Brighton Beach Ave. at Ocean Parkway

Brighton Beach Ave. at Coney Island Ave.

Brighton Beach Ave. at Vrighton 5th St.

Brighton Beach Ave. at Vrighton 1st St.

5.b. BRIGHTON BEACH

A traffic and pedestrian LOS analysis was conducted at three signalized intersections, Brighton Beach Avenue at Ocean Parkway, at Coney Island Avenue, and at Brighton 5th Street, and one unsignalized intersection, Brighton Beach Avenue at Brighton 1st Street. Figures 3 and 4 show existing and future balanced traffic volumes for the AM, midday, PM, and weekend peak periods. Figures 5 and 6 represent incremental trips generated by future development as discussed in the future no-build conditions section. Table 9 illustrates the severity of accidents for a three-year period by time of day for each occurrence. Table 10 compares LOS and delay for existing, no-build, and build conditions. Recommended actions for this study area are shown in Drawing 2.

Peak Hour

Traffic

Based upon the peak period traffic counts, the weekday morning peak hour is 8:00-9:00 AM; the midday period is 12:30-1:30 PM, the evening period is 4:30-5:30 PM, and the weekend period is 1:30-2:30 PM.

Pedestrian

Based upon the peak period traffic counts, the weekday morning peak hour is 8:00-9:00 AM; the midday period is 12:30-1:30 PM; the evening period is 5:00-6:00 PM; and the weekend period is 1:00-2:00 PM.

2000 EXISTING CONDITIONS

Brighton Beach Avenue at Ocean Parkway

Traffic

Overall, the intersection operates at LOS C for all peak periods, with delays ranging from 28.6 to 34.9 seconds per vehicle. All lane groups operate at LOS D or better with 14.6 to 54.4 seconds of delay per vehicle.

Pedestrian

All sidewalks, crosswalks, and corners operate at LOS B or better for the AM, midday, PM, and weekend peak periods.

Brighton Beach Avenue at Coney Island Avenue

Traffic

Overall, during the AM and midday peak periods the intersection operates at LOS C, and at LOS D during the PM and the weekend period, with delays ranging from 32.2 to 38.3 seconds per vehicle. All lane groups operate at LOS D or better, with delays ranging from 23.6 to 44.3 seconds per vehicle, except the eastbound left turn, which operates at LOS E during the midday, PM and weekend peak periods with delays ranging from 63.1 to 73.7 seconds per vehicle.

Pedestrian

Sidewalks operate at LOS A for the maximum surge during all peak periods. Crosswalks operate at LOS C or better, and corners operate at LOS A, for each peak period.

Brighton Beach Avenue at Brighton 5th Street

Traffic

Overall, this intersection operates at LOS B during the AM, PM, and weekend peak periods with delays ranging from 5.5 to 7.5 seconds per vehicle. During the midday period, the intersection operates at LOS C with delays of 19.9 seconds per vehicle. All lane groups operate at LOS C better, with delays ranging from 4.0 to 23.2 seconds per vehicle.

Pedestrian

All sidewalks, crosswalks, and corners operate at LOS B or better for each peak period.

Brighton Beach Avenue at Brighton 1st Street

Traffic

Overall, this unsignalized intersection operates at LOS A during all peak periods, with a range of 3.1 to 4.4 seconds per vehicle of average total delay.

Pedestrian

The sidewalks operate at LOS A for each walkway and LOS B for platoon conditions for each peak period. Crosswalks and corners operate at LOS A.

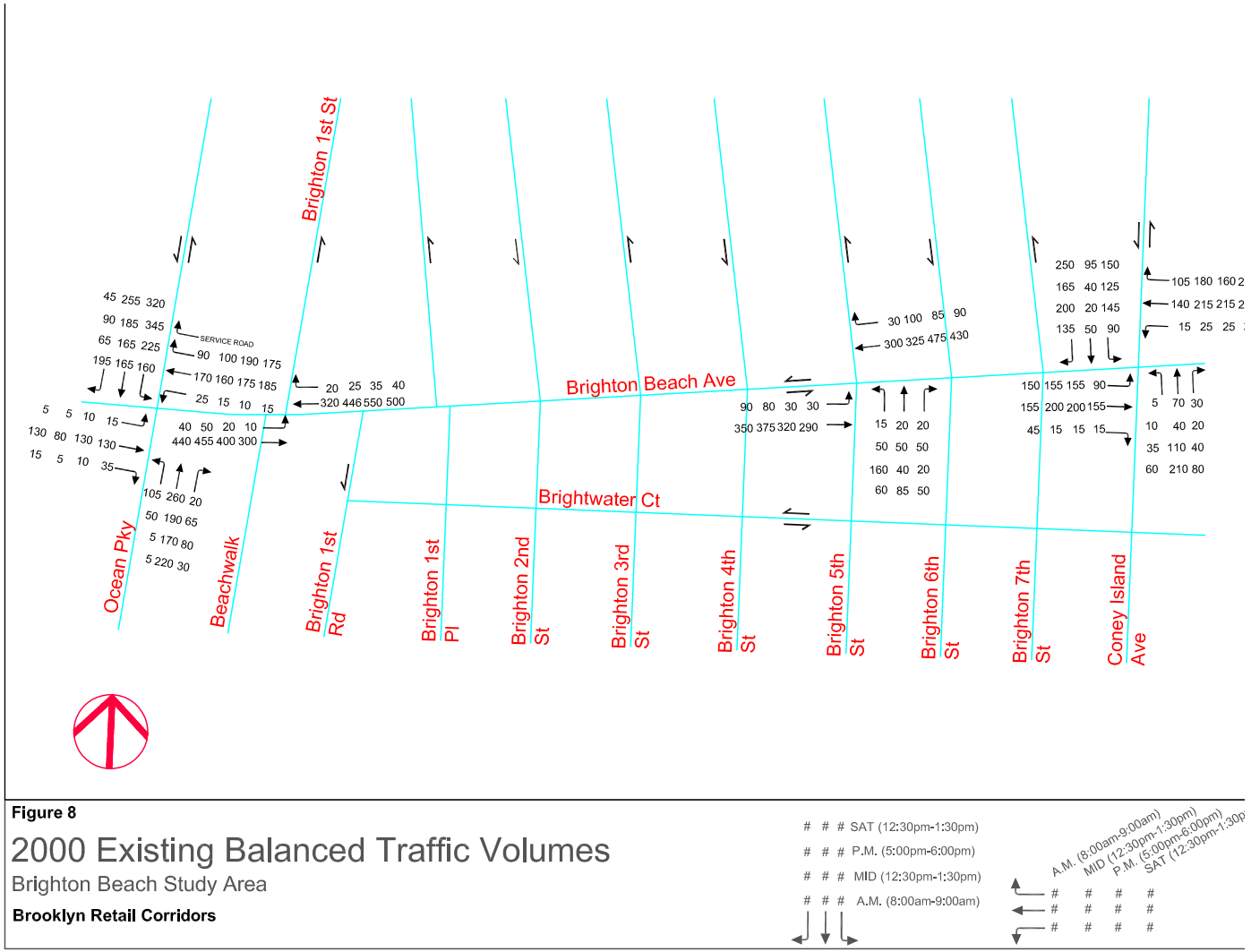


Figure 8

2000 Existing Balanced Traffic Volumes

Brighton Beach Study Area

Brooklyn Retail Corridors

2004 FUTURE NO-BUILD CONDITIONS

The future development scenario identifies seven potential sites within, or near, the study area. Five of the sites are located a considerable distance from the study area, and are not expected to have an impact on the study area traffic network. Their location and access to the Brighton Beach Avenue retail corridor do not warrant analysis under the future 2004 build condition. These sites include a planned Home Depot on Cropsey Avenue; TOPS appliance; Bensonhurst movie theater and retail space; Drier-Offerman Park Driving Range/Miniature Golf; and HPD Partnership homes. Two recent developments have had an impact on the study area traffic network.

The first development, Oceana, is a residential development built along the Coney Island boardwalk that includes 15 seven (7) to 12 story buildings with 850 dwelling units, 1,200 parking spaces, 53,000 square feet of open space, including a public playground and improved access to the boardwalk.

At Ocean Parkway and Brighton Beach Avenue, this development generates 86 additional vehicles during the AM peak period, 38 additional vehicles during the midday peak period, 76 additional vehicles during the PM peak period, and 70 additional vehicles during the weekend peak period.

No additional vehicle trips are projected at Brighton 1st Street and Brighton Beach Avenue.

At Brighton 5th Street and Brighton Beach Avenue, this development generates for the westbound through movement an additional 33 vehicle trips during the AM peak period, 20 additional vehicles during the midday peak perk period, 45 additional vehicles during the PM peak period and 38 additional vehicles during the weekend peak period.

At Coney Island Avenue and Brighton Beach Ave, this development generates 230 additional vehicles during the AM peak period, 130 additional vehicles during the midday peak period, 286 additional vehicles during the weekend peak period, and 179 additional vehicles during the weekend peak period.

The Keyspan Minor League Baseball Stadium in Coney Island, which occupies 948,000 square feet, has 1,158 parking spaces, and 7,500 seats, was projected to generate 305 additional vehicle trips during the PM peak period and 260 additional vehicle trips during the weekend peak period at Brighton Beach Avenue and Ocean Parkway.

Brighton Beach Avenue at Ocean Parkway

Traffic

Overall, the intersection would continue to operate at LOS C during the AM, midday and weekend peak period, and would deteriorate to LOS D during the PM peak period. Overall, delays would slightly increase, ranging from 26.0 to 35.5 seconds of delay per vehicle.

All lane groups would operate at LOS D or better, with the exception of the westbound right-turn movement, which would deteriorate to LOS E during the PM peak period, with 55.7 seconds of delay per vehicle (from 54.4 seconds of delay under existing conditions). During the weekend period it would deteriorate to LOS E with an increase in delay to 56.6 seconds of delay per vehicle from 53.7 seconds of delay per vehicle under existing conditions.

Pedestrian

All sidewalks, crosswalks, and corners would continue to operate at LOS B or better.

Brighton Beach Avenue at Coney Island Avenue

Traffic

Overall, the intersection would continue to operate at LOS C during the AM peak period and at LOS D during the PM and weekend peak periods. During the midday, the intersection would deteriorate to LOS D. Delays range from 33.2 to 50.2seconds per vehicle. All lane groups would operate at LOS D or better, with delays ranging from 24.4 to 47.2 seconds per vehicle, except the eastbound left-turn movement, which would continue to operate at LOS E during the midday period, with 66.9 seconds of delay per vehicle. The eastbound left-turn movement would continue to operate at LOS F, with 82.3 seconds of delay during the PM period. During the weekend period this movement would deteriorate to LOS F with 107.0 seconds of delay per vehicle. The southbound left, through, and right-turn movements would deteriorate to LOS E during the weekend period, with 71.8 seconds of delay per vehicle.

Pedestrian

All sidewalks, crosswalks, and corners would continue to operate at LOS C or better.

Brighton Beach Avenue at Brighton 5th Street

Traffic

Overall, the intersection would continue to operate at LOS B during the AM, PM, and weekend peak periods, with delays ranging from 5.5 to 7.5 seconds of delay per vehicle. During the midday period, the intersection would operate at LOS C, with delays ranging from 4.0 to 24.6 seconds per vehicle.

Pedestrian

Sidewalks, crosswalks, and corners would continue to operate at an acceptable level of service.

Brighton Beach Avenue at Brighton 1st Street

Traffic

Overall, this unsignalized intersection operates at LOS A during all peak periods, with average total delays/vehicle ranging from 3.3 seconds during the AM period to 4.6 seconds during the PM peak.

Pedestrian

Sidewalks, crosswalk, and corner level of service did not change from existing conditions.

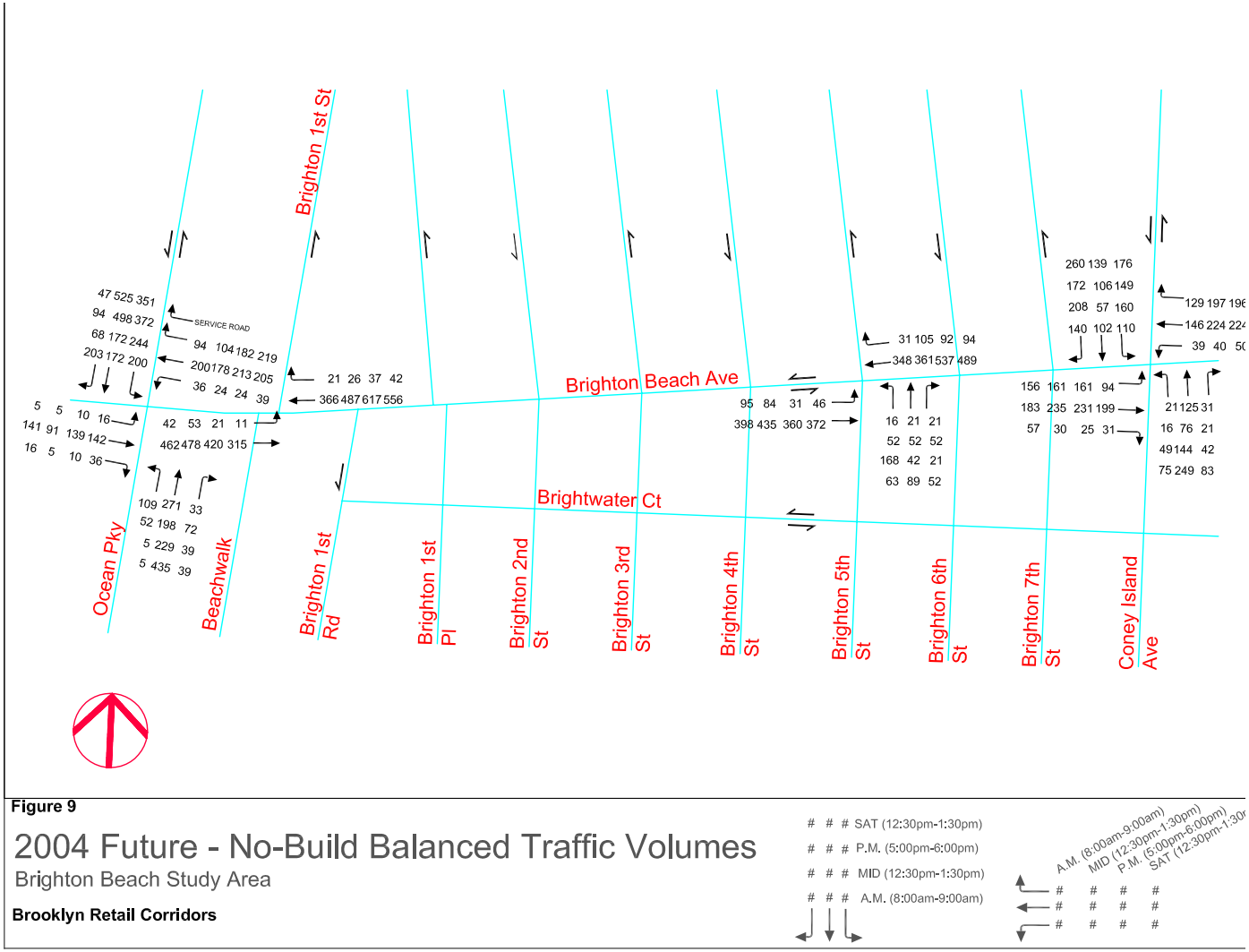


Figure 9

2004 Future - No-Build Balanced Traffic Volumes

Brighton Beach Study Area

Brooklyn Retail Corridors

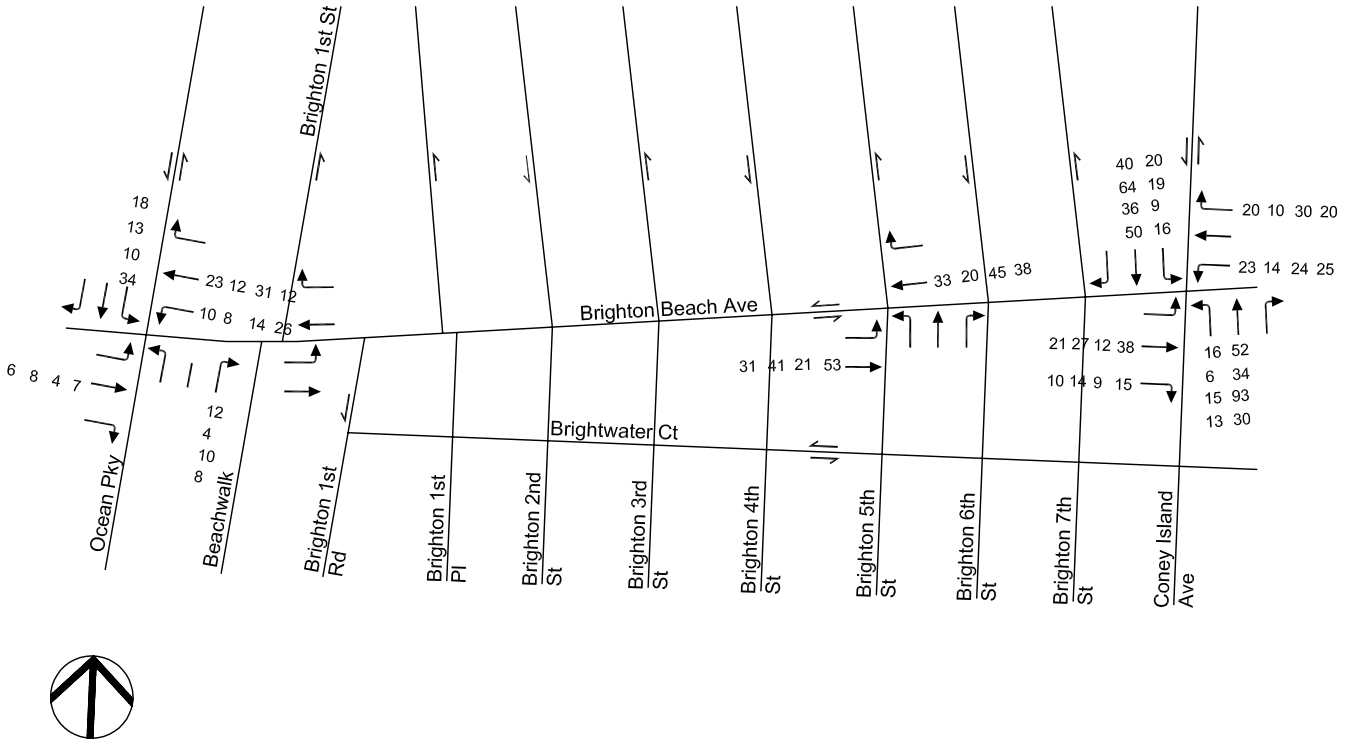


Figure 10

Project Trip Increment (Oceana)

Brighton Beach Study Area

Brooklyn Retail Corridors

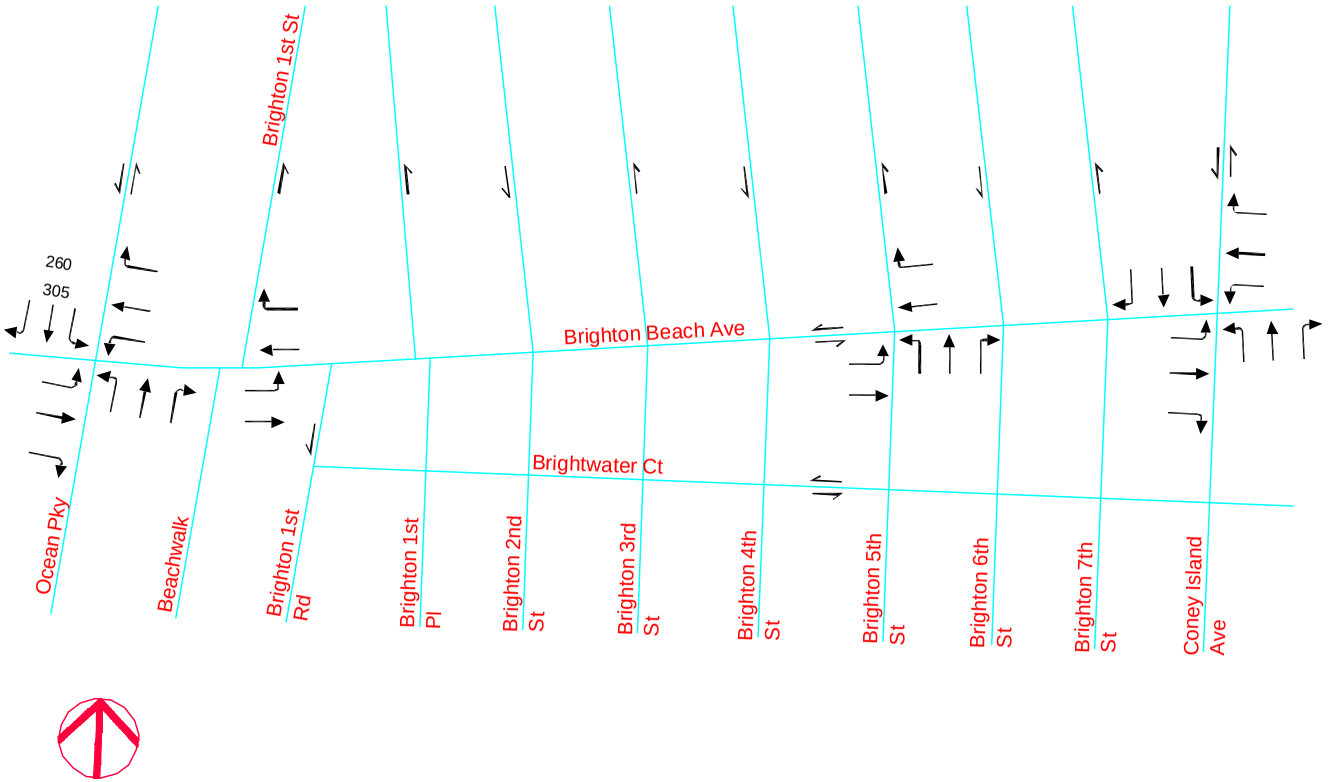


Figure 11

Project Trip Increment (Baseball Stadium)

Brighton Beach Study Area

Brooklyn Retail Corridors

ACCIDENT SUMMARY

The types of accidents occurring at these locations suggest the following contributing factors: restricted sight distances, signal timing, roadway lighting, high traffic volumes, roadway design, excessive speed, and/or pavement markings.

Brighton Beach Avenue at Ocean Parkway

Between 1996 and 1998, there were 37 reportable and 60 non-reportable accidents, and no fatalities, at this location. Of the total number of reportable accidents, 59 percent occurred during the day. Of the three most common types of accidents, 35 percent involved left-turns, 27 percent involved right-angle turns, and 16 percent were pedestrian-related. The number of accidents increased in 1997 from the previous year, then decreased in 1998.

Brighton Beach Avenue at Coney Island Avenue

Between 1996 and 1998, there were 46 reportable and 71 non-reportable accidents, with no fatalities, at this location. Of the total number of reportable accidents, 67 percent occurred during the day. Of the three most common types of accidents, 24 percent were other-angle common-direction collisions, 22 percent were rear-end collisions, and 22 percent were sideswipes. From 1996 to 1998, the number of accidents decreased modestly.

Table 9:Accident Analysis
Brighton Beach Avenue at Ocean Parkway and Coney Island Avenue

1996	Ocean Parkway			Coney Island Avenue		
	DAY	NIGHT	TOTAL	DAY	NIGHT	TOTAL
FATALITY	0	0	0	0	0	0
INJURY	6	1	7	5	2	7
DAMAGE ONLY	3	3	6	10	3	13
TOTAL	9	4	13	15	5	20

1997	Ocean Parkway			Coney Island Avenue		
	DAY	NIGHT	TOTAL	DAY	NIGHT	TOTAL
FATALITY	0	0	0	0	0	0
INJURY	5	2	7	5	4	9
DAMAGE ONLY	3	5	8	3	4	7
TOTAL	8	7	15	8	8	16

1998	Ocean Parkway			Coney Island Avenue		
	DAY	NIGHT	TOTAL	DAY	NIGHT	TOTAL
FATALITY	0	0	0	0	0	0
INJURY	4	4	8	6	1	7
DAMAGE ONLY	1	0	1	2	1	3
TOTAL	5	4	9	8	2	10

RECOMMENDATIONS AND 2004 FUTURE BUILD CONDITIONS

PEDESTRIAN CROSSINGS

Brighton Beach Avenue between Ocean Parkway and Brighton 1st Street

Due to the location of a subway entrance/exit and a bus stop, pedestrians cross the street mid-block to reach retail stores, transit facilities, and the beach. Pedestrians reach the Brighton Beach boardwalk by using Beachwalk, a restricted roadway in poor condition that is poorly lit and lacks pedestrian amenities.

RECOMMENDATION:

Install a pedestrian separator on the Brighton Beach Avenue median between Ocean Parkway and Brighton 1st Street to discourage midblock crossings.

Conduct a warrant analysis to determine the feasibility of installing a traffic control device and crosswalks to provide safe access to Beachwalk from Brighton Beach Avenue.

Install a neckdown on Brighton 1st Street at Brighton Beach Avenue.

Redesign Beachwalk (Drawing 3) as a welcoming pedestrian space that might serve as both a gateway to the beach and as the centerpiece of neighborhood pedestrian improvements:

Repave the length of Beachwalk from Brighton Beach Avenue to the boardwalk stairway with a more attractive material;

Replace grass strips. Remove rusted iron posts, and replace them with two stone or wooden planters to distinguish the entranceway. Install another planter at the south end of the boardwalk stairway;

At the south end of Beachwalk, plant trees on the west side, and plant shrubs on the east side, either to match the shrubs opposite or other beach shrubs;

Install seven new benches and standard trash receptacles along the walkway, four along the east side, two along the west wall, and one by the boardwalk stairs. Promote the installation of local artists' work on Boardwalk's west walls and the wall to the east of the boardwalk stairs. Install pedestrian level lighting. Install directional signage "To the Boardwalk" at the Ocean Parkway station. A maintenance agreement between NYCDOT and an existing organization, such as the Brighton Beach Business Improvement District, would be required prior to the implementation of any such design treatments.

Brighton Beach Avenue at Ocean Parkway

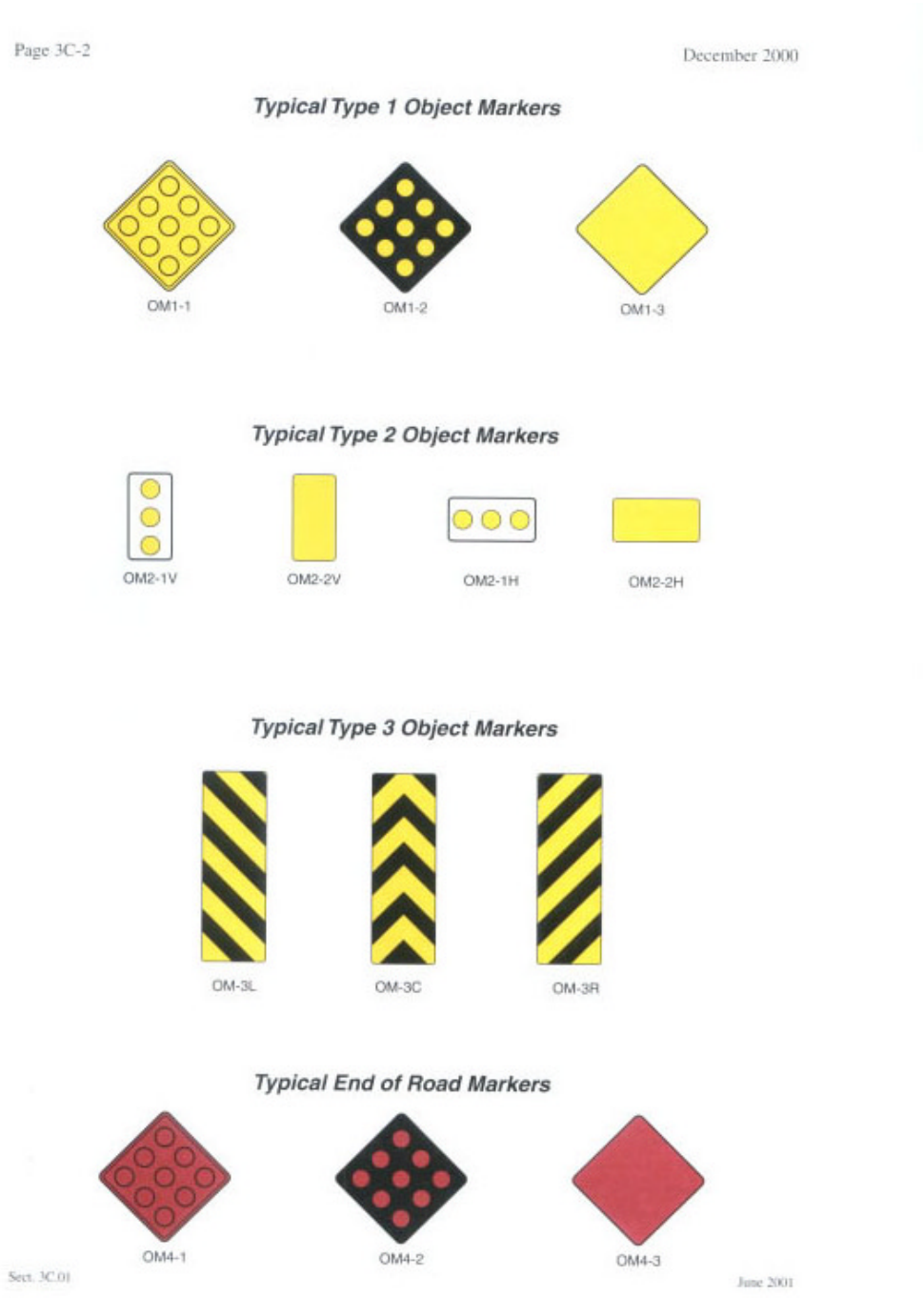
The elevated subway station's concrete supports obstruct sight lines for pedestrians crossing the intersection from north to south, and for drivers turning from wide Ocean Parkway onto the narrow retail corridor of Brighton Beach Avenue.

RECOMMENDATION:

Upgrade or replace existing object markers on the elevated structure's concrete supports that are in disrepair. As stated in the Manual on Uniform Traffic Control Devices (2000 edition), object markers are used to mark obstructions within, or adjacent to, the roadway. Type 1, 2, or 3 object markers are suitable for this location. All three types have reflective elements that may elevate the level of pedestrian safety at night.

Mount properly-angled mirrors at the top of the supports to help both drivers and pedestrians see around corners, and install signs at each leg of the intersection warning drivers of crossing pedestrians. Clean existing light fixtures underneath the structure to better illuminate the roadway, increase nighttime visibility, and improve sight lines.

Request the MTA to repaint the elevated structure's concrete supports as part of their Five-Year Capital Plan. This would provide a more orderly appearance to the intersection and would increase the overall attractiveness of the western gateway to the retail corridor.



Source: Manual on Uniform Traffic Control Devices (2000 edition)

Adjust the signal timing by increasing the westbound green time by three seconds for the PM and weekend peak period. During the PM peak period, the east- and westbound green time would increase from 23 to 26 seconds; during the weekend period, the east and westbound green time would increase from 16 to 19 seconds. The north and southbound green time would decrease by seven seconds and four seconds of a protected southbound left turn phase would be added at the end of the cycle (lagging). During the PM peak period, the north- and southbound green time would decrease from 57 to 50 seconds; during the weekend peak period the north- and southbound green time would decrease from 40 to 33 seconds.

Overall, during the PM peak period, the intersection would continue to operate at LOS D, with a slight increase in lane group delay to 35.8 seconds per vehicle from the No-Build delay of 35.5 seconds. The eastbound left-turn movement would improve to LOS B from the no-build LOS C, with 19.0 seconds of delay per vehicle. The westbound left-turn movement would improve to LOS B with 18.8 seconds of delay per vehicle form the no-build condition of LOS C with 20.5 seconds of delay. Additionally, the westbound right-turn movement would improve to LOS D with 49.3 seconds of delay per vehicle from the no-build condition of LOS E with 55.7 seconds of delay. The westbound through-right movement would continue to operate at LOS D with a decrease in lane group delay to 48.6 from 54.4 seconds of delay from the no-build condition.

During the weekend peak period, the intersection, overall, would continue to operate at LOS C, with 30.7 seconds of delay from the no-build condition of LOS C with 32.0 seconds of delay per vehicle. The eastbound through-right movement would improve to LOS C with 34.6 seconds of delay per vehicle from the no-build condition of LOS D with 39.4 seconds of delay. The westbound through-right movement would continue at LOS D with 43.5 seconds of delay per vehicle from the no-build condition with 46.8 seconds of delay per vehicle. The westbound right-turn movement would improve to LOS D with 43.5 seconds of delay from the no-build condition of LOS E and 56.6 seconds of delay.

EAST-WEST PEDESTRIAN TRAFFIC CONTROL DEVICES

Brighton Beach Avenue at Ocean Parkway

The pedestrian signal for the eastern Ocean Parkway service road is the most prominent and displays "WALK" while the main road signal displays "DON'T WALK." Pedestrians respond to the service road signal and may begin crossing Ocean Parkway unsafely.

RECOMMENDATION:

Improve the visibility of pedestrian signals either by changing their placement or by trimming any trees that may be blocking pedestrians view of them. Install pedestrian signage reminding pedestrians to wait for the green signal before crossing.

INTERSECTION CORNERS

Brighton Beach Avenue

The sidewalks along Brighton Beach Avenue are extremely congested, particularly during the summer months, by beach-goers, local residents, subway riders, sidewalk vendors, fruit stands, and retail displays. Pedestrians crossing Brighton Beach Avenue typically wait in the roadway, rather than on the sidewalk, due to limited space.

RECOMMENDATION:

Increase enforcement of laws governing retail displays on the sidewalk. Implement the Mayor's Executive Order governing "clear corner zones" to relocate newsboxes from street corners and install them at bus stops in order to remove clutter.

PEDESTRIAN AMENITIES/LIGHTING

Brighton Beach Avenue Corridor

Brighton Beach Avenue is very dark at night, creating the perception of an unsafe atmosphere that may discourage shoppers.

RECOMMENDATION:

Install lighting designed for use under elevated structures (”BB“ lighting) along retail streets to provide twice the illumination as standard light fixtures. An alternative is to install a higher wattage light or a metal halide light in the standard fixtures. Install standard Department of Sanitation trash receptacles, their number, placement, and scheduling of additional collection services to be determined by the Department of Sanitation (DOS).

TRUCK LOADING ZONE REGULATIONS

Brighton Beach Avenue

Trucks make deliveries along Brighton Beach Avenue at all times of the day, frequently blocking the flow of traffic by double parking. There are no truck loading time or zone regulations in effect, and some local businesses do not support time restrictions.

RECOMMENDATION:

Monitor/assess the NYCDOT Metered Parking/Congestion Pricing for Commercial Vehicles Pilot Program in Midtown Manhattan to determine its applicability to the Brighton Beach retail corridor.

ON- AND OFF-STREET PARKING FACILITIES

Brighton Beach Avenue Corridor

There is a lack of on-street parking along Brighton Beach Avenue.

RECOMMENDATION:

Replace existing standard parking meters with one or two-hour muni-meters along Brighton Beach Avenue between Ocean Parkway and Coney Island Avenue. The installation of muni-meters would increase the parking supply by up to 25 percent. An alternative to muni-meters would be to stripe white parking space limit markings along the corridor to create a more orderly on-street parking environment.

Create approximately 50 new off-street metered parking spaces on the median beneath the elevated subway tracks on Brighton Beach Avenue between West 3rd and West 6th Streets. Use as a model for developing additional parking spaces at this location two existing locations (West 126th Street and Broadway; Queens Boulevard) where parking underneath elevated structures currently exists. This would generate additional revenue, as well as address the parking shortfall along the retail corridor.

PEDESTRIAN CROSSWALKS

Brighton Beach Avenue Corridor

Pavement markings are faded all along the Brighton Beach corridor, including locations with high volumes of pedestrian activity.

RECOMMENDATION:

Re-stripe faded and/or install pavement markings at Brighton Beach Avenue at Brighton 5th, 6th, and 7th Streets.

HIGH ACCIDENT LOCATION

Brighton Beach Avenue at Coney Island Avenue

Between 1996 and 1998, 46 accidents occurred at this location. Heavy vehicular volumes, considerable pedestrian traffic, and irregular intersection geometry all contribute to the number of accidents, many of which involved rear-end, sideswipe, and other-angle collisions. The vehicular level of service for the eastbound left-turning traffic is poor during the midday, evening, and weekend peak periods.

RECOMMENDATION:

Install pedestrian separators on the Brighton Beach Avenue median to encourage use of the crosswalks and thereby increase pedestrian safety.

Replace the painted channelization markings with a suitably sized and shaped, raised concrete pedestrian refuge and channelization island. This would provide a safe place for pedestrians who cannot cross the roadway within one traffic signal cycle.

Install neckdowns at all four corners of the intersection to decrease crossing distances for pedestrians.

Adjust the signal timing in the PM period by increasing the east and westbound green time by nine (9) seconds (from 34 to 43 seconds), decreasing the north and southbound green time by seven (7) seconds (from 46 to 39 seconds), and decreasing the pedestrian green by two (2) seconds (from 27 to 25 seconds). Although the pedestrian phase would decrease, there would be sufficient time to cross the intersection at a diagonal at a pace of four feet per second. During the PM period, the eastbound left turn would improve to LOS D (43.5 seconds of delay per vehicle) from the no-build condition LOS F (82.3 seconds of delay per vehicle). Overall, the intersection would improve to LOS C with 33.4 seconds of delay per vehicle from the no-build condition of 38.4 seconds.

Movements with failing levels-of-service during the midday and weekend peak periods cannot be mitigated under the existing 90-second signal cycle without negatively impacting pedestrians. Change the signal timing cycle for the midday and weekend peak periods from 90 seconds to 120 seconds to match the signal cycles during the morning and evening peak hours. The east and westbound green time would be 40 seconds with three (3) seconds of yellow and two (2) seconds of all red. The north and southbound green time would be 42 seconds with three (3) seconds of yellow and two (2) seconds of all red. The all-pedestrian phase would have 25 seconds of green time. This change is not expected to affect signal operations at Brighton 1st Street, Brighton 5th Street, or Ocean Parkway or the signal progression along the Brighton Beach Avenue corridor. (The cycle length at Ocean Parkway and Brighton Beach Avenue could also be changed from 90 to 120 seconds during the AM and PM peaks to ensure smooth traffic flow.)

During the midday peak period, the eastbound left turn movement would improve to LOS D with 51.1 seconds of delay from LOS E and 66.9 seconds of delay under the no-build condition. The eastbound through and right-turn movement would drop to LOS D from

LOS C during the no-build, with a slight increase in vehicle delay (to 35.1 seconds to 33.7 seconds) The southbound through, left and right movements would continue to operate at LOS C, with a vehicle delay of 34.1 seconds (a decrease from the no-build condition of 34.8 seconds of delay). All other movements would continue to operate at LOS C with slight increases in delay ranging from 1.4 seconds to 2.6 seconds. Overall, the intersection would continue to operate at LOS D, but with a slight decrease in vehicle delay to 35.3 seconds from 36.0 seconds under the no-build condition.

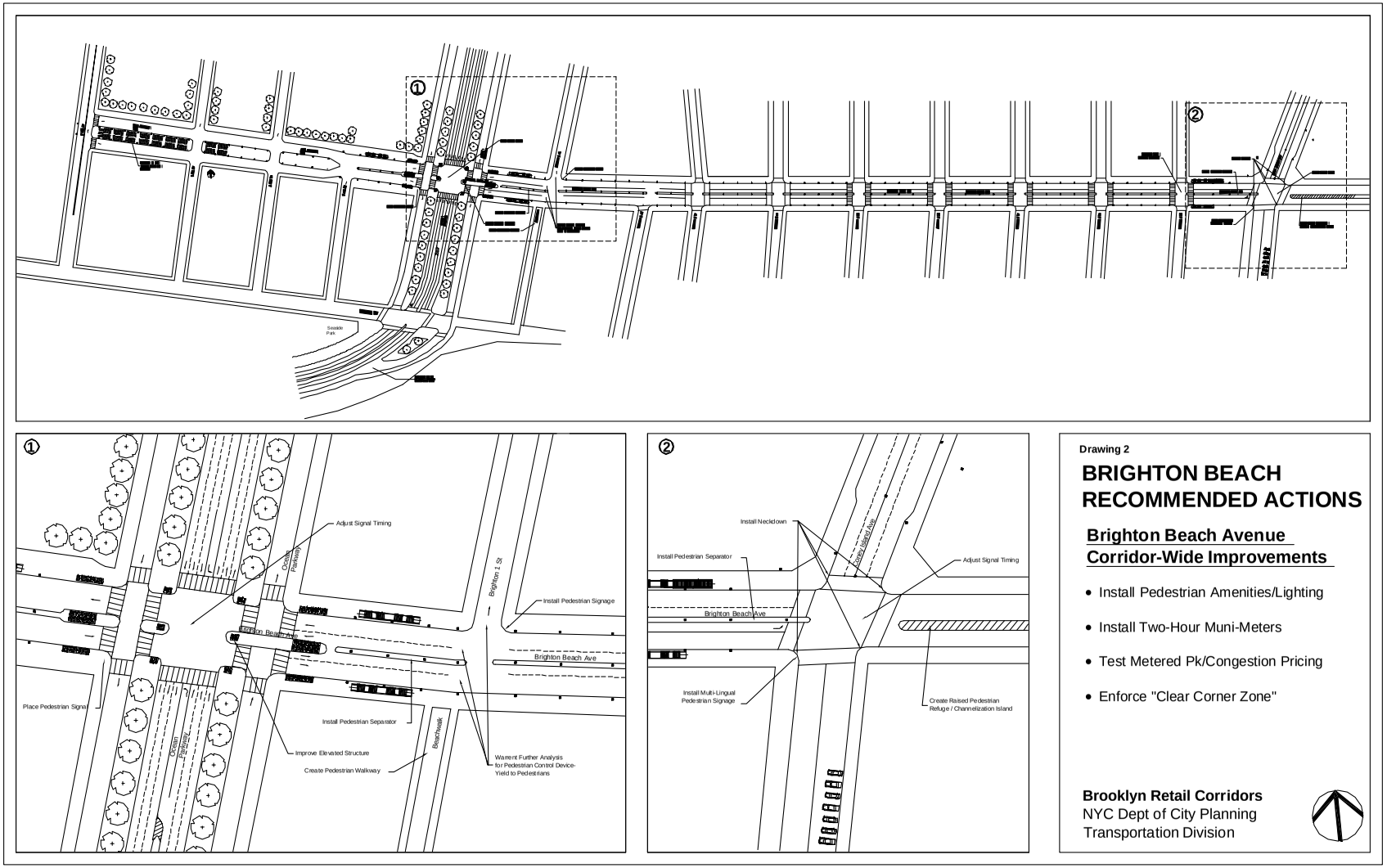
During the weekend peak period, the eastbound left turn movement would improve to LOS E from LOS F under the no-build condition (the vehicle delay would decrease to 64.0 seconds from 107.0 seconds during the no-build condition). The southbound left, through, and right turn movements would improve to LOS D and 44.5 seconds of delay from the no-build conditions of LOS E and 71.8 seconds of delay. The northbound left turn movement would remain at LOS D, with decreased delay from the no-build condition (37.1 seconds from 47.2 seconds during the no-build). All other movement would continue to operate at LOS C with a slight increase in delay ranging from 1.4 seconds to 2.5 seconds. Overall, the intersection would remain at LOS D with a decrease in delay to 39.1 seconds of delay from the no build condition of 50.2 seconds.

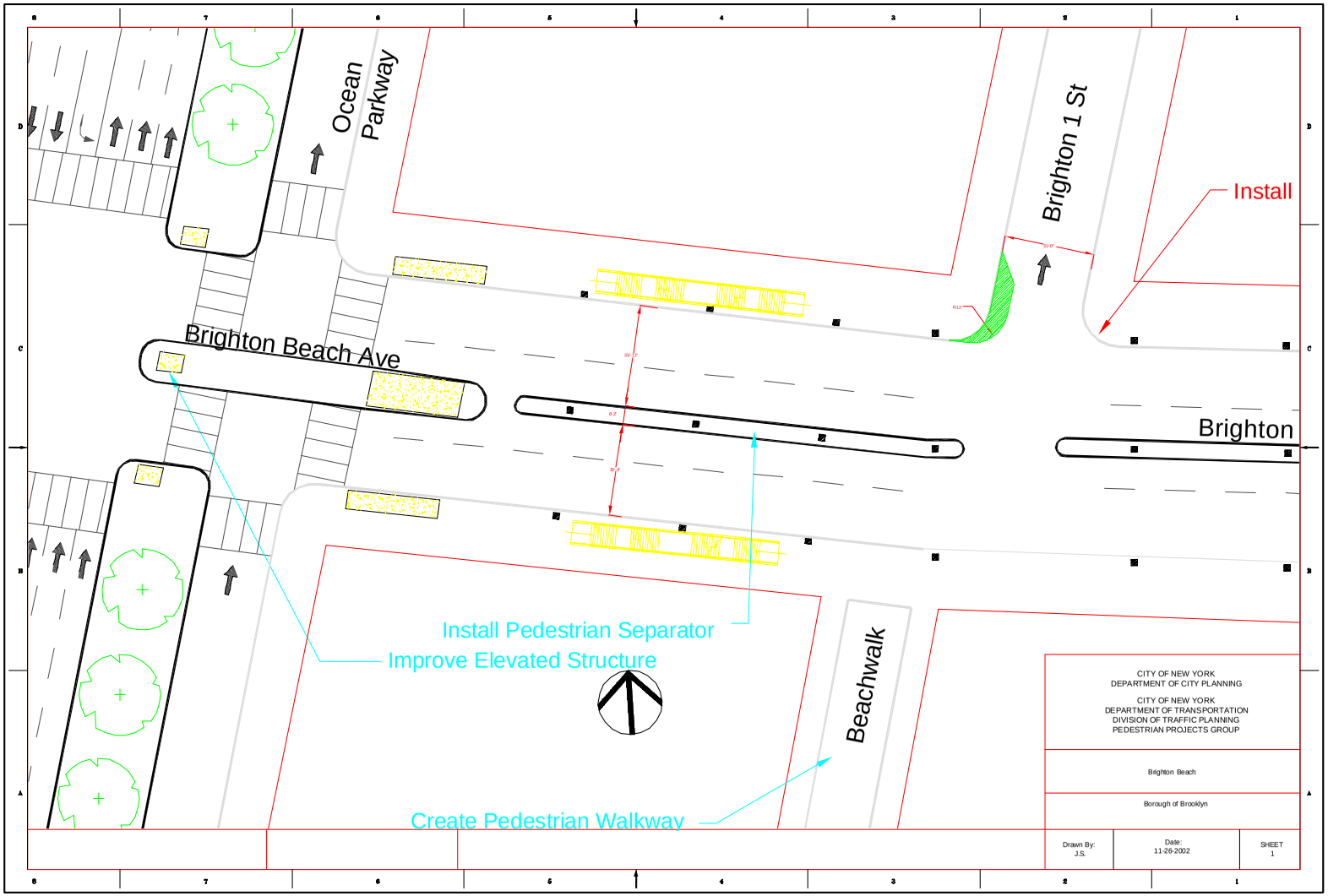
TABLE 10
Brighton Beach: Comparison of LOS and Delay for Existing, No-Build, and Build Conditions

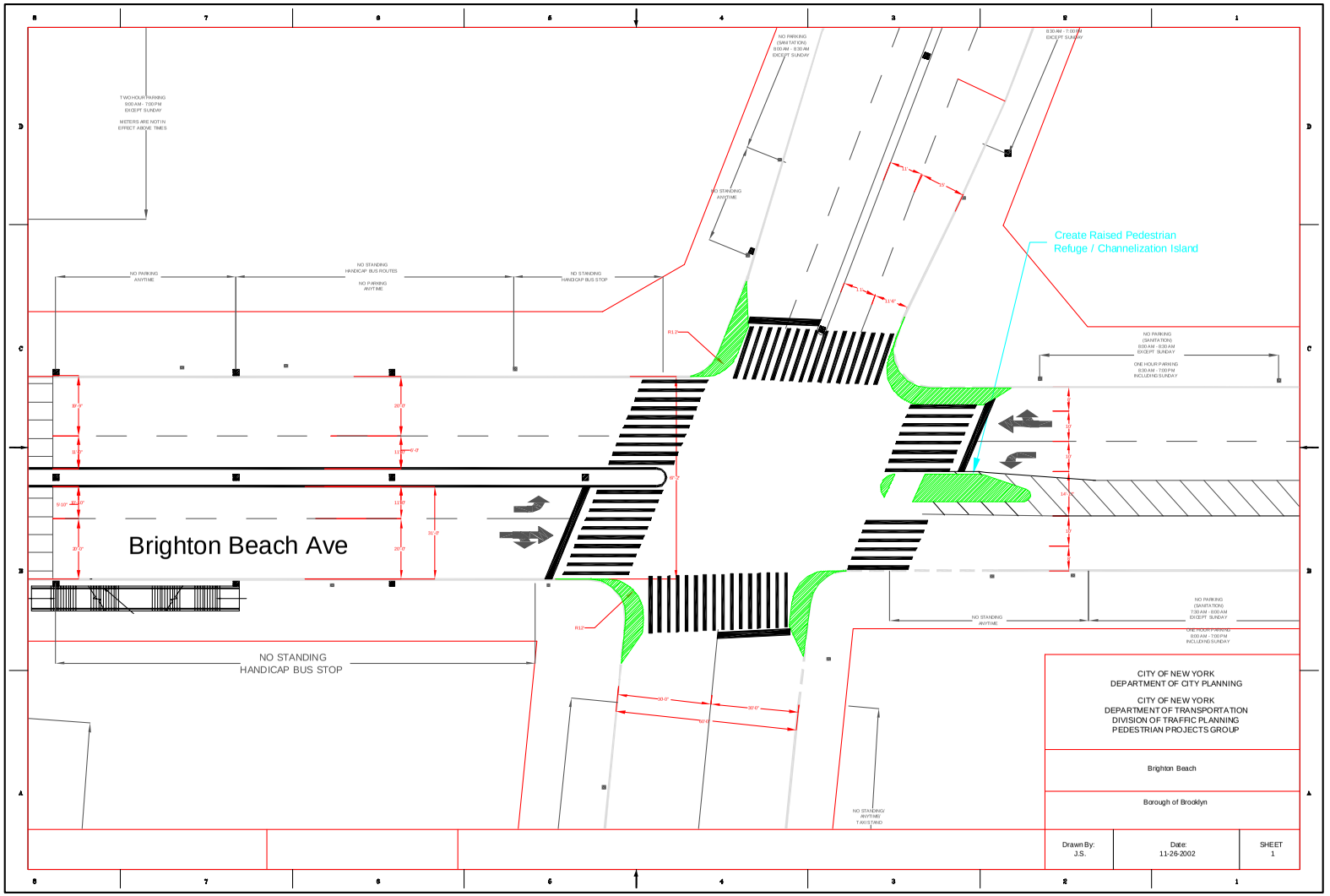
MIDDAY PEAK PERIOD													
INTERSECTION	**2000 Existing**				**2004 No-Build**				**2004 Build**				**Delay**
Approach	Mvm't	v/c	Delay	LOS	Mvm't	v/c	Delay	LOS	Mvm't	v/c	Delay	LOS	**Change**
Brighton Beach Ave @ Coney Island Ave													
Eastbound	L	0.78	55.0+	E	L	0.86	66.9	E	L	0.70	51.1	D	15.8
	TR	0.49	31.4	C	TR	0.58	33.7	C	TR	0.47	35.1	D	-1.4
Westbound	L	0.10	25.7	C	L	0.20	27.6	C	L	0.16	30.0	C	-2.4
	TR	0.50	30.0	C	TR	0.53	30.6	C	TR	0.44	33.2	C	-2.6
Northbound	L	0.05	24.9	C	L	0.09	25.7	C	L	0.07	27.1	C	-1.4
	TR	0.07	24.8	C	TR	0.12	25.2	C	TR	0.09	27.0	C	-1.8
Southbound	LTR	0.58	32.2	C	LTR	0.67	34.8	C	LTR	0.53	34.1	C	0.7
Intersection			**33.7**	**C**			**36.0**	**D**			**35.3**	**D**	**0.7**

PM PEAK PERIOD													
INTERSECTION	2000 Existing				2004 No-Build				2004 Build				Delay
Approach	Mvm't	v/c	Delay	LOS	Mvm't	v/c	Delay	LOS	Mvm't	v/c	Delay	LOS	Change
Brighton Beach Ave @ Ocean Parkway													
Eastbound	L	0.01	20.5	C	L	0.01	20.7	C	L	0.01	19.0	B	1.7
	TR	0.25	43.7	D	TR	0.29	44.4	D	TR	0.25	41.3	D	3.1
	R	0.02	40.3	D	R	0.02	40.3	D	R	0.02	37.8	D	2.5
Westbound	L	0.02	20.2	C	L	0.05	20.5	C	L	0.04	18.8	B	1.7
	TR	0.53	50.1	D	TR	0.65	54.4	D	TR	0.57	48.6	D	5.8
	R	0.63	54.4	D	R	0.66	55.7	E	R	0.58	49.3	D	6.4
Northbound	L	0.01	17.2	B	L	0.02	17.3	B	L	0.02	21.3	C	-4.0
	TR	0.14	18.4	B	TR	0.15	18.5	B	TR	0.17	22.8	C	-4.3
Southbound	L	0.79	40.4	D	L	0.88	49.4	D	L	0.84	47.7	D	1.7
	TR	0.15	18.5	B	TR	0.31	20.3	C	TR	0.35	25.1	C	-4.8
Intersection			**34.9**	**C**			**35.5**	**D**			**35.8**	**D**	**-0.3**
Brighton Beach Ave @ Coney Island Ave													
Eastbound	L	0.77	63.1	E	L	0.88	82.3	F	L	0.63	43.5	D	38.8
	TR	0.25	34.5	C	TR	0.31	35.3	D	TR	0.24	28.2	C	7.1
Westbound	L	0.09	32.9	C	L	0.20	35.0-	C	L	0.15	27.7	C	-27.7
	TR	0.45	37.8	D	TR	0.51	38.9	D	TR	0.40	30.6	C	8.3
Northbound	L	0.11	25.1	C	L	0.18	26.5	C	L	0.23	32.4	C	-5.9
	TR	0.13	24.8	C	TR	16.00	25.2	C	TR	0.19	30.2	C	-5.0
Southbound	LTR	0.39	28.7	C	LTR	0.50	30.7	C	LTR	0.59	37.6	D	-6.9
Intersection			**36.0**	**D**			**38.4**	**D**			**33.4**	**C**	**5.0**

SATURDAY PEAK PERIOD													
INTERSECTION	2000 Existing				2004 No-Build				2004 Build				Delay
Approach	Mvm't	v/c	Delay	LOS	Mvm't	v/c	Delay	LOS	Mvm't	v/c	Delay	LOS	Change
Brighton Beach Ave @ Ocean Parkway													
Eastbound	L	0.01	15.0	B	L	0.01	15.1	B	L	0.01	13.4	B	1.7
	TR	0.45	38.5	D	TR	0.48	39.4	D	TR	0.40	34.6	C	4.8
	R	0.09	32.6	C	R	0.09	32.7	C	R	0.08	29.9	C	2.8
Westbound	L	0.03	14.9	B	L	0.08	15.3	B	L	0.07	13.6	B	1.7
	TR	0.62	43.7	D	TR	0.69	46.8	D	TR	0.57	38.7	D	8.1
	R	0.74	53.7	D	R	0.77	56.6	E	R	0.65	43.5	D	13.1
Northbound	L	0.01	14.6	B	L	0.02	14.7	B	L	0.02	19.0	B	-4.3
	TR	0.13	15.5	B	TR	0.14	15.5	B	TR	0.17	20.1	C	-4.6
Southbound	L	0.80	36.5	D	L	0.89	47.1	D	L	0.83	42.6	D	4.5
	TR	0.16	15.7	B	TR	0.29	16.9	B	TR	0.36	22.0	C	-5.1
Intersection			**31.1**	**C**			**32.0**	**C**			**30.7**	**C**	**1.3**
Brighton Beach Ave @ Coney Island Ave													
Eastbound	L	0.88	73.7	E	L	1.01	107.0	F	L	0.80	64.0	E	43.0
	TR	0.46	30.9	C	TR	0.55	33.1	C	TR	0.45	34.7	C	-1.6
Westbound	L	0.08	25.3	C	L	0.21	27.7	C	L	0.17	30.2	C	-2.5
	TR	0.58	31.5	C	TR	0.63	32.6	C	TR	0.51	34.7	C	-2.1
Northbound	L	0.38	33.6	C	L	0.60	47.2	D	L	0.42	37.1	D	10.1
	TR	0.35	27.8	C	TR	0.40	28.4	C	TR	0.31	29.8	C	-1.4
Southbound	LTR	0.84	44.3	D	LTR	1.01	71.8	E	LTR	0.80	44.5	D	27.3
Intersection			**38.3**	**D**			**50.2**	**D**			**39.1**	**D**	**11.1**

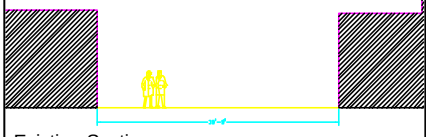

①
②
Adjust Signal Timing
Ocean Parkway
Brighton 1 St
Install Pedestrian Signage
Brighton Beach Ave
Place Pedestrian Signal
Install Pedestrian Separator
Improve Elevated Structure
Create Pedestrian Walkway
Boardwalk
Warrent Further Analysis for Pedestrian Control Device- Yield to Pedestrians
Install Neckdown
Install Pedestrian Separator
Coney Island Ave
Adjust Signal Timing
Brighton Beach Ave
Install Multi-Lingual Pedestrian Signage
Create Raised Pedestrian Refuge / Channelization Island
Drawing 2
BRIGHTON BEACH
RECOMMENDED ACTIONS
Brighton Beach Avenue
Corridor-Wide Improvements
• Install Pedestrian Amenities/Lighting
• Install Two-Hour Muni-Meters
• Test Metered Pk/Congestion Pricing
• Enforce "Clear Corner Zone"
Brooklyn Retail Corridors
NYC Dept of City Planning
Transportation Division


Ocean Parkway
Brighton 1 St
Install
Brighton Beach Ave
Brighton
Install Pedestrian Separator
Improve Elevated Structure
Beachwalk
Create Pedestrian Walkway
CITY OF NEW YORK
DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC PLANNING
PEDESTRIAN PROJECTS GROUP
Brighton Beach
Borough of Brooklyn
Drawn By:
J.S.
Date:
11-26-2002
SHEET
1

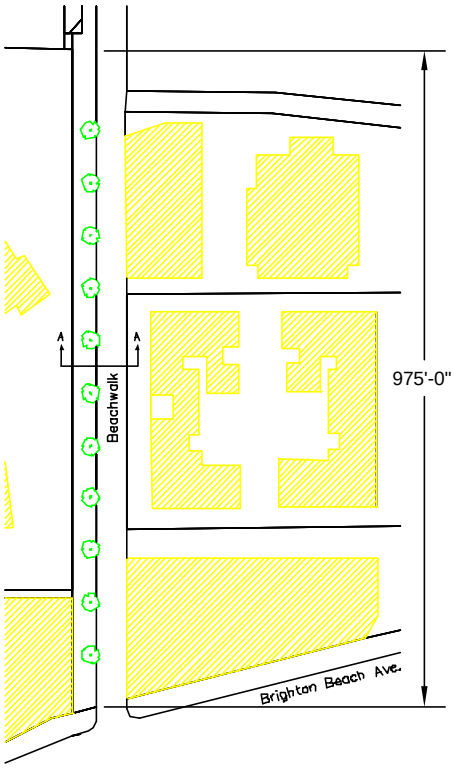

Create Raised Pedestrian
Refuge / Channelization Island
Brighton Beach Ave
NO STANDING
HANDICAP BUS STOP
CITY OF NEW YORK
DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC PLANNING
PEDESTRIAN PROJECTS GROUP
Brighton Beach
Borough of Brooklyn
Drawn By:
J.S.
Date:
11-26-2002
SHEET
1

Existing Condition

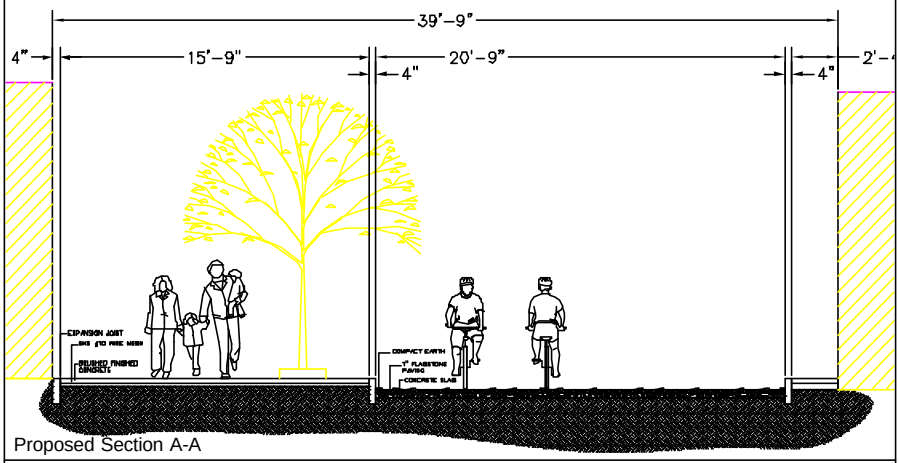
Proposed Condition



Existing Section



Proposed Plan

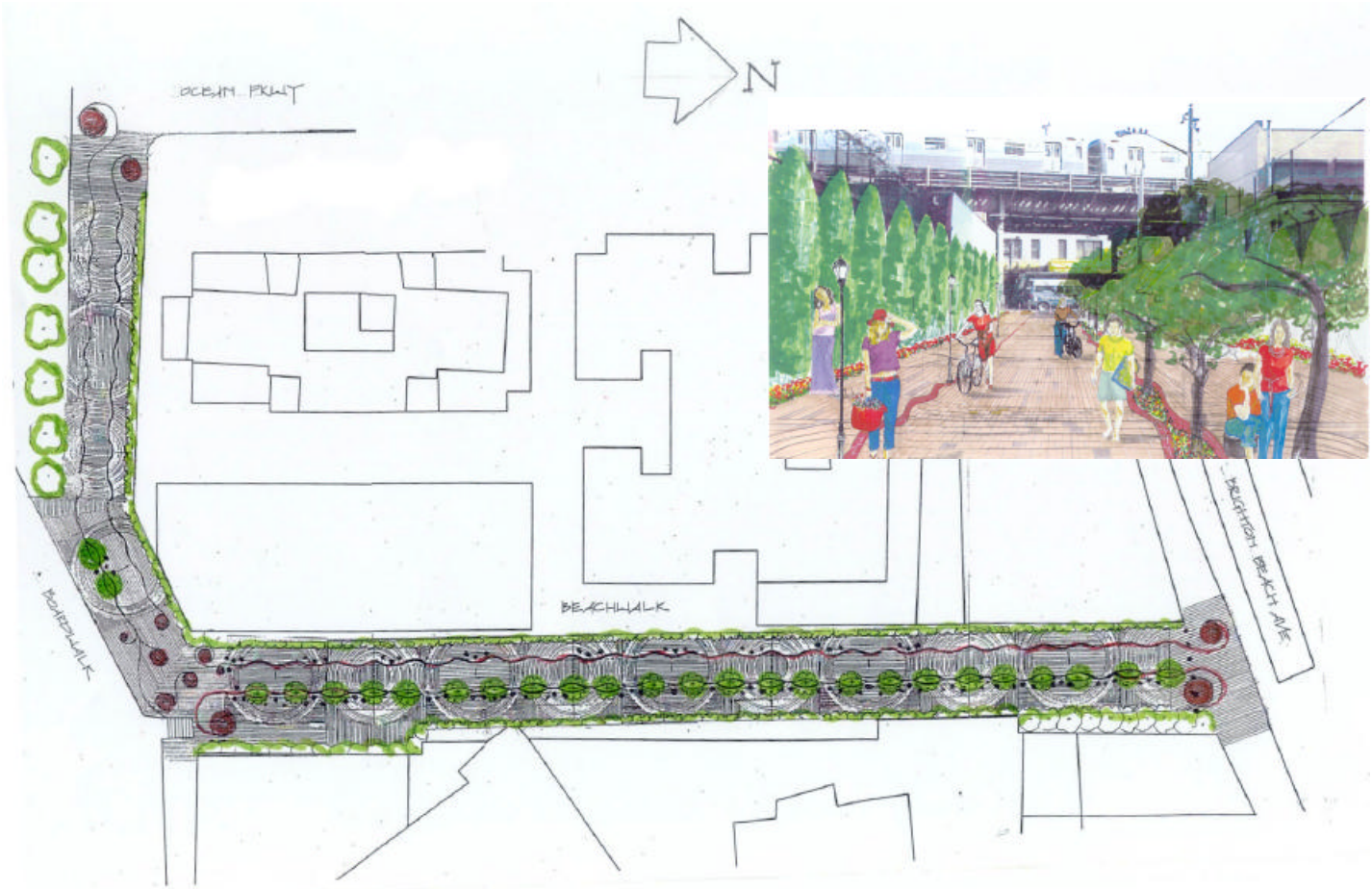


Proposed Section A-A

Drawing 3a

Brighton Beach: Recommended Actions: Beachwalk

Brooklyn Retail Corridors
NYC Dept of City Planning
Transportation Division



Drawing 3b
Brighton Beach:
Recommended Actions: Beachwalk
Alternative Proposed Future Condition

Brooklyn Retail Corridors
New York City
Department of Transportation
Division of Traffic Planning
Pedestrian Projects Group

Knickerbocker Ave. at DeKalb Ave.

Knickerbocker Ave. at Myrtle Ave.

Knickerbocker Ave. at Himrod St.

Knickerbocker Ave. at Menahan St.

5.c. BUSHWICK

A traffic and pedestrian LOS analysis was conducted at two signalized intersections, Knickerbocker Avenue at Dekalb and Myrtle Avenues. Two unsignalized intersections, Knickerbocker Avenue at Himrod and Menahan Streets, were also analyzed. Figures 7 and 8 show the existing and future no-build balanced traffic volumes for the AM, midday, PM, and weekend peak periods. Table 11 illustrates the severity of accidents for a three year period by time of day for each occurrence. Table 12 compares LOS and delay for existing, no-build, and build conditions for both intersections. Recommended actions for this study area are shown in Drawing 4.

Peak Hour

Traffic

Based upon the peak period traffic counts, the morning peak hour is 8:00-9:00 AM, the midday period is 12:30-1:30 PM, the evening period is 4:30-5:30 PM, and the weekend period is 1:00-2:00 PM.

Pedestrian

Based upon the peak period traffic counts, the morning peak hour is 8:00-9:00 AM, the midday period is 12:30-1:30 PM, the evening period is 4:30-5:30 PM, and the weekend period is 1:00-2:00 PM.

2000 EXISTING CONDITIONS

Knickerbocker Avenue at Dekalb Avenue

Traffic

Overall, the intersection operates at acceptable LOS B for all four peak periods, with delays ranging from 8.9 to 9.7 seconds per vehicle. All lane groups operate at LOS B for all peak periods. Delays range from 5.1 to 12.2 seconds per vehicle.

Pedestrian

All sidewalks, crosswalks, and corners operate at LOS B or better for all peak periods.

Knickerbocker Avenue at Myrtle Avenue

Traffic

Overall, the intersection operates during the AM and weekend peak periods at an acceptable LOS C, with 16.3 and 23.4 seconds of delay per vehicle respectively. Each lane group operates at LOS C or better, with delays ranging from 11.0 to 21.6 seconds per vehicle. The exception is the northbound left-through movement during the weekend peak period, which operates at LOS E with 41.1 seconds of delay. During the midday period, the intersection operates at LOS B, with 13.1 seconds of delay per vehicle. Each lane group operates at LOS B or better, with delays ranging from 9.2 to 16.0 seconds of delay per vehicle. During the PM period, the intersection operates at LOS D with 25.6 seconds of delay per vehicle. Lane groups operate at LOS C or better, with delays ranging from 13.8 to 20.7 seconds per vehicle, except for the northbound left-through movement, which operates at LOS E with 48.1 seconds of delay.

Pedestrian

All sidewalks, crosswalks, and corners operate at LOS C or better for all peak periods.

Knickerbocker Avenue at Himrod Street

Traffic

Overall, this unsignalized intersection operates at LOS C during the AM, PM, and weekend peak periods, and LOS B during the midday period. Delays range from 1.6 to 3.0 seconds of delay per vehicle.

Pedestrian

All sidewalks, crosswalks, and corners operate at LOS A for all peak periods.

Knickerbocker Avenue at Menahan Street

Traffic

Overall, this unsignalized intersection operates at LOS B for all peak periods, with delays ranging from 1.4 to 1.7 seconds of delay per vehicle.

Pedestrian

All sidewalks, crosswalks, and corners operate at LOS C or better for all peak periods.

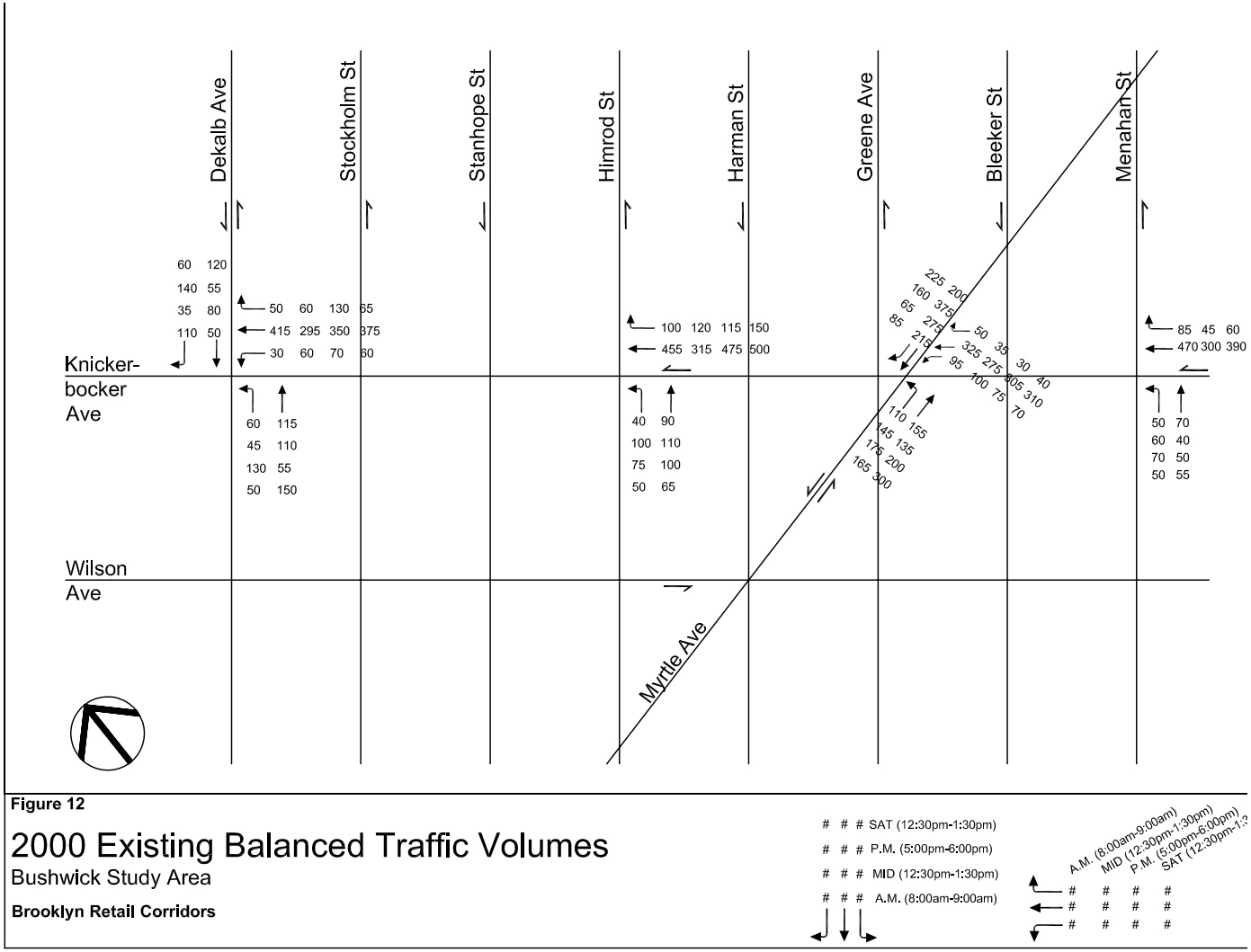


Figure 12

2000 Existing Balanced Traffic Volumes

Bushwick Study Area

Brooklyn Retail Corridors

2004 FUTURE NO-BUILD CONDITIONS

The future development scenario identifies four New York City Department of Housing Preservation and Development (HPD) residential and commercial projects in the vicinity of the Bushwick retail corridor: the Bushwick Central I project, which involves the construction of 104 dwelling units in 52 two-story, two-family homes; Bushwick West, 70 two-story, two-family homes totaling 140 dwelling units; the Ridgewood Bushwick Youth Center, a one- or two-story building of 20,000 square feet; and retail space totaling up to 7,500 square feet. Due to their location and the residential use, these developments are not expected to have an impact on the study area's traffic network and a build analysis is not warranted.

Knickerbocker Avenue at Dekalb Avenue

Traffic

Overall, this intersection would continue to operate at an acceptable LOS B for all peak periods, with a slight increase in delays, ranging from 9.0 to 9.8 seconds of delay per vehicle. All lane groups would experience a very slight increase in delays ranging from 5.1 to 12.4 seconds per vehicle.

Pedestrian

All sidewalks, crosswalks, and corners would continue to operate at acceptable levels for all peak periods.

Knickerbocker Avenue at Myrtle Avenue

Traffic

Overall, this intersection would continue to operate at LOS C during the AM peak period. All lane groups would operate at LOS C or better, and would experience a slight increase in delays, ranging from 11.1 to 21.8 seconds of delay per vehicle. During the midday period, the intersection would continue to operate at LOS B, with a slight increase in delay to 13.8 seconds per vehicle from the no-build condition of 13.1 seconds of delay. All lane groups would continue to operate at LOS C or better, with very slight increases in delay, which would range from 9.4 to 16.1 seconds per vehicle. During the PM and weekend peak periods, the overall intersection would deteriorate to LOS F. All lane groups would operate at LOS C or better, with the exception of the northbound left-through movement for both periods, which would operate at LOS F.

Pedestrian

All sidewalks, crosswalks, and corners would continue to operate at acceptable levels for all peak periods.

Knickerbocker Avenue at Himrod Street

Traffic

Overall, this intersection would continue to operate at LOS C during the AM, PM, and weekend periods, with a slight increase in average total delay, ranging from 11.2 to 13.1 seconds per vehicle. During the midday period, this intersection would continue to operate at LOS B, with a slight increase in average total delay to 9.3 seconds per vehicle.

Pedestrian

All sidewalks, crosswalks, and corners would continue to operate at acceptable levels for all peak periods.

Knickerbocker Avenue at Menahan Street

Traffic

During the AM period, this intersection would deteriorate to LOS C with increased average total delay of 10.2 seconds per vehicle. The midday, PM, and weekend periods would continue to operate at LOS B, with a slight increase in delay; average total delay ranges from 6.6 to 8.5 seconds per vehicle.

Pedestrian

All sidewalks, crosswalks, and corners would continue to operate at acceptable levels for all peak periods.

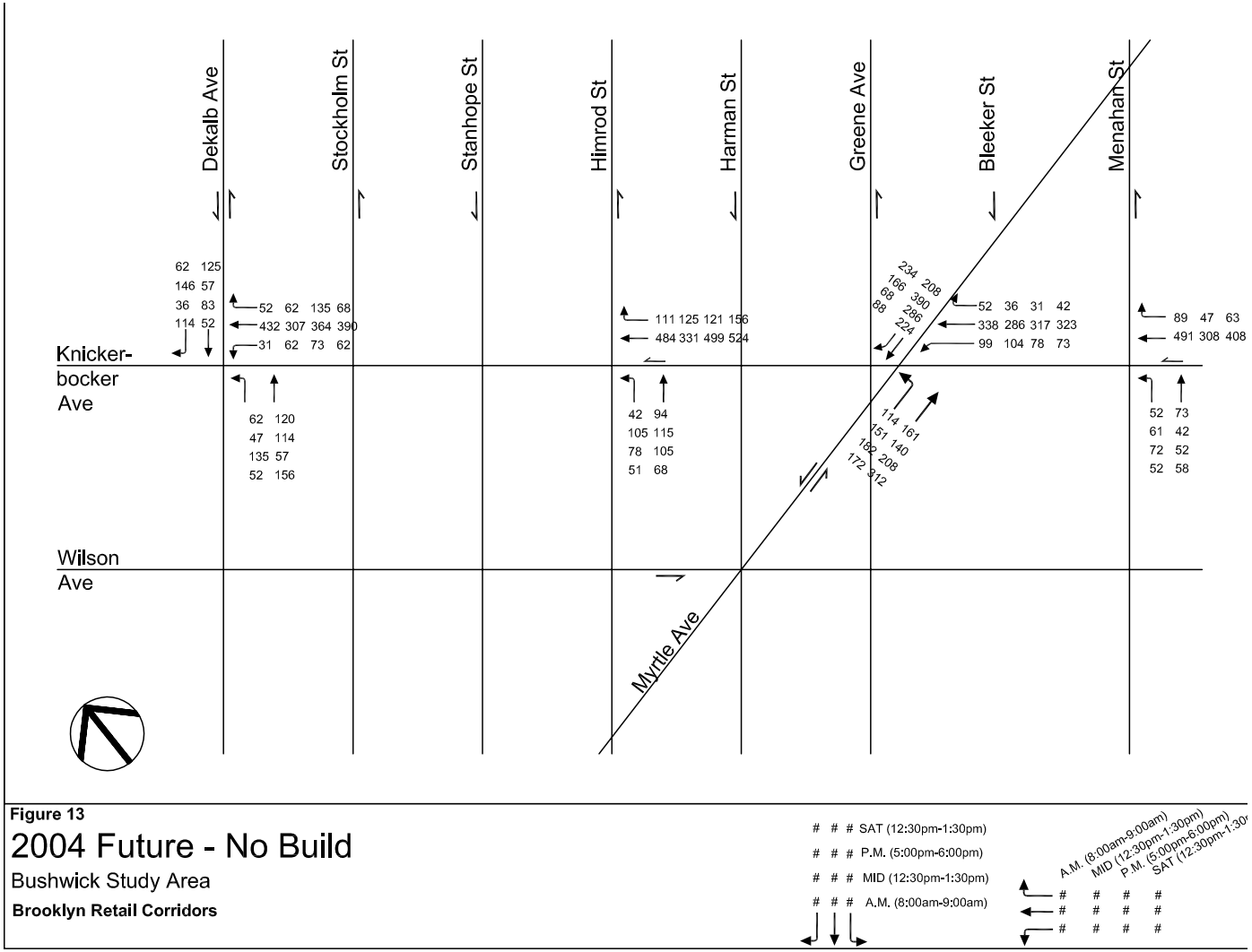


Figure 13

2004 Future - No Build

Bushwick Study Area

Brooklyn Retail Corridors

ACCIDENT SUMMARY

The data suggests that permanent markings, roadway design, channelization, roadway lighting, roadway condition and poor visibility of traffic control devices (i.e. traffic signals, stop signs, directional signs, etc.) may be factors contributing to accidents at these locations.

Knickerbocker Avenue at Myrtle Avenue

Between 1996 and 1998, there were 20 reportable and 16 non-reportable accidents, and no fatalities, at this intersection. Eleven (55 percent) of the reportable accidents occurred at night, and of the three most common accident types, 30 percent were sideswipes, 25 percent involved pedestrians, and 15 percent involved bicyclists. Accidents increased in 1997 from 1996, but decreased again in 1998.

Knickerbocker Avenue at Himrod Street

Between 1996 and 1998, there were 30 reportable and 29 non-reportable accidents, none fatal. Fifty-seven percent of the reportable accidents occurred during the evening. The three most common type of accidents involved collisions with a fixed object (67 percent), right angle turns (13 percent), and rear-end collisions (10 percent). Reportable accidents increased from three (3) to 16 from 1996 to 1997 and then decreased slightly to 11 in 1998. Twelve of the 16 accidents in 1997 and 7 of 11 accidents in 1998 were due to a fixed object. A review of accident data from the first six months of 1999 showed a substantial decrease in accidents once again indicating that the outstanding problem was corrected and the occurrences in 1997 and 1998 were anomalous.

Table 11:Accident Analysis
Knickerbocker Avenue at Myrtle Avenue and Himrod Street

1996	Myrtle Avenue			Himrod Street		
	DAY	NIGHT	TOTAL	DAY	NIGHT	TOTAL
FATALITY	0	0	0	0	0	0
INJURY	1	1	2	1	0	1
DAMAGE ONLY	1	0	1	2	0	2
TOTAL	2	1	3	3	0	3

1997	Myrtle Avenue			Himrod Street		
	DAY	NIGHT	TOTAL	DAY	NIGHT	TOTAL
FATALITY	0	0	0	0	0	0
INJURY	0	3	3	0	3	3
DAMAGE ONLY	4	4	8	7	6	13
TOTAL	4	7	11	7	9	16

1998	Myrtle Avenue			Himrod Street		
	DAY	NIGHT	TOTAL	DAY	NIGHT	TOTAL
FATALITY	0	0	0	0	0	0
INJURY	3	3	6	1	4	5
DAMAGE ONLY	0	0	0	2	4	6
TOTAL	3	3	6	3	8	11

RECOMMENDATIONS AND 2004 FUTURE BUILD CONDITIONS

STREET GEOMETRY/CHANNELIZATION OF VEHICULAR TRAFFIC

Knickerbocker Avenue at Myrtle Avenue

This intersection is configured so that the two westbound travel lanes diverge, passing on either side of the elevated subway's support columns, and then merge into only one lane after the intersection. The reduced capacity of Knickerbocker Avenue causes spill backs into the intersection, thereby restricting traffic flow on Myrtle Avenue. Taxis make left turns from Myrtle Avenue to pick up passengers exiting the subway station, further disrupting westbound traffic flow on Knickerbocker Avenue. Pedestrians on the north-south crosswalk are confused by the intersection geometry and are often caught in the middle of traffic, unsure of its direction. Over three years there were 20 accidents, five involving pedestrians.

RECOMMENDATION:

Adjust signal timing by increasing the north- and southbound green by three (3) seconds (from 67 to 70 seconds in the PM, and 49 to 52 seconds on the weekend) and decreasing the east- and westbound green time by the same (from 43 to 40 seconds in the PM, and 31 to 28 seconds on the weekend).

Create two 10-foot travel lanes, one a designated left-turn lane at the northbound approach, by prohibiting curbside parking on both sides of Myrtle Avenue for 100 feet south of the intersection. Shift the centerline four (4) feet at the northbound approach, thereby narrowing the southbound lane from 16 to 15 feet. For ease of southbound traffic flow, peg-a-track the centerline through the intersection.

With these adjustments, the intersection would improve from LOS F under the no-build condition to LOS C during the PM period and LOS B during the weekend peak period, with 22.7 and 12.6 seconds of delay respectively. All lane groups would operate at LOS C or better, with delays ranging from 6.9 to 22.6 seconds per vehicle,except the PM northbound left-turn movement, which would continue to operate at LOS F with 70.6 seconds of delay.

Implement a program of traffic calming ”gateway“ treatments to increase pedestrian safety and distinguish the commercial area from the surrounding residential streets:

Channelize traffic on Knickerbocker Avenue west of the intersection by creating and marking with arrows: a left-turn-only lane for traffic traveling southbound onto Myrtle Avenue, and a through-only lane for traffic continuing on Knickerbocker Avenue.

Repair/upgrade the existing traffic island to provide pedestrian refuge and better channelize the westbound traffic, thereby eliminating some of the uncertainty pedestrians have when crossing the street. Illuminate the island with reflective material at points of possible danger to pedestrians. Remove current signage (in disrepair) on the support column and install a ”Type 2” object marker - an all yellow reflective panel is recommended - to indicate an obstruction in the roadway.

Extend the sidewalk from the southwest corner of Knickerbocker Avenue to the elevated subway structure’s support column to create a clearly defined location where pedestrians, particularly subway patrons, may safely cross the intersection, while eliminating a dangerous left-turn shortcut through the intersection.

Install at the intersection standard ”BB“ lighting under the elevated subway structure to increase pedestrian safety, and highlight the entrance to the Knickerbocker Avenue retail corridor.

Designate a section of the curb on Myrtle Avenue as a NYCDOT/TLC authorized taxi stand to provide a pick-up and drop-off area for taxis servicing passengers exiting the subway station. Install applicable taxi-stand signage.

INTERSECTION PAVEMENT MARKINGS

Knickerbocker Avenue Corridor

Seven out of nine intersections on Knickerbocker Avenue between Dekalb and Myrtle Avenues are unsignalized. Most of the minor streets are controlled by stop signs that

are sometimes obstructed by vendor merchandise, and many of the pavement markings are either lacking or faded.

RECOMMENDATION:

Re-stripe faded pavement markings along Knickerbocker Avenue at Dekalb Avenue, Stockholm Street, Stanhope Street, and Green Avenue. Install high-visibility crosswalks at Stockholm, Stanhope, Himrod, and Harman streets.

TRAFFIC CONTROL DEVICES/CONGESTION

Knickerbocker Avenue Corridor

Traffic on Stockholm, Stanhope, Himrod, and Harmon streets - minor streets with stop signs - often queues up before there is an available gap in the Knickerbocker Avenue traffic stream, causing pedestrians to weave through vehicular traffic when trying to cross the street. Thirty accidents occurred at the intersection of Knickerbocker Avenue and Himrod Street between 1996 and 1998; 20 involved collisions with fixed objects. Parked trucks and vendor merchandise near sidewalk corners obstruct motorists' view of the stop sign on Himrod Street.

RECOMMENDATION:

Install signage on Himrod Street, in advance of the intersection, warning motorists of the approaching stop sign.

PEDESTRIAN AMENITIES/LIGHTING

Knickerbocker Avenue Corridor

Area residents cite poor lighting at the pedestrian level as contributing to a perception that the environment is unsafe at night.

RECOMMENDATION:

Install standard NYCDOT street light fixtures along Knickerbocker Avenue between Myrtle and Dekalb Avenues to supplement existing lighting. The specific number and location of fixtures should be determined by NYCDOT's Street Lighting Division. Install pedestrian amenities,

including benches and standard DOS waste receptacles, along the Knickerbocker Avenue corridor between Myrtle and Dekalb avenues. The Department of Sanitation shall determine the number and placement of all receptacles.

ON-STREET PARKING

Knickerbocker Avenue Corridor

Metered parking lanes on both sides of Knickerbocker Avenue are insufficient to meet neighborhood demand. Based upon community input, it has been noted that there is inadequate enforcement of parking regulations on weekends, especially illegal double-parking and blocked intersections.

RECOMMENDATION:

Install either muni-meters or parking space limit markings, and relocate fire hydrants from midblock locations to corners, along Knickerbocker Avenue between Myrtle and Dekalb avenues.

Increase enforcement, to the extent possible, during peak periods to eliminate double parking. This item will be referred to the Community Board as an agenda item for the District Service Cabinet.

TRUCK LOADING ZONE REGULATIONS

Knickerbocker Avenue Corridor

There are few truck loading zones in the study area and trucks make deliveries at all times of day, frequently blocking moving traffic.

RECOMMENDATION:

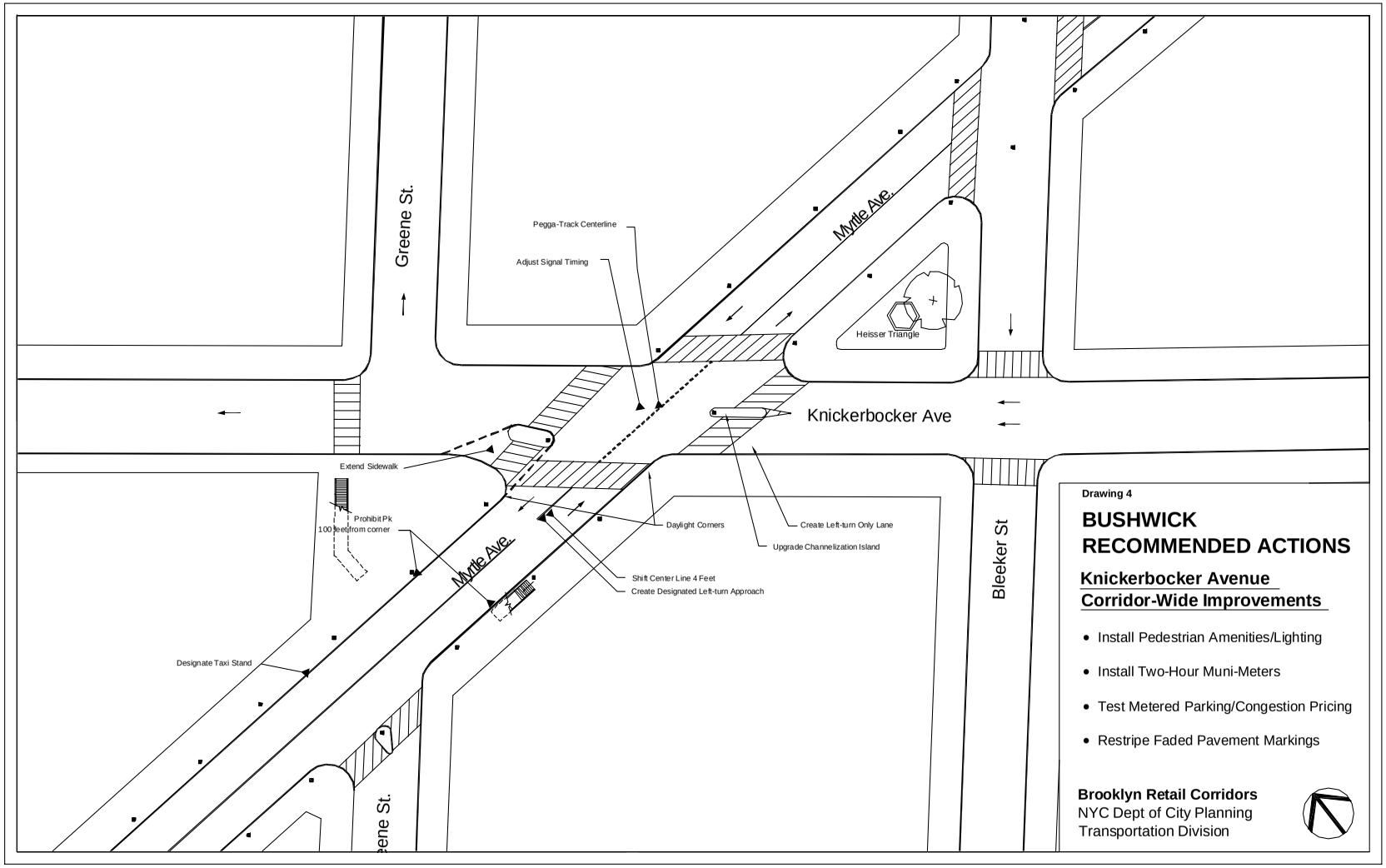
Monitor/assess NYCDOT'sMetered Parking/Congestion Pricing for Commercial Vehicles Pilot Program in Midtown Manhattan for its applicability to Knickerbocker Avenue. Under this program, commercial vehicles during designated periods may only stand on streets by parking in spaces controlled by muni-meters with a graduated hourly rate, thus promoting turnover and off-peak deliveries.

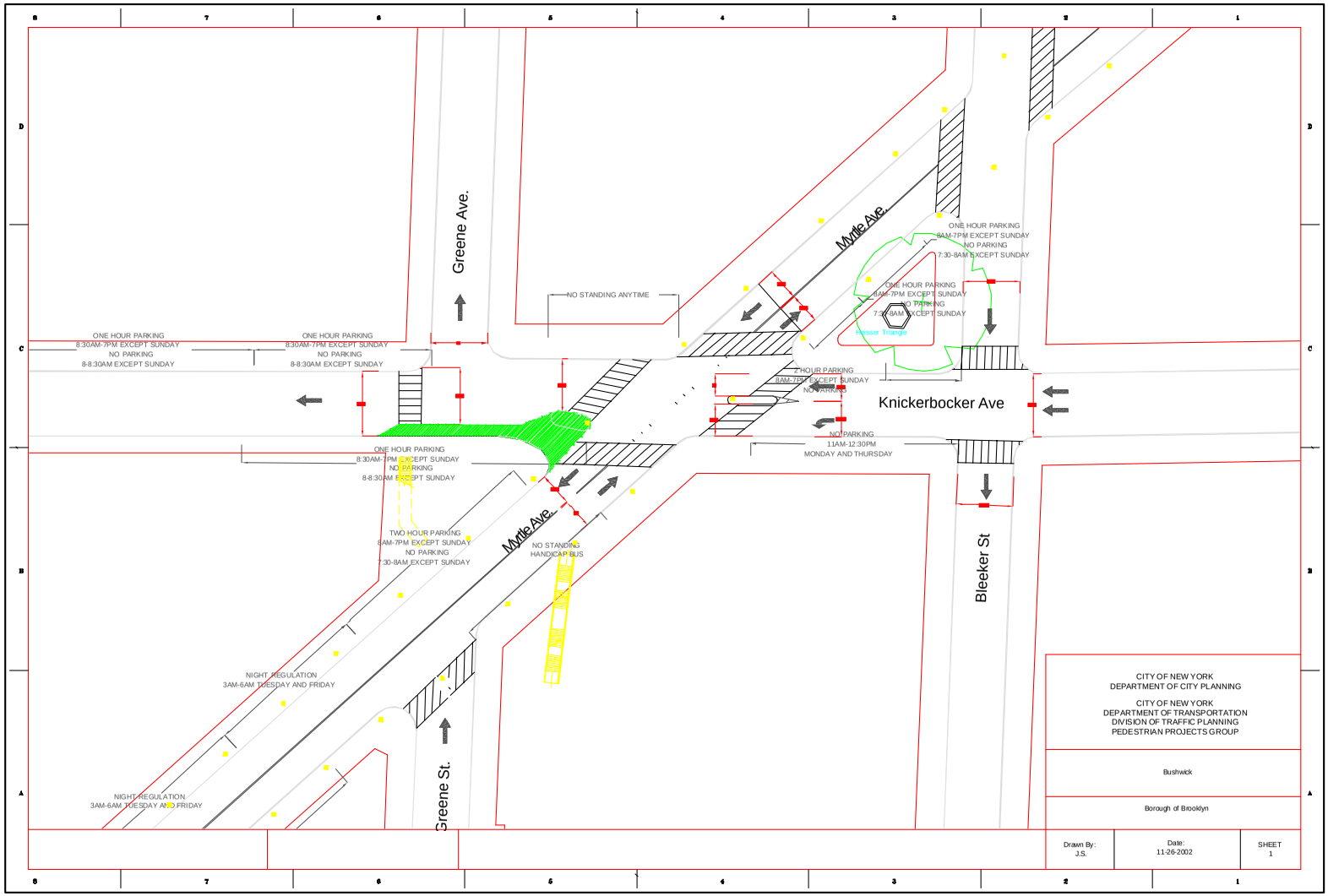
TABLE 12

Bushwick: Comparison of LOS and Delay for Existing, No-Build, and Build Conditions

PM PEAK PERIOD													
INTERSECTION	**2000 Existing**				**2004 No-Build**				**2004 Build**				**Delay**
Approach	Mvm't	V/C	Delay	LOS	Mvm't	V/C	Delay	LOS	Mvm't	V/C	Delay	LOS	**Change**
Knickerbocker Ave @ Mrytle													
Westbound	LTR	0.367	20.7	C	LTR	0.384	20.9	C	LTR	0.407	22.6	C	-1.7
Northbound	LT	0.979	48.1	E	LT	1.571			L	1.007	70.6	F	-70.6
									T	0.187	8.2	B	-8.2
Southbound	TR	0.622	13.8	B	TR	0.647	14.3	B	TR	0.620	12.5	B	1.8
Intersection			**25.6**	**D**				**F**			**22.7**	**C**	-22.7

SATURDAY PEAK PERIOD													
INTERSECTION	**2000 Existing**				**2004 No-Build**				**2004 Build**				**Delay**
Approach	Mvm't	V/C	Delay	LOS	Mvm't	V/C	Delay	LOS	Mvm't	V/C	Delay	LOS	**Change**
Knickerbocker Ave @ Mrytle													0.0
Westbound	LTR	0.384	16.1	C	LTR	0.400	16.2	C	LTR	0.440	18.0	C	-1.8
Northbound	LT	0.982	41.1	E	LT	1.389			L	0.699	14.9	C	-14.9
									T	0.328	6.9	B	-6.9
Southbound	TR	0.643	11.5	B	TR	0.667	12.0	B	TR	0.630	10.0	B	2.0
Intersection			**23.4**	**C**				**F**			**12.6**	**B**	-12.6


Greene St.
Myrtle Ave.
Pegga-Track Centerline
Adjust Signal Timing
Heisser Triangle
Knickerbocker Ave
Extend Sidewalk
Prohibit Pk
100 feet from corner
Myrtle Ave.
Daylight Corners
Create Left-turn Only Lane
Upgrade Channelization Island
Shift Center Line 4 Feet
Create Designated Left-turn Approach
Bleeker St
Designate Taxi Stand
eene St.
Drawing 4
BUSHWICK
RECOMMENDED ACTIONS
Knickerbocker Avenue
Corridor-Wide Improvements
• Install Pedestrian Amenities/Lighting
• Install Two-Hour Muni-Meters
• Test Metered Parking/Congestion Pricing
• Restripe Faded Pavement Markings
Brooklyn Retail Corridors
NYC Dept of City Planning
Transportation Division


Greene Ave.
Myrtle Ave.
NO STANDING ANYTIME
ONE HOUR PARKING
8:30AM-7PM EXCEPT SUNDAY
NO PARKING
8-8:30AM EXCEPT SUNDAY
ONE HOUR PARKING
8AM-7PM EXCEPT SUNDAY
NO PARKING
7:30-8AM EXCEPT SUNDAY
Pelosser Triangle
Knickerbocker Ave
NO PARKING
11AM-12:30PM
MONDAY AND THURSDAY
TWO HOUR PARKING
8AM-7PM EXCEPT SUNDAY
NO PARKING
7:30-8AM EXCEPT SUNDAY
NO STANDING
HANDICAP BUS
Bleeker St
NIGHT REGULATION
3AM-6AM TUESDAY AND FRIDAY
Greene St.
CITY OF NEW YORK
DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC PLANNING
PEDESTRIAN PROJECTS GROUP
Bushwick
Borough of Brooklyn
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