

1. ROCKAWAY PARK/BEACH 116TH STREET STATION

1.1 LOCATION

The Rockaway Park/Beach 116th Street subway station is the terminus of both the A and S trains on the Rockaway Park line. The station is located on Beach 116th Street in Rockaway Park, Queens. Rockaway Park is primarily residential with neighborhood commercial uses.

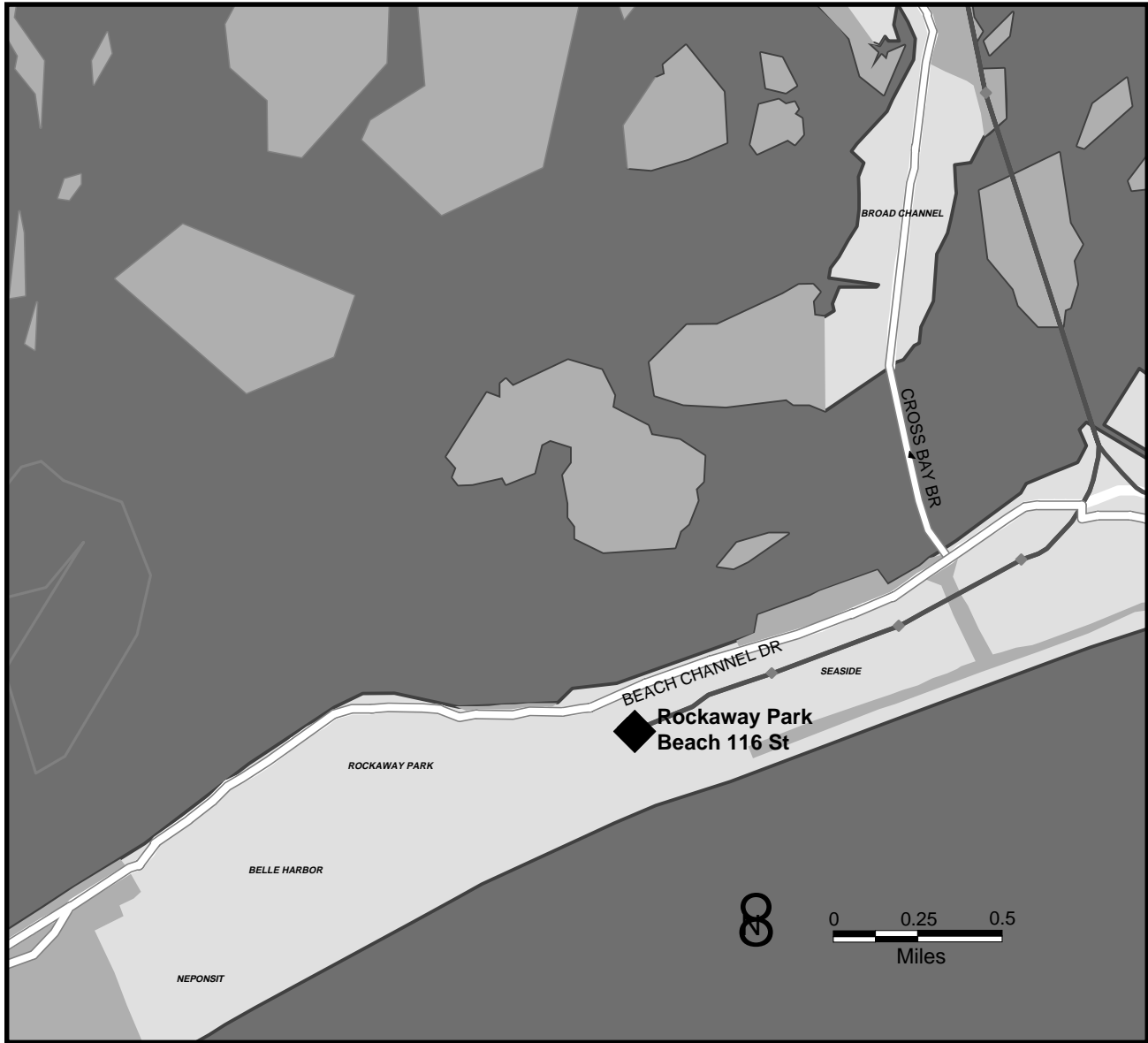
1.2 AREA TRANSPORTATION FACILITIES

There are no highways or expressways near the Rockaway Park/Beach 116th Street station. Two arterials are adjacent to the study area, Beach Channel Drive and Rockaway Beach Boulevard. Beach Channel Drive is a through truck route that runs the entire length of Far Rockaway. Cross Bay Boulevard is another nearby arterial and truck route that carries traffic into other neighborhoods in Queens, terminating at Woodhaven Boulevard.


Manhattan is accessible to commuters via the A train, which runs parallel to Rockaway Beach Boulevard. Four bus lines run through the primary study area, the Q21, Q22, Q35 and Q53; none of them are New York City Transit buses. The Q22, which is operated by Green Bus Lines, Inc., runs the entire length of Far Rockaway. The Q21, operated by Green Bus Lines, and the Q53 and Q35, operated by Triborough Coach Corp., run from Beach 116th Street, along Cross Bay Boulevard. The Q21 terminates in Ozone Park, and the Q53 terminates in Jackson Heights.



This map illustrates the various types and locations of the surrounding transportation facilities



ROCKAWAY PARK/
BEACH 116th
STATION



OTHER PROJECT SITES



SUBWAY LINES AND
STATIONS



TRUCK ROUTES



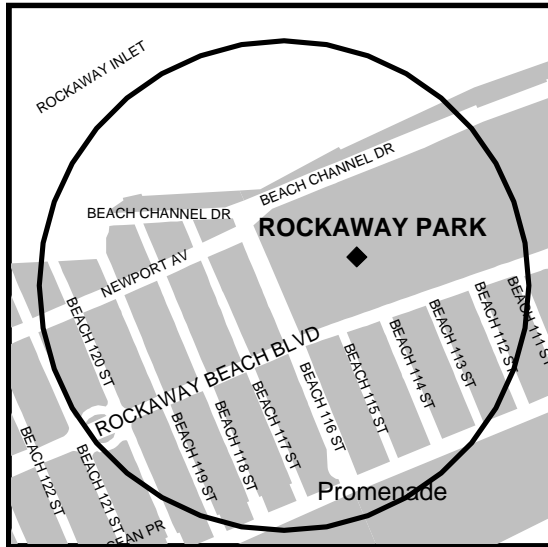
LIRR
TRACKS



LIRR STATION



2. SECONDARY STUDY AREA



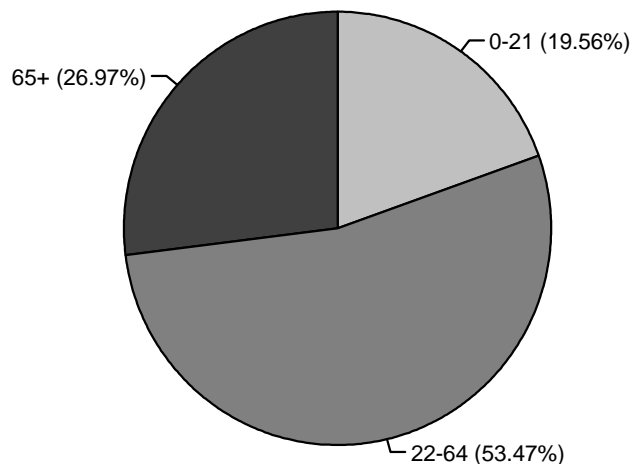
The secondary study area includes the quarter-mile radius (or an approximate five-minute walk) surrounding the Rockaway Park/Beach 116th Street subway station. Roughly, this includes the area from Beach Channel Drive to the north, Beach 121st Street to the west, Beach 111th Street to the east, and Rockaway Beach Promenade to the south.

2.1 POPULATION DATA

The population pie chart shows the age distribution of residents in census tracts that intersect the secondary study area as reported by the 1990 US Census. According to that report, the total population of the area was 11,704. The senior citizen population was higher than that of the city as a whole, with 27% of its residents over the age of 65, compared to 13% citywide. The under 21 population was 20%, below the citywide average of 29%.

Age/Years	% of Population
0-5	6.5%
6-11	5.1%
12-16	3.8%
17-21	4.2%
22-64	53.5%
65-69	6.8%
70-74	5.2%
75-79	5.4%
80-84	5.2%
85 +	4.5%

AGE DISTRIBUTION: 1990



2.2 JOURNEY TO WORK

The *Journey to Work* chart presents the distribution of various means of transportation among commuters living in census tracts that intersect a quarter-mile radius of the Rockaway Park/Beach 116th subway station. This data was taken from the 1990 US Census.

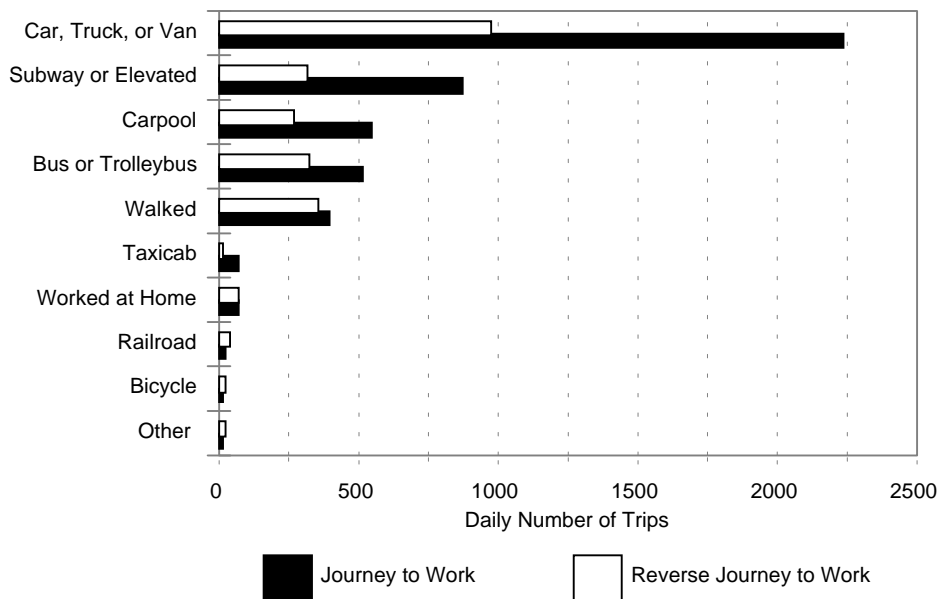
According to the 1990 Census Report, the dominant mode of transportation to work from these census tracts was driving, which accounted for 48% of commuters living in the area. Nineteen percent of commuters traveled to work by subway, and 11% car pooled. Additionally, 10% of commuters traveled to work by bus and eight percent walked. The remaining three percent traveled by various other modes.

When these data are compared to New York City as a whole, a larger portion of the residents in the area of the Rockaway Park/Beach 116th Street station drove to work: 48% of the workers in the secondary study area drove to work in 1990, versus 24% in the city as a whole. However, a lower percentage of people in the area of the station traveled to work by subway (18% vs. 37%), bus (10% vs. 13%), car pool (11% vs. 13%), and walking (eight percent vs. 11%), than in the city as a whole.

Reverse *Journey to Work* data indicate that of the people who worked in the area, 42% traveled to work by car, truck or van. Just 15% of reverse commuters walked to work, 14% traveled by bus, 13% traveled by subway, and 11% car pooled. The remaining five percent traveled by various other modes.

JOURNEY TO WORK: 1990

Rockaway Park Secondary Study Area



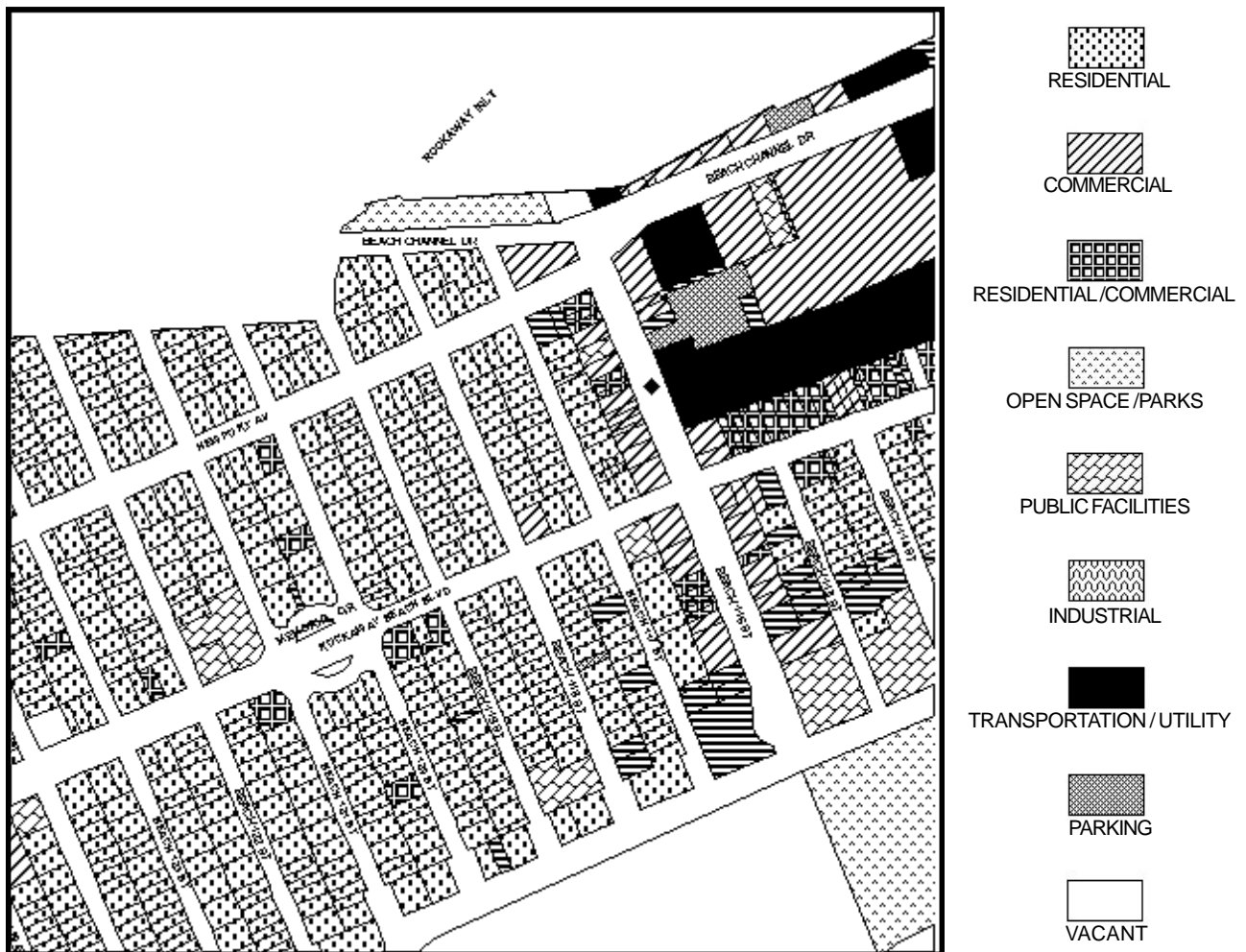
2.3 MODE OF ACCESS TO SUBWAY STATION

According to the MTA's 1990 survey of subway riders, 82% of riders accessed the Rockaway Park/Beach 116th Street subway station by walking. In comparison to the other 77 Queens stations surveyed, a higher percentage (15%) of subway riders drove to the station. The station had among the fewest riders accessing the station by rail.

2.4 LAND USE

The area immediately surrounding the Rockaway Park/Beach 116th subway station is commercial. The area west of the station is residential. To the south are a few public facilities, and the eastern portion of the quarter mile radius surrounding the station is occupied by the MTA subway station facilities.

There are a number of elderly care facilities located near the station, including the Promenade Nursing Home on Beach 114th Street, Park Nursing Home on 115th Street, and Park Inn Home for Adults at 112-05 Ocean Promenade.



This map shows the existing land use conditions for the secondary study area

2.5 ZONING AND DEVELOPMENT

The immediate intersection of the Rockaway Park/Beach 116th subway station, as well as the south-east section of the study area, are zoned R5, permitting three-story rowhouses and small apartment buildings. The northeast section of the study area is zoned M1-1, which permits light manufacturing, and M2-1, which permits medium manufacturing. There is a C1-2 commercial overlay along Beach 116th Street, which permits local shops and services.

The area west of Beach 116th Street is zoned for residential development. The northwest section is zoned R3-1, and immediately west of the station is zoned R3-2, which both permit small single and two family homes. The southwest section is zoned R4, which permits the same kind of housing as in R3 districts but with a higher density. The Promenade at the very southern section of the study area is zoned R7A, which permits six to eight story apartment buildings.

There is an as-of-right residential building with 150 units being built east of the station. At present there are no Uniform Land Use Review Process (ULURP) applications being considered by the Planning Commission

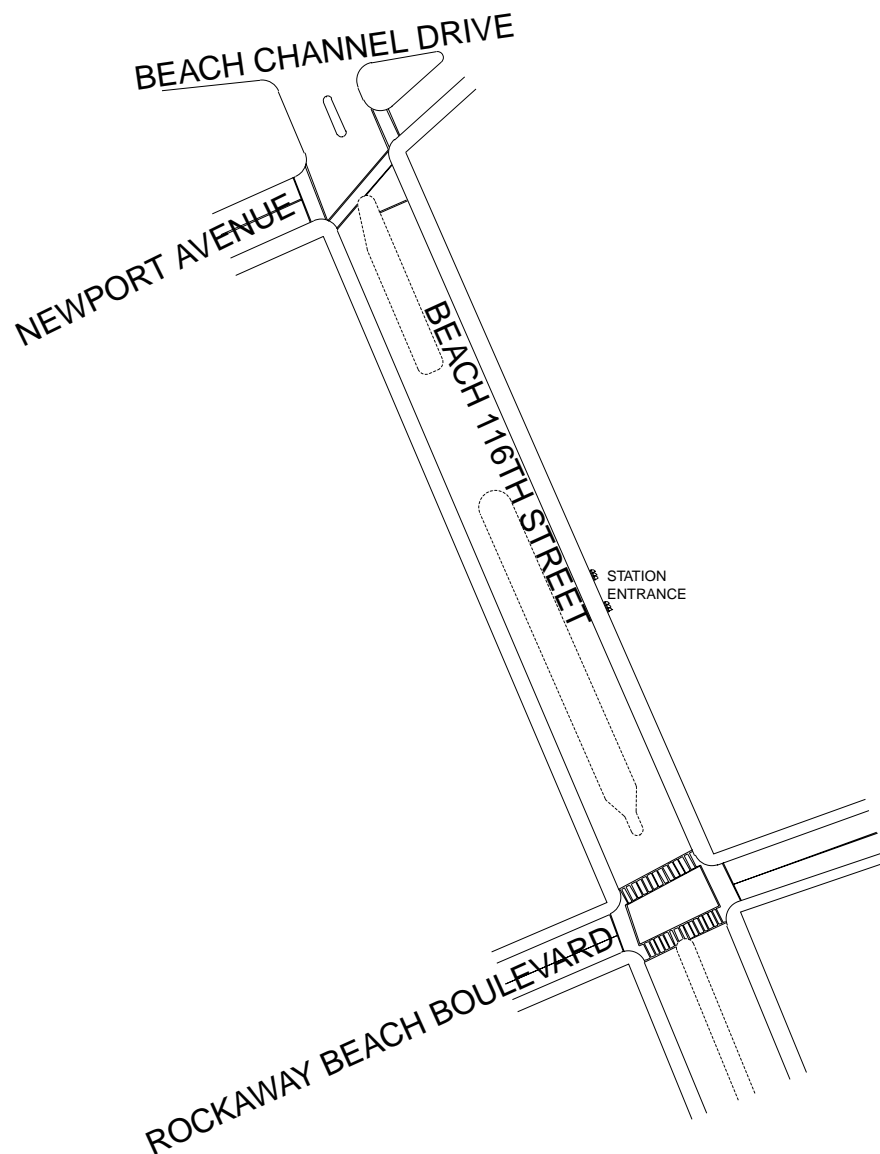
2.6 ORGANIZATIONS AND ON-GOING PROJECTS

There are no official Business Improvement Districts presently working within the secondary study area.

3. PRIMARY STUDY AREA

The primary study area includes one block of Beach 116th Street, bounded by Newport Avenue to the north and by Rockaway Beach Boulevard to the south. Also included in the primary study area is a parking median that extends the length of Beach 116th. The following section describes the existing conditions at the subway entrance; the physical conditions of its roadways, crosswalks, and sidewalks; and traffic conditions.

The usage of the Rockaway Park/Beach 116th Street station has not changed drastically recently: in 1998, the number of registrations – 295,950 — was less than one percent lower than the 1997 registration. The station's 1998 registration made it the 70th-most-used station in the Queens.



3.1 STATION ENTRANCES

The Rockaway Park/Beach 116th Street station only has one entrance. It is located along the eastern side of Beach 116th Street, about 220 feet north of Rockaway Beach Boulevard.

A tall, one story building houses the subway station and a transit police station. The station entrance consists of two ten foot wide doorways located on the sidewalk. An interior door connects the station to a small café located next door.

An adjacent lot, north of the station, is used for municipal parking. This NYC Department of Transportation lot provides public metered parking as well as parking for NYC Transit Authority employees and police officers.



Station entrance doors



Municipal parking lot



Station Building

3.2 STREETS ADJACENT TO THE STATION ENTRANCE

The two intersections in the primary study area are regularly configured. Rockaway Beach Boulevard and Newport Avenue both meet Beach 116th Street at roughly 90 degree angles. Just south of this intersection, Newport Avenue merges into Beach Channel Drive. On the southern side of the primary study area, Beach 116th forms a cul-du-sac which turns around at Rockaway Beach Promenade.

3.2.1 Roadways

Beach 116th Street is approximately 70 feet wide. Along Beach 116th Street, there is a median that varies in width from ten feet to 28 feet. The roadway on the eastern side of the median is approximately 22 feet wide, while the roadway on the western side is slightly narrower measuring 18 feet in most locations. No parking is permitted on either side of the street between Newport Avenue and Rockaway Beach Boulevard, with the exception of fire department parking which is permitted to the north of the station entrance, on the eastern side of the street. Parking is permitted between Rockaway Beach Boulevard and Rockaway Beach Promenade.



Parking on Beach 116th Street

The median provides diagonal, head-in parking along the full length of the primary study area. Between Newport Avenue and the municipal parking lot, the median provides parking only on the west side of the street. Between the municipal parking lot and Rockaway Beach Boulevard, parking is provided on both sides of the median. However, along the two left turning lanes from Beach 116th Street onto Rockaway Beach Boulevard no parking is permitted along the median. South of Rockaway Beach Boulevard, the median provides parking on both sides.

Rockaway Beach Boulevard is approximately 35 feet wide. There are two lanes for traffic, one in each direction, and one parking lane on each side of the street. The New York City Bicycle Master Plan recommends the use of Rockaway Beach Boulevard as a bicycle route.



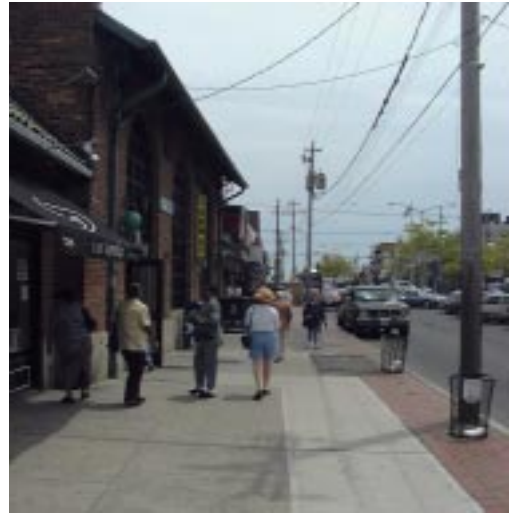
Rockaway Boulevard

Newport Avenue is approximately 40 feet wide and has two through lanes separated by double yellow lines. Parking lanes exist on both sides of the street.

3.2.2 Sidewalks

The sidewalks along Beach 116th Street are 13 feet wide on the west side and 15 feet wide on the east side. Both sides have a four-foot-wide amenities strip lined with brick pavers. The sidewalks along Newport Avenue and Rockaway Beach Boulevard range from nine to 16 feet. The amenity strips provide space for trash cans, signs, planters, flags and utility poles. The effective sidewalk width is rarely less than nine feet on either side.

A narrow sidewalk is located along the median. It is used primarily by people who park on the median and then pay for the space at the electronic Muni Meters, located along the median. Generally this space is four feet wide, but trees that are planted along the median reduce the effective width to approximately two feet in some locations. Street cleaning of the median is difficult due its dimensions, thus litter accumulates around the median.



Sidewalk outside of station entrance

3.2.3 Crosswalks

Both of the intersections in the primary study area have crosswalks. The crosswalks range in width from 14 to 18 feet. While most of the crosswalks in the area are standard pedestrian crosswalks, ladder crosswalks exist along Rockaway Beach Boulevard at Beach 116th Street. On the south side of the intersection of Beach 116th Street and Rockaway Beach Boulevard, the median extends into the crosswalk, creating a refuge for pedestrians crossing.

There is a break in the median just north of the station at the municipal parking lot. Although this segment of Beach 116th Street is not an intersection, the driveway to the parking lot and the break in the median give the impression of an intersection. This is also a point where pedestrians often cross to and from the median. There is no crosswalk at this location.



South crosswalk at the intersection of Rockaway Boulevard.



Beach 116th Street roadway adjacent to the municipal parking lot

3.2.4 Lighting

Most of the lighting in the primary study area is placed along the median. The most common fixture is a double Cobra Head lamp placed upon a shared lamppost. Standard Cobra Heads are primarily on the corners. Utility poles are located throughout the study area, but there are few Cobra head luminaires attached.

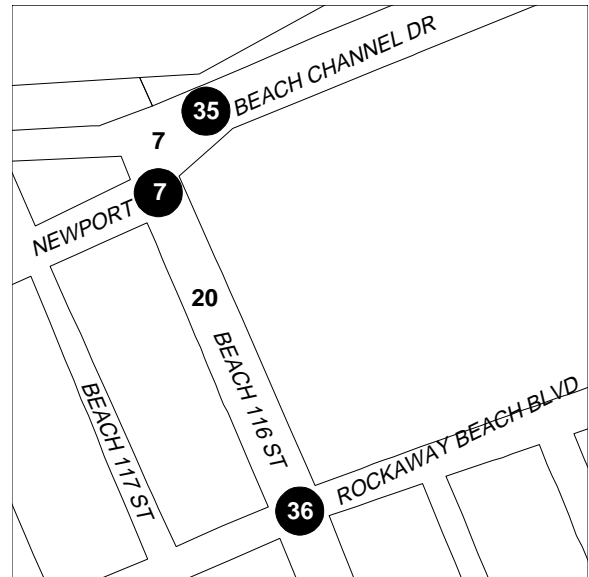
3.3 TRAFFIC

3.3.1 Automobile

Rockaway Beach Boulevard and Beach Channel Drive run east-west along the length of the Rockaways and are the main means of vehicular access to the study area. Both arterials carry a significant amount of vehicular traffic.

Along Beach 116th Street traffic becomes congested due to drivers looking for parking along the median and in the municipal parking lot. A significant number of vehicles were observed standing or double parked along the length of Beach 116th Street while visiting local stores or picking up passengers from the subway station. The loading and unloading of trucks along Beach 116th Street also complicates traffic patterns. The subway station is located near Rockaway Beach and during the summertime traffic volumes were observed to be higher than in other seasons.

Within the primary study area, the majority of accidents happened at the intersections of Beach 116th Street and Rockaway Beach Boulevard (36 accidents), and the intersection of Beach 116th Street and Beach Channel Drive (35 accidents), from 1996 to 1998, inclusive. During the same time period, 20 mid-block accidents occurred on Beach 116th Street between Rockaway Beach Boulevard and Newport Avenue.



Total accidents that occurred at an intersection (1996 - 1998)



Total accidents that occurred mid-block (1996 - 1998)



Beach 116th Street north of Rockaway Boulevard. Note the standing vehicles.

3.3.2 Bus

There are four buses that stop at three different locations throughout the primary study area. The Triborough Coach Q53 bus offers express service between mainland Rego Park, Queens, Broad Channel and Beach 116th Street. The bus runs along Rockaway Beach Boulevard and turns right on to Beach 116th, terminating on the north eastern corner of Beach 116th Street and Rockaway Beach Boulevard. The bus stop is 150 feet long and is meant to offer ample queuing space for multiple buses. However, this bus stop can become overcrowded and block the intersection of Rockaway Beach Boulevard and Beach 116th Street.

The Green Line Q21 bus follows the same route as the Q53 while in the Rockaways. The only difference is that instead of turning right on to Beach 116th Street, the Q21 turns left on to Beach 116th Street and terminates about 50 feet from Rockaway Beach Promenade.

The Green Line Q35 bus also terminates in the primary study area. It stops at a bus shelter west of Beach 116th Street on the south side of Newport Avenue. The Q35 offers service to points west of Beach 116th and Brooklyn.

The Green Line Q22 bus runs east-west throughout the Rockaways. It runs along Rockaway Beach Boulevard and stops on the north east corner of Rockaway Beach Boulevard at Beach 116th Street.



Bus stop on Rockaway Boulevard



Southwest corner of Newport Avenue and Beach 116th Street

3.3.3 Pedestrian

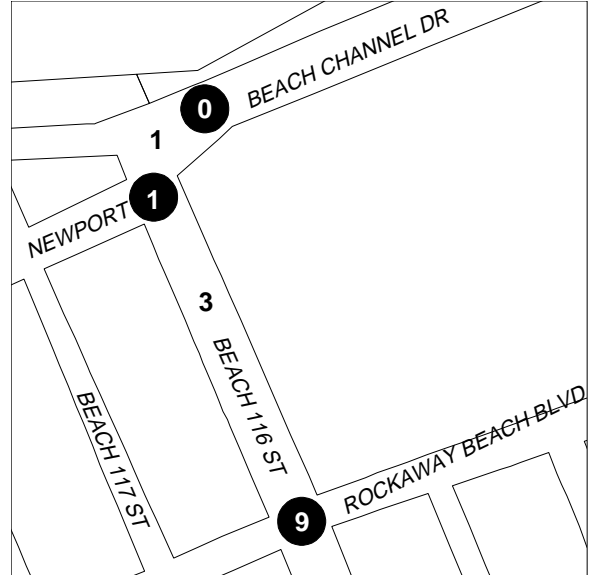
The primary pedestrian movement in the study area is between the subway station, the buses and the beach. Thus, the intersection of Beach 116th and Rockaway Beach Boulevard is often congested.

The median extends into the crosswalk on the south side of the intersection and it is used as a pedestrian refuge. On the north end of the intersection the median does not extend into the crosswalk, rather double yellow lines extend from the median and meet the crosswalk. Pedestrians were observed using the space in between the two double yellow lines as a pedestrian refuge. Curb cuts are located on all corners in this intersection.

The intersection of Beach 116th Street and Newport Avenue is not used as heavily. Pedestrians were seen using the median as a pedestrian refuge at this intersection as well. On the south west corner there is a trash can, utility pole and a cobra head with a traffic and pedestrian signal attached. This street furniture is clustered around the curb cut, making it difficult for pedestrians to access the crosswalk.

The municipal parking lot, located on Beach 116th adjacent to the station, is treated by pedestrians as an intersection. The break in the median, where vehicles can make left hand turns into the parking lot, creates the illusion of an intersection. Pedestrians were observed using this area as a crossing point to access the median as well as cross the street.

Jay walking is common throughout the area. Persons parking in the median typically jay walk to the sidewalk. Beach 116th Street has a number of pedestrians, standing vehicles and slow moving vehicles sharing the roadway space.



Pedestrian accidents that occurred at an intersection (1996 - 1998)

Pedestrian accidents that occurred mid-block (1996 - 1998)



The median on Beach 116th Street

ROCKAWAY PARK/BEACH 116TH STREET APPENDICES

APPENDIX 1: 1990 CENSUS DATA

Population Data by Age and Census Tract

APPENDIX 2: 1990 CENSUS DATA

Journey to Work - Workers by place of residence

Reverse Journey to Work - Workers by place of employment

APPENDIX 3: 1996-1998 ACCIDENT DATA

Accidents by Node/s

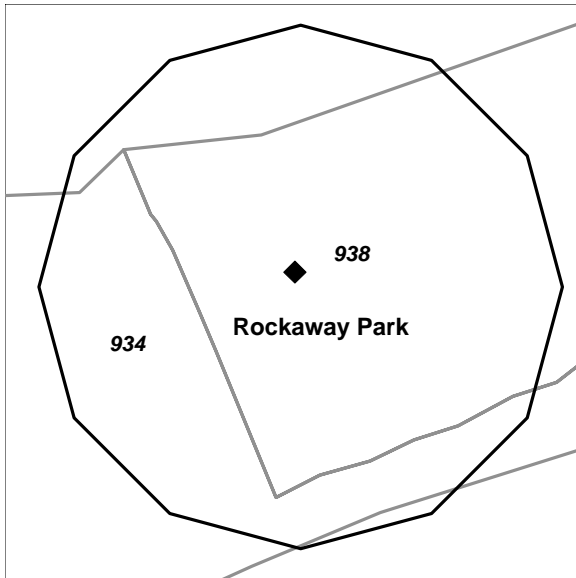
APPENDIX 4: SIGNAL TIMING DATA

APPENDIX 5: INVENTORY OF EXISTING CONDITIONS

APPENDIX 1: 1990 CENSUS DATA

Population data by age

Tract	Total	0-5 yrs	6-11 yrs	12-16 yrs	17-21 yrs	22-64 yrs	65-69 yrs	70-74 yrs	75-79 yrs	80-84 yrs	85+ yrs
934	7313	578	383	258	335	4219	445	267	320	258	250
938	4391	187	216	181	151	2039	351	336	310	346	274
People	11704	765	599	439	486	6258	796	603	630	604	524
Percent	100%	6.5%	5.1%	3.8%	4.2%	53.5%	6.8%	5.2%	5.4%	5.2%	4.5%



Source: US Bureau of Census, 1990, STF 3

APPENDIX 2: 1990 CENSUS DATA

Journey to Work - Workers by place of residence

Census Tract	934	938	Total	Percent
Car, Truck, or Van	1665	563	2228	47.7%
Carpool	380	155	535	11.4%
Bus or Trolley	335	172	507	10.8%
Streetcar, Trolley	0	0	0	0.0%
Subway or Elevated	598	266	864	18.5%
Railroad	14	0	14	0.3%
Ferry	0	0	0	0.0%
Taxi	42	20	62	1.3%
Motorcycle	0	0	0	0.0%
Bike	0	8	8	0.2%
Walk	197	194	391	8.4%
Other	0	8	8	0.2%
Work at Home	30	28	58	1.2%

Reverse Journey to Work - Workers by place of employment

Census Tract	934	938	Total	Percent
Car, Truck, or Van	263	705	968	41.7%
Carpool	98	161	259	11.2%
Bus or Trolley	107	211	318	13.7%
Streetcar, Trolley	0	0	0	0.0%
Subway or Elevated	208	96	304	13.1%
Railroad	8	20	28	1.2%
Ferry	0	0	0	0.0%
Taxi	9	0	9	0.4%
Motorcycle	14	0	14	0.6%
Bike	11	0	11	0.5%
Walk	142	208	350	15.1%
Other	0	0	0	0.0%
Work at Home	30	28	58	2.5%

Source: US Bureau of Census, 1990, STF 3

APPENDIX 3:**1996-1998****Accident Data****Accidents by node/s**

Node/s	Year	Accidents	Reportable	Fatalities	Injuries	Pedestrians
1484	1996	3	3	0	3	0
1484	1997	0	0	0	0	0
1484	1998	4	1	0	1	1
1484	3 yr total	7	4	0	4	1
1485	1996	11	6	0	6	3
1485	1997	17	8	0	7	4
1485	1998	8	3	0	3	2
1485	3 yr total	36	17	0	16	9
1484 1485	1996	7	3	0	3	3
1484 1485	1997	7	1	0	1	0
1484 1485	1998	6	1	0	1	0
1484 1485	3 yr total	20	5	0	5	3
1331	1996	16	5	0	4	0
1331	1997	8	2	0	1	0
1331	1998	11	6	0	6	0
1331	3 yr total	35	13	0	11	0
1331 1484	1996	3	0	0	0	0
1331 1484	1997	2	2	0	1	1
1331 1484	1998	2	2	0	2	0
1331 1484	3 yr total	7	4	0	3	1

Intersection
BEACH 116TH ST AND NEWPORT AVE
BEACH 116TH ST AND NEWPORT AVE
BEACH 116TH ST AND NEWPORT AVE
BEACH 116TH ST AND NEWPORT AVE
BEACH 116TH ST AND ROCKAWAY BEACH BLVD
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BEACH 116TH ST BETWEEN NEWPORT AND BEACH CHANNEL DRIVE
BEACH 116TH ST BETWEEN NEWPORT AND BEACH CHANNEL DRIVE
BEACH 116TH ST BETWEEN NEWPORT AND BEACH CHANNEL DRIVE

APPENDIX 4: SIGNAL TIMING DATA

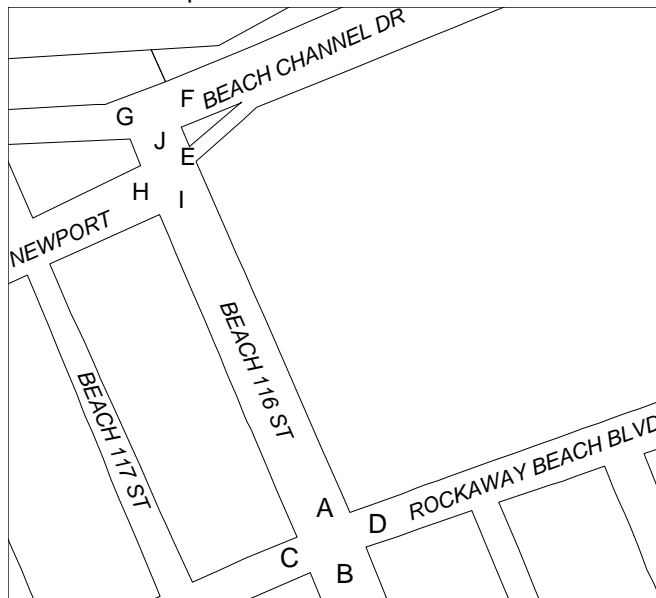
Rockaway Beach Boulevard and Beach 116th Street

INTERSECTION INDICATOR	CROSSWALK ORIENTATION	TRAFFIC FLOW	TIME
A	Crossing B 116 St along north side of Rockaway Beach Blvd	Rockaway Beach Blvd	All day
B	Crossing B 116 St along south side of Rockaway Beach Blvd	Rockaway Beach Blvd	All day
C	Crossing Rockaway Beach Blvd along west side of B 116 St	Beach 116 St.	All day
D	Crossing Rockaway Beach Blvd along east side of B 116 St	Beach 116 St.	All day

Beach 116th Street and Beach Channel Drive

INTERSECTION INDICATOR	CROSSWALK ORIENTATION	TRAFFIC FLOW	TIME
E	Crossing Newport along east side of Beach 116th Street	Beach 116th Street	All day
F	Crossing Beach Channel Drive along east side of Beach 116th St.	Beach 116th Street	All day
G	Crossing Beach Channel Drive along west side of Beach 116th St.	Beach 116th Street	All day
H	Crossing Newport along west side of Beach 116th Street	Beach 116th Street	All day
I	Crossing Beach 116th along south side of Newport	Beach Channel Drive & Newport	All day
J	Crossing Beach 116th along south side of Beach Channel Drive	Beach Channel Drive & Newport	All day

Intersection Map: Beach 116th Street



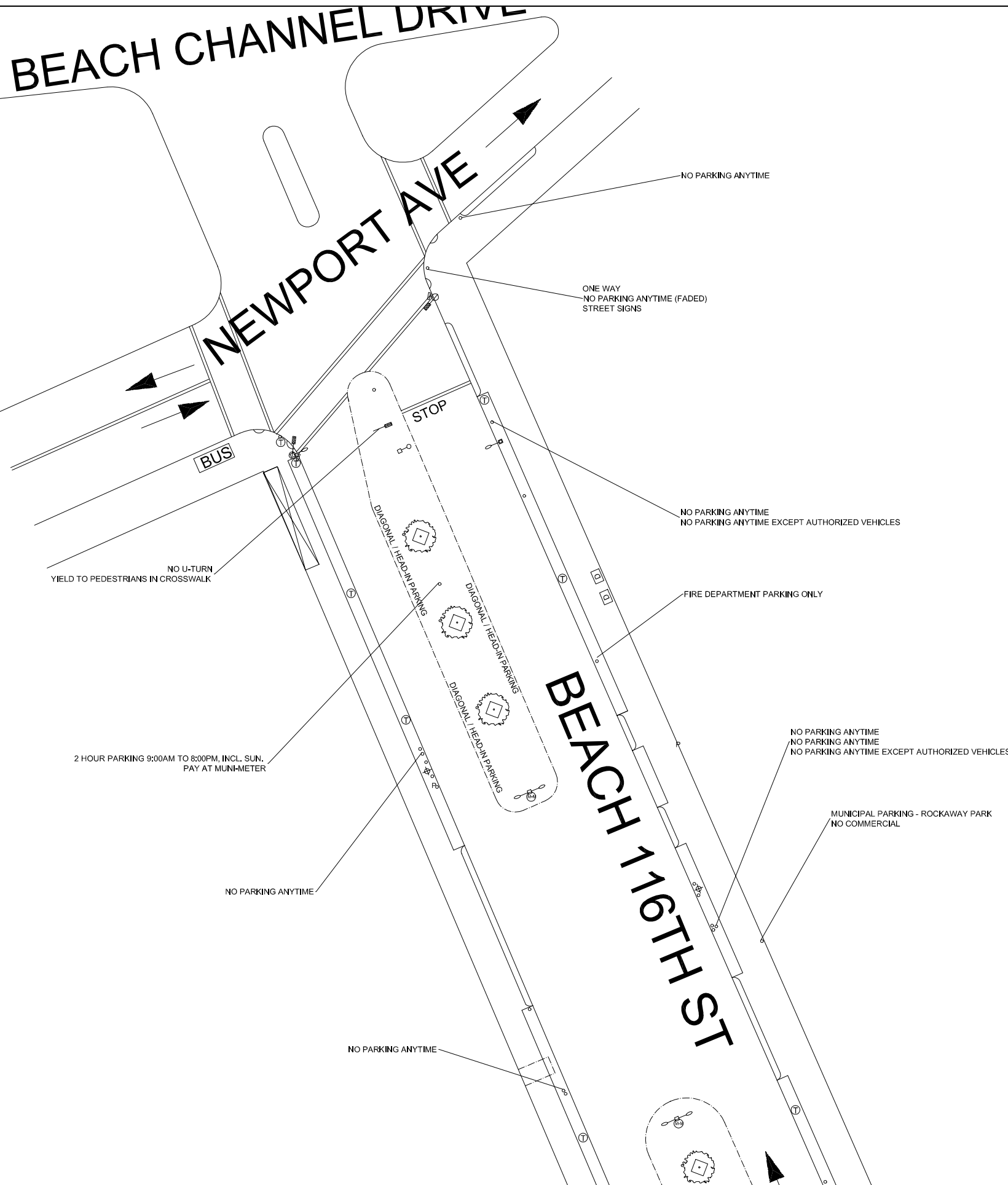
Rockaway Beach Boulevard and Beach 116th Street

GREEN	AMBER	RED	CYCLE TIME	Crosswalk Length	Crosswalk Width	Total Pedestrian Crossing Time (Green and Amber)	Adjusted Pedestrian Crossing Time (Green Only)	Estimated Time Required to Cross Street*	Preliminary Estimation of Sufficient Crossing Time
seconds	seconds	seconds	seconds	feet	feet	seconds	seconds	seconds	
49.5	2.7	1.8	90	68	15	52.2	49.5	17	Sufficient
49.5	2.7	1.8	90	78	14	52.2	49.5	19.5	Sufficient
31.5	2.7	1.8	90	33	13.6	34.2	31.5	8.25	Sufficient
31.5	2.7	1.8	90	36	18	34.2	31.5	9	Sufficient

Beach 116th Street and Beach Channel Drive

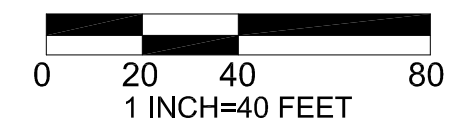
GREEN	AMBER	RED	CYCLE TIME	Crosswalk Length	Crosswalk Width	Total Pedestrian Crossing Time (Green and Amber)	Adjusted Pedestrian Crossing Time (Green Only)	Estimated Time Required to Cross Street*	Preliminary Estimation of Sufficient Crossing Time
seconds	seconds	seconds	seconds	feet	feet	seconds	seconds	seconds	
17	3	1	60	24	12	20	17	6	Sufficient
17	3	1	60	60	13.5	20	17	15	Sufficient
17	3	1	60	51	12.5	20	17	12.75	Sufficient
28*	3	1	60	41	14	3	28*	10.25	Sufficient
23	3	1	60	75	13	26	23	18.75	Sufficient
23	3	1	60	70	12	26	23	17.5	Sufficient

* Includes time dedicated to southbound traffic on Beach 116th and right turns onto Newport.











BEACH 116TH ROCKAWAY LINE

DEPARTMENT OF CITY PLANNING
TRANSPORTATION DIVISION
2 LAFAYETTE, RM 1200
NEW YORK, NY



SURVEYED: MAY 25TH, 2000

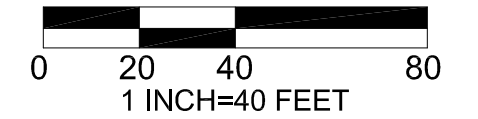
MAPPED: JUNE 16TH, 2000

-  SUBWAY ENTRANCE
-  STREET TREE
-  PLANTER
-  MARQUEES / AWNINGS
-  DRIVEWAY / CURB CUTS
-  STREET VENDOR
-  PEDESTRIAN SIGNAL
-  TRAFFIC SIGNAL
-  STREET LIGHT
-  PEDESTRIAN SCALE STREET LIGHT
-  TRASH CAN
-  DUMPSTER
-  SIGNAGE
-  PARKING METER
-  MUNI-METER STATION
-  FIRE HYDRANT
-  PHONE
-  MAIL BOX
-  BOLLARD



BEACH 116TH ROCKAWAY LINE

DEPARTMENT OF CITY PLANNING
TRANSPORTATION DIVISION
2 LAFAYETTE, RM 1200
NEW YORK, NY



SURVEYED: MAY 25TH, 2000

MAPPED: JUNE 16TH, 2000

-  SUBWAY ENTRANCE
-  STREET TREE
-  PLANTER
-  MARQUEES / AWNINGS
-  DRIVEWAY / CURB CUTS
-  STREET VENDOR
-  PEDESTRIAN SIGNAL
-  TRAFFIC SIGNAL
-  STREET LIGHT
-  PEDESTRIAN SCALE STREET LIGHT
-  TRASH CAN
-  DUMPSTER
-  SIGNAGE
-  PARKING METER
-  MUNI-METER STATION
-  FIRE HYDRANT
-  PHONE
-  MAIL BOX
-  BOLLARD

