

Hampshire Country Club Planned Residential Development
Village of Mamaroneck,
Westchester County, New York
Final Environmental Impact Statement

V Traffic Analyses and Backup



FEIS Chapter M Appendix

Response to
Comment M1, M19

Construction
Traffic Activity

Average Daily Truck and Non-Truck Visits to the Hampshire Country Club Site during Construction
(with projected peak-hour trips)

	Mobilization	Main Platform Fill	Demobilization	Structure/Foundation/Roads/Utilities/Fitout/Spurs Fill				Demobilization
					Initial Period	Middle Period	Completion Period	
Duration	0.5 Months	9 Months	0.25 Months		12 Months	24 Months	6 Months	0.5 Months
Vehicle Type								
Single Unit 5-Axle	2 Misc.	24 Fill	2 Misc.		3.5 Fill 0.5 Concrete 0 Topsoil 0 Paving 0 Driveway 0 Tennis/Parking	3.5 Fill 0.5 Concrete 0.2 Topsoil 1 Paving 0.5 Driveway 0 Tennis/Parking	0 Fill 0 Concrete 0.2 Topsoil 1 Paving 0.5 Driveway 2 Tennis/Parking	1 Misc.
				Subtotal	4	5.7	3.7	
Tractor Trailer	0.2 Misc.	0.2 Misc.	0.2 Misc.		0.2 General 0.0 Wood 0.0 Materials/Fitout	0.2 General 0.6 Wood 0.5 Materials/Fitout	0.1 General 0.0 Wood 0.5 Materials/Fitout	0.2 Misc.
				Subtotal	0.2	1.3	0.6	
Over Sized (carrying heavy equipment)	1	0	0.5		0	0	0	0.75
Single Unit 3-Axle	1 General Delivery	2 General Delivery	2 General Delivery		4 General Delivery	0.5 Mechanical/Electrical 5 - General Delivery	0.5 Mechanical/Electrical 4 - General Delivery	2 General Delivery
				Subtotal	4	5.5	4.5	
Total Trucks	4.2	26.2	4.7		8.2	12.5	8.8	3.95
Private Auto/Pickup	15	25	20		40	50	40	15
Max Per-hour Trips								
Truck	3	12	3		6	8	6	2.4
Car	10	17	13		27	33	27	10
Total	13	29	16		33	41	33	12

FEIS Chapter M Appendix

Response to Comment M9, M42, M 43

Revised Intersection Analyses & Summary Table
with twice the counted level of Pedestrian Activity
and with Cooper Avenue Closed

Revised Table M8 and M9 reflecting twice the counted level of pedestrian activity and Cooper Avenue as an emergency access only.

Build Levels of Service - High Pedestrian Analysis (LOS/Delay)								
Intersection	Approach	Lane Group	AM Peak Hour		PM Peak Hour		Sat Peak Hour	
			No-Build	Build	No-Build	Build	No-Build	Build
Boston Post Rd & Hommocks Rd/Weaver St	EB	L	E/62.7	E/64.0	D/49.1	D/49.2	D/45.8	D/45.9
		TR	D/52.7	D/52.8	D/47.5	D/47.7	D/44.1	D/44.2
	WB	L	E/56.7	E/66.7	D/47.2	D/48	D/43.1	D/43.6
		TR	D/51.5	D/52.2	D/44.6	D/44.8	D/41.1	D/41.2
	NB	L	D/42.0	D/42.0	E/56.4	E/56.4	D/50.0	D/50
		TR	E/72.0	E/73.8	C/31.0	C/31.4	C/33.2	C/33.5
	SB	L	E/76.2	E/76.2	C/26.4	C/27.5	C/28.3	C/29.3
		TR	D/38.1	D/38.1	D/41.1	D/41.1	D/42.4	D/42.4
	Intersection		E/57.3	E/58.4	D/39.5	D/39.7	D/39.6	D/39.8
Boston Post Rd & Orienta Ave/ Delancey Ave	EB	L	D/43.6	D/43.6	D/43.7	D/43.4	D/45.3	D/45.2
		R	B/10.4	B/10.4	B/12.8	B/12.5	B/13.0	B/12.8
	WB	L	D/44.8	D/44.8	D/42.3	D/42.6	D/40.4	D/40.5
		R	A/9.0	A/9.0	A/8.6	A/8.7	A/8.5	A/8.4
	NB	TR	D/42.3	D/42.4	D/39.1	D/39.2	D/41.1	D/41.2
	SB	TR	C/23.3	C/23.4	C/23.4	C/23.7	C/21.2	C/21.4
	Intersection		C/27.8	C/28.1	C/23.1	C/23.4	C/24.8	C/24.8
Boston Post Rd & Old Boston Post Rd/ Richbell Rd	EB	L	D/49.8	D/49.9	D/44.5	D/44.6	D/41.8	D/42.1
		R	D/41.9	D/41.7	D/40.1	D/39.9	A/9.7	A/9.6
	WB	L	D/40.5	D/40.4	D/40.1	D/39.8	D/36.3	D/36.2
		TR	D/43.5	D/43.4	D/39.7	D/39.4	C/26.8	C/27.0
	NB	L	B/18.9	B/18.1	B/14.2	B/14.5	B/14.7	B/14.8
		T	B/18.8	B/19	B/13.5	B/13.7	B/14.8	B/14.9
	SB	TR	C/28.7	C/28.8	C/24.5	C/24.8	C/24.8	C/24.9
	Intersection		C/27.4	C/27.5	C/23.1	C/23.3	C/21.4	C/21.5

A new analysis has been performed to address the stated concerns. The traffic volumes used in the DEIS analysis were compared to ATR data collected over the course of a week, March 14-20, 2016. The data confirmed that the counts used in the DEIS are representative of typical vehicular volumes. The ATR data showed higher volumes than the DEIS counts for the northbound approach of Boston Post Road at Orienta Avenue, so the volumes in the new analysis were increased by the difference. Volumes at the intersection of Boston Post Road were revised to reflect that Cooper Avenue is now proposed to be an emergency-only access.

The pedestrian counts were collected when there was activity at the school, including the ice rink and pool. A substantial number of pedestrians and bicyclists were recorded. To present a conservative analysis representative of times of higher pedestrian activity, all pedestrian and bicyclist volumes were doubled for the new analysis.

The new analysis shows that the pedestrian volumes have only a very minor impact on vehicular delay. There is no significant difference between the delays reported in the DEIS and the new analysis, which is provided in the table. The intersection of Boston Post Road at Hommocks Road/Weaver Street operates with an exclusive pedestrian signal phase, therefore it is not expected that an increase in pedestrian volumes would significantly affect vehicular delay.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	152	52	56	145	33	84	584	136	177	507	65
Future Volume (vph)	73	152	52	56	145	33	84	584	136	177	507	65
Satd. Flow (prot)	1687	1650	0	1652	1549	0	1602	3258	0	1604	3208	0
Flt Permitted	0.439			0.380			0.176			0.098		
Satd. Flow (perm)	632	1650	0	610	1549	0	290	3258	0	165	3208	0
Satd. Flow (RTOR)												
Confl. Peds. (#/hr)	300		100	100		300	64		26	26		64
Confl. Bikes (#/hr)									4			4
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	7%	3%	2%	2%	4%	6%	10%	4%	3%	5%	6%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	272	0	75	237	0	112	960	0	236	763	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		12			16		5	2		1	6	
Permitted Phases	12			16			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		16.0	42.0		23.0	49.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Act Effct Green (s)	32.2	32.2		32.2	32.2		46.8	37.0		58.8	44.0	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.37	0.30		0.47	0.35	
v/c Ratio	0.60	0.64		0.48	0.60		0.53	1.00		0.87	0.68	
Control Delay	62.7	52.7		56.7	51.5		42.0	72.0		76.2	38.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	62.7	52.7		56.7	51.5		42.0	72.0		76.2	38.1	
LOS	E	D		E	D		D	E		E	D	
Approach Delay		55.3			52.8			68.9			47.1	
Approach LOS		E			D			E			D	
Queue Length 50th (ft)	75	213		56	183		49	407		138	274	
Queue Length 95th (ft)	#126	253		91	223		70	387		179	271	
Internal Link Dist (ft)		190			209			263			1683	
Turn Bay Length (ft)	145			150			180			140		
Base Capacity (vph)	162	425		157	398		226	964		286	1129	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.60	0.64		0.48	0.60		0.50	1.00		0.83	0.68	

Intersection Summary

Cycle Length: 125

Actuated Cycle Length: 125

Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 57.3

Intersection LOS: E

Intersection Capacity Utilization 63.4%

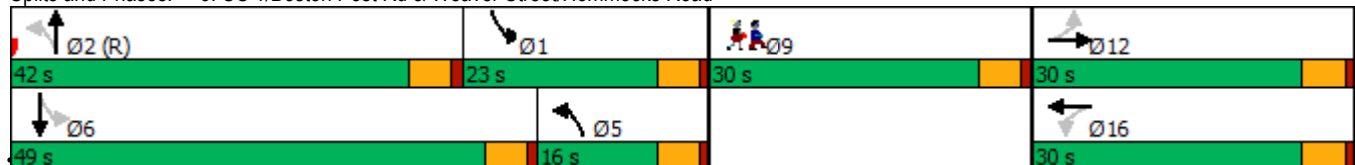
ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: US 1/Boston Post Rd & Weaver Street/Hommocks Road



No-Build
9: US 1/Boston Post Rd & Delancey Ave

AM Peak Hour
08/22/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3	Ø4
Lane Configurations								
Traffic Volume (vph)	27	168	81	772	877	14		
Future Volume (vph)	27	168	81	772	877	14		
Satd. Flow (prot)	1736	1599	0	3487	3025	0		
Flt Permitted	0.950			0.835				
Satd. Flow (perm)	1730	1599	0	2922	3025	0		
Satd. Flow (RTOR)		189						
Confl. Peds. (#/hr)	2		22			22		
Confl. Bikes (#/hr)						10		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		
Heavy Vehicles (%)	4%	1%	3%	3%	4%	8%		
Parking (#/hr)					5			
Shared Lane Traffic (%)								
Lane Group Flow (vph)	30	189	0	958	1001	0		
Turn Type	Perm	Prot	custom	NA	NA			
Protected Phases		5	6	6 4	8		3	4
Permitted Phases	5		3 4	3				
Total Split (s)	26.0	26.0	26.0		68.0		24.0	44.0
Total Lost Time (s)	5.0	5.0			5.0			
Act Effect Green (s)	17.8	17.8		87.2	63.0			
Actuated g/C Ratio	0.15	0.15		0.73	0.52			
v/c Ratio	0.12	0.48		0.39	0.63			
Control Delay	43.6	10.3		1.3	22.5			
Queue Delay	0.0	0.1		0.4	0.8			
Total Delay	43.6	10.4		1.7	23.3			
LOS	D	B		A	C			
Approach Delay	15.0			1.7	23.3			
Approach LOS	B			A	C			
Queue Length 50th (ft)	20	0		22	278			
Queue Length 95th (ft)	47	62		18	343			
Internal Link Dist (ft)	246			90	543			
Turn Bay Length (ft)		70						
Base Capacity (vph)	302	435		2444	1588			
Starvation Cap Reductn	0	0		863	211			
Spillback Cap Reductn	0	17		0	295			
Storage Cap Reductn	0	0		0	0			
Reduced v/c Ratio	0.10	0.45		0.61	0.77			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 13.0

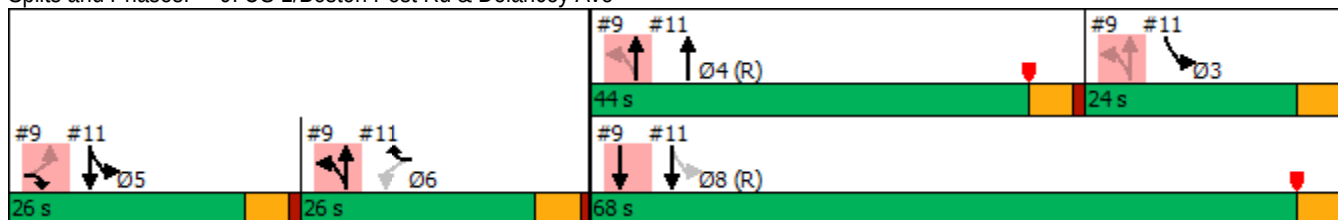
Intersection LOS: B

Intersection Capacity Utilization 64.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: US 1/Boston Post Rd & Delancey Ave



No-Build
11: US 1/Boston Post Rd & Orienta Avenue

AM Peak Hour
08/22/2018

							Ø3	Ø5	Ø8
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3	Ø5	Ø8
Lane Configurations									
Traffic Volume (vph)	79	220	633	123	362	682			
Future Volume (vph)	79	220	633	123	362	682			
Satd. Flow (prot)	1601	1501	3375	0	1648	1757			
Flt Permitted	0.950				0.168				
Satd. Flow (perm)	1579	1501	3375	0	291	1757			
Satd. Flow (RTOR)		247							
Confl. Peds. (#/hr)	8			16	16				
Confl. Bikes (#/hr)				2					
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89			
Heavy Vehicles (%)	9%	4%	3%	11%	9%	4%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	89	247	849	0	407	766			
Turn Type	Perm	Prot	NA		custom	NA			
Protected Phases		6	4		3 5	5 8	3	5	8
Permitted Phases	6				8				
Total Split (s)	26.0	26.0	44.0				24.0	26.0	68.0
Total Lost Time (s)	5.0	5.0	5.0						
Act Effect Green (s)	24.2	24.2	39.0		85.8	85.8			
Actuated g/C Ratio	0.20	0.20	0.32		0.72	0.72			
v/c Ratio	0.28	0.49	0.77		0.60	0.61			
Control Delay	44.8	9.0	42.3		22.4	4.5			
Queue Delay	0.0	0.0	0.0		26.1	0.5			
Total Delay	44.8	9.0	42.3		48.4	4.9			
LOS	D	A	D		D	A			
Approach Delay	18.5		42.3			20.0			
Approach LOS	B		D			C			
Queue Length 50th (ft)	60	0	311		212	58			
Queue Length 95th (ft)	111	70	384		310	56			
Internal Link Dist (ft)	450		2270			90			
Turn Bay Length (ft)									
Base Capacity (vph)	318	500	1096		724	1303			
Starvation Cap Reductn	0	0	0		321	185			
Spillback Cap Reductn	0	0	0		0	0			
Storage Cap Reductn	0	0	0		0	0			
Reduced v/c Ratio	0.28	0.49	0.77		1.01	0.69			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 27.8

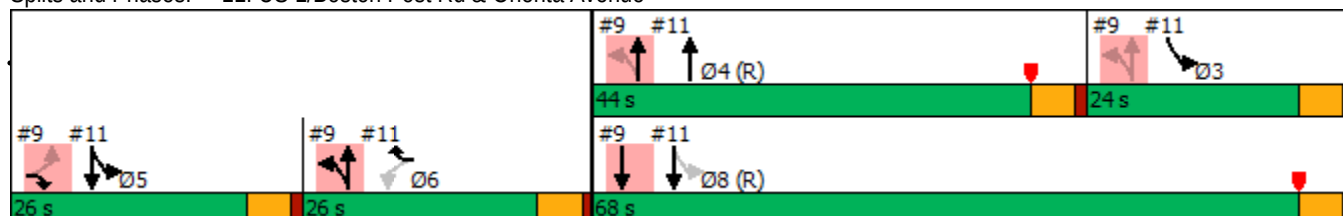
Intersection LOS: C

Intersection Capacity Utilization 58.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 11: US 1/Boston Post Rd & Orienta Avenue



No-Build

AM Peak Hour

20: US 1/Boston Post Rd & Richbell Rd/Old Boston Post Rd

08/22/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	0	93	86	65	68	96	813	0	0	675	65
Future Volume (vph)	96	0	93	86	65	68	96	813	0	0	675	65
Satd. Flow (prot)	1736	0	1568	1678	1667	0	1646	3271	0	0	3266	0
Flt Permitted	0.596			0.950			0.172					
Satd. Flow (perm)	1066	0	1500	1624	1667	0	290	3271	0	0	3266	0
Satd. Flow (RTOR)												
Confl. Peds. (#/hr)	20		22	22		20	120					120
Confl. Bikes (#/hr)												8
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	4%	2%	3%	4%	3%	3%	6%	3%	2%	2%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	0	109	101	156	0	113	956	0	0	870	0
Turn Type	Perm		Perm	Perm	NA		pm+pt	NA			NA	
Protected Phases					8		5	2				6
Permitted Phases	4		4	8			2					
Total Split (s)	31.0		31.0	31.0	31.0		13.0	67.0				54.0
Total Lost Time (s)	5.0		5.0	5.0	5.0		5.0	5.0				5.0
Act Effect Green (s)	17.0		17.0	17.0	17.0		43.4	43.4				33.5
Actuated g/C Ratio	0.20		0.20	0.20	0.20		0.51	0.51				0.39
v/c Ratio	0.54		0.37	0.31	0.47		0.38	0.58				0.68
Control Delay	49.8		41.9	40.5	43.5		18.9	18.8				28.7
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Total Delay	49.8		41.9	40.5	43.5		18.9	18.8				28.7
LOS	D		D	D	D		B	B				C
Approach Delay		45.9			42.3			18.8				28.7
Approach LOS		D			D			B				C
Queue Length 50th (ft)	69		64	59	94		41	237				264
Queue Length 95th (ft)	136		125	116	169		78	320				348
Internal Link Dist (ft)		483			489			1683				2270
Turn Bay Length (ft)			140	100			175					
Base Capacity (vph)	412		579	627	644		308	2395				2090
Starvation Cap Reductn	0		0	0	0		0	0				0
Spillback Cap Reductn	0		0	0	0		0	0				0
Storage Cap Reductn	0		0	0	0		0	0				0
Reduced v/c Ratio	0.27		0.19	0.16	0.24		0.37	0.40				0.42

Intersection Summary

Cycle Length: 125

Actuated Cycle Length: 85.5

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 27.4

Intersection LOS: C

Intersection Capacity Utilization 57.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 20: US 1/Boston Post Rd & Richbell Rd/Old Boston Post Rd

 02	 04	 09
67 s	31 s	27 s
 05	 08	
13 s	31 s	
 06		
54 s		

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	153	52	76	150	34	84	584	140	177	507	65
Future Volume (vph)	73	153	52	76	150	34	84	584	140	177	507	65
Satd. Flow (prot)	1687	1651	0	1652	1550	0	1602	3254	0	1604	3208	0
Flt Permitted	0.425			0.379			0.176			0.098		
Satd. Flow (perm)	616	1651	0	609	1550	0	290	3254	0	165	3208	0
Satd. Flow (RTOR)												
Confl. Peds. (#/hr)	300		100	100		300	64		26	26		64
Confl. Bikes (#/hr)									4			4
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	7%	3%	2%	2%	4%	6%	10%	4%	3%	5%	6%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	273	0	101	245	0	112	966	0	236	763	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		12			16		5	2		1	6	
Permitted Phases	12			16			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		16.0	42.0		23.0	49.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Act Effct Green (s)	32.2	32.2		32.2	32.2		46.8	37.0		58.8	44.0	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.37	0.30		0.47	0.35	
v/c Ratio	0.61	0.64		0.65	0.61		0.53	1.00		0.87	0.68	
Control Delay	64.0	52.8		66.7	52.2		42.0	73.8		76.2	38.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	64.0	52.8		66.7	52.2		42.0	73.8		76.2	38.1	
LOS	E	D		E	D		D	E		E	D	
Approach Delay		55.7			56.5			70.5			47.1	
Approach LOS		E			E			E			D	
Queue Length 50th (ft)	75	214		79	190		49	~413		138	274	
Queue Length 95th (ft)	#128	253		#138	230		70	390		179	271	
Internal Link Dist (ft)		190			209			263			1683	
Turn Bay Length (ft)	145			150			180			140		
Base Capacity (vph)	158	425		156	399		226	963		286	1129	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.61	0.64		0.65	0.61		0.50	1.00		0.83	0.68	

Intersection Summary

Cycle Length: 125

Actuated Cycle Length: 125

Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 58.4

Intersection LOS: E

Intersection Capacity Utilization 64.5%

ICU Level of Service C

Analysis Period (min) 15

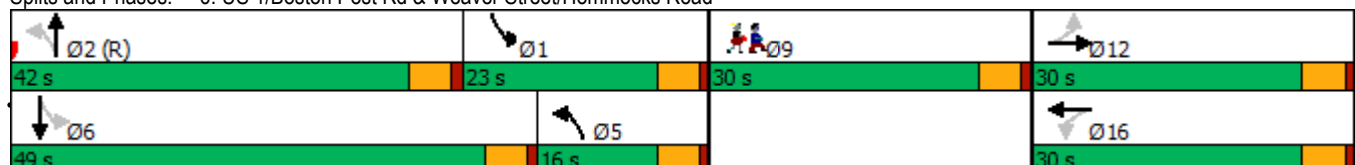
~ Volume exceeds capacity, queue is theoretically infinite.

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: 6: US 1/Boston Post Rd & Weaver Street/Hommocks Road



Build
9: US 1/Boston Post Rd & Delancey Ave

AM Peak Hour
08/22/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3	Ø4
Lane Configurations								
Traffic Volume (vph)	27	169	86	787	880	14		
Future Volume (vph)	27	169	86	787	880	14		
Satd. Flow (prot)	1736	1599	0	3487	3025	0		
Flt Permitted	0.950			0.818				
Satd. Flow (perm)	1730	1599	0	2863	3025	0		
Satd. Flow (RTOR)		190						
Confl. Peds. (#/hr)	2		22			22		
Confl. Bikes (#/hr)						10		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		
Heavy Vehicles (%)	4%	1%	3%	3%	4%	8%		
Parking (#/hr)					5			
Shared Lane Traffic (%)								
Lane Group Flow (vph)	30	190	0	981	1005	0		
Turn Type	Perm	Prot	custom	NA	NA			
Protected Phases		5	6	6 4	8		3	4
Permitted Phases	5		3 4	3				
Total Split (s)	26.0	26.0	26.0		68.0		24.0	44.0
Total Lost Time (s)	5.0	5.0			5.0			
Act Effect Green (s)	17.8	17.8		87.2	63.0			
Actuated g/C Ratio	0.15	0.15		0.73	0.52			
v/c Ratio	0.12	0.48		0.40	0.63			
Control Delay	43.6	10.3		1.4	22.5			
Queue Delay	0.0	0.1		0.4	0.9			
Total Delay	43.6	10.4		1.8	23.4			
LOS	D	B		A	C			
Approach Delay	14.9			1.8	23.4			
Approach LOS	B			A	C			
Queue Length 50th (ft)	20	0		24	281			
Queue Length 95th (ft)	47	61		21	345			
Internal Link Dist (ft)	246			90	543			
Turn Bay Length (ft)		70						
Base Capacity (vph)	302	436		2435	1588			
Starvation Cap Reductn	0	0		846	210			
Spillback Cap Reductn	0	18		0	298			
Storage Cap Reductn	0	0		0	0			
Reduced v/c Ratio	0.10	0.45		0.62	0.78			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 12.9

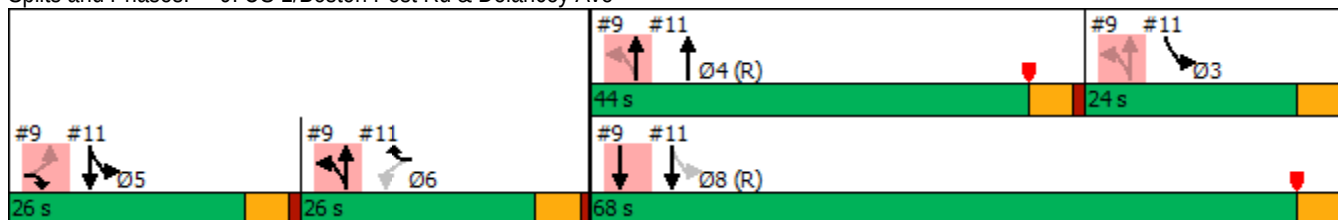
Intersection LOS: B

Intersection Capacity Utilization 64.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: US 1/Boston Post Rd & Delancey Ave



Build
11: US 1/Boston Post Rd & Orienta Avenue

AM Peak Hour
08/22/2018

							Ø3	Ø5	Ø8
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3	Ø5	Ø8
Lane Configurations									
Traffic Volume (vph)	79	239	634	123	367	682			
Future Volume (vph)	79	239	634	123	367	682			
Satd. Flow (prot)	1601	1501	3375	0	1648	1757			
Flt Permitted	0.950				0.168				
Satd. Flow (perm)	1579	1501	3375	0	291	1757			
Satd. Flow (RTOR)		269							
Confl. Peds. (#/hr)	8			16	16				
Confl. Bikes (#/hr)				2					
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89			
Heavy Vehicles (%)	9%	4%	3%	11%	9%	4%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	89	269	850	0	412	766			
Turn Type	Perm	Prot	NA		custom	NA			
Protected Phases		6	4		3 5	5 8	3	5	8
Permitted Phases	6				8				
Total Split (s)	26.0	26.0	44.0				24.0	26.0	68.0
Total Lost Time (s)	5.0	5.0	5.0						
Act Effect Green (s)	24.2	24.2	39.0		85.8	85.8			
Actuated g/C Ratio	0.20	0.20	0.32		0.72	0.72			
v/c Ratio	0.28	0.52	0.78		0.61	0.61			
Control Delay	44.8	9.0	42.4		22.6	4.4			
Queue Delay	0.0	0.0	0.0		27.9	0.5			
Total Delay	44.8	9.0	42.4		50.5	4.9			
LOS	D	A	D		D	A			
Approach Delay	17.9		42.4			20.8			
Approach LOS	B		D			C			
Queue Length 50th (ft)	60	0	311		216	57			
Queue Length 95th (ft)	111	73	384		317	54			
Internal Link Dist (ft)	450		2270			90			
Turn Bay Length (ft)									
Base Capacity (vph)	318	517	1096		724	1303			
Starvation Cap Reductn	0	0	0		319	185			
Spillback Cap Reductn	0	0	0		0	0			
Storage Cap Reductn	0	0	0		0	0			
Reduced v/c Ratio	0.28	0.52	0.78		1.02	0.69			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 28.1

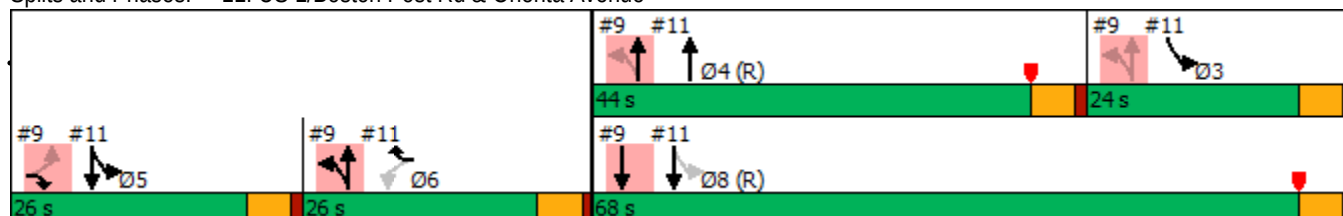
Intersection LOS: C

Intersection Capacity Utilization 58.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 11: US 1/Boston Post Rd & Orienta Avenue



Build

AM Peak Hour

20: US 1/Boston Post Rd & Richbell Rd/Old Boston Post Rd

08/22/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	97	0	93	86	67	68	79	814	0	0	675	65
Future Volume (vph)	97	0	93	86	67	68	79	814	0	0	675	65
Satd. Flow (prot)	1736	0	1568	1678	1672	0	1646	3271	0	0	3266	0
Flt Permitted	0.589			0.950			0.172					
Satd. Flow (perm)	1053	0	1500	1624	1672	0	290	3271	0	0	3266	0
Satd. Flow (RTOR)												
Confl. Peds. (#/hr)	20		22	22		20	120					120
Confl. Bikes (#/hr)												8
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	4%	2%	3%	4%	3%	3%	6%	3%	2%	2%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	0	109	101	159	0	93	958	0	0	870	0
Turn Type	Perm		Perm	Perm	NA		pm+pt	NA			NA	
Protected Phases					8		5	2				6
Permitted Phases	4		4	8			2					
Total Split (s)	31.0		31.0	31.0	31.0		13.0	67.0				54.0
Total Lost Time (s)	5.0		5.0	5.0	5.0		5.0	5.0				5.0
Act Effect Green (s)	17.2		17.2	17.2	17.2		43.4	43.4				33.5
Actuated g/C Ratio	0.20		0.20	0.20	0.20		0.51	0.51				0.39
v/c Ratio	0.54		0.36	0.31	0.47		0.32	0.58				0.68
Control Delay	49.9		41.7	40.4	43.4		18.1	19.0				28.8
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Total Delay	49.9		41.7	40.4	43.4		18.1	19.0				28.8
LOS	D		D	D	D		B	B				C
Approach Delay		45.9			42.2			18.9				28.8
Approach LOS		D			D			B				C
Queue Length 50th (ft)	70		64	59	96		33	240				265
Queue Length 95th (ft)	137		125	116	172		66	320				348
Internal Link Dist (ft)		483			489			1683				2270
Turn Bay Length (ft)			140	100			175					
Base Capacity (vph)	406		579	627	645		307	2392				2089
Starvation Cap Reductn	0		0	0	0		0	0				0
Spillback Cap Reductn	0		0	0	0		0	0				0
Storage Cap Reductn	0		0	0	0		0	0				0
Reduced v/c Ratio	0.28		0.19	0.16	0.25		0.30	0.40				0.42

Intersection Summary

Cycle Length: 125

Actuated Cycle Length: 85.7

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 27.5

Intersection LOS: C

Intersection Capacity Utilization 56.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 20: US 1/Boston Post Rd & Richbell Rd/Old Boston Post Rd

 Ø2	 Ø4	 Ø9
67 s	31 s	27 s
 Ø5	 Ø8	
13 s	31 s	
 Ø6		
54 s		

No-Build

PM Peak Hour

6: US 1/Boston Post Rd & Weaver Street/Hommocks Road

08/22/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	81	91	54	78	34	147	704	51	61	783	106
Future Volume (vph)	116	81	91	54	78	34	147	704	51	61	783	106
Satd. Flow (prot)	1770	1588	0	1652	1635	0	1745	3410	0	1668	3299	0
Flt Permitted	0.640			0.534			0.132			0.195		
Satd. Flow (perm)	1128	1588	0	909	1635	0	240	3410	0	340	3299	0
Satd. Flow (RTOR)												
Confl. Peds. (#/hr)	42		20	20		42	44		22	22		44
Confl. Bikes (#/hr)			6									6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	1%	6%	2%	1%	1%	1%	2%	2%	1%	3%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	129	191	0	60	125	0	163	839	0	68	988	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		12			16		5	2		1	6	
Permitted Phases	12			16			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		18.0	63.0		13.0	58.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Act Effect Green (s)	39.7	39.7		39.7	39.7		68.3	59.1		59.3	53.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.50	0.43		0.44	0.39	
v/c Ratio	0.39	0.41		0.23	0.26		0.69	0.57		0.32	0.77	
Control Delay	49.1	47.5		47.2	44.6		56.4	31.0		26.4	41.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	49.1	47.5		47.2	44.6		56.4	31.0		26.4	41.1	
LOS	D	D		D	D		E	C		C	D	
Approach Delay		48.1			45.5			35.1			40.1	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	104	155		46	97		76	293		30	396	
Queue Length 95th (ft)	181	245		94	164		118	360		55	483	
Internal Link Dist (ft)		190			209			263			1683	
Turn Bay Length (ft)	145			150			180			140		
Base Capacity (vph)	328	463		265	476		269	1482		230	1285	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.39	0.41		0.23	0.26		0.61	0.57		0.30	0.77	

Intersection Summary

Cycle Length: 136

Actuated Cycle Length: 136

Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 39.5

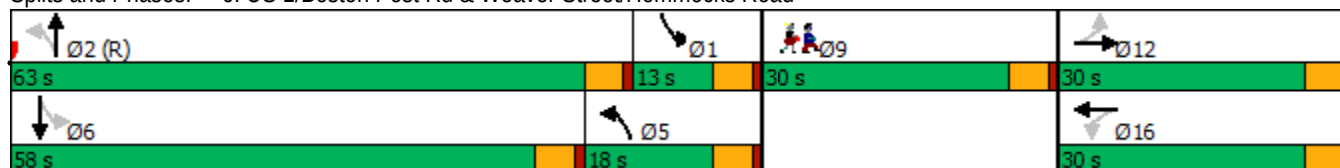
Intersection LOS: D

Intersection Capacity Utilization 64.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: US 1/Boston Post Rd & Weaver Street/Hommocks Road



No-Build
9: US 1/Boston Post Rd & Delancey Ave

PM Peak Hour
08/22/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3	Ø4
Lane Configurations								
Traffic Volume (vph)	14	57	93	881	919	25		
Future Volume (vph)	14	57	93	881	919	25		
Satd. Flow (prot)	1787	1583	0	3486	2991	0		
Flt Permitted	0.950			0.840				
Satd. Flow (perm)	1756	1583	0	2938	2991	0		
Satd. Flow (RTOR)		61						
Confl. Peds. (#/hr)	10		22			22		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Heavy Vehicles (%)	1%	2%	13%	2%	5%	4%		
Parking (#/hr)					5			
Shared Lane Traffic (%)								
Lane Group Flow (vph)	15	61	0	1047	1015	0		
Turn Type	Perm	Prot	custom	NA	NA			
Protected Phases		5	6	6 4	8		3	4
Permitted Phases	5		3 4	3				
Total Split (s)	26.0	26.0	26.0		68.0		20.0	48.0
Total Lost Time (s)	5.0	5.0			5.0			
Act Effect Green (s)	15.8	15.8		89.2	63.0			
Actuated g/C Ratio	0.13	0.13		0.74	0.52			
v/c Ratio	0.06	0.23		0.42	0.65			
Control Delay	43.7	12.8		1.1	22.9			
Queue Delay	0.0	0.0		0.3	0.5			
Total Delay	43.7	12.8		1.5	23.4			
LOS	D	B		A	C			
Approach Delay	18.9			1.5	23.4			
Approach LOS	B			A	C			
Queue Length 50th (ft)	10	0		20	286			
Queue Length 95th (ft)	30	38		19	359			
Internal Link Dist (ft)	246			90	543			
Turn Bay Length (ft)		70						
Base Capacity (vph)	307	327		2521	1570			
Starvation Cap Reductn	0	0		812	197			
Spillback Cap Reductn	0	2		0	125			
Storage Cap Reductn	0	0		0	0			
Reduced v/c Ratio	0.05	0.19		0.61	0.74			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 12.5

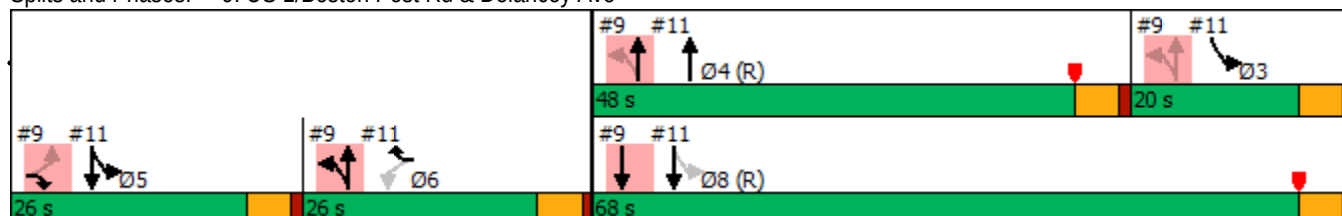
Intersection LOS: B

Intersection Capacity Utilization 69.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: US 1/Boston Post Rd & Delancey Ave



No-Build
11: US 1/Boston Post Rd & Orienta Avenue

PM Peak Hour
08/22/2018

							Ø3	Ø5	Ø8
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3	Ø5	Ø8
Lane Configurations									
Traffic Volume (vph)	73	234	740	140	197	774			
Future Volume (vph)	73	234	740	140	197	774			
Satd. Flow (prot)	1694	1487	3449	0	1710	1757			
Flt Permitted	0.950				0.148				
Satd. Flow (perm)	1648	1487	3449	0	266	1757			
Satd. Flow (RTOR)		252							
Confl. Peds. (#/hr)	16			14	14				
Confl. Bikes (#/hr)				2					
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93			
Heavy Vehicles (%)	3%	5%	2%	3%	5%	4%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	78	252	947	0	212	832			
Turn Type	Perm	Prot	NA		custom	NA			
Protected Phases		6	4		3 5	5 8	3	5	8
Permitted Phases	6				8				
Total Split (s)	26.0	26.0	48.0				20.0	26.0	68.0
Total Lost Time (s)	5.0	5.0	5.0						
Act Effect Green (s)	26.2	26.2	43.0		83.8	83.8			
Actuated g/C Ratio	0.22	0.22	0.36		0.70	0.70			
v/c Ratio	0.22	0.48	0.77		0.34	0.68			
Control Delay	42.3	8.6	39.1		13.6	7.4			
Queue Delay	0.0	0.0	0.0		6.5	0.9			
Total Delay	42.3	8.6	39.1		20.1	8.3			
LOS	D	A	D		C	A			
Approach Delay	16.6		39.1			10.7			
Approach LOS	B		D			B			
Queue Length 50th (ft)	50	0	338		67	168			
Queue Length 95th (ft)	100	75	420		138	226			
Internal Link Dist (ft)	450		2270			90			
Turn Bay Length (ft)									
Base Capacity (vph)	359	521	1235		690	1303			
Starvation Cap Reductn	0	0	0		420	219			
Spillback Cap Reductn	0	0	0		0	0			
Storage Cap Reductn	0	0	0		0	0			
Reduced v/c Ratio	0.22	0.48	0.77		0.79	0.77			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 23.1

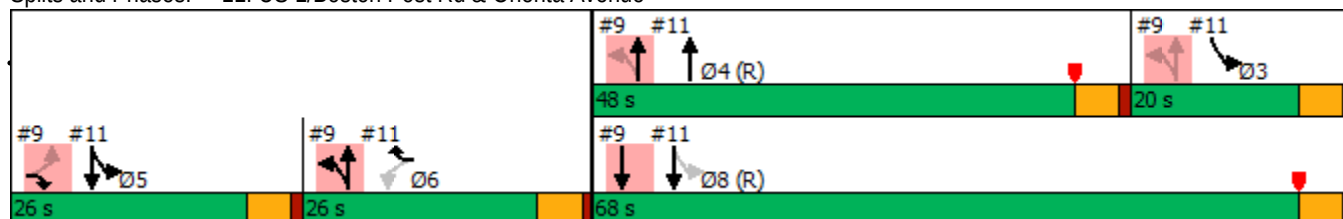
Intersection LOS: C

Intersection Capacity Utilization 53.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: US 1/Boston Post Rd & Orienta Avenue



No-Build

PM Peak Hour

20: US 1/Boston Post Rd & Richbell Rd/Old Boston Post Rd

08/22/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	0	91	107	41	56	78	797	0	0	858	96
Future Volume (vph)	98	0	91	107	41	56	78	797	0	0	858	96
Satd. Flow (prot)	1787	0	1599	1728	1644	0	1728	3303	0	0	3277	0
Flt Permitted	0.688			0.950			0.137					
Satd. Flow (perm)	1241	0	1535	1678	1644	0	247	3303	0	0	3277	0
Satd. Flow (RTOR)												
Confl. Peds. (#/hr)	34		20	20		34	52					52
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	1%	1%	3%	1%	1%	2%	2%	2%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	0	100	118	107	0	86	876	0	0	1048	0
Turn Type	Perm		Perm	Perm	NA		pm+pt	NA			NA	
Protected Phases					8		5	2				6
Permitted Phases	4		4	8			2					
Total Split (s)	31.0		31.0	31.0	31.0		12.0	67.0			55.0	
Total Lost Time (s)	5.0		5.0	5.0	5.0		5.0	5.0			5.0	
Act Effect Green (s)	14.7		14.7	14.7	14.7		45.2	45.2			35.7	
Actuated g/C Ratio	0.19		0.19	0.19	0.19		0.57	0.57			0.45	
v/c Ratio	0.47		0.35	0.38	0.35		0.29	0.47			0.71	
Control Delay	44.5		40.1	40.1	39.7		14.2	13.5			24.5	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	44.5		40.1	40.1	39.7		14.2	13.5			24.5	
LOS	D		D	D	D		B	B			C	
Approach Delay		42.4			39.9			13.5			24.5	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	37		34	40	36		10	72			161	
Queue Length 95th (ft)	137		124	142	130		63	297			463	
Internal Link Dist (ft)		483			489			1683			2270	
Turn Bay Length (ft)	140			100			175					
Base Capacity (vph)	498		615	672	659		300	2646			2290	
Starvation Cap Reductn	0		0	0	0		0	0			0	
Spillback Cap Reductn	0		0	0	0		0	0			0	
Storage Cap Reductn	0		0	0	0		0	0			0	
Reduced v/c Ratio	0.22		0.16	0.18	0.16		0.29	0.33			0.46	

Intersection Summary

Cycle Length: 125

Actuated Cycle Length: 79.4

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 23.1

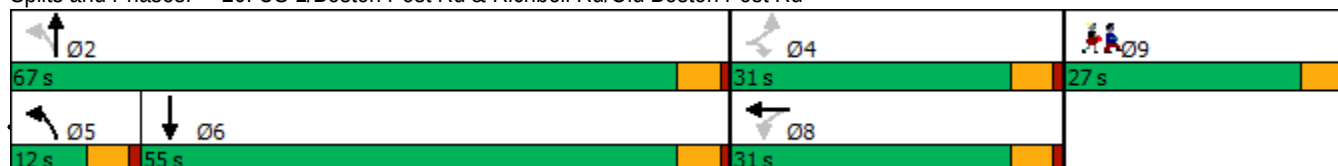
Intersection LOS: C

Intersection Capacity Utilization 56.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 20: US 1/Boston Post Rd & Richbell Rd/Old Boston Post Rd



Build

PM Peak Hour

6: US 1/Boston Post Rd & Weaver Street/Hommocks Road

08/22/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	86	91	63	80	35	147	704	70	62	783	106
Future Volume (vph)	116	86	91	63	80	35	147	704	70	62	783	106
Satd. Flow (prot)	1770	1594	0	1652	1635	0	1745	3393	0	1668	3299	0
Flt Permitted	0.635			0.525			0.132			0.185		
Satd. Flow (perm)	1120	1594	0	894	1635	0	240	3393	0	323	3299	0
Satd. Flow (RTOR)												
Confl. Peds. (#/hr)	42		20	20		42	44		22	22		44
Confl. Bikes (#/hr)			6									6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	1%	6%	2%	1%	1%	1%	2%	2%	1%	3%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	129	197	0	70	128	0	163	860	0	69	988	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		12			16		5	2		1	6	
Permitted Phases	12			16			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		18.0	63.0		13.0	58.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Act Effect Green (s)	39.7	39.7		39.7	39.7		68.3	59.1		59.3	53.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.50	0.43		0.44	0.39	
v/c Ratio	0.40	0.42		0.27	0.27		0.69	0.58		0.34	0.77	
Control Delay	49.2	47.7		48.0	44.8		56.4	31.4		27.5	41.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	49.2	47.7		48.0	44.8		56.4	31.4		27.5	41.1	
LOS	D	D		D	D		E	C		C	D	
Approach Delay		48.3			45.9			35.4			40.2	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	104	161		54	99		76	303		31	396	
Queue Length 95th (ft)	181	252		108	168		118	371		55	483	
Internal Link Dist (ft)		190			209			263			1683	
Turn Bay Length (ft)	145			150			180			140		
Base Capacity (vph)	326	464		260	476		269	1474		223	1285	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.40	0.42		0.27	0.27		0.61	0.58		0.31	0.77	

Intersection Summary

Cycle Length: 136

Actuated Cycle Length: 136

Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 39.7

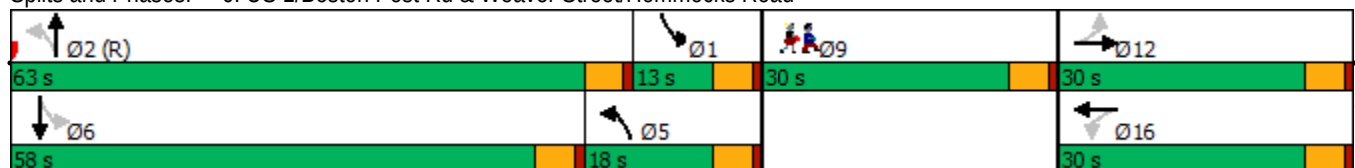
Intersection LOS: D

Intersection Capacity Utilization 64.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: US 1/Boston Post Rd & Weaver Street/Hommocks Road



Build
9: US 1/Boston Post Rd & Delancey Ave

PM Peak Hour
08/22/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3	Ø4
Lane Configurations								
Traffic Volume (vph)	14	62	96	888	934	25		
Future Volume (vph)	14	62	96	888	934	25		
Satd. Flow (prot)	1787	1583	0	3485	2991	0		
Flt Permitted	0.950			0.829				
Satd. Flow (perm)	1756	1583	0	2899	2991	0		
Satd. Flow (RTOR)		67						
Confl. Peds. (#/hr)	10		22			22		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Heavy Vehicles (%)	1%	2%	13%	2%	5%	4%		
Parking (#/hr)					5			
Shared Lane Traffic (%)								
Lane Group Flow (vph)	15	67	0	1058	1031	0		
Turn Type	Perm	Prot	custom	NA	NA			
Protected Phases		5	6	6 4	8		3	4
Permitted Phases	5		3 4	3				
Total Split (s)	26.0	26.0	26.0		68.0		20.0	48.0
Total Lost Time (s)	5.0	5.0			5.0			
Act Effect Green (s)	16.0	16.0		89.0	63.0			
Actuated g/C Ratio	0.13	0.13		0.74	0.52			
v/c Ratio	0.06	0.25		0.42	0.66			
Control Delay	43.4	12.5		1.2	23.2			
Queue Delay	0.0	0.0		0.4	0.5			
Total Delay	43.4	12.5		1.5	23.7			
LOS	D	B		A	C			
Approach Delay	18.1			1.5	23.7			
Approach LOS	B			A	C			
Queue Length 50th (ft)	10	0		20	293			
Queue Length 95th (ft)	30	40		20	367			
Internal Link Dist (ft)	246			90	543			
Turn Bay Length (ft)		70						
Base Capacity (vph)	307	332		2510	1570			
Starvation Cap Reductn	0	0		800	195			
Spillback Cap Reductn	0	3		0	145			
Storage Cap Reductn	0	0		0	0			
Reduced v/c Ratio	0.05	0.20		0.62	0.75			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 12.7

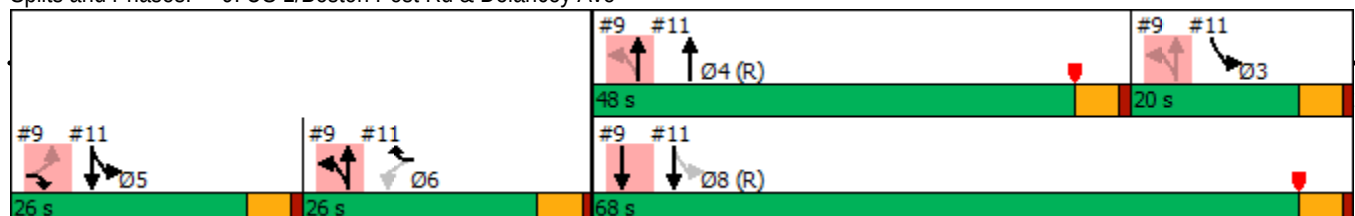
Intersection LOS: B

Intersection Capacity Utilization 69.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: US 1/Boston Post Rd & Delancey Ave



Build
11: US 1/Boston Post Rd & Orienta Avenue

PM Peak Hour
08/22/2018

							Ø3	Ø5	Ø8
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3	Ø5	Ø8
Lane Configurations									
Traffic Volume (vph)	73	243	741	144	217	774			
Future Volume (vph)	73	243	741	144	217	774			
Satd. Flow (prot)	1694	1487	3449	0	1710	1757			
Flt Permitted	0.950				0.146				
Satd. Flow (perm)	1648	1487	3449	0	263	1757			
Satd. Flow (RTOR)		261							
Confl. Peds. (#/hr)	16			14	14				
Confl. Bikes (#/hr)				2					
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93			
Heavy Vehicles (%)	3%	5%	2%	3%	5%	4%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	78	261	952	0	233	832			
Turn Type	Perm	Prot	NA		custom	NA			
Protected Phases		6	4		3 5	5 8	3	5	8
Permitted Phases	6				8				
Total Split (s)	26.0	26.0	48.0				20.0	26.0	68.0
Total Lost Time (s)	5.0	5.0	5.0						
Act Effect Green (s)	26.0	26.0	43.0		84.0	84.0			
Actuated g/C Ratio	0.22	0.22	0.36		0.70	0.70			
v/c Ratio	0.22	0.50	0.77		0.38	0.68			
Control Delay	42.6	8.7	39.2		15.1	7.2			
Queue Delay	0.0	0.0	0.0		8.6	0.9			
Total Delay	42.6	8.7	39.2		23.6	8.0			
LOS	D	A	D		C	A			
Approach Delay	16.5		39.2			11.4			
Approach LOS	B		D			B			
Queue Length 50th (ft)	50	0	341		82	156			
Queue Length 95th (ft)	100	76	423		159	209			
Internal Link Dist (ft)	450		2270			90			
Turn Bay Length (ft)									
Base Capacity (vph)	356	526	1235		689	1303			
Starvation Cap Reductn	0	0	0		411	216			
Spillback Cap Reductn	0	0	0		0	0			
Storage Cap Reductn	0	0	0		0	0			
Reduced v/c Ratio	0.22	0.50	0.77		0.84	0.77			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 23.4

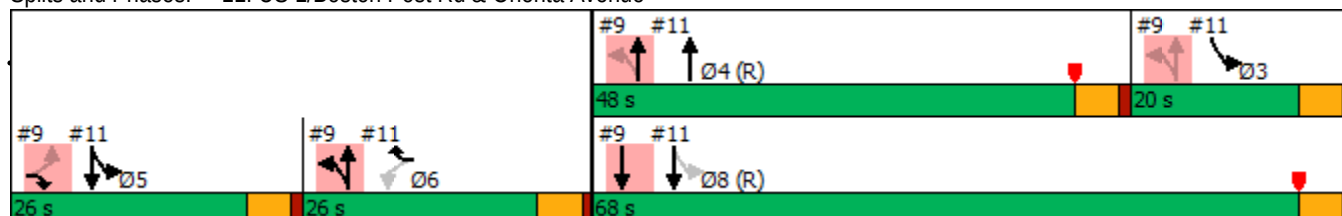
Intersection LOS: C

Intersection Capacity Utilization 53.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: US 1/Boston Post Rd & Orienta Avenue



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	0	92	107	42	56	79	797	0	0	858	96
Future Volume (vph)	102	0	92	107	42	56	79	797	0	0	858	96
Satd. Flow (prot)	1787	0	1599	1728	1646	0	1728	3303	0	0	3277	0
Flt Permitted	0.687			0.950			0.136					
Satd. Flow (perm)	1239	0	1535	1678	1646	0	245	3303	0	0	3277	0
Satd. Flow (RTOR)												
Confl. Peds. (#/hr)	34		20	20		34	52					52
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	1%	1%	3%	1%	1%	2%	2%	2%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	0	101	118	108	0	87	876	0	0	1048	0
Turn Type	Perm		Perm	Perm	NA		pm+pt	NA			NA	
Protected Phases					8		5	2				6
Permitted Phases	4		4	8			2					
Total Split (s)	31.0		31.0	31.0	31.0		12.0	67.0			55.0	
Total Lost Time (s)	5.0		5.0	5.0	5.0		5.0	5.0			5.0	
Act Effect Green (s)	15.1		15.1	15.1	15.1		45.4	45.4			35.9	
Actuated g/C Ratio	0.19		0.19	0.19	0.19		0.57	0.57			0.45	
v/c Ratio	0.48		0.35	0.37	0.35		0.30	0.47			0.71	
Control Delay	44.6		39.9	39.8	39.4		14.5	13.7			24.8	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	44.6		39.9	39.8	39.4		14.5	13.7			24.8	
LOS	D		D	D	D		B	B			C	
Approach Delay		42.4			39.6			13.8			24.8	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	39		34	40	37		11	74			163	
Queue Length 95th (ft)	141		124	142	131		65	301			467	
Internal Link Dist (ft)		483			489			1683			2270	
Turn Bay Length (ft)	140			100			175					
Base Capacity (vph)	493		611	668	655		298	2636			2278	
Starvation Cap Reductn	0		0	0	0		0	0			0	
Spillback Cap Reductn	0		0	0	0		0	0			0	
Storage Cap Reductn	0		0	0	0		0	0			0	
Reduced v/c Ratio	0.23		0.17	0.18	0.16		0.29	0.33			0.46	

Intersection Summary

Cycle Length: 125

Actuated Cycle Length: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 23.3

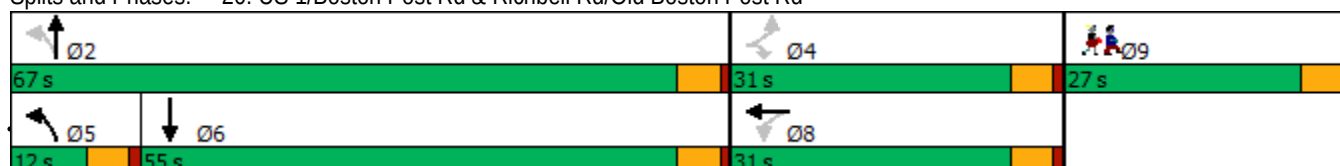
Intersection LOS: C

Intersection Capacity Utilization 56.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 20: US 1/Boston Post Rd & Richbell Rd/Old Boston Post Rd



No-Build

Saturday Peak Hour

6: US 1/Boston Post Rd & Weaver Street/Hommocks Road

08/22/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	61	122	41	61	46	149	799	61	47	731	147
Future Volume (vph)	150	61	122	41	61	46	149	799	61	47	731	147
Satd. Flow (prot)	1787	1567	0	1668	1624	0	1745	3431	0	1668	3304	0
Flt Permitted	0.668			0.545			0.141			0.147		
Satd. Flow (perm)	1241	1567	0	930	1624	0	255	3431	0	255	3304	0
Satd. Flow (RTOR)												
Confl. Peds. (#/hr)	10		28	28		10	62		48	48		62
Confl. Bikes (#/hr)									4			10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	191	0	43	112	0	155	896	0	49	914	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		12			16		5	2		1	6	
Permitted Phases	12			16			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		18.0	57.0		12.0	51.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Act Effect Green (s)	39.2	39.2		39.2	39.2		61.8	52.9		52.0	46.0	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.48	0.41		0.40	0.36	
v/c Ratio	0.41	0.40		0.15	0.23		0.63	0.64		0.29	0.78	
Control Delay	45.8	44.1		43.1	41.1		50.0	33.2		28.3	42.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	45.8	44.1		43.1	41.1		50.0	33.2		28.3	42.4	
LOS	D	D		D	D		D	C		C	D	
Approach Delay		44.9			41.7			35.6			41.7	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	120	146		30	81		71	314		21	355	
Queue Length 95th (ft)	202	232		68	141		113	387		43	438	
Internal Link Dist (ft)		190			209			263			1683	
Turn Bay Length (ft)	145			150			180			140		
Base Capacity (vph)	377	476		282	493		276	1407		181	1178	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.41	0.40		0.15	0.23		0.56	0.64		0.27	0.78	

Intersection Summary

Cycle Length: 129

Actuated Cycle Length: 129

Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 39.6

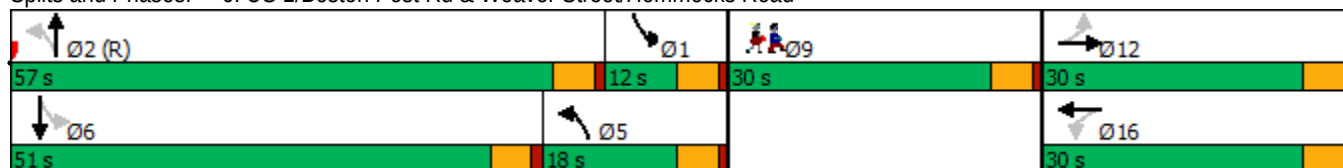
Intersection LOS: D

Intersection Capacity Utilization 66.3%

ICU Level of Service C

Analysis Period (min) 15

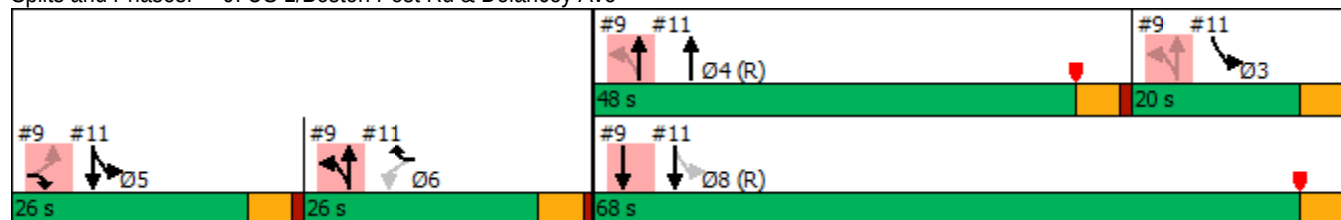
Splits and Phases: 6: US 1/Boston Post Rd & Weaver Street/Hommocks Road





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3	Ø4
Lane Configurations								
Traffic Volume (vph)	18	65	44	970	840	25		
Future Volume (vph)	18	65	44	970	840	25		
Satd. Flow (prot)	1787	1599	0	3567	3051	0		
Flt Permitted	0.950			0.955				
Satd. Flow (perm)	1714	1599	0	3410	3051	0		
Satd. Flow (RTOR)		68						
Confl. Peds. (#/hr)	24		32					
Confl. Bikes (#/hr)						14		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Heavy Vehicles (%)	1%	1%	1%	1%	3%	4%		
Parking (#/hr)					5			
Shared Lane Traffic (%)								
Lane Group Flow (vph)	19	68	0	1067	910	0		
Turn Type	Perm	Prot	custom	NA	NA			
Protected Phases		5	6	6 4	8		3	4
Permitted Phases	5		3 4	3				
Total Split (s)	26.0	26.0	26.0		68.0		20.0	48.0
Total Lost Time (s)	5.0	5.0			5.0			
Act Effect Green (s)	14.5	14.5		90.5	63.0			
Actuated g/C Ratio	0.12	0.12		0.75	0.52			
v/c Ratio	0.09	0.27		0.40	0.57			
Control Delay	45.3	13.0		0.9	21.0			
Queue Delay	0.0	0.0		0.5	0.2			
Total Delay	45.3	13.0		1.3	21.2			
LOS	D	B		A	C			
Approach Delay	20.1			1.3	21.2			
Approach LOS	C			A	C			
Queue Length 50th (ft)	13	0		12	242			
Queue Length 95th (ft)	35	40		13	304			
Internal Link Dist (ft)	246			90	543			
Turn Bay Length (ft)		70						
Base Capacity (vph)	299	335		2669	1601			
Starvation Cap Reductn	0	0		1015	0			
Spillback Cap Reductn	0	2		0	137			
Storage Cap Reductn	0	0		0	0			
Reduced v/c Ratio	0.06	0.20		0.65	0.62			
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 120								
Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.82								
Intersection Signal Delay: 10.9				Intersection LOS: B				
Intersection Capacity Utilization 67.9%				ICU Level of Service C				
Analysis Period (min) 15								

Splits and Phases: 9: US 1/Boston Post Rd & Delancey Ave



No-Build
11: US 1/Boston Post Rd & Orienta Avenue

Saturday Peak Hour
08/22/2018

							Ø3	Ø5	Ø8
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3	Ø5	Ø8
Lane Configurations									
Traffic Volume (vph)	51	157	857	131	192	713			
Future Volume (vph)	51	157	857	131	192	713			
Satd. Flow (prot)	1711	1516	3497	0	1710	1809			
Flt Permitted	0.950				0.111				
Satd. Flow (perm)	1687	1516	3497	0	200	1809			
Satd. Flow (RTOR)		165	16						
Confl. Peds. (#/hr)	8			22	22				
Confl. Bikes (#/hr)				6					
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95			
Heavy Vehicles (%)	2%	3%	1%	1%	5%	1%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	54	165	1040	0	202	751			
Turn Type	Perm	Prot	NA		custom	NA			
Protected Phases		6	4		3 5	5 8	3	5	8
Permitted Phases	6				8				
Total Split (s)	26.0	26.0	48.0				20.0	26.0	68.0
Total Lost Time (s)	5.0	5.0	5.0						
Act Effect Green (s)	27.5	27.5	43.0		82.5	82.5			
Actuated g/C Ratio	0.23	0.23	0.36		0.69	0.69			
v/c Ratio	0.14	0.35	0.82		0.35	0.60			
Control Delay	40.4	8.5	41.1		17.6	5.5			
Queue Delay	0.0	0.0	0.0		2.5	0.4			
Total Delay	40.4	8.5	41.1		20.1	5.9			
LOS	D	A	D		C	A			
Approach Delay	16.4		41.1			8.9			
Approach LOS	B		D			A			
Queue Length 50th (ft)	33	0	377		75	115			
Queue Length 95th (ft)	74	60	465		148	150			
Internal Link Dist (ft)	450		2270			90			
Turn Bay Length (ft)									
Base Capacity (vph)	386	474	1263		664	1341			
Starvation Cap Reductn	0	0	0		343	205			
Spillback Cap Reductn	0	0	0		0	0			
Storage Cap Reductn	0	0	0		0	0			
Reduced v/c Ratio	0.14	0.35	0.82		0.63	0.66			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 24.8

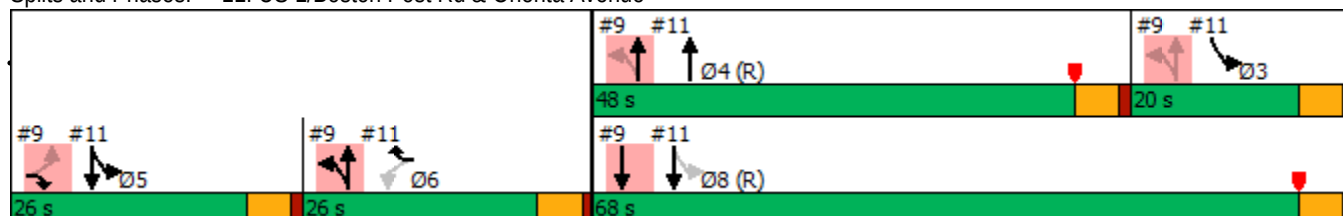
Intersection LOS: C

Intersection Capacity Utilization 54.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: US 1/Boston Post Rd & Orienta Avenue



20: US 1/Boston Post Rd & Richbell Rd/Old Boston Post Rd

08/22/2018

Intersection Summary	
Cycle Length: 125	
Actuated Cycle Length: 76.7	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

Ø2		Ø4	Ø9
67 s		31 s	27 s
Ø5	Ø6	Ø8	
14 s	53 s	31 s	

Build
6: US 1/Boston Post Rd & Weaver Street/Hommocks Road

Saturday Peak Hour
08/22/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	64	122	52	64	46	149	799	74	48	731	147
Future Volume (vph)	150	64	122	52	64	46	149	799	74	48	731	147
Satd. Flow (prot)	1787	1572	0	1668	1627	0	1745	3420	0	1668	3304	0
Flt Permitted	0.663			0.541			0.141			0.141		
Satd. Flow (perm)	1231	1572	0	923	1627	0	255	3420	0	244	3304	0
Satd. Flow (RTOR)												
Confl. Peds. (#/hr)	10		28	28		10	62		48	48		62
Confl. Bikes (#/hr)									4			10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	194	0	54	115	0	155	909	0	50	914	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		12			16		5	2		1	6	
Permitted Phases	12			16			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		18.0	57.0		12.0	51.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Act Effect Green (s)	39.2	39.2		39.2	39.2		61.8	52.9		52.0	46.0	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.48	0.41		0.40	0.36	
v/c Ratio	0.42	0.41		0.19	0.23		0.63	0.65		0.30	0.78	
Control Delay	45.9	44.2		43.6	41.2		50.0	33.5		29.3	42.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	45.9	44.2		43.6	41.2		50.0	33.5		29.3	42.4	
LOS	D	D		D	D		D	C		C	D	
Approach Delay		45.0			42.0			35.9			41.7	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	120	149		39	83		71	321		22	355	
Queue Length 95th (ft)	#202	236		81	144		113	395		44	438	
Internal Link Dist (ft)		190			209			263			1683	
Turn Bay Length (ft)	145			150			180			140		
Base Capacity (vph)	374	478		280	494		276	1402		177	1178	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.42	0.41		0.19	0.23		0.56	0.65		0.28	0.78	

Intersection Summary

Cycle Length: 129

Actuated Cycle Length: 129

Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 39.8

Intersection LOS: D

Intersection Capacity Utilization 66.5%

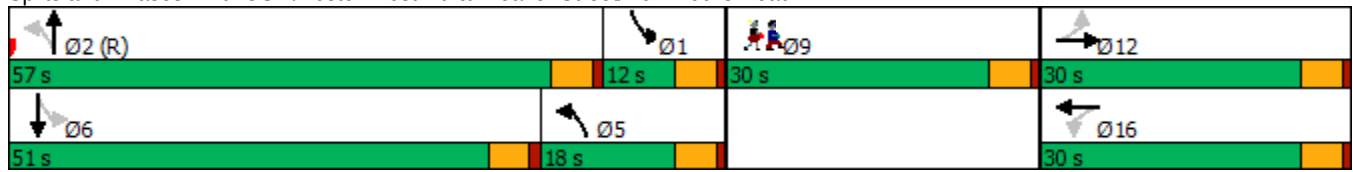
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: US 1/Boston Post Rd & Weaver Street/Hommocks Road





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3	Ø4
Lane Configurations								
Traffic Volume (vph)	18	68	46	978	850	25		
Future Volume (vph)	18	68	46	978	850	25		
Satd. Flow (prot)	1787	1599	0	3567	3051	0		
Flt Permitted	0.950			0.955				
Satd. Flow (perm)	1714	1599	0	3410	3051	0		
Satd. Flow (RTOR)		72						
Confl. Peds. (#/hr)	24		32					
Confl. Bikes (#/hr)						14		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Heavy Vehicles (%)	1%	1%	1%	1%	3%	4%		
Parking (#/hr)					5			
Shared Lane Traffic (%)								
Lane Group Flow (vph)	19	72	0	1077	921	0		
Turn Type	Perm	Prot	custom	NA	NA			
Protected Phases		5	6	6 4	8		3	4
Permitted Phases	5		3 4	3				
Total Split (s)	26.0	26.0	26.0		68.0		20.0	48.0
Total Lost Time (s)	5.0	5.0			5.0			
Act Effect Green (s)	14.8	14.8		90.2	63.0			
Actuated g/C Ratio	0.12	0.12		0.75	0.52			
v/c Ratio	0.09	0.28		0.40	0.58			
Control Delay	45.2	12.7		0.9	21.2			
Queue Delay	0.0	0.0		0.5	0.2			
Total Delay	45.2	12.8		1.4	21.4			
LOS	D	B		A	C			
Approach Delay	19.5			1.4	21.4			
Approach LOS	B			A	C			
Queue Length 50th (ft)	13	0		13	245			
Queue Length 95th (ft)	35	41		14	310			
Internal Link Dist (ft)	246			90	543			
Turn Bay Length (ft)		70						
Base Capacity (vph)	299	339		2662	1601			
Starvation Cap Reductn	0	0		1002	0			
Spillback Cap Reductn	0	3		0	174			
Storage Cap Reductn	0	0		0	0			
Reduced v/c Ratio	0.06	0.21		0.65	0.65			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBT and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 11.0

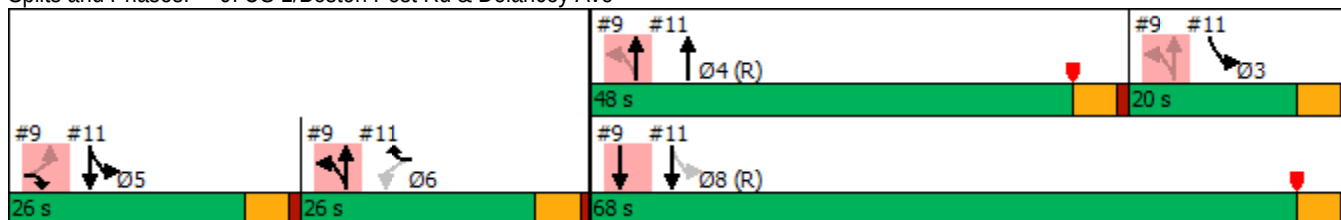
Intersection LOS: B

Intersection Capacity Utilization 68.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: US 1/Boston Post Rd & Delancey Ave



Build
11: US 1/Boston Post Rd & Orienta Avenue

Saturday Peak Hour
08/22/2018

							Ø3	Ø5	Ø8
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø3	Ø5	Ø8
Lane Configurations									
Traffic Volume (vph)	51	168	857	133	206	713			
Future Volume (vph)	51	168	857	133	206	713			
Satd. Flow (prot)	1711	1516	3496	0	1710	1809			
Flt Permitted	0.950				0.110				
Satd. Flow (perm)	1687	1516	3496	0	198	1809			
Satd. Flow (RTOR)		177	16						
Confl. Peds. (#/hr)	8			22	22				
Confl. Bikes (#/hr)				6					
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95			
Heavy Vehicles (%)	2%	3%	1%	1%	5%	1%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	54	177	1042	0	217	751			
Turn Type	Perm	Prot	NA		custom	NA			
Protected Phases		6	4		3 5	5 8	3	5	8
Permitted Phases	6				8				
Total Split (s)	26.0	26.0	48.0				20.0	26.0	68.0
Total Lost Time (s)	5.0	5.0	5.0						
Act Effect Green (s)	27.2	27.2	43.0		82.8	82.8			
Actuated g/C Ratio	0.23	0.23	0.36		0.69	0.69			
v/c Ratio	0.14	0.37	0.83		0.38	0.60			
Control Delay	40.5	8.4	41.2		18.7	5.4			
Queue Delay	0.0	0.0	0.0		2.7	0.4			
Total Delay	40.5	8.4	41.2		21.4	5.8			
LOS	D	A	D		C	A			
Approach Delay	15.9		41.2			9.3			
Approach LOS	B		D			A			
Queue Length 50th (ft)	33	0	378		87	108			
Queue Length 95th (ft)	75	62	467		164	140			
Internal Link Dist (ft)	450		2270			90			
Turn Bay Length (ft)									
Base Capacity (vph)	383	481	1263		663	1341			
Starvation Cap Reductn	0	0	0		333	204			
Spillback Cap Reductn	0	0	0		0	0			
Storage Cap Reductn	0	0	0		0	0			
Reduced v/c Ratio	0.14	0.37	0.83		0.66	0.66			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 4:NBTL and 8:SBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 24.8

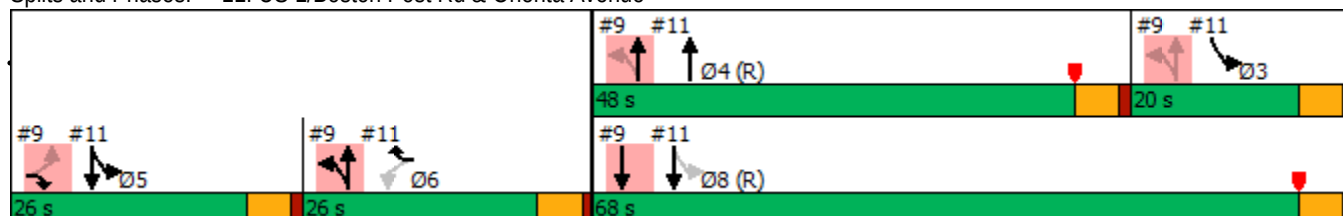
Intersection LOS: C

Intersection Capacity Utilization 55.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 11: US 1/Boston Post Rd & Orienta Avenue



20: US 1/Boston Post Rd & Richbell Rd/Old Boston Post Rd

08/22/2018

Intersection Summary	
Cycle Length: 125	
Actuated Cycle Length: 77	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 60.4%	ICU Level of Service B
Analysis Period (min) 15	

 Ø2 67 s		 Ø4 31 s		 Ø9 27 s	
 Ø5 14 s		 Ø6 53 s		 Ø8 31 s	

FEIS Chapter M Appendix

Response to Comment M19

Surrounding Street Truck Activity

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Page 1

Site Code:
Station ID:
SB BOSTON POST RD S OF ORIENTA AVE
MAMARONECK,NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Motor	Cars Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Doubl	5 Axle Doubl	>6 Axl Doubl	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Bicycl	Not Class	Total
03/10/1 6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	0	126	37	2	2	0	0	2	1	0	1	0	0	0	0	171
07:00	0	498	148	3	17	0	0	6	0	0	0	0	0	1	0	673
08:00	0	431	127	1	14	0	0	6	0	0	0	0	0	0	0	579
09:00	0	424	125	1	13	0	0	2	0	0	0	0	0	1	0	566
10:00	0	403	119	0	16	0	0	7	0	0	0	0	0	0	0	545
11:00	0	459	137	1	21	0	0	6	0	0	0	0	0	0	0	624
12 PM	0	426	127	1	13	0	0	9	0	0	0	0	0	1	0	577
13:00	0	418	124	2	17	0	0	6	0	0	0	0	0	0	0	567
14:00	0	501	149	4	18	0	0	10	1	0	0	0	0	0	0	683
15:00	0	475	142	0	16	0	0	8	0	0	0	0	0	0	0	641
16:00	0	690	206	1	24	0	0	10	0	0	0	0	0	0	0	931
17:00	0	609	181	1	22	0	0	14	0	0	0	1	0	0	0	828
18:00	0	453	135	0	12	0	0	12	0	0	1	0	0	1	0	614
19:00	0	344	102	0	14	0	0	4	0	0	0	0	0	1	0	465
20:00	0	232	69	0	5	0	0	5	0	0	0	0	0	0	0	311
21:00	0	164	48	0	4	0	0	3	0	0	0	0	0	0	0	219
22:00	0	102	30	0	0	0	0	1	0	0	0	0	0	0	0	133
23:00	0	52	15	0	0	0	0	0	0	0	0	0	0	0	0	67
Total	0	6807	2021	17	228	0	0	111	2	0	2	1	0	5	0	9194
Percent	0.0%	74.0%	22.0%	0.2%	2.5%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	

Site Code:
Station ID:
NB BOSTON POST RD S OF ORIENTA AVE
MAMARONECK,NY
Latitude: 0' 0.0000 Undefined

NB

Start Time	Motor	Cars Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Doubl	5 Axle Doubl	>6 Axl Doubl	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Bicycl	Not Class	Total
03/10/1 6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	0	156	60	0	6	0	0	5	0	0	0	0	0	0	0	227
07:00	0	355	136	0	16	0	0	12	1	1	0	0	0	0	0	521
08:00	0	530	203	0	21	0	0	16	0	0	1	0	0	0	0	771
09:00	0	427	164	0	20	0	0	10	0	1	0	0	0	0	0	622
10:00	0	409	156	0	19	0	0	15	0	0	0	0	0	1	0	600
11:00	0	497	191	0	21	0	0	16	0	1	0	0	0	0	0	726
12 PM	0	461	176	0	18	0	0	11	0	0	0	0	0	1	0	667
13:00	0	467	180	0	17	0	0	14	0	0	1	0	0	0	0	679
14:00	0	511	195	0	21	0	0	16	0	0	0	0	0	0	0	743
15:00	0	589	226	0	25	0	0	17	1	0	3	0	0	1	0	862
16:00	0	539	205	0	20	0	0	17	0	0	0	1	0	0	0	782
17:00	0	523	199	0	23	0	0	15	0	1	0	0	0	0	0	761
18:00	0	481	183	0	17	0	0	13	0	0	0	0	1	0	0	695
19:00	0	387	148	0	20	0	0	12	0	0	1	0	0	0	0	568
20:00	0	270	102	0	12	0	0	9	1	1	1	0	0	1	0	397
21:00	0	219	84	0	8	0	0	8	0	0	0	1	0	0	0	320
22:00	0	151	58	0	4	0	0	4	1	1	1	0	0	0	0	220
23:00	0	80	31	0	4	0	0	3	0	0	0	0	0	0	0	118
Total	0	7052	2697	0	292	0	0	213	4	6	8	2	1	4	0	10279
Percent	0.0%	68.6%	26.2%	0.0%	2.8%	0.0%	0.0%	2.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Page 2

Site Code:
Station ID:
SB BOSTON POST RD S OF ORIENTA AVE
MAMARONECK,NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	Motor	Cars Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Doubl	5 Axle Doubl	>6 Axl Doubl	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Bicycl	Not Class	Total
03/11/1																
6	0	25	8	0	0	0	0	0	0	0	0	0	0	0	0	33
01:00	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
02:00	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
03:00	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
04:00	0	23	7	0	0	0	0	0	0	0	0	0	0	0	0	30
05:00	0	64	20	0	0	0	0	1	1	0	0	0	0	0	0	86
06:00	0	129	39	1	2	0	0	3	0	0	0	0	0	0	0	174
07:00	0	527	157	6	20	0	0	12	0	0	0	0	0	0	0	722
08:00	0	439	130	1	18	0	0	9	0	0	1	0	0	0	0	598
09:00	0	403	119	1	13	0	0	8	0	0	0	0	0	0	0	544
10:00	0	430	128	1	15	0	0	7	0	0	0	0	0	1	0	582
11:00	0	494	147	0	21	0	0	12	1	0	0	0	0	1	0	676
12 PM	0	499	148	1	21	0	0	10	0	0	1	0	0	0	0	680
13:00	0	501	148	1	18	0	0	10	0	0	0	1	0	0	0	679
14:00	0	490	146	0	16	0	0	6	0	0	0	0	0	0	0	658
15:00	0	504	149	3	17	0	0	5	0	0	0	0	0	0	0	678
16:00	0	564	168	2	17	0	0	8	0	0	0	0	0	1	0	760
17:00	0	628	187	0	26	0	0	11	0	0	0	0	0	0	0	852
18:00	0	542	161	0	13	0	0	6	0	0	0	0	0	1	0	723
19:00	0	356	106	0	16	0	0	5	1	0	0	0	0	0	0	484
20:00	0	241	72	0	9	0	0	4	0	0	0	0	0	0	0	326
21:00	0	191	56	0	6	0	0	2	0	0	0	0	0	0	0	255
22:00	0	156	46	0	1	0	0	0	0	0	0	0	0	0	0	203
23:00	0	96	28	0	0	0	0	0	0	0	0	0	0	0	0	124
Total	0	7327	2177	17	249	0	0	119	3	0	2	1	0	4	0	9899
Percent	0.0%	74.0%	22.0%	0.2%	2.5%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Site Code:
Station ID:
NB BOSTON POST RD S OF ORIENTA AVE
MAMARONECK,NY
Latitude: 0' 0.0000 Undefined

NB

Start Time	Motor	Cars Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Doubl	5 Axle Doubl	>6 Axl Doubl	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Bicycl	Not Class	Total
03/11/1																
6	0	37	15	0	1	0	0	0	0	0	0	0	0	0	0	53
01:00	0	18	7	0	0	0	0	0	0	0	0	0	0	0	0	25
02:00	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	13
03:00	0	13	3	0	0	0	0	0	0	0	0	0	0	0	0	16
04:00	0	16	7	0	0	0	0	0	0	0	0	0	0	0	0	23
05:00	0	42	17	0	2	0	0	0	0	0	0	0	0	0	0	61
06:00	0	146	56	0	6	0	0	3	0	0	0	0	0	0	0	211
07:00	0	451	173	0	19	0	0	12	1	0	0	0	0	0	0	656
08:00	0	529	202	0	22	0	0	17	0	0	0	0	0	0	0	770
09:00	0	458	175	0	18	0	0	12	0	0	0	0	0	0	0	663
10:00	0	415	158	0	18	0	0	12	1	1	2	0	0	1	0	608
11:00	0	481	183	0	23	0	0	14	0	0	0	1	0	0	0	702
12 PM	0	513	196	0	18	0	0	14	1	0	0	0	0	1	0	743
13:00	0	498	191	0	22	0	0	13	0	0	0	0	0	0	0	724
14:00	0	495	189	0	21	0	0	16	0	1	0	0	0	0	0	722
15:00	0	627	239	0	23	0	0	16	0	0	2	0	0	0	0	907
16:00	0	593	226	0	22	0	0	19	1	0	1	1	1	0	0	864
17:00	0	555	212	0	21	0	0	13	0	2	0	2	0	0	0	805
18:00	0	503	193	0	21	0	0	16	0	0	0	0	0	0	0	733
19:00	0	422	161	0	17	0	0	14	0	1	0	0	0	0	0	615
20:00	0	279	107	0	14	0	0	5	0	0	1	0	0	0	0	406
21:00	0	242	92	0	11	0	0	5	0	0	0	0	0	0	0	350
22:00	0	168	64	0	7	0	0	5	0	0	0	0	0	0	0	244
23:00	0	108	41	0	4	0	0	2	1	0	0	0	0	0	0	156
Total	0	7618	2911	0	310	0	0	208	5	5	6	4	1	2	0	11070
Percent	0.0%	68.8%	26.3%	0.0%	2.8%	0.0%	0.0%	1.9%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	

Job Title: Mamaroneck Project
Location: Mamaroneck ny
Date: 3 /15/ 2016 Tuesday

Weather : cloudy
Field Tech:
DAY# 1



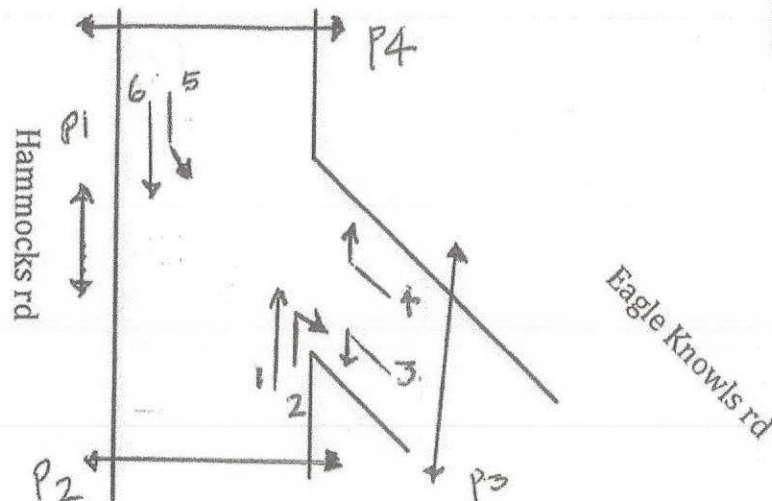
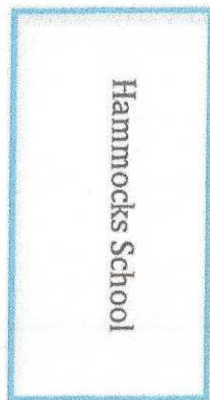
TRAFFIC DATA COLLECTIONS

914-302-6326 fax-914-629-6815 cell

TIME	1					2					3					4					5					6								
	C	T	S B	P B	B	C	T	S B	P B	B	C	T	S B	P B	B	C	T	S B	P B	B	C	T	S B	P B	B	C	T	S B	P B	B	P 1	P 2	P 3	P 4
7-7:15p	.	.	.	-	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	3	.	.	.	.	.	1	1	.	.	.	.	.	.
7:30	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	
7:45	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	15	.	.	.	.	3	.	.	.	.	.	.	.	.	5	1	.	3	
8:00	3	.	.	.	3	.	.	.	.	.	1	.	.	.	.	48	.	.	.	4	17	.	.	.	.	3	.	.	.	.	.	.		
8:15	4	.	.	.	.	.	.	.	.	.	1	.	.	.	.	12	1	.	.	2	3	.	.	.	.	3	.	.	.	.	.	.		
8:30	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	4	.	.	.	1	1	.	.	.	.	.	.	2	
8:45	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	.	.	.	.	5	.	.	.	.	3	.	.	.	.	.	.	2	
9:00	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.	.	.	3	.	.	.	.	3	.	.	.	.	.	.	.	
9:15	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	2	.	.	.	.	2	.	.	.	.	.	.	.	

KEY:

C=cars
T=truck 3+axle
SB= school bus
PB=Public trans
B=Bicycle



This intersection is not signalized

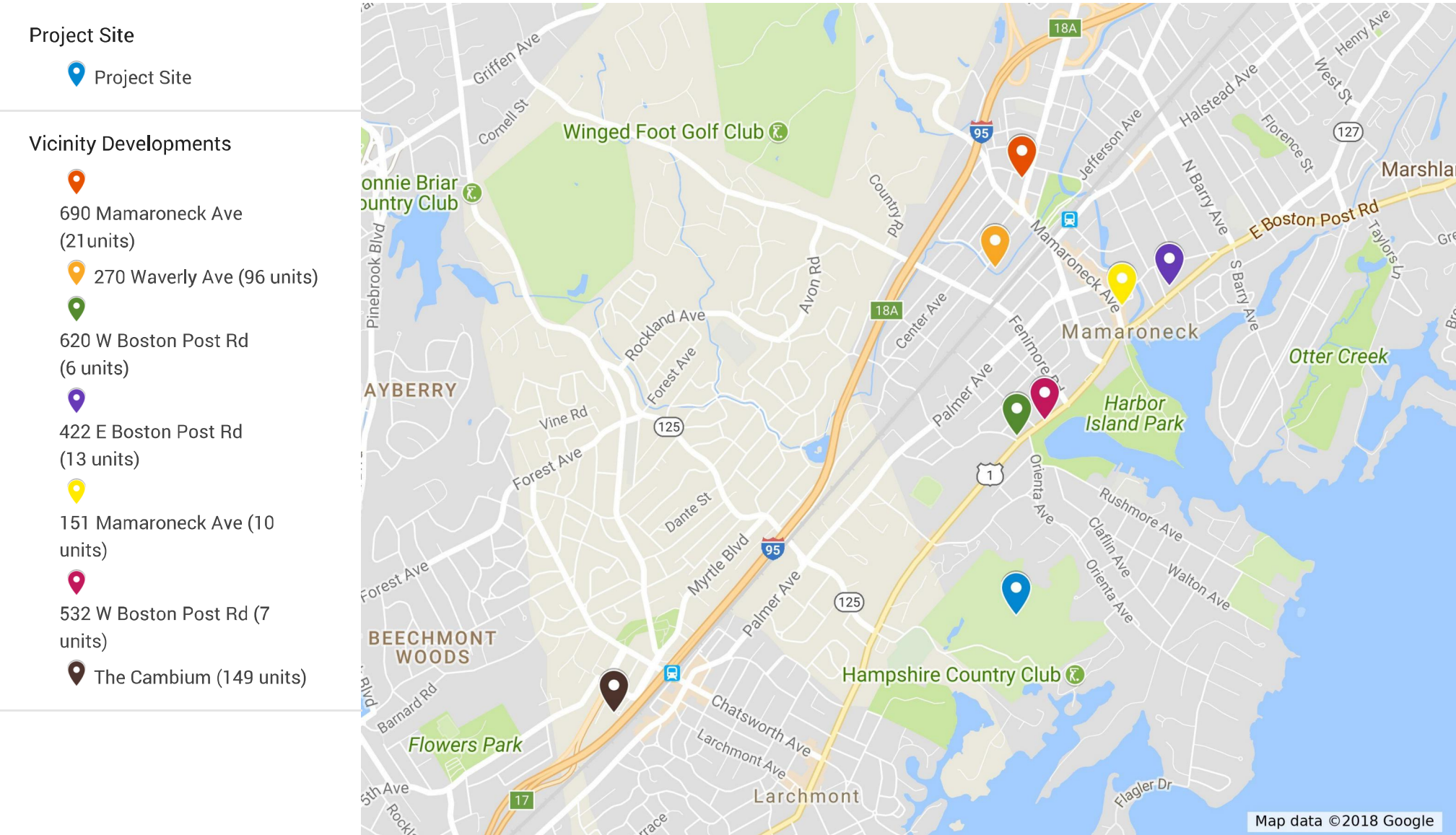
FEIS Chapter M Appendix

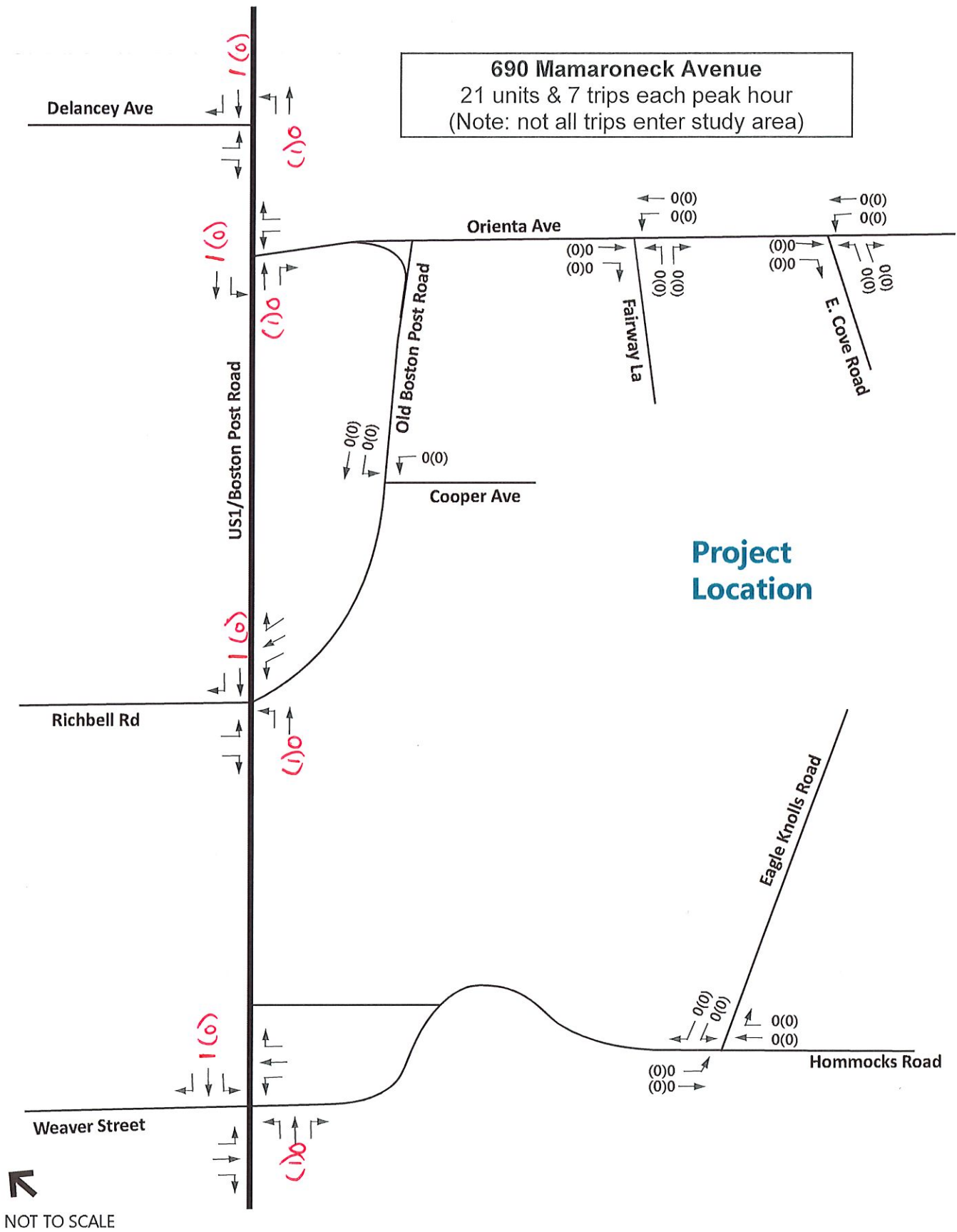
Response to Comment M35

Vicinity Development Traffic

Hampshire Vicinity Developments

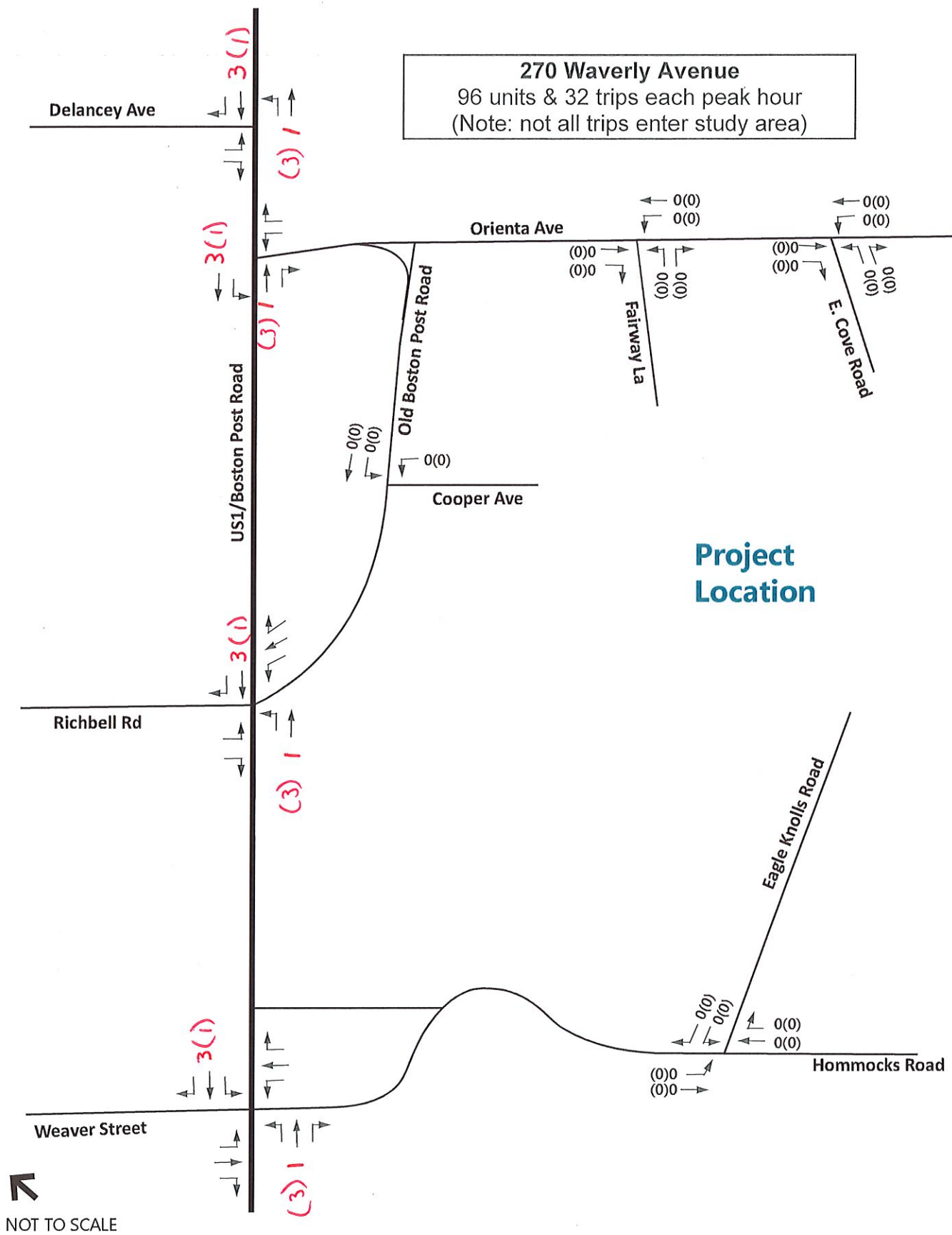
EXHIBIT 3M-8.1





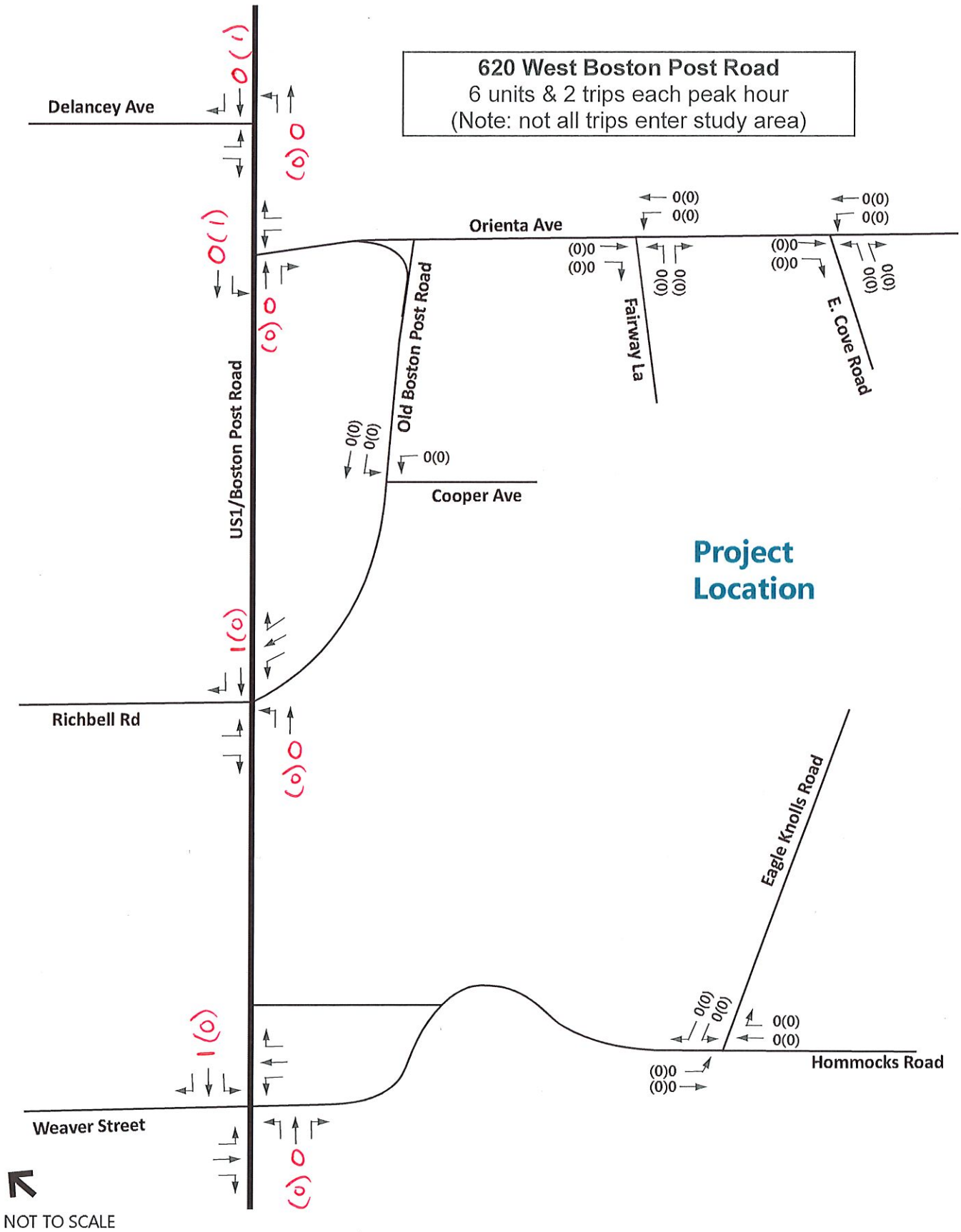
Hampshire Country Club - PRD | Village of Mamaroneck, NY

**Vicinity Development
Weekday Hour Volumes**

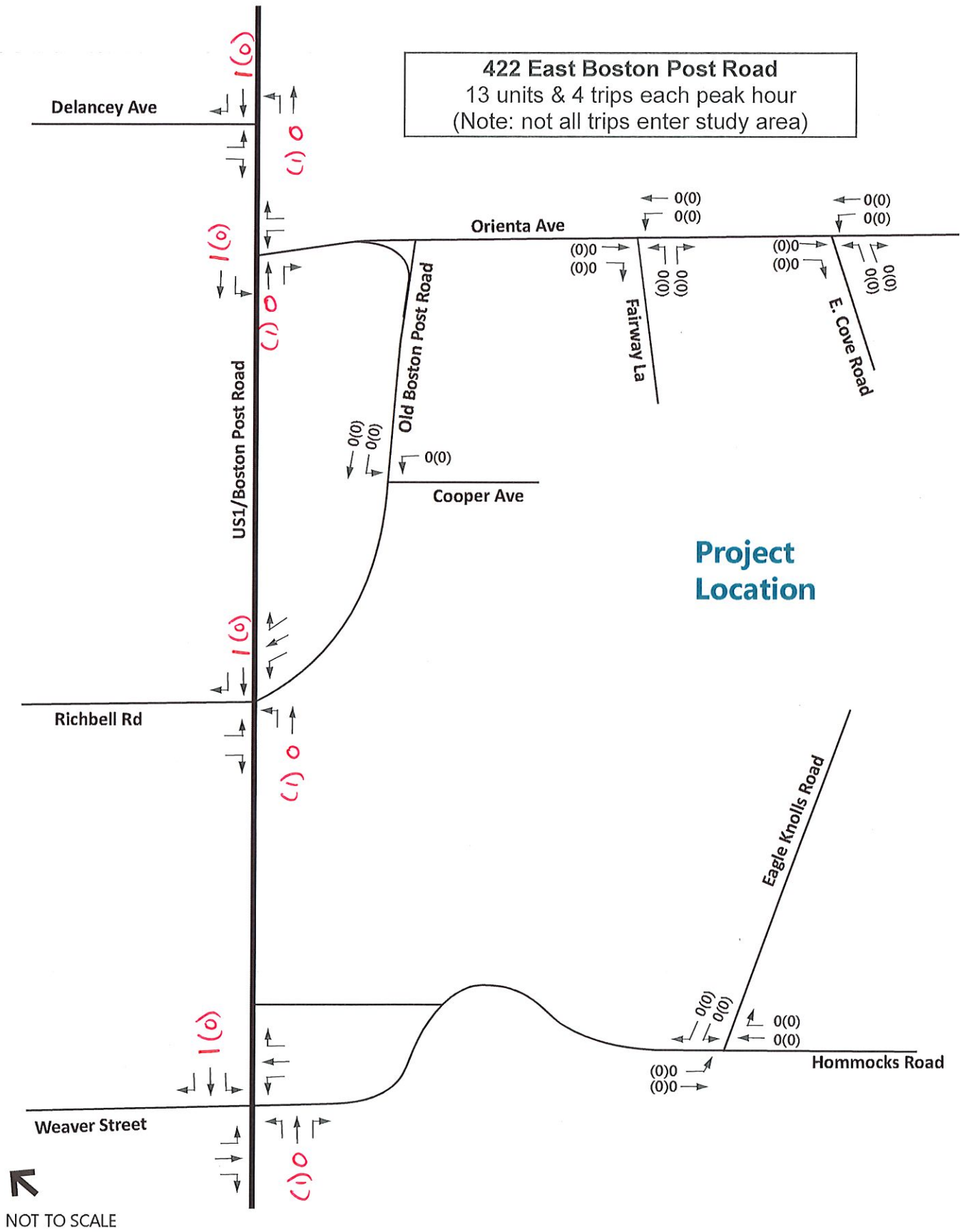


Hampshire Country Club - PRD | Village of Mamaroneck, NY

Vicinity Development
Weekday Hour Volumes



**Vicinity Development
Weekday Hour Volumes**

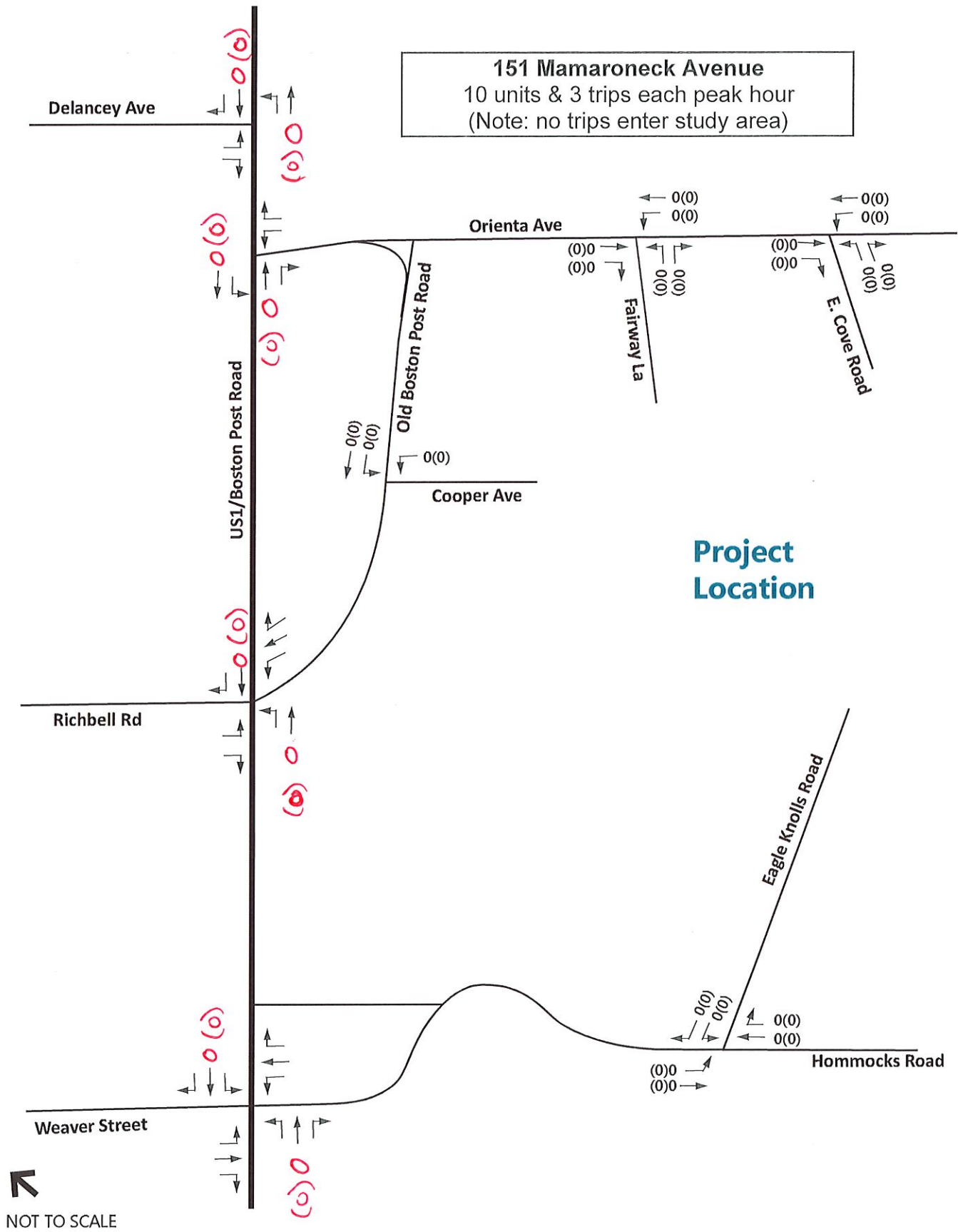


Hampshire Country Club - PRD | Village of Mamaroneck, NY

00= AM Peak Hour

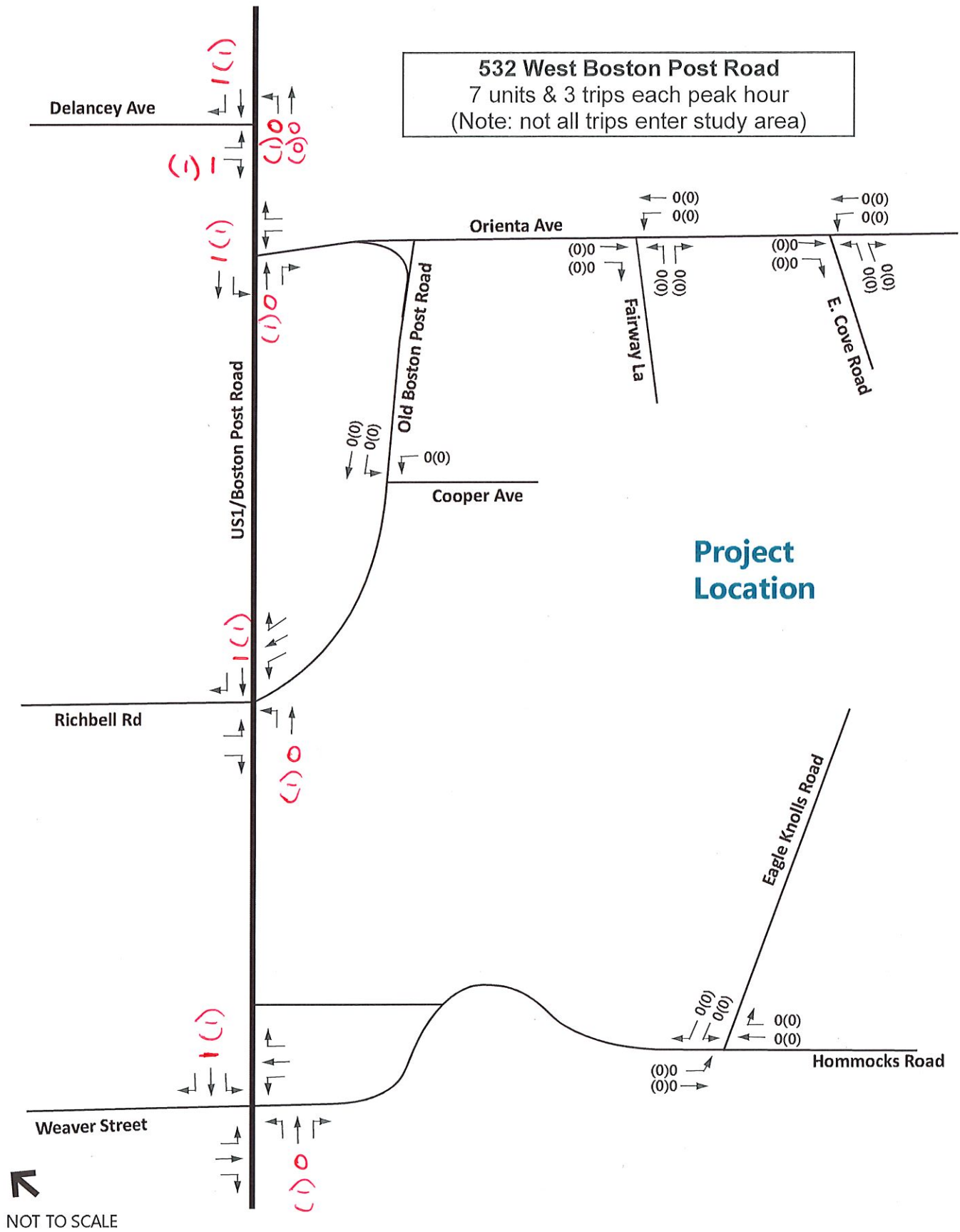
(00)=PM Peak Hour

**Vicinity Development
Weekday Hour Volumes**



Hampshire Country Club - PRD | Village of Mamaroneck, NY

Vicinity Development
Weekday Hour Volumes

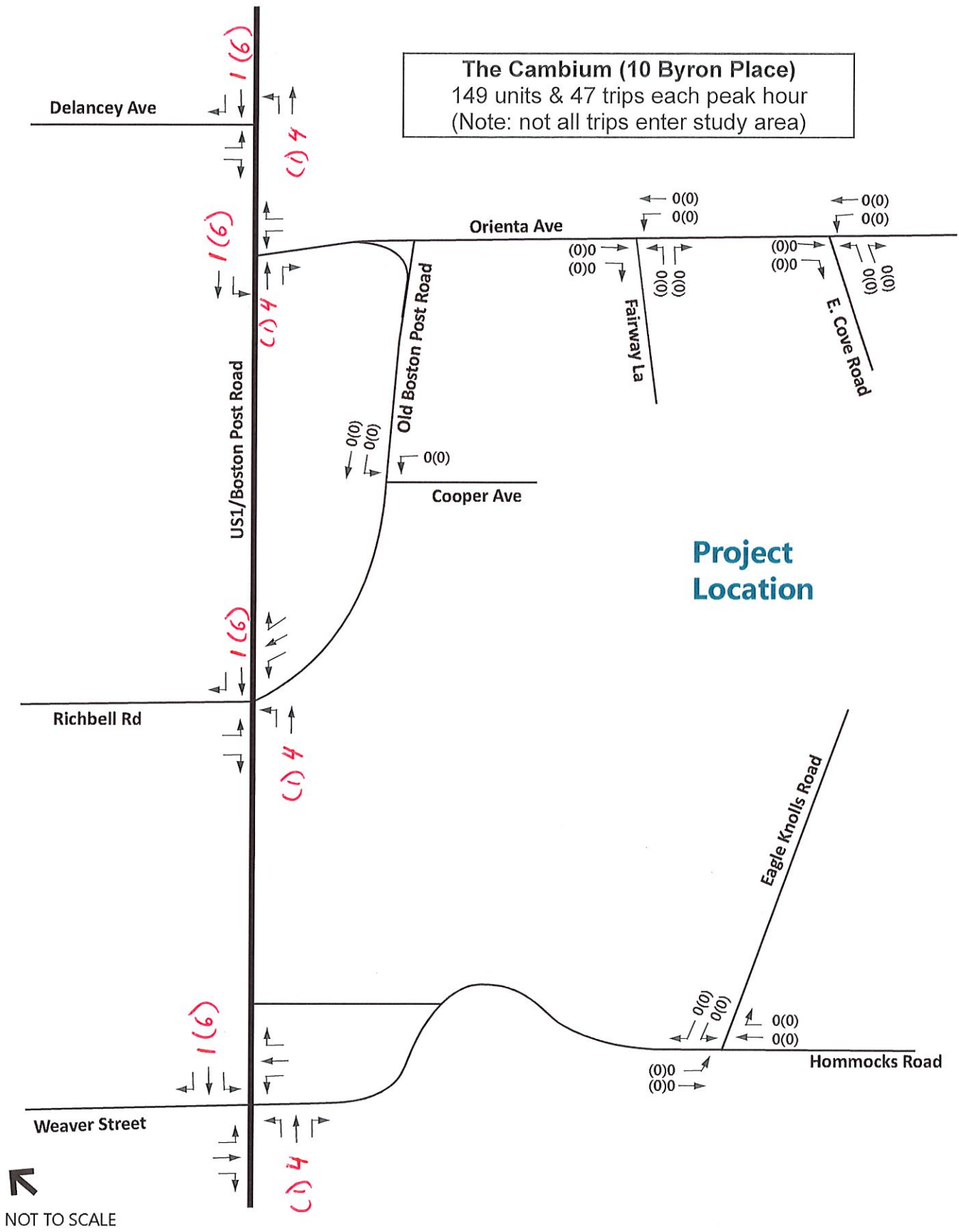


Hampshire Country Club - PRD | Village of Mamaroneck, NY

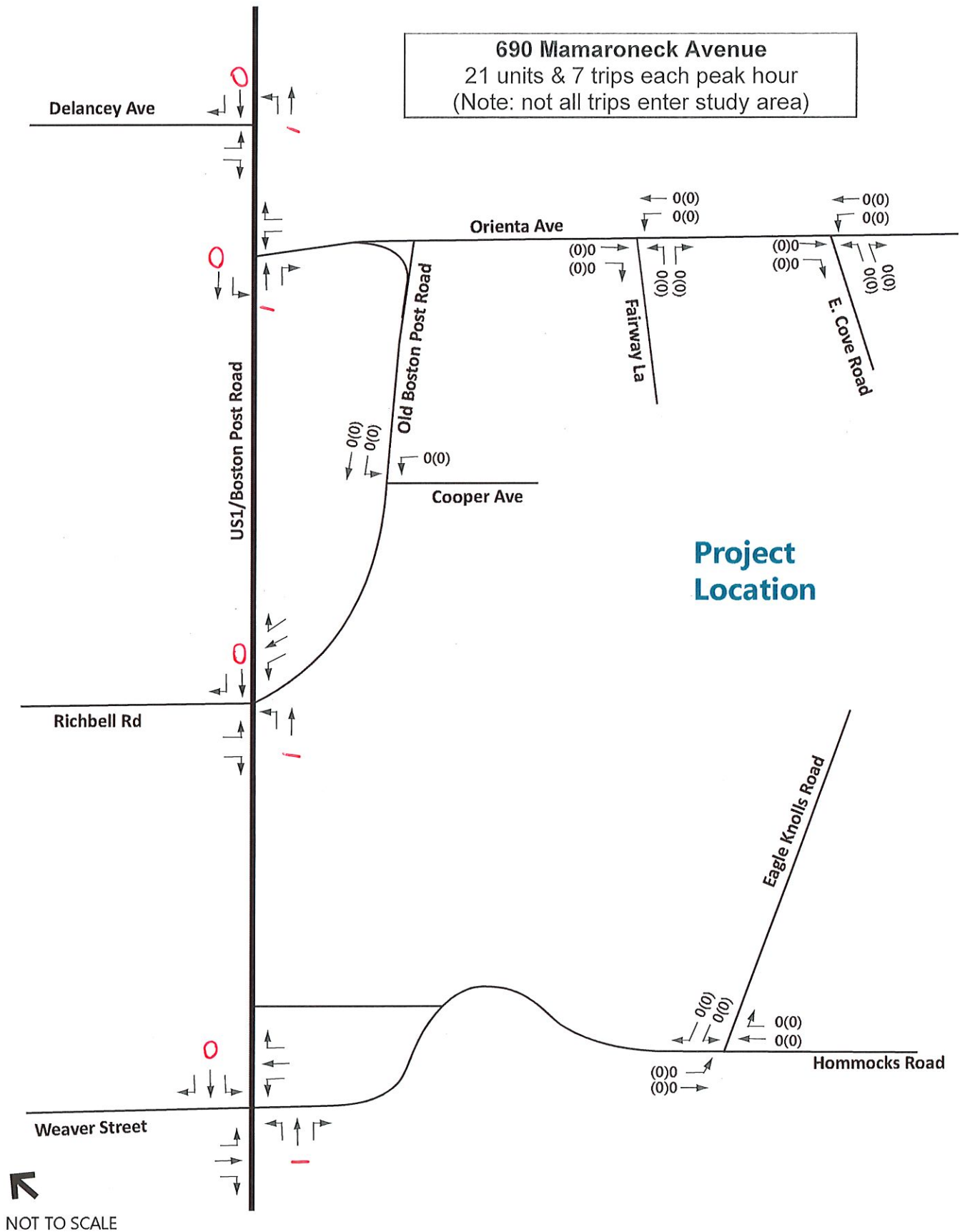
00= AM Peak Hour

(00)=PM Peak Hour

**Vicinity Development
Weekday Hour Volumes**

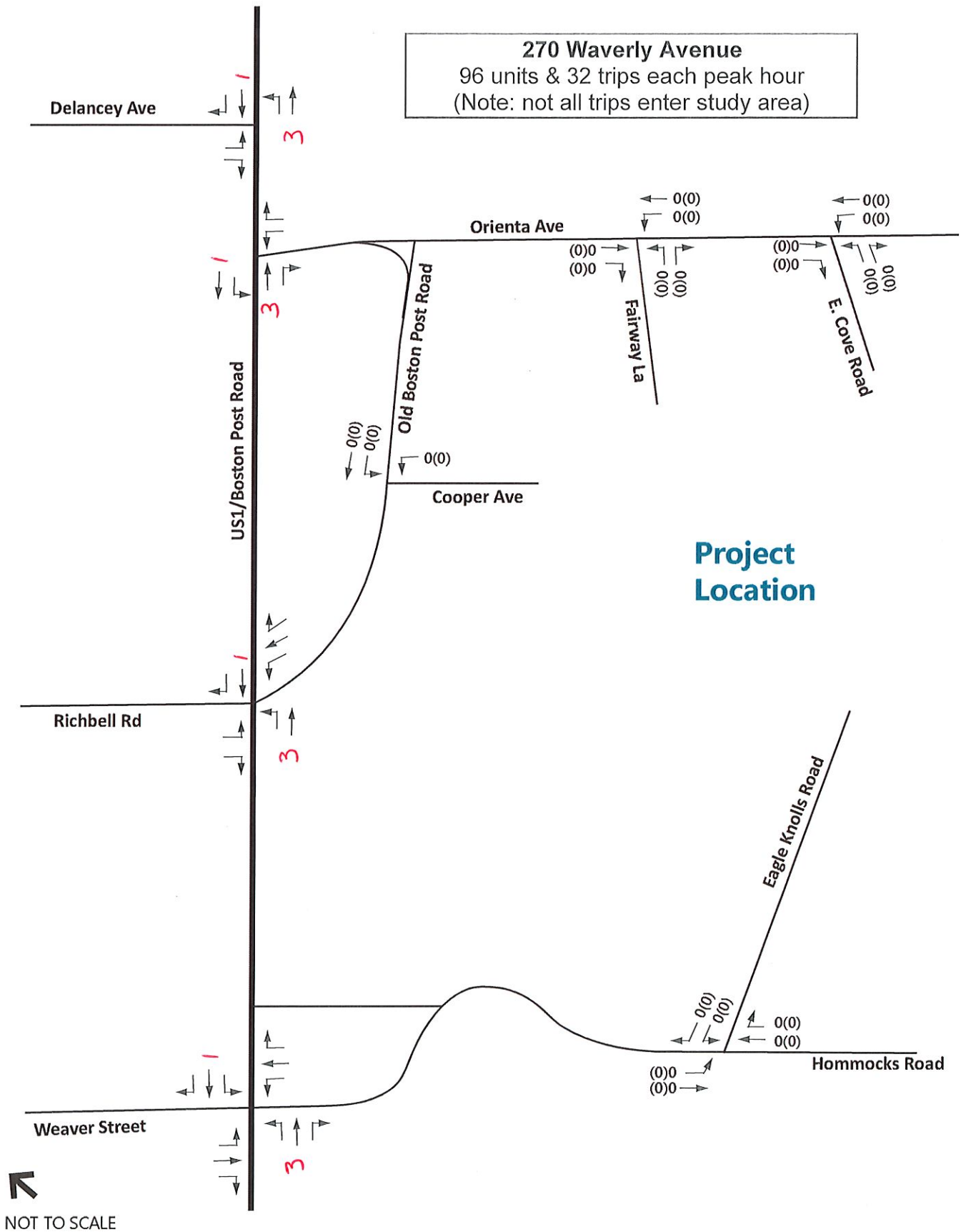


Hampshire Country Club - PRD | Village of Mamaroneck, NY



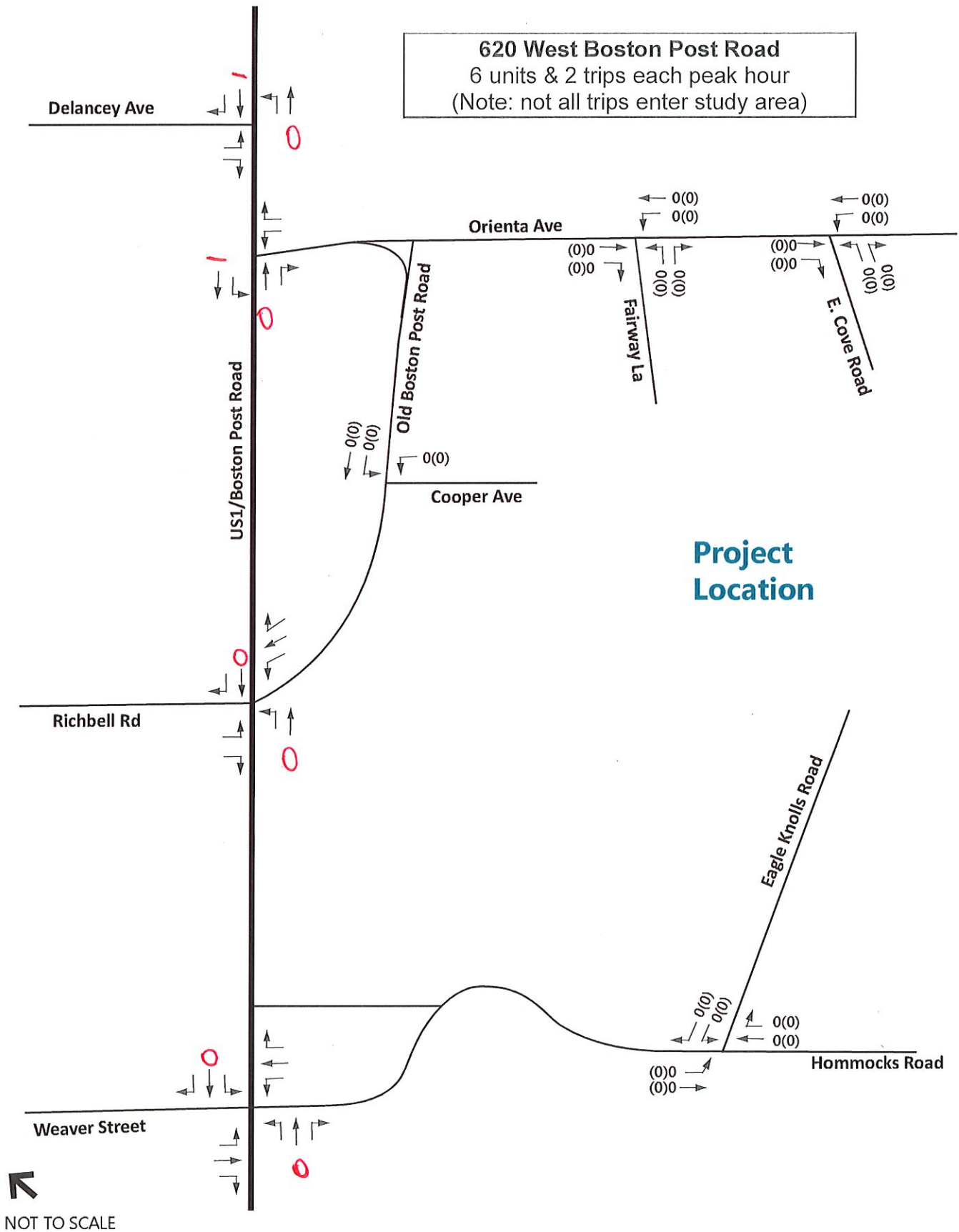
Hampshire Country Club - PRD | Village of Mamaroneck, NY

Vicinity Development Saturday
Peak Hour Volumes



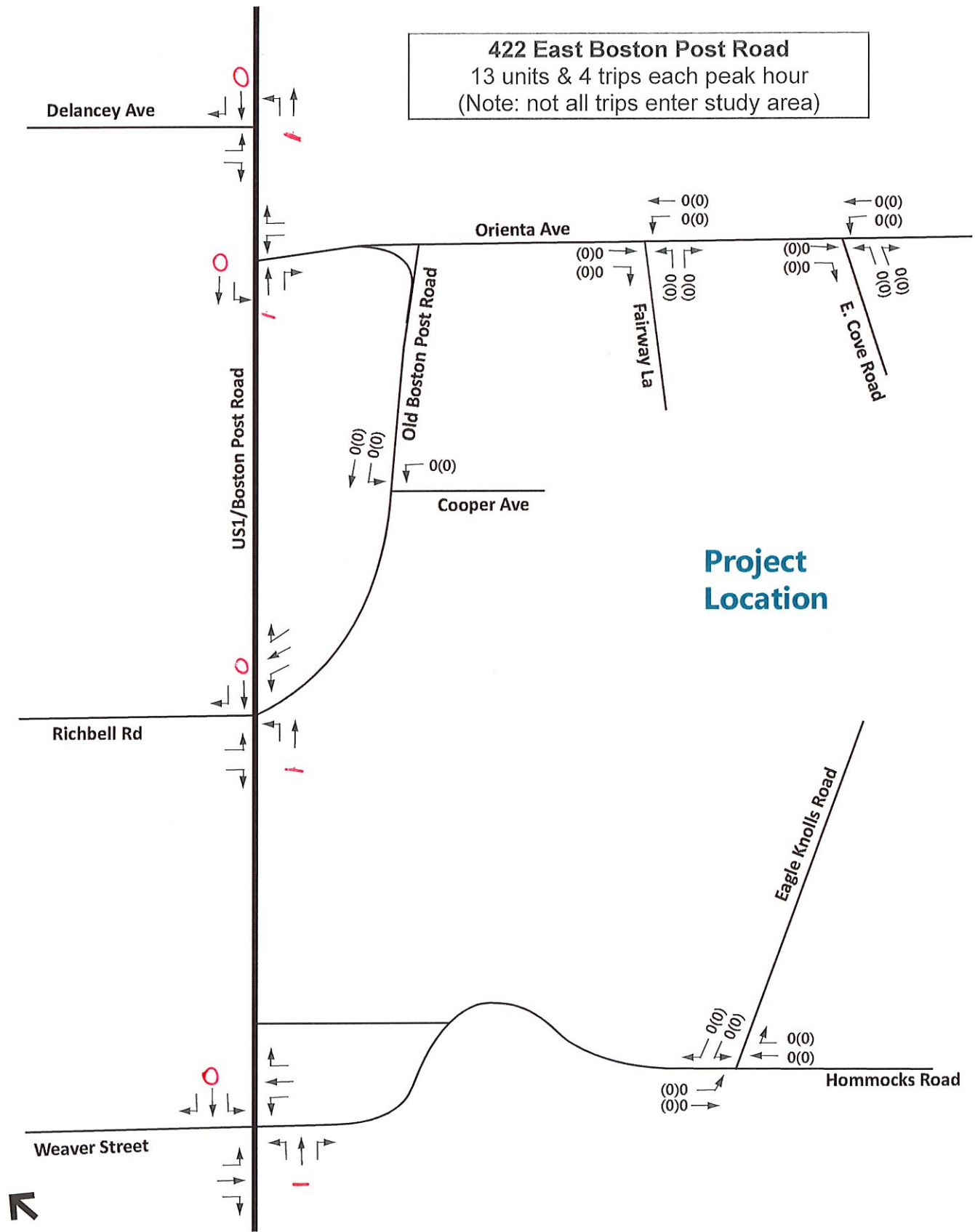
Hampshire Country Club - PRD | Village of Mamaroneck, NY

Vicinity Development Saturday
Peak Hour Volumes



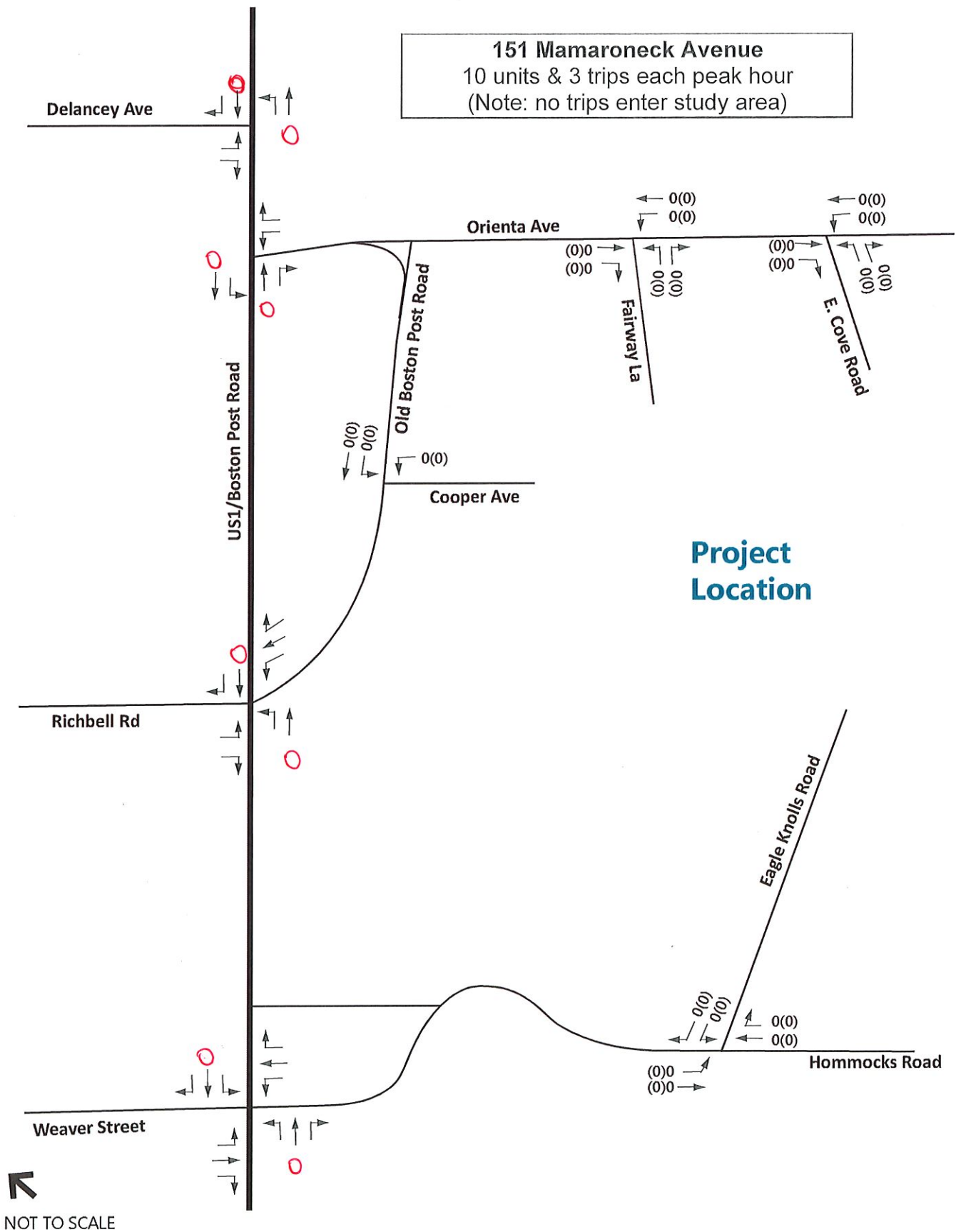
Hampshire Country Club - PRD | Village of Mamaroneck, NY

Vicinity Development Saturday
Peak Hour Volumes



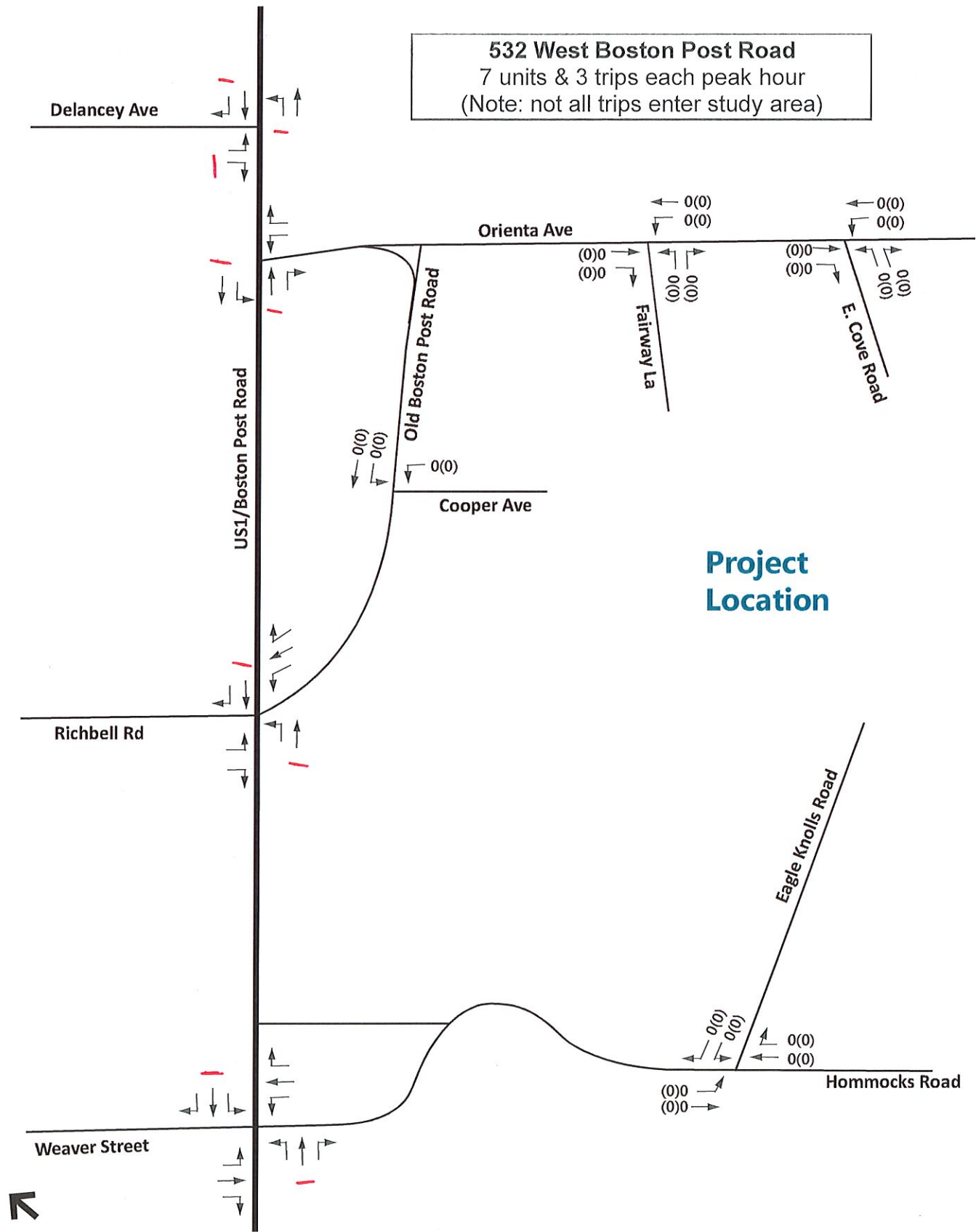
Hampshire Country Club - PRD | Village of Mamaroneck, NY

Vicinity Development Saturday
Peak Hour Volumes



Hampshire Country Club - PRD | Village of Mamaroneck, NY

Vicinity Development Saturday
 Peak Hour Volumes

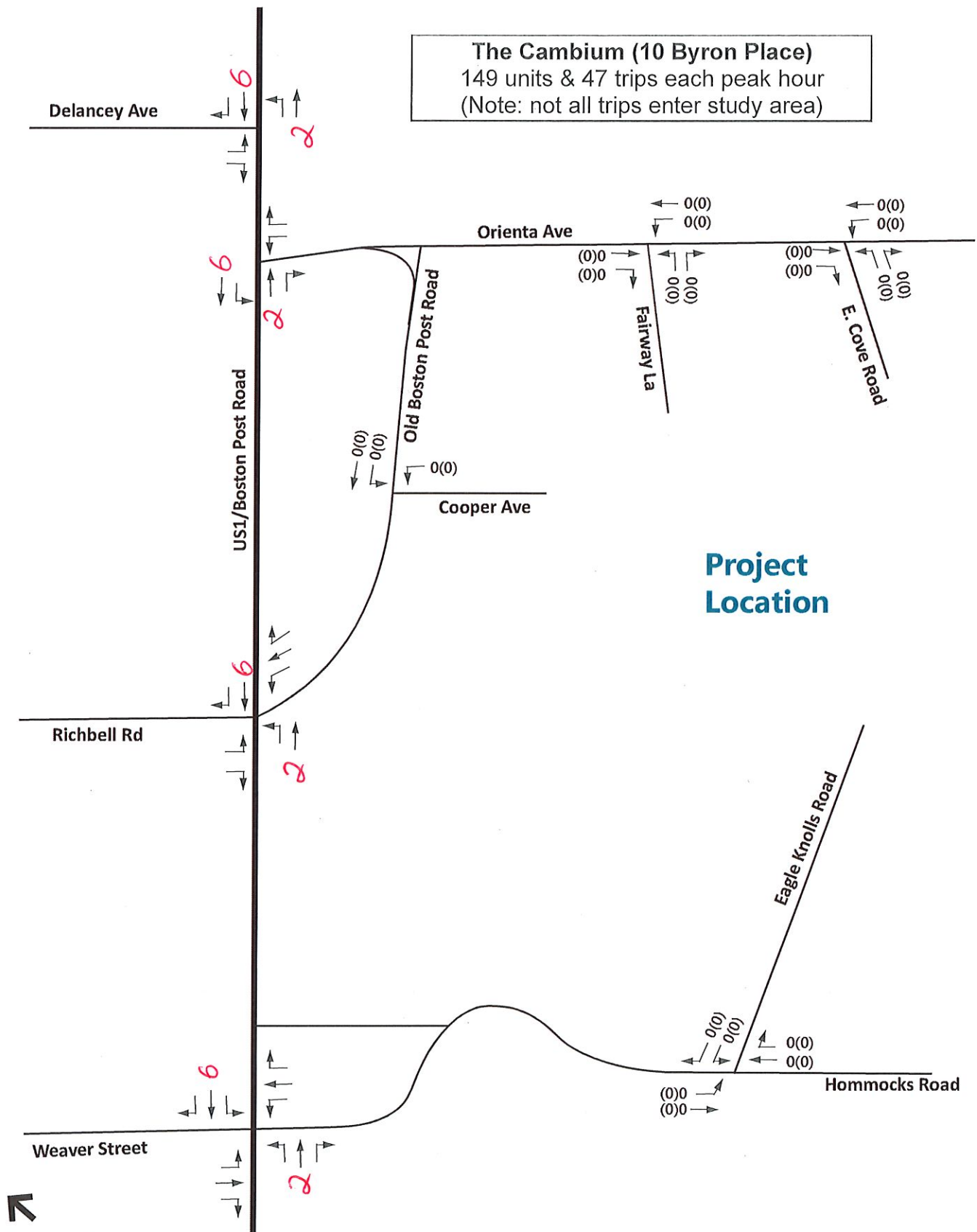


Hampshire Country Club - PRD | Village of Mamaroneck, NY

Vicinity Development Saturday
Peak Hour Volumes

The Cambium (10 Byron Place)

149 units & 47 trips each peak hour
(Note: not all trips enter study area)



**Project
Location**



NOT TO SCALE

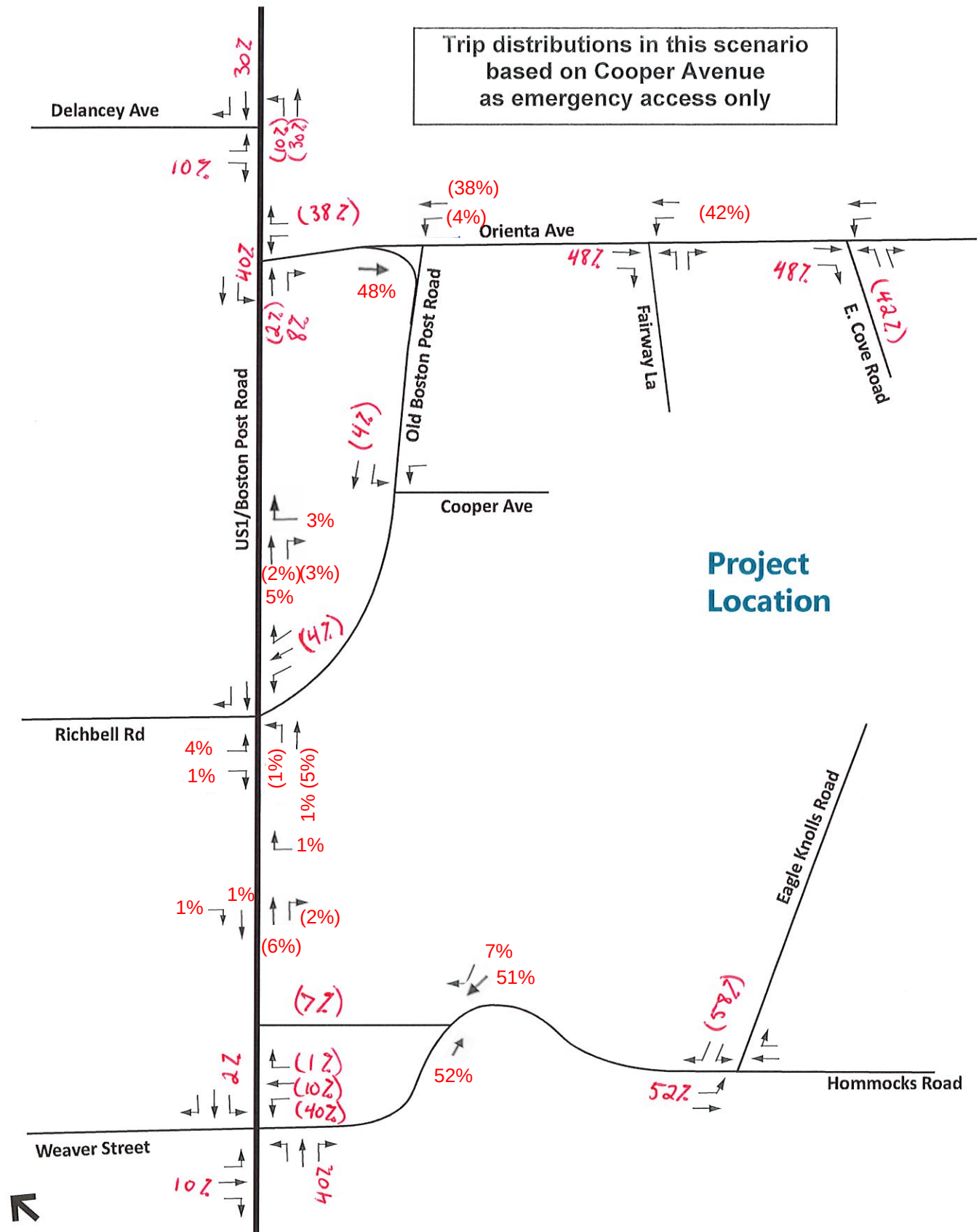
Hampshire Country Club - PRD | Village of Mamaroneck, NY

**Vicinity Development Saturday
Peak Hour Volumes**

FEIS Chapter M Appendix

Response to Comment M36

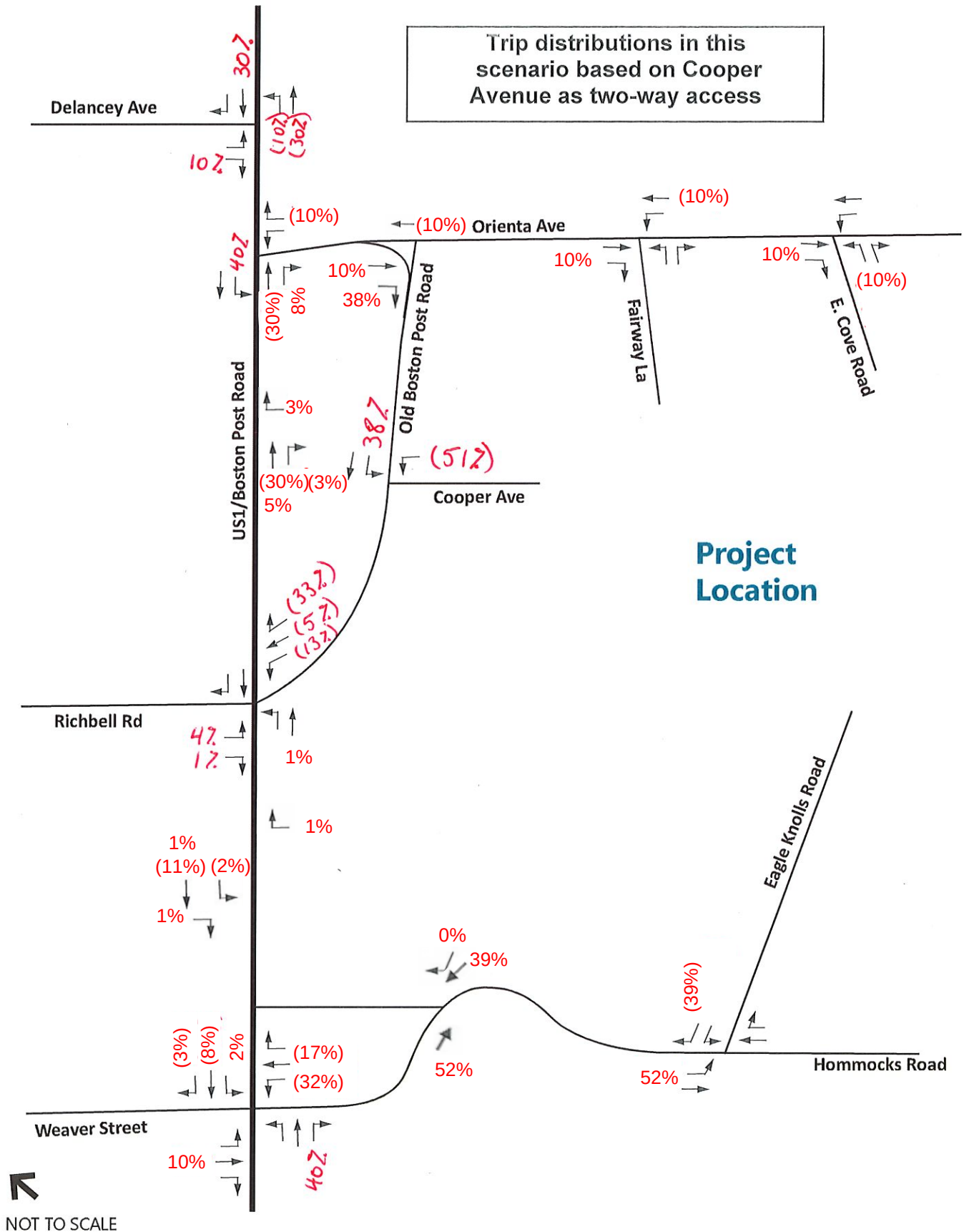
Project Traffic



Hampshire Country Club - PRD | Village of Mamaroneck, NY

00= Arrival
(00)=Departure

Trip Distributions
Proposed Access
 (Cooper Avenue Closed,
 Except if needed for Emergency Access)



Hampshire Country Club - PRD | Village of Mamaroneck, NY

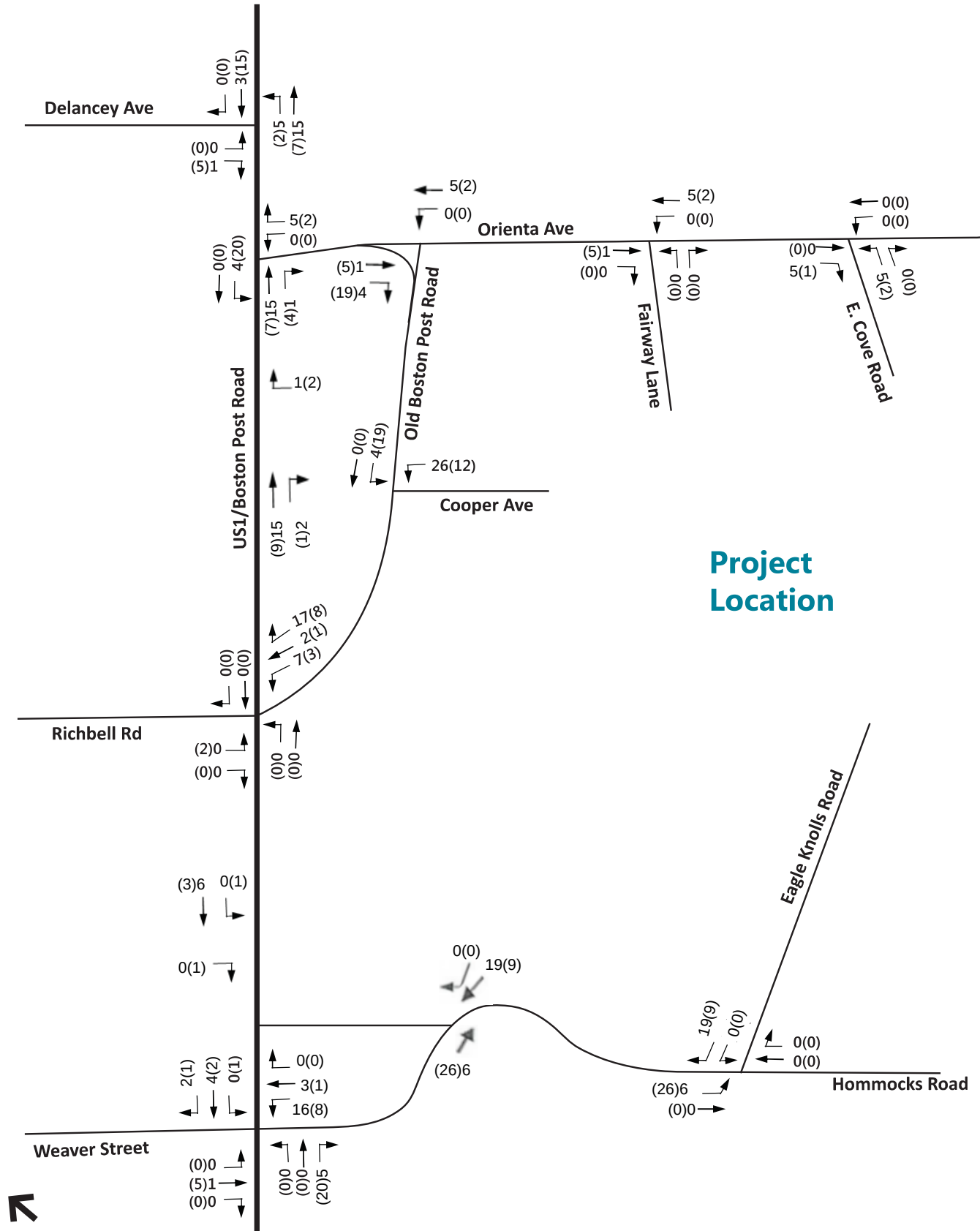
00= Arrival
(00)=Departure

Trip Distributions
Alternative Access
(Cooper Avenue Two-way Access)



00= AM Peak Hour
(00)=PM Peak Hour

**Project Generated Weekday
Peak Hour Volumes**
Proposed Access
(Cooper Avenue Closed,
Except if needed for Emergency Access)



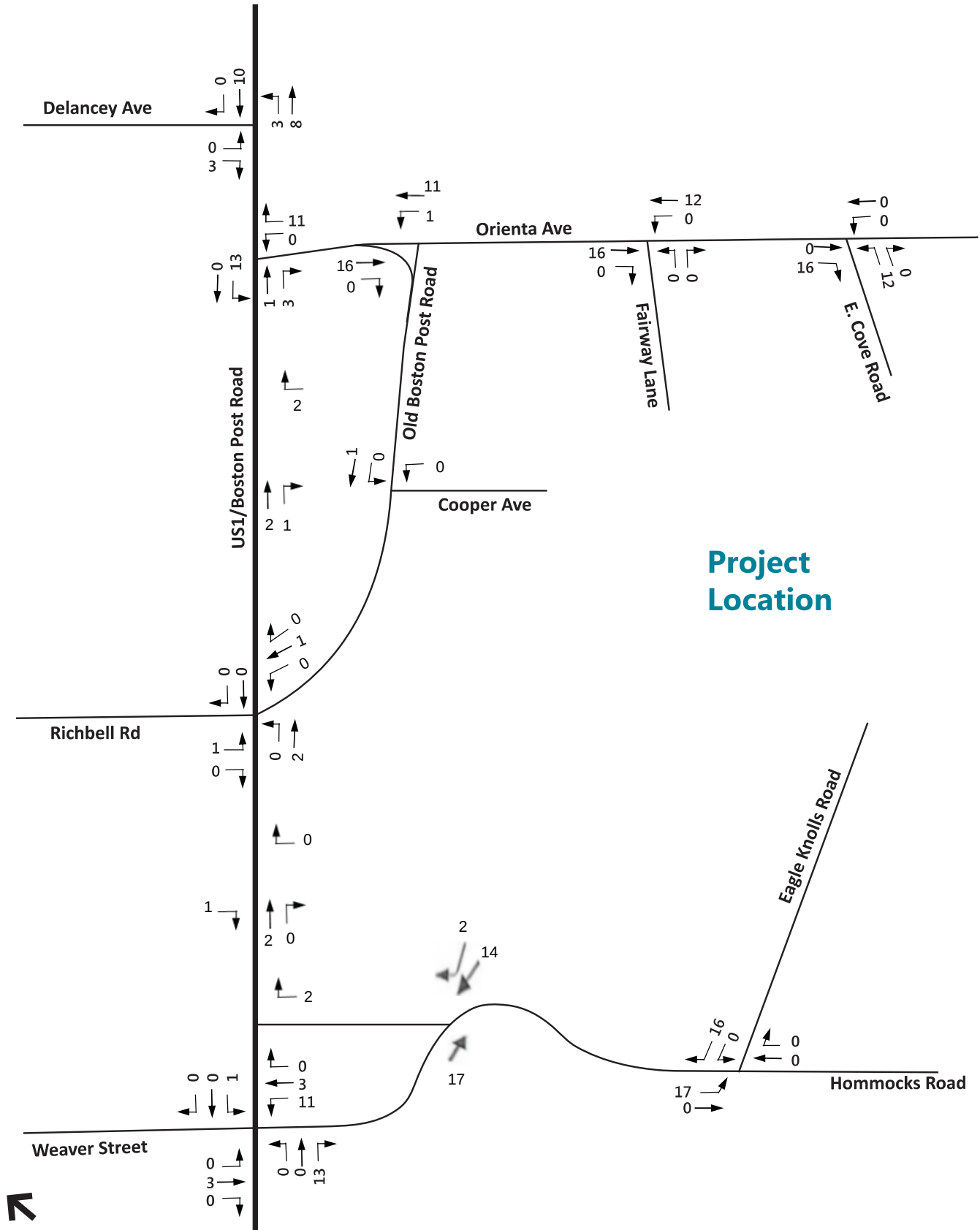
00= AM Peak Hour

(00)=PM Peak Hour

**Project Generated Weekday
Peak Hour Volumes**

Alternative Access
(Cooper Avenue Two-way Access)

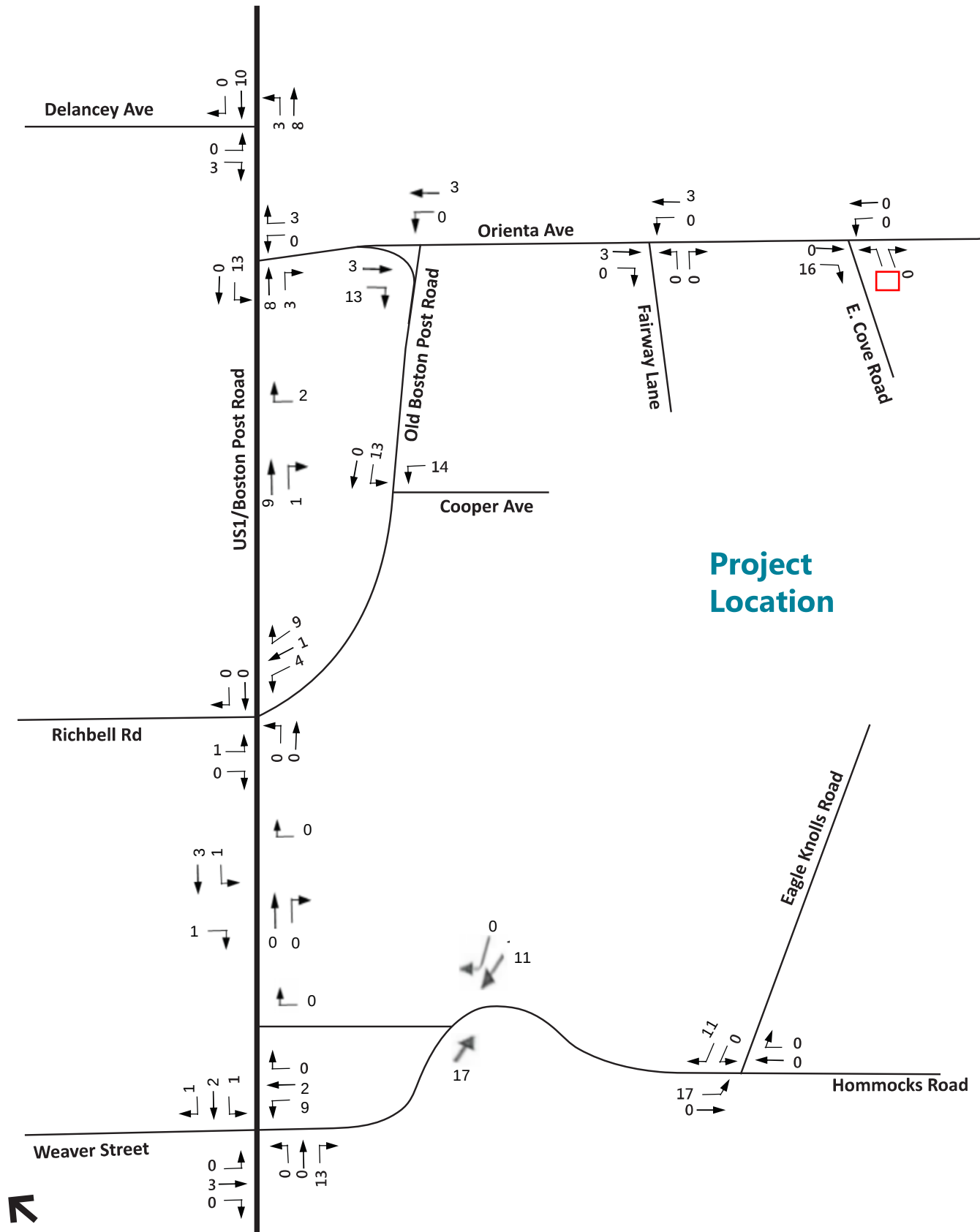
\\vhb\proj\WhitePlains\2867702-HampshireSubdivision\graphics\FIGURES\Traffic\Maps\3M\TrafficFigures_12_16_16.indd



NOT TO SCALE

Hampshire Country Club - PRD | Village of Mamaroneck, NY

**Project Generated Saturday
Peak Hour Volumes
Proposed Access**
(Cooper Avenue Closed,
Except when needed for Emergency Access)



Project Location

Hampshire Country Club - PRD | Village of Mamaroneck, NY

**Project Generated Saturday
Peak Hour Volumes
Alternative Access
(Cooper Avenue Two-way Access)**

FEIS Chapter M Appendix

Response to Comment M37

V/C Values for LOS E Lane Groups

Table showing V/C ratio values for locations with LOS "E" or worse.

(with pedestrians doubled)

Levels-of-Service and Volume-to-Capacity Ratios for Lane Groups with LOS E or Worse					
Scenario	Approach	Lane Group	LOS	Delay	V/C
Boston Post Rd & Hommocks Rd/Weaver St					
No-Build AM	EB	L	E	62.7	0.60
	WB	L	E	56.7	0.48
	NB	TR	E	72.0	1.00
	SB	L	E	76.2	0.87
No-Build PM	NB	L	E	56.4	0.69
Build AM	EB	L	E	64.0	0.61
	WB	L	E	66.7	0.65
	NB	TR	E	73.8	1.00
	SB	L	E	76.2	0.87
Build PM	NB	L	E	56.4	0.69