A. INTRODUCTION

Each previous chapter examines the potential for significant adverse impacts resulting from the proposed actions. Significant adverse impacts to traffic have been identified in Chapter 4, "Transportation," and measures have been considered to mitigate the anticipated impacts. These measures are detailed below.

PRINCIPAL CONCLUSIONS

As discussed in Chapter 4, "Transportation," of the ten study area intersections analyzed, the proposed project would create significant traffic impacts at five intersections in the weekday midday peak hour~~; six intersections in the weekday PM peak hour;~~, and at seven intersections in the weekday PM and Saturday midday peak hours.

The recommended mitigation measures to address significant adverse traffic impacts consist of readily implementable improvement measures, which could include signal timing and phasing changes, parking regulation changes to gain or widen a travel lane at key intersections, and lane restriping. These measures represent some of the standard traffic capacity improvements that are typically implemented by the New York City Department of Transportation (NYCDOT). **Table 8-1** summarizes the significant adverse traffic impacts and whether they could be fully or partially mitigated with the implementation of these traffic improvement measures.

Table 8-1
Traffic Impact Mitigation Summary

Intersections	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
No significant impact	5	~~4~~3	3
Impact could be fully mitigated	3	~~3~~4	~~6~~5
Impact could be partially mitigated	1	1	~~0~~1
Unmitigated impact	1	2	1

The major overall finding of the traffic mitigation analysis is that seven of the ten intersections analyzed would either not be significantly impacted or could be mitigated with mitigation measures identified in this chapter. Impacts identified at three intersections could not be fully mitigated during at least one peak hour: Hylan Boulevard and New Dorp Lane would be unmitigated for the ~~Saturday midday~~weekday PM peak hour (but could be fully mitigated during the weekday midday and ~~PM~~ Saturday midday peak hours); Hylan Boulevard and Beach Avenue would be unmitigated for all peak hours analyzed; and Hylan Boulevard and Ebbitts Street could ~~only~~ be partially mitigated during the ~~weekday midday and PM~~ all peak hours ~~(but could be fully mitigated during the Saturday midday peak hour~~ analyzed.

~~There is a potential for additional impacts to be identified between Draft and Final of this Environmental Impact Statement (EIS), and if so, additional measures will be explored, where feasible, to further mitigate the identified impacts. There is a potential for changes in the background as a result of NYCDOT's plans within the study area which could include, but are not limited to, changes in signal phasing and timing plans at selected intersections along Hylan Boulevard, and introduction of bike lanes or routes along Guyon Avenue and along Mill Road. The proposed mitigation measures are subject to review and approval by the NYCDOT, and if certain proposed mitigation measures deemed infeasible by NYCDOT, alternatives will be analyzed. If no other alternative mitigation measures can be identified, those impacted locations would be unmitigated.~~

~~Between Draft and Final of this EIS, additional measures will be explored, where feasible, to further mitigate the identified impacts. If no additional feasible measures can be identified, the projected impacts would remain unmitigated, and would therefore be considered unavoidable adverse impacts.~~

B. TRANSPORTATION

TRAFFIC

As discussed in Chapter 4, "Transportation," the proposed actions would result in significant adverse traffic impacts at a number of locations in the traffic study area. This section describes the mitigation measures that could reduce or eliminate significant impacts, or indicates whether impacts would remain unmitigated.

Of the ten study area intersections analyzed, the proposed action would result in significant traffic impacts at five intersections during the weekday midday peak hour, ~~six intersections during the weekday PM peak hour,~~ and seven intersections during the weekday PM and Saturday midday peak hours.

Table 8-1 summarizes the significant adverse traffic impacts and whether they could be fully or partially mitigated with the implementation of traffic improvement measures. Details of the intersection capacity analyses and all traffic mitigation measures (e.g., signal timing changes, parking regulation changes, lane reconfigurations, etc.) are summarized in **Tables 8-2 through 8-4**.

The major overall finding of the traffic mitigation analysis is that seven of the ten intersections analyzed would either not be significantly impacted or could be mitigated with readily implementable traffic improvement measures, including signal timing and phasing changes, parking regulation changes to gain or widen a travel lane at key intersections, and lane restriping. These measures represent some of the standard traffic capacity improvements that are typically implemented by the New York City Department of Transportation (NYCDOT).

Of the ten interactions analyzed, ~~three~~ two intersections, Mill Road at Ebbitts Street Plaza Driveway and at Ebbitts Street~~, and Hylan Boulevard at Buffalo Street~~, would not be significantly impacted during any of the peak hours analyzed. The intersection of Hylan Boulevard and Midland Avenue would be significantly impacted during the Saturday midday peak hour~~s~~, the intersection of Hylan Boulevard and Buffalo Street would be impacted during the weekday PM peak hour, and the intersection of Hylan Boulevard and Tysens Lane would be significantly impacted during the weekday PM and Saturday midday peak hours. The other intersections would be impacted for all three peak hours analyzed.

TABLE 8-2
NO-ACTION VS MITIGATED WITH-ACTION TRAFFIC LEVELS OF SERVICE COMPARISON - MIDDAY PEAK HOUR

		2019 No-Action				With Action				2019 With-Action				Mitigation Measures
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**	
Hylan Boulevard & New Dorp Lane														
New Dorp Lane	EB	L	0.79	73.3	E	L	0.80	74.0	E	L	0.80	74.0	E	- Modify signal timing: shift 2 sec. green time from NB/SB phase to NB left-turn/SB-left turn lead/WB right-turn lag phase.
		TR	0.79	60.4	E	TR	0.80	61.0	E	TR	0.80	61.0	E	
	WB	L	0.97	121.9	F	L	0.98	124.5	F	L	0.98	124.5	F	
		T	0.44	43.3	D	T	0.45	43.4	D	T	0.45	43.4	D	
		R	0.52	34.7	C	R	0.54	35.2	D	R	0.52	33.0	C	
Hylan Bouelvard	NB	L	0.82	51.3	D	L	0.83	55.5	E	L	0.77	47.3	D	
		TR	0.68	25.7	C	TR	0.70	26.2	C	TR	0.72	28.1	C	
	SB	L	1.13	123.0	F	L	1.18	144.1	F	L	1.09	113.9	F	
		TR	0.74	27.2	C	TR	0.75	27.7	C	TR	0.78	29.9	C	
Overall Intersection		**-**	**1.19**	**40.7**	**D**	**-**	**1.28**	**42.5**	**D**	**-**	**1.16**	**41.7**	**D**	
Hylan Boulevard & Beach Avenue														
Beach Avenue	EB	LTR	0.58	46.9	D	LTR	0.65	50.6	D					-Unmitigated
		-	-	-	-	-	-	-	-					
	WB	LT	0.33	40.3	D	LT	0.47	44.2	D					
		R	0.47	26.9	C	R	0.53	28.5	C					
Hylan Boulevard	NB	L	0.25	27.5	C	L	0.25	27.5	C					
		TR	0.73	31.5	C	TR	0.74	31.9	C					
	SB	L	0.86	54.0	D	L	0.98	81.0	F					
		TR	0.56	14.9	B	TR	0.56	14.9	B					
Overall Intersection		**-**	**0.70**	**27.0**	**C**	**-**	**0.73**	**30.1**	**C**					
Hylan Boulevard & Ebbitts Street														
Ebbitts Street	EB	LTR	0.19	39.2	D	LTR	0.19	39.2	D	LTR	0.19	39.2	D	- Partially mitigated
	WB	L	0.93	86.1	F	L	1.06	118.2	F	L	1.06	118.2	F	- Modify signal timing: shift 1 sec. green time from NB/SB phase to the SB lead/WB right-turn lag phase.
		T	0.31	40.7	D	T	0.31	40.7	D	T	0.31	40.7	D	
		R	0.37	32.7	C	R	0.37	32.8	C	R	0.36	31.9	C	
Hylan Boulevard	NB	L	0.37	24.0	C	L	0.38	24.6	C	L	0.38	25.3	C	
		TR	0.64	22.2	C	TR	0.66	22.7	C	TR	0.67	23.5	C	
	SB	L	1.13	113.1	F	L	1.18	132.6	F	L	1.12	114.7	F	
		TR	0.56	13.7	B	TR	0.57	13.9	B	TR	0.57	13.9	B	
Overall Intersection		**-**	**1.15**	**29.9**	**C**	**-**	**1.25**	**33.9**	**C**	**-**	**1.20**	**33.0**	**C**	
Hylan Boulevard & Tysens Lane														
Tysens Lane	EB	L	0.68	58.2	E	L	0.71	61.2	E					- No improvements needed.
		T	0.60	42.1	D	T	0.60	42.1	D					
		R	0.25	34.0	C	R	0.25	34.0	C					
	WB	L	1.03	116.1	F	L	1.03	117.7	F					
		T	0.66	44.4	D	T	0.66	44.4	D					
		R	0.24	34.0	C	R	0.24	34.0	C					
	NB	L	0.40	44.0	D	L	0.40	44.8	D					
		TR	0.63	27.9	C	TR	0.65	28.4	C					
	SB	L	0.45	33.9	C	L	0.46	35.6	D					
		TR	0.86	35.2	D	TR	0.88	36.8	D					
Overall Intersection		**-**	**1.01**	**39.0**	**D**	**-**	**1.04**	**39.8**	**D**					
Mill Road & Ebbitts Street														
Ebbitts Street	EB	LTR	0.53	18.8	B	LTR	0.54	19.0	B					- No improvements needed.
	WB	LTR	0.50	20.6	C	LTR	0.51	20.7	C					
Mill Road	NB	LTR	0.35	10.7	B	LTR	0.36	10.9	B					
	SB	LTR	0.43	11.7	B	LTR	0.44	11.8	B					
Overall Intersection		**-**	**0.47**	**15.3**	**B**	**-**	**0.48**	**15.4**	**B**					
Ebbitts Street & Plaza Driveway (Unsignalized)														
Ebbitts Street	EB	LT	-	9.2	A	LT	-	9.3	A					- No improvements needed.
	WB	TR	-	-	-	TR	-	-	-					
Plaza Driveway	SB	LR	-	31.7	D	LR	-	43.5	E					
Overall Intersection		**-**	**-**	**12.6**	**B**	-	**-**	**17.1**	**C**					
Hylan Boulevard & Lincoln Avenue														
Lincoln Avenue	WB	L	0.44	37.7	D	L	0.45	37.8	D	L	0.46	38.8	D	- Modify signal timing: shift 1 sec. green time from WB phase to NB lead phase.
		TR	0.32	36.7	D	TR	0.32	36.7	D	TR	0.33	37.6	D	
Hylan Boulevard	NB	L	0.77	39.6	D	L	0.83	47.4	D	L	0.78	39.9	D	
		T	0.47	12.0	B	T	0.48	12.2	B	T	0.47	11.7	B	
	SB	TR	0.68	22.9	C	TR	0.69	23.2	C	TR	0.69	23.2	C	
Overall Intersection		**-**	**0.64**	**21.7**	**C**	-	**0.62**	**22.2**	**C**	**-**	**0.65**	**21.8**	**C**	
Hylan Boulevard & Guyon Avenue														
Guyon Avenue	EB	L	0.88	82.3	F	L	0.92	89.7	F	L	0.88	80.0	F	- Modify signal timing: shift 1 sec. green time from NB/SB phase to EB/WB phase.
		TR	0.47	45.1	D	TR	0.47	45.1	D	TR	0.46	43.8	D	
	WB	L	0.65	57.4	E	L	0.65	57.4	E	L	0.62	54.1	D	
		TR	0.44	44.0	D	TR	0.46	44.4	D	TR	0.44	43.2	D	
Hylan Boulevard	NB	L	0.58	24.1	C	L	0.59	25.4	C	L	0.60	26.6	C	
		TR	0.40	11.7	B	TR	0.41	11.8	B	TR	0.41	12.3	B	
	SB	L	0.14	15.9	B	L	0.16	16.3	B	L	0.17	16.9	B	
		TR	0.66	22.0	C	TR	0.67	22.3	C	TR	0.68	23.2	C	
Overall Intersection		**-**	**0.75**	**25.9**	**C**	-	**0.77**	**26.5**	**C**	**-**	**0.76**	**26.3**	**C**	
Hylan Boulevard & Midland Avenue														
Midland Avenue	EB	L	0.23	25.5	C	L	0.23	25.5	C					- No improvements needed.
		T	0.47	42.5	D	T	0.47	42.5	D					
		R	0.36	40.3	D	R	0.37	40.7	D					
	WB	L	0.44	34.9	C	L	0.44	34.9	C					
		R	0.11	35.4	D	R	0.11	35.4	D					
Hylan Boulevard	NB	TR	0.70	27.4	C	TR	0.72	28.0	C					
	SB	L	0.41	33.3	C	L	0.43	35.4	D					
		T	0.71	27.8	C	T	0.72	28.2	C					
Overall Intersection		**-**	**0.67**	**29.2**	**C**	**-**	**0.68**	**29.6**	**C**					
Hylan Boulevard & Buffalo Street														
Lincoln Avenue	EB	LTR	0.45	44.3	D	LTR	0.45	44.3	D					- No improvements needed.
	WB	LTR	0.28	39.6	D	LTR	0.28	39.6	D					
Hylan Boulevard	NB	L	0.10	9.4	A	L	0.10	9.6	A					
		T	0.47	16.1	B	T	0.48	16.2	B					
	SB	L	0.09	7.7	A	L	0.09	7.8	A					
		TR	0.64	19.1	B	TR	0.65	19.4	B					
Overall Intersection		**-**	**0.57**	**19.6**	**B**	**-**	**0.57**	**19.8**	**B**					

Notes
(1): Control delay is measured in seconds per vehicle.
(2): Level of service (LOS) for signalized intersections is based upon average control delay per vehicle (sec/veh) for each lane group as listed in the 2000 Highway Capacity Manual -- TRB.
(3): Overall intersection V/C ratio is the critical lane groups' V/C ratio, not the weighted average of all the movements.

TABLE 8-3
NO-ACTION VS MITIGATED WITH-ACTION TRAFFIC LEVELS OF SERVICE COMPARISON - PM PEAK HOUR

		2019 No-Action				With Action				2019 With-Action				Mitigation Measures
INTERSECTION & APPROACH		**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**	**Mvt.**	**V/C**	**Control Delay**	**LOS**	
Hylan Boulevard & New Dorp Lane														
New Dorp Lane	EB	L	0.72	67.2	E	L	0.73	68.4	E					-Unmitigated
		TR	1.21	165.7	F	TR	1.22	169.4	F					
	WB	L	1.83	478.8	F	L	1.83	478.8	F					
		T	0.45	44.2	D	T	0.46	44.4	D					
		R	0.46	30.8	C	R	0.48	31.4	C					
Hylan Bouelvard	NB	L	0.86	67.3	E	L	0.86	67.4	E					
		TR	0.69	27.7	C	TR	0.70	28.1	C					
	SB	L	1.27	176.1	F	L	1.32	198.3	F					
		TR	1.06	72.3	E	TR	1.08	78.7	E					
Overall Intersection		**-**	**1.85**	**81.8**	**F**	**-**	**1.96**	**86.2**	**F**					
Hylan Boulevard & Beach Avenue														
Beach Avenue	EB	LTR	0.64	50.1	D	LTR	0.68	52.3	D					-Unmitigated
		-	-	-	-	-	-	-	-					
	WB	LT	0.38	42.2	D	LT	0.54	47.5	D					
		R	0.45	27.3	C	R	0.53	29.3	C					
Hylan Boulevard	NB	L	0.35	33.8	C	L	0.35	33.8	C					
		TR	0.72	30.6	C	TR	0.73	30.9	C					
	SB	L	0.74	39.0	D	L	0.86	54.9	D					
		TR	0.68	9.6	A	TR	0.68	9.6	A					
Overall Intersection		**-**	**0.71**	**22.7**	**C**	**-**	**0.73**	**24.7**	**C**					
Hylan Boulevard & Ebbitts Street														
Ebbitts Street	EB	LTR	0.18	38.9	D	LTR	0.18	38.9	D	LTR	0.18	38.9	D	- Partially mitigated
	WB	L	0.94	87.6	F	L	1.07	120.1	F	L	1.07	120.1	F	- Modify signal timing: shift 1 sec. green time from NB/SB phase to the SB lead/WB right-turn lag phase.
		T	0.36	41.8	D	T	0.36	41.8	D	T	0.36	41.8	D	
		R	0.26	30.5	C	R	0.26	30.5	C	R	0.25	29.7	C	
Hylan Boulevard	NB	L	0.29	23.8	C	L	0.30	24.3	C	L	0.30	25.1	C	
		TR	0.62	21.7	C	TR	0.64	22.2	C	TR	0.65	23.1	C	
	SB	L	1.10	98.7	F	L	1.14	115.6	F	L	1.09	99.0	F	
		TR	0.71	8.9	A	TR	0.71	9.0	A	TR	0.71	9.0	A	
Overall Intersection		**-**	**1.12**	**25.2**	**C**	**-**	**1.21**	**28.8**	**C**	**-**	**1.15**	**28.1**	**C**	
Hylan Boulevard & Tysens Lane														
Tysens Lane	EB	L	0.70	65.0	E	L	0.75	70.6	E	L	0.71	64.2	E	- Modify signal timing: shift 1 sec. green time from NB/SB lead left-turn phase to EB/WB phase and 1 sec.
		T	0.73	51.6	D	T	0.73	51.6	D	T	0.71	49.4	D	green time from the NB/SB lead left-turn phase to the NB/SB phase.
		R	0.41	40.5	D	R	0.41	40.5	D	R	0.39	39.4	D	
	WB	L	1.07	140.1	F	L	1.08	144.4	F	L	1.02	122.6	F	
		T	0.68	48.9	D	T	0.68	48.9	D	T	0.66	47.1	D	
		R	0.27	37.7	D	R	0.27	37.7	D	R	0.26	36.7	D	
	NB	L	0.46	47.1	D	L	0.46	47.5	D	L	0.51	50.9	D	
		TR	0.58	24.5	C	TR	0.59	24.8	C	TR	0.58	24.0	C	
	SB	L	0.49	31.5	C	L	0.50	33.1	C	L	0.54	34.7	C	
		TR	1.00	42.8	D	TR	1.02	48.8	D	TR	1.00	43.0	D	
Overall Intersection		**-**	**1.09**	**42.5**	**D**	**-**	**1.09**	**45.5**	**D**	**-**	**1.09**	**41.7**	**D**	
Mill Road & Ebbitts Street														
Ebbitts Street	EB	LTR	0.76	24.4	C	LTR	0.78	25.0	C					- No improvements needed.
	WB	LTR	0.46	19.7	B	LTR	0.47	19.8	B					
Mill Road	NB	LTR	0.56	14.0	B	LTR	0.57	14.3	B					
	SB	LTR	0.55	13.8	B	LTR	0.55	13.9	B					
Overall Intersection		**-**	**0.64**	**17.8**	**B**	**-**	**0.66**	**18.1**	**B**					
Ebbitts Street & Plaza Driveway (Unsignalized)														
Ebbitts Street	EB	LT	-	8.7	A	LT	-	8.8	A					- No improvements needed.
	WB	TR	-	-	-	TR	-	-	-					
Plaza Driveway	SB	LR	-	25.6	D	LR	-	32.8	D					
Overall Intersection		**-**	**-**	**9.8**	**A**	-	**-**	**12.7**	**B**					
Hylan Boulevard & Lincoln Avenue														
Lincoln Avenue	WB	L	0.81	49.8	D	L	0.82	50.2	D	L	0.85	53.0	D	- Modify signal timing: shift 1 sec. green time from WB phase to NB lead phase; shift 1 sec. green time from
		TR	0.65	46.6	D	TR	0.65	46.6	D	TR	0.67	48.5	D	NB/SB phase to NB lead phase.
Hylan Boulevard	NB	L	0.97	94.6	F	L	1.07	125.0	F	L	0.93	86.6	F	
		T	0.41	10.9	B	T	0.43	11.1	B	T	0.42	10.6	B	
	SB	T	0.98	36.2	D	T	0.99	39.9	D	T	1.01	44.7	D	
		R	0.34	12.7	B	R	0.34	12.7	B	R	0.34	13.4	B	
Overall Intersection		**-**	**0.92**	**33.3**	**C**	-	**1.07**	**36.0**	**D**	**-**	**0.97**	**36.9**	**D**	
Hylan Boulevard & Guyon Avenue														
Guyon Avenue	EB	L	0.46	43.1	D	L	0.49	44.1	D	L	0.51	45.7	D	- Modify signal timing: shift 1 sec. green time from EB/WB phase to NB/SB phase.
		TR	0.53	43.3	D	TR	0.53	43.3	D	TR	0.55	44.7	D	
	WB	L	0.62	52.8	D	L	0.62	52.8	D	L	0.65	55.9	E	
		TR	0.28	37.3	D	TR	0.30	37.5	D	TR	0.30	38.4	D	
Hylan Boulevard	NB	L	0.81	63.8	E	L	0.81	64.1	E	L	0.81	64.2	E	
		TR	0.49	14.8	B	TR	0.50	15.0	B	TR	0.49	14.3	B	
	SB	L	0.21	14.3	B	L	0.24	14.7	B	L	0.24	14.0	B	
		TR	1.04	48.5	D	TR	1.06	54.6	D	TR	1.04	47.0	D	
Overall Intersection		**-**	**0.91**	**37.6**	**D**	-	**0.91**	**40.7**	**D**	**-**	**0.92**	**36.9**	**D**	
Hylan Boulevard & Midland Avenue														
Midland Avenue	EB	L	0.23	26.2	C	L	0.23	26.2	C					- No improvements needed.
		T	0.61	47.1	D	T	0.61	47.1	D					
		R	0.57	46.6	D	R	0.59	47.3	D					
	WB	L	1.08	115.7	F	L	1.08	115.7	F					
		R	0.08	34.8	C	R	0.08	34.8	C					
Hylan Boulevard	NB	TR	0.56	23.6	C	TR	0.57	23.9	C					
	SB	L	0.07	18.0	B	L	0.08	18.2	B					
		T	0.87	36.5	D	T	0.89	38.0	D					
Overall Intersection		**-**	**1.00**	**42.1**	**D**	**-**	**1.01**	**42.5**	**D**					
Hylan Boulevard & Buffalo Street														
Lincoln Avenue	EB	LTR	0.42	41.5	D	LTR	0.42	41.5	D	LTR	0.42	41.5	D	- Modify signal timing: shift 1 sec. green time from NBL/SBL phase to the NB/SB phase.
	WB	LTR	0.09	35.0	C	LTR	0.09	35.0	C	LTR	0.09	35.0	C	
Hylan Boulevard	NB	L	0.07	18.7	B	L	0.07	19.1	B	L	0.08	18.9	B	
		T	0.43	16.5	B	T	0.44	16.6	B	T	0.43	16.0	B	
	SB	L	0.02	7.6	A	L	0.02	7.6	A	L	0.02	7.6	A	
		TR	1.04	58.8	E	TR	1.06	62.8	E	TR	1.04	56.6	E	
Overall Intersection		**-**	**0.80**	**45.9**	**D**	**-**	**0.81**	**48.5**	**D**	**-**	**0.81**	**44.3**	**D**	

Notes
(1): Control delay is measured in seconds per vehicle.
(2): Level of service (LOS) for signalized intersections is based upon average control delay per vehicle (sec/veh) for each lane group as listed in the 2000 Highway Capacity Manual -- TRB.
(3): Overall intersection V/C ratio is the critical lane groups' V/C ratio, not the weighted average of all the movements.

TABLE 8-4
NO-ACTION VS MITIGATED WITH-ACTION TRAFFIC LEVELS OF SERVICE COMPARISON - SATURDAY MIDDAY PEAK HOUR

		2019 No-Action				With Action				2019 With-Action				Mitigation Measures
			Control				Control				Control			
INTERSECTION & APPROACH	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	**Mvt.**	**V/C**	**Delay**	**LOS**	
Hylan Boulevard & New Dorp Lane													
New Dorp Lane EB	L	0.92	104.5	F	L	0.92	106.4	F	L	0.87	92.6	F	- Modify signal timing: shift 1 sec. green time from NB/SB phase to NB left-turn/SB left-turn lead/WB right-turn
	TR	1.00	99.5	F	TR	1.01	102.0	F	TR	0.97	90.5	F	lag phase, and 1 sec. green time from NB/SB phase to EB/WB phase.
WB	L	1.68	399.5	F	L	1.72	417.7	F	L	1.57	349.8	F	
	T	0.59	49.8	D	T	0.60	50.1	D	T	0.58	48.4	D	
	R	0.64	38.9	D	R	0.66	39.9	D	R	0.63	36.9	D	
Hylan Bouelvard NB	L	0.96	85.6	F	L	0.97	89.8	F	L	0.92	78.3	E	
	TR	0.80	29.7	C	TR	0.83	30.6	C	TR	0.86	33.4	C	
SB	L	1.36	221.7	F	L	1.42	248.4	F	L	1.34	216.2	F	
	TR	0.79	29.1	C	TR	0.81	30.1	C	TR	0.84	32.7	C	
Overall Intersection	**-**	**2.00**	**62.9**	**E**	**-**	**2.28**	**66.0**	**E**	**-**	**2.15**	**62.0**	**E**	
Hylan Boulevard & Beach Avenue													
Beach Avenue EB	LTR	0.88	73.0	E	LTR	1.03	107.5	F					-Unmitigated
	-	-	-	-	-	-	-	-					
WB	LT	0.51	44.4	D	LT	0.67	51.5	D					
	R	0.53	28.6	C	R	0.61	31.2	C					
Hylan Boulevard NB	L	0.21	26.0	C	L	0.21	26.0	C					
	TR	0.90	38.3	D	TR	0.92	40.0	D					
SB	L	1.01	93.5	F	L	1.17	144.6	F					
	TR	0.54	14.6	B	TR	0.54	14.6	B					
Overall Intersection	**-**	**0.87**	**35.9**	**D**	**-**	**1.56**	**44.5**	**D**					
Hylan Boulevard & Ebbitts Street													
Ebbitts Street EB	LTR	0.21	38.8	D	LTR	0.21	38.8	D	LTR	0.21	38.8	C	- Partially mitigated
WB	L	0.78	61.8	E	L	0.91	78.8	E	L	0.91	78.8	D	
	T	0.31	40.1	D	T	0.31	40.1	D	T	0.31	40.1	C	- Modify signal timing: shift 1 sec. green time from NB/SB phase to the SB lead/WB right-turn lag phase.
	R	0.43	33.1	C	R	0.42	33.1	C	R	0.42	32.2	D	
Hylan Boulevard NB	L	0.26	19.6	B	L	0.27	19.8	B	L	0.27	20.5	B	
	TR	0.76	25.4	C	TR	0.80	26.5	C	TR	0.81	27.6	C	
SB	L	1.16	136.6	F	L	1.20	155.6	F	L	1.14	134.3	F	
	TR	0.48	13.1	B	TR	0.49	13.2	B	TR	0.49	13.2	C	
Overall Intersection	**-**	**1.27**	**31.7**	**C**	**-**	**1.43**	**34.6**	**C**	**-**	**1.33**	**33.6**	**D**	
Hylan Boulevard & Tysens Lane													
Tysens Lane EB	L	0.75	70.7	E	L	0.80	77.2	E	L	0.75	68.8	E	- Modify signal timing: shift 1 sec. green time from NB/SB phase to EB/WB phase.
	T	0.68	49.1	D	T	0.69	49.2	D	T	0.67	47.3	D	
	R	0.21	36.3	D	R	0.21	36.3	D	R	0.20	35.4	D	
WB	L	1.09	144.8	F	L	1.11	151.9	F	L	1.05	129.1	F	
	T	0.67	48.2	D	T	0.67	48.2	D	T	0.65	46.4	D	
	R	0.28	37.6	D	R	0.28	37.6	D	R	0.27	36.6	D	
NB	L	0.22	27.2	C	L	0.23	28.8	C	L	0.23	29.9	C	
	TR	0.78	31.4	C	TR	0.82	32.6	C	TR	0.83	33.8	C	
SB	L	0.74	57.9	E	L	0.76	61.0	E	L	0.76	61.5	E	
	TR	0.71	29.3	C	TR	0.74	30.2	C	TR	0.76	31.3	C	
Overall Intersection	**-**	**1.03**	**40.0**	**D**	**-**	**1.05**	**41.2**	**D**	**-**	**1.06**	**40.7**	**D**	
Mill Road & Ebbitts Street													
Ebbitts Street EB	LTR	0.54	18.2	B	LTR	0.55	18.4	B					- No improvements needed.
WB	LTR	0.57	22.2	C	LTR	0.59	22.6	C					
Mill Road NB	LTR	0.36	10.8	B	LTR	0.38	11.0	B					
SB	LTR	0.42	11.4	B	LTR	0.42	11.5	B					
Overall Intersection	**-**	**0.48**	**15.6**	**B**	**-**	**0.49**	**15.8**	**B**					
Ebbitts Street & Plaza Driveway (Unsignalized)													
Ebbitts Street EB	LT	-	9.6	A	LT	-	9.9	A					- No improvements needed.
WB	TR	-	-	-	TR	-	-	-					
Plaza Driveway SB	LR	-	45.9	E	LR	-	82.4	F					
Overall Intersection	**-**	**-**	**17.3**	**C**	-	**-**	**30.4**	**D**					
Hylan Boulevard & Lincoln Avenue													
Lincoln Avenue WB	L	0.60	39.7	D	L	0.61	39.9	D	L	0.63	41.1	D	- Modify signal timing: shift 1 sec. green time from WB phase to NB lead phase.
	TR	0.56	40.9	D	TR	0.56	40.9	D	TR	0.54	42.2	D	
Hylan Boulevard NB	L	1.10	133.9	F	L	1.16	155.1	F	L	1.08	125.5	F	
	T	0.55	14.2	B	T	0.57	14.4	B	T	0.56	13.8	B	
SB	TR	0.85	29.9	C	TR	0.86	30.8	C	TR	0.86	30.8	C	
Overall Intersection	**-**	**1.11**	**30.6**	**C**	-	**1.24**	**32.2**	**C**	**-**	**1.10**	**30.8**	**C**	
Hylan Boulevard & Guyon Avenue													
Guyon Avenue EB	L	0.90	83.2	F	L	0.95	94.2	F	L	0.91	83.3	F	- Modify signal timing: shift 1 sec. green time from NB/SB phase to EB/WB phase.
	TR	0.52	46.4	D	TR	0.52	46.4	D	TR	0.50	45.0	D	
WB	L	0.75	67.6	E	L	0.75	67.6	E	L	0.72	62.7	E	
	TR	0.38	42.4	D	TR	0.40	42.8	D	TR	0.38	41.7	D	
Hylan Boulevard NB	L	0.75	38.2	D	L	0.77	41.6	D	L	0.78	44.0	D	
	TR	0.53	13.4	B	TR	0.54	13.6	B	TR	0.55	14.2	B	
SB	L	0.27	19.6	B	L	0.33	21.6	C	L	0.33	22.4	C	
	TR	0.68	22.9	C	TR	0.70	23.3	C	TR	0.71	24.1	C	
Overall Intersection	**-**	**0.77**	**26.7**	**C**	-	**0.79**	**27.7**	**C**	**-**	**0.79**	**27.4**	**C**	
Hylan Boulevard & Midland Avenue													
Midland Avenue EB	L	0.26	26.0	C	L	0.26	26.0	C	L	0.27	26.7	C	- Modify signal timing: shift 1 sec. green time from EBL/WBL lag phase to NB/SB phase.
	T	0.79	57.0	E	T	0.79	57.0	E	T	0.79	57.0	E	
	R	0.41	41.5	D	R	0.43	42.0	D	R	0.43	42.0	D	
WB	L	0.70	53.3	D	L	0.70	53.3	D	L	0.73	56.2	E	
	R	0.09	35.1	D	R	0.09	35.1	D	R	0.09	35.1	D	
Hylan Boulevard NB	TR	0.77	29.3	C	TR	0.79	30.0	C	TR	0.78	28.9	C	
SB	L	0.58	51.7	D	L	0.62	58.4	E	L	0.59	53.6	D	
	T	0.70	27.5	C	T	0.72	28.0	C	T	0.71	27.0	C	
Overall Intersection	**-**	**0.84**	**32.8**	**C**	**-**	**0.85**	**33.2**	**C**	**-**	**0.81**	**32.6**	**C**	
Hylan Boulevard & Buffalo Street													
Lincoln Avenue EB	LTR	0.56	47.9	D	LTR	0.56	48.1	D					- No improvements needed.
WB	LTR	0.24	38.9	D	LTR	0.24	38.9	D					
Hylan Boulevard NB	L	0.09	9.5	A	L	0.09	9.7	A					
	T	0.54	17.1	B	T	0.56	17.4	B					
SB	L	0.16	9.2	A	L	0.16	9.5	A					
	TR	0.65	19.2	B	TR	0.66	19.5	B					
Overall Intersection	**-**	**0.61**	**20.2**	**C**	**-**	**0.62**	**20.4**	**C**					

Notes
(1): Control delay is measured in seconds per vehicle.
(2): Level of service (LOS) for signalized intersections is based upon average control delay per vehicle (sec/veh) for each lane group as listed in the 2000 Highway Capacity Manual -- TRB.
(3): Overall intersection V/C ratio is the critical lane groups' V/C ratio, not the weighted average of all the movements.

Traffic impacts could not be fully mitigated at three intersections for one more or more peak hours analyzed. Impacts identified at the intersection of Hylan Boulevard and New Dorp Lane would be unmitigated for the ~~Saturday midday~~ weekday PM peak hour (but could be fully mitigated during the weekday midday and ~~PM~~ Saturday midday peak hours), impacts identified at the intersection Hylan Boulevard and Beach Avenue would be unmitigated for all peak hours analyzed, and impacts identified at the intersection of Hylan Boulevard and Ebbitts Street could ~~only~~ be partially mitigated during all ~~the weekday midday and PM~~ peak hours ~~(but could be fully mitigated during the Saturday midday peak hour)~~analyzed.

Impacted traffic movements and the peak hours in which they are impacted are identified below.

HYLAN BOULEVARD AND NEW DORP LANE

- Eastbound New Dorp Lane left turn movement (~~Saturday~~ weekday PM ~~midday~~)
- Westbound New Dorp Lane left turn movement (~~weekday PM and~~ Saturday midday)
- Northbound Hylan Boulevard left turn movement (~~weekday midday and~~ Saturday midday)
- Southbound Hylan Boulevard left turn movement (weekday midday, PM, and Saturday midday)
- Southbound Hylan Boulevard through-right movement (weekday PM)

HYLAN BOULEVARD AND BEACH AVENUE

- Southbound Hylan Boulevard left turn movement (weekday midday, PM, and Saturday midday)

HYLAN BOULEVARD AND EBBITTS STREET

- Westbound Ebbitts Street left turn movement (weekday midday, PM and Saturday midday)
- Southbound Hylan Boulevard left turn movement (weekday midday, PM, and Saturday midday)

HYLAN BOULEVARD AND TYSENS LANE

- Eastbound Tysens Lane left turn movement (weekday PM and Saturday midday)
- Westbound Tysen Lane left turn movement (weekday PM and Saturday midday)
- Southbound Hylan Boulevard through-right movement (weekday PM)

HYLAN BOULEVARD AND LINCOLN AVENUE

- Northbound Hylan Boulevard left turn movement (weekday midday, PM, and Saturday midday)

HYLAN BOULEVARD AND GUYON AVENUE

- Eastbound Guyon Avenue left turn movement (weekday midday and Saturday midday)
- Southbound Hylan Boulevard through-right movement (weekday PM)

HYLAN BOULEVARD AND MIDLAND AVENUE

- Southbound Hylan Boulevard left turn movement (Saturday midday)

HYLAN BOULEVARD AND BUFFALO STREET

- Southbound Hylan Boulevard shared through-right movement (weekday PM)

MITIGATION

Traffic mitigation measures needed for each intersection are described below; details of signal timing modifications are summarized in the LOS tables presented at the end of the chapter.

HYLAN BOULEVARD AND NEW DORP LANE

- Modify the signal timing during all three peak periods. During the weekday midday peak period, shift two seconds of green time from the northbound/southbound phase to the northbound/southbound exclusive left-turn phase. During the Saturday midday peak period, shift one second of green time from the northbound/southbound phase to the eastbound/westbound phase and one second of green time from the northbound/southbound phase to the northbound/southbound exclusive left-turn phase.
- Significant impacts identified at this intersection during the weekday PM peak hour could not be fully mitigated.

HYLAN BOULEVARD AND BEACH AVENUE

- Significant impacts identified at this intersection~~s~~ during the peak hours analyzed could not be fully mitigated.

HYLAN BOULEVARD AND EBBITTS STREET

- Modify the signal timing during all three peak periods. During the weekday midday ~~and~~, PM, and Saturday midday peak periods, shift ~~two~~ one second~~s~~ of green time from the northbound/southbound phase to the ~~northbound/southbound exclusive left-turn and westbound right-turn phase and two seconds of green time from the northbound/southbound phase to the eastbound/westbound phase. During the Saturday midday peak period, shift three seconds of green time from the northbound/southbound phase to the eastbound/westbound phase and one second of green time from the northbound/southbound phase to northbound~~/southbound ~~exclusive left-turn~~ lead and westbound lag right-turn phase.
- Significant impacts identified at this intersection during the weekday midday ~~and~~, PM, and Saturday midday peak hours could only be partially mitigated.

HYLAN BOULEVARD AND TYSEN LANE

- Modify the signal timing during the weekday PM and Saturday midday peak periods. During the weekday PM peak period, shift one second of green time from the northbound/southbound lead left-turn phase to the eastbound/westbound phase and one second of green time from the northbound/southbound lead left-turn phase to the northbound/southbound phase. During the Saturday midday peak period, shift one second of green time from the northbound/southbound phase to the eastbound/westbound phase.

HYLAN BOULEVARD AND LINCOLN AVENUE

- Modify the signal timing during all three peak periods. During the weekday midday and Saturday midday peak periods, shift one second of green time from the eastbound/westbound phase to the northbound lead phase. During the weekday PM peak period, shift one second green time from the eastbound/westbound phase and one second of green time from the northbound/southbound phase to the northbound lead phase.

HYLAN BOULEVARD AND GUYON AVENUE

- Modify the signal timing during all three peak periods. During the weekday midday and Saturday midday peak periods, shift one second of green time from the northbound/southbound phase to the eastbound/westbound phase. During the weekday PM peak period, shift one second green time from the eastbound/westbound phase to the northbound/southbound phase.

HYLAN BOULEVARD AND MIDLAND AVENUE

- Modify the signal timing during the Saturday midday peak period. During this period, shift one second of green time from the eastbound/westbound lag left-turn phase to the northbound/southbound phase.

HYLAN BOULEVARD AND BUFFALO STREET

- Modify the signal timing during the weekday PM peak period. During this period, shift one second of green time from the northbound/southbound lead left-turn phase to the northbound/southbound phase.

IMPLEMENTATION

Each of the traffic capacity improvements described above fall within the jurisdiction of NYCDOT for implementation. No designated truck loading/unloading zones or bus layover space would be affected by the proposed traffic improvement measures. ✷