	2	176	27	203		0	30%	5	5	2	210
		SB	T	259	3	262	39	301		0	10%	2	2		303
			R	143	2	145	22	166		0		0	0		166
Alden Road at Site Driveway	WB	L	2		2		2	20%	4		0	4		6	
		T	520	1	521	78	599		0	30%	5	5	2	606	
	SB	T	660	1	661	97	758		0		0	0		758	
		R	4		4		4	30%	5		0	5		9	
	R	4		4		4		0	30%	5	5		-2	9	
Alden Road at Site Driveway	WB	L	4		4		4		0	40%	7	7	2	13	
		R	2		2		2		0	30%	5	5		7	
	NB	T	638		638	95	733		0		0	0		733	
		R	4		4		4	20%	3		0	3		7	
	SB	L	1		1		1	30%	5		0	5		6	
	T	579		579	87	666		0		0	0		666		

Peak Hour: 4:00 PM to 5:00 PM

TRAFFIC PROJECTION MODEL

Saturday Midday Peak Hour
 Fairhaven RMD
 240 Bridge Street, Fairhaven, MA

Intersection	Dir.	Turn	2022 Counted Volumes	Volume Balancing	2022 Existing Volumes	Background Growth 7 yrs (at 2.0% per year)	2029 No Build Volumes	New Project Trips PERCENT ENTER	New Project Trips Trips ENTER	New Project Trips PERCENT EXIT	New Project Trips Trips EXIT	New Project Trips TOTAL	2029 Build Volumes	
Alden Road at Bridge Street	EB	L	199	1	200	30	230	10%	2		0	2	232	
		T	219		219	33	252	10%	2		0	2	254	
	WB	L	151	1	152	23	175		0	10%	3	3	178	
		T	225	2	227	33	260		0	20%	4	4	264	
	NB	L	28		28	4	32		0		0	0	32	
		T	261	1	262	39	301	10%	3		0	3	304	
	SB	L	172		172	26	198	10%	3		0	3	201	
		T	180	1	181	27	208		0	10%	3	3	211	
		T	343	3	346	51	397		0	10%	3	3	400	
		R	189	2	191	28	219		0		0	0	219	
	Bridge Street at Site Driveway	EB	L	3		3		3	20%	5		0	5	8
			T	566	3	569	86	655		0	10%	3	3	658
WB		T	540		540	81	621		0		0	0	621	
		R	4		4		4	30%	8		0	8	12	
SB		L	3		3		3		0	20%	5	5	8	
	R	6		6		6		0	30%	7	7	13		
Alden Road at Site Driveway	WB	L	2		2		2		0	20%	6	6	8	
		R	3		3		3		0	30%	8	8	11	
	NB	T	625		625	94	719		0		0	0	719	
		R	4		4		4	20%	5		0	5	9	
	SB	L	3		3		3	30%	8		0	8	11	
T		715	1	716	106	822		0		0	0	822		

Peak Hour: 11:00 AM to 12:00 PM

APPENDIX D
Highway Capacity Manual Methodologies

CAPACITY/LEVEL-OF-SERVICE ANALYSES METHODOLOGY

The detailed capacity/level-of-service analysis contained in this traffic impact study was performed in accordance with the standard techniques contained in the *Highway Capacity Manual*.⁽¹⁾ By definition, capacity represents “the maximum rate of flow that can reasonably be expected to pass a point on a uniform section of a lane or roadway under prevailing roadway, traffic, and control conditions.” The level of functioning of an intersection or a uniform section of a lane or roadway can be expressed in terms of levels of service. Level of service (LOS) is defined as “a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers”. Such measures include “speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.”

At unsignalized intersections, a methodology for evaluating the relative functioning of intersections controlled by stop or yield signs has been developed, and is based on several assumptions, including:

- Major street flows are not affected by the minor (stop-sign controlled) street movements.
- Left turns from the major street to the minor street are influenced only by opposing major street through flow.
- Minor street left turns are impeded by all major street traffic plus opposing minor street traffic.
- Minor street through traffic is impeded by all major street traffic.
- Minor street right turns are impeded only by the major street traffic coming from the left.

The concept of stop-controlled or yield-controlled intersection analysis is based on the estimate of average total delay on minor streets. The methodology of analysis relies on three elements: the size and distribution of gaps in the major traffic stream, the usefulness of these gaps to the minor stream drivers, and the relative priority of the various traffic streams at the intersection. The results of the analysis provide an estimate of average total delay for the various critical movements at the unsignalized intersections. Correlation between average total delay and the respective levels of service are provided for unsignalized intersections as follows:

(1) *Transportation Research Board, Highway Capacity Manual, 6th Edition, published by the Transportation Research Board, Washington, DC, 2016.*

Unsignalized Intersections

Level of Service	Control Delay Per Vehicle (seconds)
A	0 – 10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F	> 50

At signalized intersections, an additional element must be considered: time allocation. Level of service is based on the average control delay per vehicle for various movements within the intersection. Volume/capacity relationships also affect the operations of signalized intersections. Thus, both volume/capacity and delay must be considered to evaluate the overall operation of a signalized intersection. Correlation between average delay per vehicle and the respective levels of service are provided for signalized intersections as follows:

Signalized Intersections

Level of Service	Control Delay Per Vehicle (seconds)
A	≤ 10
B	>10 – 20
C	>20 – 35
D	>35 – 55
E	>55 – 80
F	> 80

APPENDIX E
2022 Existing Capacity/Level-of-Service Analysis

Fairhaven RMD
3: Alden Road & Bridge Street

Weekday PM
Timing Plan: 2022 Existing



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	224	30	164	254	247	38	232	123	176	262	145
Future Volume (vph)	163	224	30	164	254	247	38	232	123	176	262	145
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	345		0	0		0	130		0	0		0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1805	1833	0	1787	1881	1583	1805	1900	1615	1770	1881	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	1833	0	1787	1881	1583	1805	1900	1615	1770	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				266			166			179
Link Speed (mph)		30			30			30				30
Link Distance (ft)		1304			189			937				202
Travel Time (s)		29.6			4.3			21.3				4.6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.74	0.74	0.74	0.81	0.81	0.81
Heavy Vehicles (%)	0%	2%	0%	1%	1%	2%	0%	0%	0%	2%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	175	273	0	176	273	266	51	314	166	217	323	179
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8		7	4	1	5	2	7	1	6	3
Permitted Phases						4			2			6
Detector Phase	3	8		7	4	1	5	2	7	1	6	3
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	26.0	30.0		26.0	30.0	22.0	22.0	33.0	26.0	22.0	33.0	26.0
Total Split (%)	18.6%	21.4%		18.6%	21.4%	15.7%	15.7%	23.6%	18.6%	15.7%	23.6%	18.6%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	15.2	21.0		15.4	21.1	43.0	8.6	22.9	44.5	16.6	33.9	55.3
Actuated g/C Ratio	0.14	0.20		0.15	0.20	0.41	0.08	0.22	0.42	0.16	0.32	0.53
v/c Ratio	0.67	0.74		0.67	0.72	0.33	0.34	0.76	0.21	0.78	0.53	0.19
Control Delay	59.1	54.3		59.1	53.4	3.5	57.5	53.3	4.4	65.5	38.3	3.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.1	54.3		59.1	53.4	3.5	57.5	53.3	4.4	65.5	38.3	3.7
LOS	E	D		E	D	A	E	D	A	E	D	A
Approach Delay		56.2			36.3			38.4			37.9	
Approach LOS		E			D			D			D	
Queue Length 50th (ft)	109	162		109	164	0	32	189	0	138	176	0
Queue Length 95th (ft)	237	#397		#242	#395	42	72	310	21	#329	347	32
Internal Link Dist (ft)		1224			109			857			122	
Turn Bay Length (ft)	345						130					
Base Capacity (vph)	355	436		352	445	805	284	505	853	279	607	1001

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	29.0
Total Split (s)	29.0
Total Split (%)	21%
Yellow Time (s)	2.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

Fairhaven RMD
3: Alden Road & Bridge Street

Weekday PM
Timing Plan: 2022 Existing

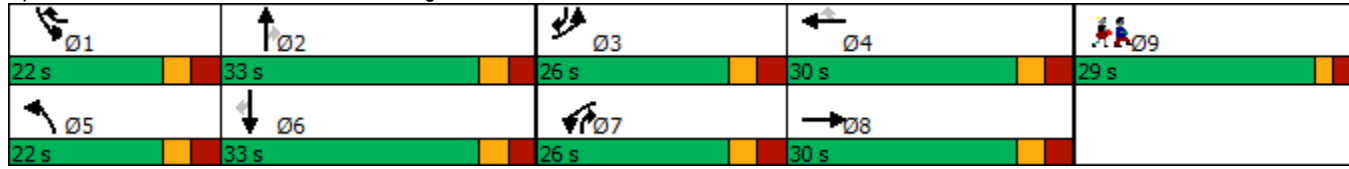


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.63		0.50	0.61	0.33	0.18	0.62	0.19	0.78	0.53	0.18

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 105
 Natural Cycle: 110
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 40.9
 Intersection LOS: D
 Intersection Capacity Utilization 64.7%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Alden Road & Bridge Street



Lane Group	Ø9
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	638	4	1	579
Future Vol, veh/h	4	2	638	4	1	579
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	85	85	83	83
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	5	3	751	5	1	698

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1105	754	0	0	756
Stage 1	754	-	-	-	-
Stage 2	351	-	-	-	-
Critical Hdwy	6.6	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	221	412	-	-	864
Stage 1	468	-	-	-	-
Stage 2	690	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	221	412	-	-	864
Mov Cap-2 Maneuver	221	-	-	-	-
Stage 1	468	-	-	-	-
Stage 2	689	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	261	864
HCM Lane V/C Ratio	-	-	0.029	0.001
HCM Control Delay (s)	-	-	19.2	9.2
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕ ↑↑↑			↕	
Traffic Vol, veh/h	2	521	661	4	2	4
Future Vol, veh/h	2	521	661	4	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	94	94	80	80
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	2	620	703	4	3	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	707	0	-	0	1329 354
Stage 1	-	-	-	-	705 -
Stage 2	-	-	-	-	624 -
Critical Hdwy	5.3	-	-	-	6.05 7.1
Critical Hdwy Stg 1	-	-	-	-	6.6 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	3.1	-	-	-	3.65 3.9
Pot Cap-1 Maneuver	548	-	-	-	192 553
Stage 1	-	-	-	-	379 -
Stage 2	-	-	-	-	522 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	548	-	-	-	191 553
Mov Cap-2 Maneuver	-	-	-	-	191 -
Stage 1	-	-	-	-	377 -
Stage 2	-	-	-	-	522 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	548	-	-	-	339
HCM Lane V/C Ratio	0.004	-	-	-	0.022
HCM Control Delay (s)	11.6	0	-	-	15.9
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Fairhaven RMD
3: Alden Road & Bridge Street

Saturday Midday
Timing Plan: 2022 Existing



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	219	36	152	227	167	28	262	172	181	346	191
Future Volume (vph)	200	219	36	152	227	167	28	262	172	181	346	191
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	345		0	0		0	130		0	0		0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1805	1813	0	1805	1827	1599	1805	1900	1615	1787	1900	1615
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	1813	0	1805	1827	1599	1805	1900	1615	1787	1900	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				199			198			212
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1304			189			937			202	
Travel Time (s)		29.6			4.3			21.3			4.6	
Peak Hour Factor	0.95	0.95	0.95	0.84	0.84	0.84	0.87	0.87	0.87	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	0%	0%	4%	1%	0%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	211	269	0	181	270	199	32	301	198	201	384	212
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8		7	4	1	5	2	7	1	6	3
Permitted Phases						4			2			6
Detector Phase	3	8		7	4	1	5	2	7	1	6	3
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	26.0	30.0		26.0	30.0	22.0	22.0	33.0	26.0	22.0	33.0	26.0
Total Split (%)	18.6%	21.4%		18.6%	21.4%	15.7%	15.7%	23.6%	18.6%	15.7%	23.6%	18.6%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	17.4	22.7		15.6	20.9	43.2	7.3	21.8	43.5	16.2	36.1	59.6
Actuated g/C Ratio	0.17	0.23		0.16	0.21	0.43	0.07	0.22	0.43	0.16	0.36	0.59
v/c Ratio	0.68	0.65		0.65	0.71	0.25	0.24	0.73	0.24	0.70	0.56	0.20
Control Delay	52.2	44.4		52.7	49.5	3.7	51.7	48.7	3.2	56.6	33.0	2.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	44.4		52.7	49.5	3.7	51.7	48.7	3.2	56.6	33.0	2.3
LOS	D	D		D	D	A	D	D	A	E	C	A
Approach Delay		47.8			36.4			31.9			30.8	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	132	157		115	167	0	21	189	0	130	225	0
Queue Length 95th (ft)	223	268		178	249	34	51	278	34	#256	347	34
Internal Link Dist (ft)		1224			109			857			122	
Turn Bay Length (ft)	345						130					
Base Capacity (vph)	363	452		363	441	799	290	516	876	288	682	1083

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	29.0
Total Split (s)	29.0
Total Split (%)	21%
Yellow Time (s)	2.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

Fairhaven RMD
3: Alden Road & Bridge Street

Saturday Midday
Timing Plan: 2022 Existing



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.60		0.50	0.61	0.25	0.11	0.58	0.23	0.70	0.56	0.20

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	100.6
Natural Cycle:	110
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	35.8
Intersection LOS:	D
Intersection Capacity Utilization	66.8%
ICU Level of Service	C
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 3: Alden Road & Bridge Street

Ø1 22 s	Ø2 33 s	Ø3 26 s	Ø4 30 s	Ø9 29 s
Ø5 22 s	Ø6 33 s	Ø7 26 s	Ø8 30 s	

Lane Group	Ø9
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔↔
Traffic Vol, veh/h	2	3	625	4	3	716
Future Vol, veh/h	2	3	625	4	3	716
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	96	96	91	91
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	3	5	651	4	3	787

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1053	653	0	0	655
Stage 1	653	-	-	-	-
Stage 2	400	-	-	-	-
Critical Hdwy	6.6	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	238	471	-	-	942
Stage 1	522	-	-	-	-
Stage 2	652	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	237	471	-	-	942
Mov Cap-2 Maneuver	237	-	-	-	-
Stage 1	522	-	-	-	-
Stage 2	648	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	338	942
HCM Lane V/C Ratio	-	-	0.023	0.003
HCM Control Delay (s)	-	-	15.9	8.8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕ ↑↑↑			↕	
Traffic Vol, veh/h	3	569	540	4	3	6
Future Vol, veh/h	3	569	540	4	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	83	83	80	80
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	3	625	651	5	4	8

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	656	0	-	0	1285 328
Stage 1	-	-	-	-	654 -
Stage 2	-	-	-	-	631 -
Critical Hdwy	5.3	-	-	-	6.05 7.1
Critical Hdwy Stg 1	-	-	-	-	6.6 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	3.1	-	-	-	3.65 3.9
Pot Cap-1 Maneuver	579	-	-	-	204 574
Stage 1	-	-	-	-	407 -
Stage 2	-	-	-	-	518 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	579	-	-	-	202 574
Mov Cap-2 Maneuver	-	-	-	-	202 -
Stage 1	-	-	-	-	404 -
Stage 2	-	-	-	-	518 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	579	-	-	-	356
HCM Lane V/C Ratio	0.006	-	-	-	0.032
HCM Control Delay (s)	11.3	0	-	-	15.4
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

APPENDIX F
2029 No Build Capacity/Level-of-Service Analysis

Fairhaven RMD
3: Alden Road & Bridge Street

Weekday PM
Timing Plan: 2029 No Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	257	34	188	291	283	44	267	141	203	301	166
Future Volume (vph)	187	257	34	188	291	283	44	267	141	203	301	166
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	345		0	0		0	130		0	0		0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1805	1833	0	1787	1881	1583	1805	1900	1615	1770	1881	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	1833	0	1787	1881	1583	1805	1900	1615	1770	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				304			191			205
Link Speed (mph)		30			30			30				30
Link Distance (ft)		1304			189			937				202
Travel Time (s)		29.6			4.3			21.3				4.6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.74	0.74	0.74	0.81	0.81	0.81
Heavy Vehicles (%)	0%	2%	0%	1%	1%	2%	0%	0%	0%	2%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	313	0	202	313	304	59	361	191	251	372	205
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8		7	4	1	5	2	7	1	6	3
Permitted Phases						4			2			6
Detector Phase	3	8		7	4	1	5	2	7	1	6	3
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	26.0	30.0		26.0	30.0	22.0	22.0	33.0	26.0	22.0	33.0	26.0
Total Split (%)	18.6%	21.4%		18.6%	21.4%	15.7%	15.7%	23.6%	18.6%	15.7%	23.6%	18.6%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	17.1	24.3		17.3	24.4	45.7	9.2	27.0	50.4	16.2	36.8	60.0
Actuated g/C Ratio	0.15	0.21		0.15	0.21	0.40	0.08	0.24	0.44	0.14	0.32	0.53
v/c Ratio	0.74	0.79		0.75	0.78	0.37	0.41	0.80	0.23	1.00	0.61	0.22
Control Delay	64.5	59.1		64.9	58.0	3.6	60.9	56.6	4.1	106.2	41.6	3.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	59.1		64.9	58.0	3.6	60.9	56.6	4.1	106.2	41.6	3.6
LOS	E	E		E	E	A	E	E	A	F	D	A
Approach Delay		61.2			39.5			40.6				51.8
Approach LOS		E			D			D				D
Queue Length 50th (ft)	134	205		134	206	0	40	236	0	177	223	0
Queue Length 95th (ft)	#299	#484		#305	#480	44	80	#379	20	#395	#444	32
Internal Link Dist (ft)		1224			109			857			122	
Turn Bay Length (ft)	345						130					
Base Capacity (vph)	321	394		317	403	817	257	456	858	252	607	977

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	29.0
Total Split (s)	29.0
Total Split (%)	21%
Yellow Time (s)	2.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

Fairhaven RMD
3: Alden Road & Bridge Street

Weekday PM
Timing Plan: 2029 No Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.79		0.64	0.78	0.37	0.23	0.79	0.22	1.00	0.61	0.21

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 113.8
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 47.4 Intersection LOS: D
 Intersection Capacity Utilization 71.3% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Alden Road & Bridge Street

Ø1 22 s	Ø2 33 s	Ø3 26 s	Ø4 30 s	Ø9 29 s
Ø5 22 s	Ø6 33 s	Ø7 26 s	Ø8 30 s	

Lane Group	Ø9
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	733	4	1	666
Future Vol, veh/h	4	2	733	4	1	666
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	85	85	83	83
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	5	3	862	5	1	802

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1268	865	0	0	867
Stage 1	865	-	-	-	-
Stage 2	403	-	-	-	-
Critical Hdwy	6.6	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	175	356	-	-	785
Stage 1	416	-	-	-	-
Stage 2	649	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	175	356	-	-	785
Mov Cap-2 Maneuver	175	-	-	-	-
Stage 1	416	-	-	-	-
Stage 2	648	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	211	785
HCM Lane V/C Ratio	-	-	0.036	0.002
HCM Control Delay (s)	-	-	22.7	9.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔ ↑↑↑			↔	
Traffic Vol, veh/h	2	599	758	4	2	4
Future Vol, veh/h	2	599	758	4	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	94	94	80	80
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	2	713	806	4	3	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	810	0	-	0	1525 405
Stage 1	-	-	-	-	808 -
Stage 2	-	-	-	-	717 -
Critical Hdwy	5.3	-	-	-	6.05 7.1
Critical Hdwy Stg 1	-	-	-	-	6.6 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	3.1	-	-	-	3.65 3.9
Pot Cap-1 Maneuver	489	-	-	-	149 513
Stage 1	-	-	-	-	328 -
Stage 2	-	-	-	-	473 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	489	-	-	-	148 513
Mov Cap-2 Maneuver	-	-	-	-	148 -
Stage 1	-	-	-	-	326 -
Stage 2	-	-	-	-	473 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	489	-	-	-	282
HCM Lane V/C Ratio	0.005	-	-	-	0.027
HCM Control Delay (s)	12.4	0	-	-	18.1
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Fairhaven RMD
3: Alden Road & Bridge Street

Saturday Midday
Timing Plan: 2029 No Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	252	41	175	260	192	32	301	198	208	397	219
Future Volume (vph)	230	252	41	175	260	192	32	301	198	208	397	219
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	345		0	0		0	130		0	0		0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1805	1813	0	1805	1827	1599	1805	1900	1615	1787	1900	1615
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	1813	0	1805	1827	1599	1805	1900	1615	1787	1900	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				229			228			243
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1304			189			937			202	
Travel Time (s)		29.6			4.3			21.3			4.6	
Peak Hour Factor	0.95	0.95	0.95	0.84	0.84	0.84	0.87	0.87	0.87	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	0%	0%	4%	1%	0%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	242	308	0	208	310	229	37	346	228	231	441	243
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8		7	4	1	5	2	7	1	6	3
Permitted Phases						4			2			6
Detector Phase	3	8		7	4	1	5	2	7	1	6	3
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	26.0	30.0		26.0	30.0	22.0	22.0	33.0	26.0	22.0	33.0	26.0
Total Split (%)	18.6%	21.4%		18.6%	21.4%	15.7%	15.7%	23.6%	18.6%	15.7%	23.6%	18.6%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	19.5	26.0		17.5	24.0	46.1	7.7	25.8	49.3	16.0	39.1	64.5
Actuated g/C Ratio	0.18	0.24		0.16	0.22	0.42	0.07	0.24	0.45	0.15	0.36	0.59
v/c Ratio	0.75	0.71		0.72	0.77	0.28	0.29	0.77	0.27	0.89	0.65	0.23
Control Delay	58.8	48.9		58.2	54.8	3.7	54.4	51.9	3.0	79.5	36.9	2.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.8	48.9		58.2	54.8	3.7	54.4	51.9	3.0	79.5	36.9	2.2
LOS	E	D		E	D	A	D	D	A	E	D	A
Approach Delay		53.3			40.1			33.8			38.4	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	165	202		141	210	0	26	229	0	164	278	0
Queue Length 95th (ft)	#277	#335		202	#291	36	57	322	36	#308	#421	37
Internal Link Dist (ft)		1224			109			857			122	
Turn Bay Length (ft)	345						130					
Base Capacity (vph)	330	434		330	401	806	264	470	885	261	679	1060

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	29.0
Total Split (s)	29.0
Total Split (%)	21%
Yellow Time (s)	2.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

Fairhaven RMD
3: Alden Road & Bridge Street

Saturday Midday
Timing Plan: 2029 No Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.71		0.63	0.77	0.28	0.14	0.74	0.26	0.89	0.65	0.23

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	109.3
Natural Cycle:	130
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	40.8
Intersection LOS:	D
Intersection Capacity Utilization:	73.8%
ICU Level of Service:	D
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 3: Alden Road & Bridge Street

Ø1 22 s	Ø2 33 s	Ø3 26 s	Ø4 30 s	Ø9 29 s
Ø5 22 s	Ø6 33 s	Ø7 26 s	Ø8 30 s	

Lane Group	Ø9
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	719	4	3	822
Future Vol, veh/h	2	3	719	4	3	822
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	96	96	91	91
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	3	5	749	4	3	903

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1209	751	0	0	753
Stage 1	751	-	-	-	-
Stage 2	458	-	-	-	-
Critical Hdwy	6.6	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	191	414	-	-	866
Stage 1	470	-	-	-	-
Stage 2	609	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	190	414	-	-	866
Mov Cap-2 Maneuver	190	-	-	-	-
Stage 1	470	-	-	-	-
Stage 2	605	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	281	866
HCM Lane V/C Ratio	-	-	0.028	0.004
HCM Control Delay (s)	-	-	18.2	9.2
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔ ↑↑↑			↔	
Traffic Vol, veh/h	3	655	621	4	3	6
Future Vol, veh/h	3	655	621	4	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	83	83	80	80
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	3	720	748	5	4	8

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	753	0	-	0	1477 377
Stage 1	-	-	-	-	751 -
Stage 2	-	-	-	-	726 -
Critical Hdwy	5.3	-	-	-	6.05 7.1
Critical Hdwy Stg 1	-	-	-	-	6.6 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	3.1	-	-	-	3.65 3.9
Pot Cap-1 Maneuver	521	-	-	-	159 535
Stage 1	-	-	-	-	356 -
Stage 2	-	-	-	-	469 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	521	-	-	-	157 535
Mov Cap-2 Maneuver	-	-	-	-	157 -
Stage 1	-	-	-	-	352 -
Stage 2	-	-	-	-	469 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	521	-	-	-	297
HCM Lane V/C Ratio	0.006	-	-	-	0.038
HCM Control Delay (s)	12	0	-	-	17.6
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

APPENDIX G
2029 Build Capacity/Level-of-Service Analysis

Fairhaven RMD
3: Alden Road & Bridge Street

Weekday PM
Timing Plan: 2029 Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	259	34	190	294	283	44	269	143	210	303	166
Future Volume (vph)	188	259	34	190	294	283	44	269	143	210	303	166
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	345		0	0		0	130		0	0		0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1805	1833	0	1787	1881	1583	1805	1900	1615	1770	1881	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	1833	0	1787	1881	1583	1805	1900	1615	1770	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				304			193			205
Link Speed (mph)		30			30			30				30
Link Distance (ft)		1304			189			937				202
Travel Time (s)		29.6			4.3			21.3				4.6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.74	0.74	0.74	0.81	0.81	0.81
Heavy Vehicles (%)	0%	2%	0%	1%	1%	2%	0%	0%	0%	2%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	202	315	0	204	316	304	59	364	193	259	374	205
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8		7	4	1	5	2	7	1	6	3
Permitted Phases						4			2			6
Detector Phase	3	8		7	4	1	5	2	7	1	6	3
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	26.0	30.0		26.0	30.0	22.0	22.0	33.0	26.0	22.0	33.0	26.0
Total Split (%)	18.6%	21.4%		18.6%	21.4%	15.7%	15.7%	23.6%	18.6%	15.7%	23.6%	18.6%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	17.2	24.3		17.4	24.5	45.7	9.2	27.3	50.7	16.2	36.9	60.2
Actuated g/C Ratio	0.15	0.21		0.15	0.21	0.40	0.08	0.24	0.44	0.14	0.32	0.53
v/c Ratio	0.75	0.80		0.75	0.78	0.37	0.41	0.80	0.23	1.04	0.62	0.22
Control Delay	64.9	59.8		65.2	58.6	3.6	60.9	56.7	4.1	114.7	41.6	3.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.9	59.8		65.2	58.6	3.6	60.9	56.7	4.1	114.7	41.6	3.6
LOS	E	E		E	E	A	E	E	A	F	D	A
Approach Delay		61.8			39.9			40.6				54.9
Approach LOS		E			D			D				D
Queue Length 50th (ft)	135	207		136	208	0	40	239	0	~184	225	0
Queue Length 95th (ft)	#302	#488		#309	#485	44	80	#385	21	#410	#446	32
Internal Link Dist (ft)		1224			109			857			122	
Turn Bay Length (ft)	345						130					
Base Capacity (vph)	319	393		316	403	816	256	454	860	250	608	977

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	29.0
Total Split (s)	29.0
Total Split (%)	21%
Yellow Time (s)	2.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

Fairhaven RMD
3: Alden Road & Bridge Street

Weekday PM
Timing Plan: 2029 Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.80		0.65	0.78	0.37	0.23	0.80	0.22	1.04	0.62	0.21

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	114.1
Natural Cycle:	130
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.04
Intersection Signal Delay:	48.6
Intersection LOS:	D
Intersection Capacity Utilization	72.0%
ICU Level of Service	C
Analysis Period (min)	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 3: Alden Road & Bridge Street

Ø1 22 s	Ø2 33 s	Ø3 26 s	Ø4 30 s	Ø9 29 s
Ø5 22 s	Ø6 33 s	Ø7 26 s	Ø8 30 s	

Lane Group	Ø9
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	7	733	7	6	666
Future Vol, veh/h	13	7	733	7	6	666
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	85	85	83	83
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	16	9	862	8	7	802

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1281	866	0	0	870
Stage 1	866	-	-	-	-
Stage 2	415	-	-	-	-
Critical Hdwy	6.6	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	172	356	-	-	783
Stage 1	415	-	-	-	-
Stage 2	641	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	169	356	-	-	783
Mov Cap-2 Maneuver	169	-	-	-	-
Stage 1	415	-	-	-	-
Stage 2	631	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.8	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	207	783
HCM Lane V/C Ratio	-	-	0.121	0.009
HCM Control Delay (s)	-	-	24.8	9.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕ ↑↑↑			↕	
Traffic Vol, veh/h	6	606	758	9	0	9
Future Vol, veh/h	6	606	758	9	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	94	94	80	80
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	7	721	806	10	0	11

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	816	0	-	0	1546 408
Stage 1	-	-	-	-	811 -
Stage 2	-	-	-	-	735 -
Critical Hdwy	5.3	-	-	-	6.05 7.1
Critical Hdwy Stg 1	-	-	-	-	6.6 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	3.1	-	-	-	3.65 3.9
Pot Cap-1 Maneuver	486	-	-	-	145 511
Stage 1	-	-	-	-	327 -
Stage 2	-	-	-	-	465 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	486	-	-	-	142 511
Mov Cap-2 Maneuver	-	-	-	-	142 -
Stage 1	-	-	-	-	319 -
Stage 2	-	-	-	-	465 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	486	-	-	-	511
HCM Lane V/C Ratio	0.015	-	-	-	0.022
HCM Control Delay (s)	12.5	0	-	-	12.2
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Fairhaven RMD
3: Alden Road & Bridge Street

Saturday Midday
Timing Plan: 2029 Build



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	232	254	41	178	264	192	32	304	201	211	400	219
Future Volume (vph)	232	254	41	178	264	192	32	304	201	211	400	219
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	345		0	0		0	130		0	0		0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1805	1813	0	1805	1827	1599	1805	1900	1615	1787	1900	1615
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	1813	0	1805	1827	1599	1805	1900	1615	1787	1900	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				229			231			243
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1304			189			937			202	
Travel Time (s)		29.6			4.3			21.3			4.6	
Peak Hour Factor	0.95	0.95	0.95	0.84	0.84	0.84	0.87	0.87	0.87	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	0%	0%	4%	1%	0%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	244	310	0	212	314	229	37	349	231	234	444	243
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	8		7	4	1	5	2	7	1	6	3
Permitted Phases						4			2			6
Detector Phase	3	8		7	4	1	5	2	7	1	6	3
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	26.0	30.0		26.0	30.0	22.0	22.0	33.0	26.0	22.0	33.0	26.0
Total Split (%)	18.6%	21.4%		18.6%	21.4%	15.7%	15.7%	23.6%	18.6%	15.7%	23.6%	18.6%
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	19.5	25.8		17.8	24.0	46.0	7.7	26.0	49.8	16.0	39.3	64.8
Actuated g/C Ratio	0.18	0.24		0.16	0.22	0.42	0.07	0.24	0.45	0.15	0.36	0.59
v/c Ratio	0.76	0.72		0.72	0.79	0.28	0.29	0.77	0.27	0.90	0.65	0.23
Control Delay	59.2	49.9		58.3	55.9	3.7	54.4	52.0	3.0	82.2	37.0	2.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	49.9		58.3	55.9	3.7	54.4	52.0	3.0	82.2	37.0	2.2
LOS	E	D		E	E	A	D	D	A	F	D	A
Approach Delay		54.0			40.7			33.8			39.3	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	167	205		143	213	0	26	232	0	166	280	0
Queue Length 95th (ft)	#280	#340		206	#298	36	57	325	36	#313	#438	37
Internal Link Dist (ft)		1224			109			857			122	
Turn Bay Length (ft)	345						130					
Base Capacity (vph)	329	429		329	400	804	263	468	887	260	680	1060

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	29.0
Total Split (s)	29.0
Total Split (%)	21%
Yellow Time (s)	2.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.72		0.64	0.79	0.28	0.14	0.75	0.26	0.90	0.65	0.23

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	109.6
Natural Cycle:	130
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	41.3
Intersection LOS:	D
Intersection Capacity Utilization:	74.4%
ICU Level of Service:	D
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 3: Alden Road & Bridge Street

Ø1 22 s	Ø2 33 s	Ø3 26 s	Ø4 30 s	Ø9 29 s
Ø5 22 s	Ø6 33 s	Ø7 26 s	Ø8 30 s	

Lane Group	Ø9
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	11	719	9	11	822
Future Vol, veh/h	8	11	719	9	11	822
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	96	96	91	91
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	13	17	749	9	12	903

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1230	754	0	0	758
Stage 1	754	-	-	-	-
Stage 2	476	-	-	-	-
Critical Hdwy	6.6	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	185	412	-	-	862
Stage 1	468	-	-	-	-
Stage 2	597	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	180	412	-	-	862
Mov Cap-2 Maneuver	180	-	-	-	-
Stage 1	468	-	-	-	-
Stage 2	580	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.2	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	267	862
HCM Lane V/C Ratio	-	-	0.113	0.014
HCM Control Delay (s)	-	-	20.2	9.2
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕ ↑↑↑	↕ ↑↑↑		↕	
Traffic Vol, veh/h	8	658	621	12	8	13
Future Vol, veh/h	8	658	621	12	8	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	83	83	80	80
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	9	723	748	14	10	16

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	762	0	-	0	1496 381
Stage 1	-	-	-	-	755 -
Stage 2	-	-	-	-	741 -
Critical Hdwy	5.3	-	-	-	6.05 7.1
Critical Hdwy Stg 1	-	-	-	-	6.6 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	3.1	-	-	-	3.65 3.9
Pot Cap-1 Maneuver	516	-	-	-	155 531
Stage 1	-	-	-	-	354 -
Stage 2	-	-	-	-	462 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	516	-	-	-	151 531
Mov Cap-2 Maneuver	-	-	-	-	151 -
Stage 1	-	-	-	-	344 -
Stage 2	-	-	-	-	462 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	19.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	516	-	-	-	271
HCM Lane V/C Ratio	0.017	-	-	-	0.097
HCM Control Delay (s)	12.1	0	-	-	19.7
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

APPENDIX H
Capacity/Level-of-Service Analysis Summary

CAPACITY ANALYSIS SUMMARY

**Weekday Afternoon Peak Hour
Retail Marijuana Dispensary
240 Bridge Street, Fairhaven, MA**

Intersection	Movement	2022 Existing			2029 No Build			2029 Build			
		LOS ¹	Delay ²	V/C ³	LOS	Delay	V/C	LOS	Delay	V/C	
Bridge Street at Alden Road	EB	L	E	59.1	0.67	E	64.5	0.74	E	64.9	0.75
		TR	D	54.3	0.74	E	59.1	0.79	E	59.8	0.80
	WB	L	E	59.1	0.67	E	64.9	0.75	E	65.2	0.75
		T	D	53.4	0.72	E	58.0	0.78	E	58.6	0.78
		R	A	3.5	0.33	A	3.6	0.37	A	3.6	0.37
	NB	L	E	57.5	0.34	E	60.9	0.41	E	60.9	0.41
		T	D	53.3	0.76	E	56.6	0.80	E	56.7	0.80
		R	A	4.4	0.21	A	4.1	0.23	A	4.1	0.23
	SB	L	E	65.5	0.78	F	106.2	1.00	F	114.7	1.04
		T	D	38.3	0.53	D	41.6	0.61	D	41.6	0.62
R		A	3.7	0.19	A	3.6	0.22	A	3.6	0.22	
	<i>Overall</i>	<i>D</i>	<i>40.9</i>	<i>0.65</i>	<i>D</i>	<i>47.4</i>	<i>0.71</i>	<i>D</i>	<i>48.6</i>	<i>0.72</i>	
Bridge Street at Site Driveway	EB	LT	A	0.0	0.00	A	0.0	0.01	A	0.1	0.02
		TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB	LR	C	15.9	0.02	C	18.1	0.03	B	12.2	0.02
Alden Road at Site Driveway	WB	LR	C	19.2	0.03	C	22.7	0.04	C	24.8	0.12
		TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB	LT	A	0.0	0.00	A	0.0	0.00	A	0.2	0.01

1 Level-of-Service

2 Average vehicle delay in seconds

3 Volume to capacity ratio

QUEUE SUMMARY

**Weekday Afternoon Peak Hour
Retail Marijuana Dispensary
240 Bridge Street, Fairhaven, MA**

Intersection	Movement	2022 Existing		2029 No Build		2029 Build		
		50th Queue ¹	95th Queue ²	50th Queue	95th Queue	50th Queue	95th Queue	
Bridge Street at Alden Road	EB L	109	237	134	299	135	302	
		162	397	205	484	207	488	
	WB L	109	242	134	305	136	309	
		T	164	395	206	480	208	485
		R	0	42	0	44	0	44
	NB L	32	72	40	80	40	80	
		T	189	310	236	379	239	385
		R	0	21	0	20	0	21
	SB L	138	329	177	395	184	410	
		T	176	347	223	444	225	446
		R	0	32	0	32	0	32
	Bridge Street at Site Driveway	EB LT	n/a	0	n/a	0	n/a	0
WB TR		n/a	0	n/a	0	n/a	0	
SB LR		n/a	3	n/a	3	n/a	3	
Alden Road at Site Driveway	WB LR	n/a	3	n/a	3	n/a	10	
	NB TR	n/a	0	n/a	0	n/a	0	
	SB LT	n/a	0	n/a	0	n/a	0	

1 50th Percentile Queue Length, in feet

2 95th Percentile Queue Length, in feet

n/a Not Applicable

CAPACITY ANALYSIS SUMMARY

**Saturday Midday Peak Hour
Retail Marijuana Dispensary
240 Bridge Street, Fairhaven, MA**

Intersection	Movement	2022 Existing			2029 No Build			2029 Build			
		LOS ¹	Delay ²	V/C ³	LOS	Delay	V/C	LOS	Delay	V/C	
Bridge Street at Alden Road	EB	L	D	52.2	0.68	E	58.8	0.75	E	59.2	0.76
		TR	D	44.4	0.65	D	48.9	0.71	D	49.9	0.72
	WB	L	D	52.7	0.65	E	58.2	0.72	E	58.3	0.72
		T	D	49.5	0.71	D	54.8	0.77	E	55.9	0.79
		R	A	3.7	0.25	A	3.7	0.28	A	3.7	0.28
	NB	L	D	51.7	0.24	D	54.4	0.29	D	54.4	0.29
		T	D	48.7	0.73	D	51.9	0.77	D	52.0	0.77
		R	A	3.2	0.24	A	3.0	0.27	A	3.0	0.27
	SB	L	E	56.6	0.70	E	79.5	0.89	F	82.2	0.90
		T	C	33.0	0.56	D	36.9	0.65	D	37.0	0.65
		R	A	2.3	0.20	A	2.2	0.23	A	2.2	0.23
		<i>Overall</i>	<i>D</i>	<i>35.8</i>	<i>0.67</i>	<i>D</i>	<i>40.8</i>	<i>0.74</i>	<i>D</i>	<i>41.3</i>	<i>0.74</i>
Bridge Street at Site Driveway	EB	LT	A	0.1	0.01	A	0.1	0.01	A	0.1	0.02
		TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB	LR	C	15.4	0.03	C	17.6	0.04	C	19.7	0.10
Alden Road at Site Driveway	WB	LR	C	15.9	0.02	C	18.2	0.03	C	20.2	0.11
		TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB	LT	A	0.0	0.00	A	0.0	0.00	A	0.2	0.01

1 Level-of-Service

2 Average vehicle delay in seconds

3 Volume to capacity ratio

QUEUE SUMMARY

**Saturday Midday Peak Hour
Retail Marijuana Dispensary
240 Bridge Street, Fairhaven, MA**

Intersection	Movement	2022 Existing		2029 No Build		2029 Build	
		50th Queue ¹	95th Queue ²	50th Queue	95th Queue	50th Queue	95th Queue
Bridge Street at Alden Road	EB L	132	223	165	277	167	280
		157	268	202	335	205	340
	WB L	115	178	141	202	143	206
		167	249	210	291	213	298
		0	34	0	36	0	36
	NB L	21	51	26	57	26	57
		189	278	229	322	232	325
		0	34	0	36	0	36
	SB L	130	256	164	308	166	313
		225	347	278	421	280	438
		0	34	0	37	0	37
	Bridge Street at Site Driveway	EB LT	n/a	0	n/a	0	n/a
WB TR		n/a	0	n/a	0	n/a	0
SB LR		n/a	3	n/a	3	n/a	8
Alden Road at Site Driveway	WB LR	n/a	3	n/a	3	n/a	10
	NB TR	n/a	0	n/a	0	n/a	0
	SB LT	n/a	0	n/a	0	n/a	0

¹ 50th Percentile Queue Length, in feet

² 95th Percentile Queue Length, in feet

n/a Not Applicable