

A. INTRODUCTION






The proposed actions would add a sizable number of new residents and workers to the area and therefore have the potential to impact the way residents and workers in the area use parks, playgrounds, and other open spaces. In accordance with guidelines established in the New York City *Environmental Quality Review (CEQR) Technical Manual*, this chapter assesses the adequacy of those resources in the area and the proposed actions' potential effect on their use. An open space assessment is necessary when a proposed action could potentially have a direct or indirect effect on open space resources. A direct impact physically changes, diminishes, or eliminates an open space or reduces its utilization or aesthetic value. An indirect effect occurs when the population generated by a proposed project or action could noticeably diminish the capacity of an area's open space to serve the future populations. According to the *CEQR Technical Manual*, a project that would add fewer than 200 residents or 500 employees, or a similar number of other users to an area, is typically not considered to have indirect effects on open space. The proposed actions would result in an incremental increase of 3,565 housing units, 3,107,714 square feet of commercial space, and 245,180 square feet of community facility space within the project area by 2015, while there would be a decrease in industrial space of 379,752 square feet. The proposed actions would also include the addition of approximately 0.39 acres of passive open space in the form of a plaza on west side of Sutphin Boulevard between 94th and 95th Avenues as part of the proposed Jamaica Gateway Urban Renewal Plan.

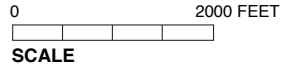
As the proposed actions would result in an incremental increase of approximately 11,158 new residents and 10,333 new workers, a detailed quantitative open space assessment is necessary to examine the change in total population relative to total public space in the area and to determine whether the increase in population would significantly impact open space use. This analysis entails the calculation of an existing open space ratio and the ratio in the future without and with the proposed actions. The open space ratio is expressed as the amount of public open space acreage per 1,000 user population.

The adequacy of open space is assessed both quantitatively and qualitatively. The quantitative approach computes the study area's ratio of open space to the population and compares this ratio with guidelines of adequacy as stated in the *CEQR Technical Manual*. The qualitative assessment considers other factors that can affect conclusions about adequacy, including proximity to additional resources beyond the study area, the availability of private recreational facilities, the quality and location of the open space, and the demographic characteristics of the area's population. The analysis in this chapter has been updated to reflect changes in the Reasonable Worst Case Development Scenario since the publication of the Draft Environmental Impact Statement, as described in Chapter 1, "Project Description." Additionally, Figure 5-4 of this chapter has been updated with the most recent design diagram of the planned Atlantic Avenue Extension Open Space. The conditions and usage levels of several open spaces have been updated based on input from the New York City Department of Parks and Recreation (DPR). Additionally, between the DEIS and FEIS, DCP worked with DPR to identify possible



Legend

-  Proposed Action Area
-  Quarter-mile Perimeter
-  Half-mile Perimeter
-  Residential Study Area Census Tracts
-  Non-Residential Study Area Census Tracts



sites for the creation of new open space in the Jamaica area, but no such sites have been identified at this point.

This analysis concludes that the proposed actions have the potential to result in a significant indirect adverse impact to open space resources within the non-residential and residential study areas. Within the non-residential and residential study areas, only the passive open space ratio for non-residents currently meets DCP guidelines and would continue to do so in the future with the proposed actions. All other passive and active open space ratios in the non-residential and residential study areas currently fall short of DCP guidelines.

According to the *CEQR Technical Manual*, a 5 percent decrease in open space ratios is considered a substantial change. In both the non-residential and residential study areas, the passive open space ratios for the combined resident and non-resident populations would decrease by more than 5 percent as a result of the proposed actions. Therefore, a detailed analysis of potential impacts on active and passive open space resources within both the residential and non-residential study areas is provided.

B. METHODOLOGY

STUDY AREAS

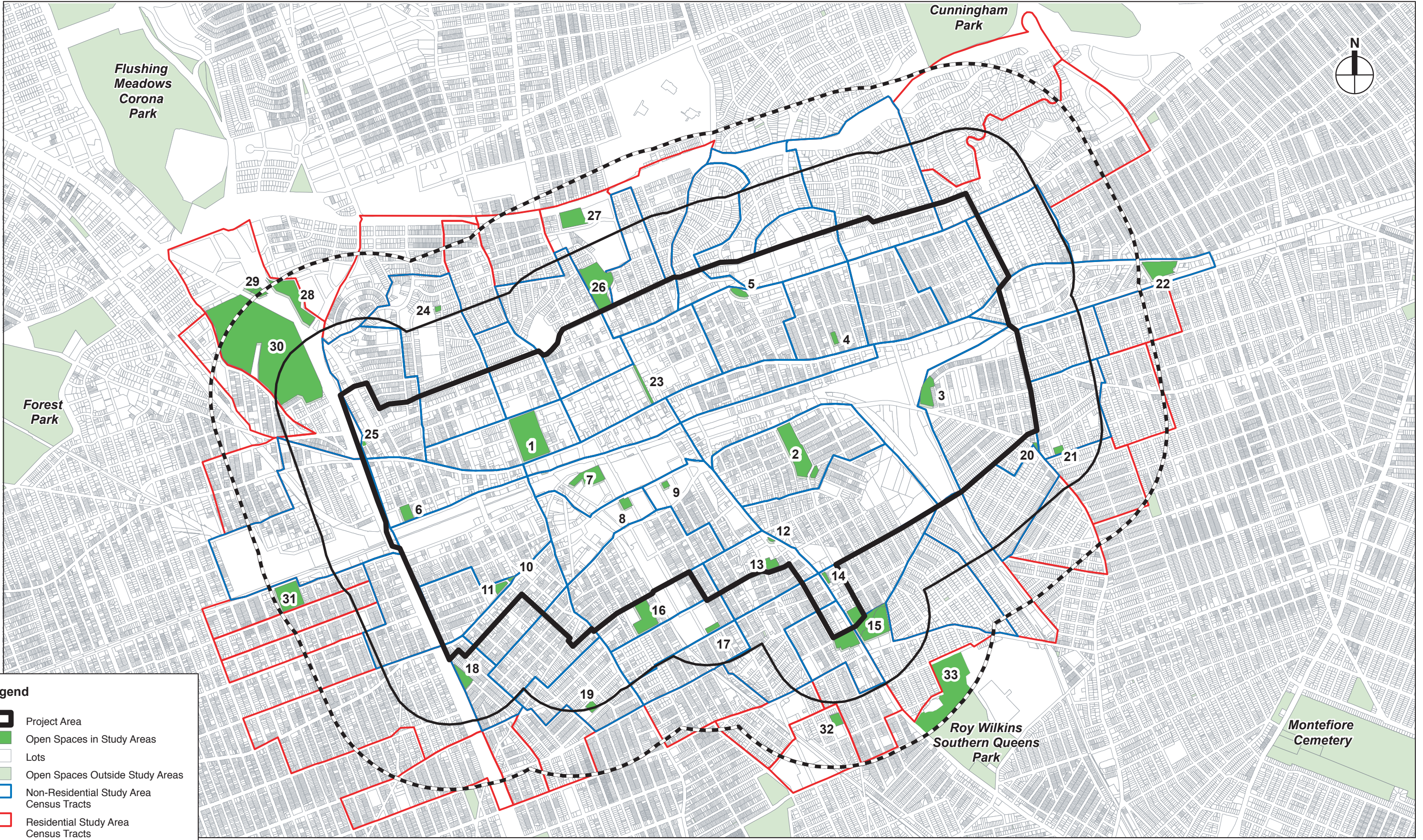
This analysis of potential open space impacts was conducted based on the methodology of the *CEQR Technical Manual*. According to CEQR guidelines, the first step in assessing potential open space impacts is to establish study areas to be examined. Study areas are based on the distance the average person is assumed to walk to reach a neighborhood open space. Workers (or populations not living in an area, e.g., commuting students) typically use passive open spaces and are assumed to walk approximately 10 minutes (about a ¼-mile distance) from their places of work. Residents are more likely to travel farther to reach parks and recreational facilities. They are assumed to walk about 20 minutes (about a ½-mile distance) to reach both passive and active neighborhood open spaces. Because the proposed action is expected to bring substantial numbers of both residents and workers to the area, two study areas are evaluated—a commercial (non-residential) study area based on a ¼-mile distance from the project site, and a residential study area based on a ½-mile distance.

As recommended in the *CEQR Technical Manual*, the open space study areas comprise all census tracts that have at least 50 percent of their area located within either the ¼-mile or the ½-mile radius of the project site. All open spaces, as well as the relevant populations in census tracts that fall at least 50 percent within the radius, are included in the study areas (see Figures 5-1 and 5-2).









INVENTORY OF OPEN SPACE RESOURCES

Publicly accessible open spaces and recreational facilities within the study areas are inventoried to determine their size, character, and condition. Open spaces that are not accessible to the general public were excluded from the survey. The information used for this analysis was gathered through field studies conducted in August 2005 and from the New York City Department of Parks and Recreation (DPR).

At each open space, active and passive recreational spaces were noted. Active open space acreage is used for activities such as jogging, field sports, and children's active play. Such open space features might include basketball courts, baseball fields, or play equipment. Passive open space acreage is characterized by activities such as strolling, reading, sunbathing, and people-



Legend

-  Project Area
-  Open Spaces in Study Areas
-  Lots
-  Open Spaces Outside Study Areas
-  Non-Residential Study Area Census Tracts
-  Residential Study Area Census Tracts
-  Quarter-mile Perimeter
-  Half-mile Perimeter

watching. Some spaces, such as lawns and public esplanades, can be considered both active and passive recreation areas since they can be used for passive activities such as sitting or strolling as well as active recreational uses like jogging or frisbee. The use level at each facility was determined based on observations of the amount of space or equipment that was observed to be in use as described in the *CEQR Technical Manual*. Open spaces with less than 25 percent of space or equipment in use were categorized as low usage. Those with 25 to 75 percent utilization were classified as having moderate usage and those with over 75 percent utilization were considered heavily used.

ADEQUACY OF OPEN SPACE RESOURCES

CRITERIA FOR QUANTIFIED ANALYSIS

The determination of the need for a quantified open space analysis is based on both the adequacy of the quantity of open space and how the proposed actions would change open space ratios in the future with the proposed actions. If a potential decrease in an adequate open space ratio exceeds 5 percent, it is generally considered to be a substantial change, warranting further analysis. However, if a study area already exhibits a low open space ratio (e.g., below the guidelines set forth in the *CEQR Technical Manual*, indicating a shortfall of open space), even a small decrease in that ratio as a result of a proposed project or action may be considered an adverse effect and would warrant detailed analysis. Given that the proposed actions would substantially increase local resident and employee populations, as stated above, a quantitative analysis has been performed.

COMPARISON TO DCP GUIDELINES

To assess the adequacy of the quantity of open space resources, open space ratios are compared against guideline values set by DCP. Although these open space ratios are not meant to determine whether a proposed action would have a significant adverse impact on open space resources, they are helpful in understanding the extent to which an impact can occur. The following guidelines are used in this type of analysis:

- For non-residential populations, a guideline of 0.15 acres of passive open space per 1,000 non-residents is typically considered adequate.
- For residential populations, a guideline of 2.5 acres per 1,000 residents is considered adequate. Ideally, this is comprised of 0.50 acres of passive space and 2.0 acres of active open space. For large-scale actions such as that analyzed in this EIS, the City seeks to attain a planning goal of a balance of 80 percent active open space and 20 percent passive open space.
- For the combined resident and non-resident population, a target open space ratio is established by creating a weighted average of the amount of open space necessary to meet the DCP guideline of 0.50 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 non-residents.

IMPACT ASSESSMENT

The assessment of potential significant adverse impacts on open space is both quantitative and qualitative. The assessment considers nearby destination resources and project-created open spaces or private/quasi-private recreational facilities not available to the general public. It is

recognized that DCP open space planning goals are not feasible for many areas of the city, and they are not considered impact thresholds. Rather, they are benchmarks indicating how well an area is served by open space.

C. EXISTING CONDITIONS

STUDY AREA POPULATION

NON-RESIDENTIAL STUDY AREA

The non-residential study area extends generally about a ¼-mile from the proposed action area boundary and includes 49 census tracts (see Figure 5-1 and Table 5-1). Based on 2000 journey-to-work census data compiled by DCP, there were 48,065 people working in the non-residential study area in 2000. To estimate the 2006 population, an annual growth factor of 0.5 percent per year was added to the 2000 census population, resulting in an estimated current population of 49,525 workers in the non-residential study area. Adding the 5,743 York College students as listed in the schools 2004-05 enrollment figures, the total non-residential population in this study area is approximately 55,268.

The 2000 Census data show a residential population of 134,730 in the ¼-mile study area. Assuming a 0.5 percent annual growth rate, the 2006 residential population within this study area is estimated at 138,823. Therefore, the total 2006 residential and non-residential population of the study area is estimated at 194,091 (see Table 5-1). Although this analysis conservatively assumes that residents and employees are separate populations, it is possible that some of the residents live near their workplace and that some students enrolled at York College also live or work within the study area. As a result, there is likely to be some double-counting of the daily user population in which residential and non-residential populations overlap, resulting in a more conservative analysis. The distribution of workers and residents in the study areas generally follows land use patterns. Employment within the non-residential study area is highest in the census tracts in the Jamaica Center Central Business District (CBD), in the tracts along the LIRR tracks that encompass industrial areas, and in the tracts just west of the Van Wyck Expressway that include industrial businesses, Jamaica Hospital, and several schools.

RESIDENTIAL STUDY AREA

The residential study area includes the 49 census tracts located in the non-residential study area, plus 27 additional census tracts. As shown on Figure 5-1, this study area reaches approximately a ½-mile from the proposed action boundary, which identifies the limits of projected and potential development sites.

Although there is no quantitative analysis dedicated exclusively to the non-residential population within the residential study area, the *CEQR Technical Manual* calls for a quantitative analysis of the total population within the residential study area, which includes the non-residential as well as the residential populations.

Table 5-1
Non-Residential Study Area Population

Census Tract	Total Residential Population	Under 5		Age 5-9		Age 10-14		Age 15-19		Age 20-64		Age 65+		Med. Age	Employees
		#	%	#	%	#	%	#	%	#	%	#	%		
142.02	2953	227	7.7	196	6.6	176	6.0	176	6.0	1815	61.5	363	12.3	34.4	3505
152	2662	203	7.6	235	8.8	245	9.2	220	8.3	1614	60.6	145	5.4	30.8	260
196	2695	233	8.6	237	8.8	246	9.1	227	8.4	1504	55.8	248	9.2	30.5	240
198	2782	247	8.9	239	8.6	189	6.8	247	8.9	1614	58.0	246	8.8	30.4	105
202	1409	97	6.9	126	8.9	125	8.9	107	7.6	802	56.9	152	10.8	31.8	25
204	1912	165	8.6	171	8.9	164	8.6	143	7.5	1067	55.8	202	10.6	31.4	325
206	1758	131	7.5	159	9.0	156	8.9	148	8.4	1040	59.2	124	7.1	30.6	190
208	2535	190	7.5	202	8.0	160	6.3	176	6.9	1609	63.5	198	7.8	31.7	3075
212	2701	227	8.4	195	7.2	199	7.4	185	6.8	1730	64.1	165	6.1	31.6	1610
214	5986	447	7.5	431	7.2	366	6.1	348	5.8	3860	64.5	534	8.9	33.8	1885
232	5011	331	6.6	326	6.5	282	5.6	278	5.5	3135	62.6	659	13.2	35.6	730
236	2816	184	6.5	185	6.6	157	5.6	226	8.0	1744	61.9	320	11.4	34.1	2295
238	5273	451	8.6	444	8.4	383	7.3	413	7.8	3345	63.4	237	4.5	29.2	1495
240	5748	501	8.7	419	7.3	385	6.7	394	6.9	3694	64.3	355	6.2	30	4580
244	20	1	5.0	0	0.0	0	0.0	0	0.0	17	85.0	2	10.0	42.5	4495
246	12	0	0.0	0	0.0	0	0.0	0	0.0	12	100.0	0	0.0	43.5	1275
248	859	68	7.9	82	9.5	86	10.0	90	10.5	462	53.8	71	8.3	29.5	375
250	29	2	6.9	2	6.9	2	6.9	0	0.0	18	62.1	5	17.2	37.5	720
252	6156	538	8.7	583	9.5	610	9.9	600	9.7	3340	54.3	485	7.9	28.8	265
258	1671	113	6.8	190	11.4	179	10.7	146	8.7	904	54.1	139	8.3	29	275
260	1636	152	9.3	142	8.7	182	11.1	171	10.5	872	53.3	117	7.2	27.7	285
262	1144	93	8.1	104	9.1	104	9.1	91	8.0	672	58.7	80	7.0	31.8	60
264	2181	141	6.5	148	6.8	183	8.4	195	8.9	1220	55.9	294	13.5	33.9	90
266	1799	104	5.8	125	6.9	127	7.1	105	5.8	881	49.0	457	25.4	41.6	505
402	1453	72	5.0	99	6.8	113	7.8	102	7.0	869	59.8	198	13.6	37.4	70
404	3959	236	6.0	320	8.1	305	7.7	308	7.8	2246	56.7	544	13.7	35.5	390
410	495	46	9.3	40	8.1	47	9.5	44	8.9	279	56.4	39	7.9	29.9	2670
414	3637	257	7.1	315	8.7	329	9.0	297	8.2	1974	54.3	465	12.8	32.9	430
422	1586	70	4.4	99	6.2	145	9.1	112	7.1	909	57.3	251	15.8	40.5	60
434	1635	108	6.6	114	7.0	127	7.8	103	6.3	961	58.8	222	13.6	36.3	50
440	3359	259	7.7	307	9.1	313	9.3	264	7.9	1889	56.2	327	9.7	30.4	270
442	1964	141	7.2	128	6.5	117	6.0	127	6.5	1170	59.6	281	14.3	34.8	675
446.01	2442	214	8.8	172	7.0	160	6.6	142	5.8	1481	60.6	273	11.2	33.6	2555
446.02	4128	455	11.0	325	7.9	245	5.9	245	5.9	2632	63.8	226	5.5	30.7	1375
448	2371	156	6.6	180	7.6	150	6.3	128	5.4	1507	63.6	250	10.5	34.9	515
454	4246	283	6.7	299	7.0	270	6.4	236	5.6	2875	67.7	283	6.7	33.9	545
458	1894	120	6.3	130	6.9	123	6.5	124	6.5	1214	64.1	183	9.7	35.9	495
460	5718	473	8.3	409	7.2	336	5.9	390	6.8	3710	64.9	400	7.0	31.9	2445
462	6576	458	7.0	477	7.3	456	6.9	428	6.5	4092	62.2	665	10.1	34.4	900
464	1356	58	4.3	72	5.3	64	4.7	104	7.7	903	66.6	155	11.4	35.8	40
466	2831	175	6.2	134	4.7	105	3.7	91	3.2	1939	68.5	387	13.7	38.1	775
468	4064	293	7.2	288	7.1	255	6.3	287	7.1	2657	65.4	284	7.0	32.6	660
470	3824	242	6.3	259	6.8	249	6.5	289	7.6	2525	66.0	260	6.8	33.4	630
472	4078	215	5.3	258	6.3	232	5.7	204	5.0	2318	56.8	851	20.9	40.3	580
480	2650	209	7.9	171	6.5	203	7.7	204	7.7	1633	61.6	230	8.7	34.4	2275
482	1608	101	6.3	110	6.8	121	7.5	108	6.7	959	59.6	209	13.0	36	295
500	4013	323	8.0	356	8.9	332	8.3	303	7.6	2234	55.7	465	11.6	32.5	580
502.01	1345	101	7.5	110	8.2	106	7.9	110	8.2	743	55.2	175	13.0	34.2	30
504	1750	88	5.0	173	9.9	151	8.6	144	8.2	970	55.4	224	12.8	33.8	90
Other daytime population*															5,743
2000 Total	134,730	9,999	7.4	10,286	7.6	9,760	7.2	9,580	7.1	81,660	60.6	13,445	10.0		53,808
Estimated additional population since 2000**	4,093														1,460
Total	138,823														55,268

Notes: * Consists of 5,743 York College students, which represents total enrollment in 2004-2005 academic year.
** Assumes an annual growth rate of 0.5 percent for residential and employee populations from 2000 to 2006.

Sources: U.S. Census of Population and Housing, U.S. Bureau of the Census, 2000; 2000 journey-to-work census data compiled by NYCDCP.

Jamaica Plan EIS

Based on 2000 journey-to-work census data compiled by DCP, the worker and other daytime population (including York College students) within the residential study area was 59,550 in 2000 (see Table 5-2). Assuming a 0.5 annual growth rate as described above and including York College enrollment, the current non-residential population in the ½-mile study area is estimated at 67,102. According to the census, the residential population in the study area was 202,734 in 2000, and assuming a 0.5 percent annual growth rate, the current residential population is estimated at 208,893. The total 2006 residential and non-residential population is estimated at 275,995. Again, this estimate conservatively assumes that the residential and non-residential populations are entirely distinct from each other.

**Table 5-2
Residential Study Area Population**

Census Tract	Total Res. Pop	under 5		age 5-9		age 10-14		age 15-19		age 20-64		65+		Med Age	Employees
		#	%	#	%	#	%	#	%	#	%	#	%		
Non-residential study area totals	134,730	9999		10286		9760		9580		81660		13445			53,808
138	3606	222	6.2	241	6.7	213	5.9	225	6.2	2313	64.1	392	10.9	35.2	580
142.01	4374	349	8.0	395	9.0	387	8.8	324	7.4	2689	61.5	230	5.3	30.4	500
148	2276	173	7.6	195	8.6	176	7.7	178	7.8	1422	62.5	132	5.8	30.4	30
150	2518	205	8.1	228	9.1	189	7.5	188	7.5	1540	61.2	168	6.7	30.8	20
154	2362	171	7.2	176	7.5	200	8.5	172	7.3	1509	63.9	134	5.7	32.1	300
158	8761	672	7.7	662	7.6	700	8.0	690	7.9	5365	61.2	672	7.7	31.9	1110
170	2375	165	6.9	165	6.9	185	7.8	176	7.4	1420	59.8	264	11.1	34.1	155
194.01	1107	80	7.2	92	8.3	84	7.6	88	7.9	645	58.3	118	10.7	33	20
194.02	1643	91	5.5	144	8.8	173	10.5	133	8.1	893	54.4	209	12.7	35.2	20
216	5708	394	6.9	328	5.7	257	4.5	260	4.6	3896	68.3	573	10.0	35.1	4050
220.02	5099	274	5.4	271	5.3	269	5.3	251	4.9	3308	64.9	726	14.2	38.1	225
230	1742	117	6.7	100	5.7	107	6.1	111	6.4	1091	62.6	216	12.4	35.2	130
270	1468	122	8.3	125	8.5	138	9.4	109	7.4	836	56.9	138	9.4	32.1	155
276	1223	100	8.2	121	9.9	116	9.5	73	6.0	704	57.6	109	8.9	30.1	665
278	2262	176	7.8	224	9.9	218	9.6	213	9.4	1229	54.3	202	8.9	29.4	135
280	1698	107	6.3	140	8.2	134	7.9	117	6.9	964	56.8	236	13.9	35.9	125
400	1416	74	5.2	81	5.7	133	9.4	97	6.9	810	57.2	221	15.6	37.2	30
420	878	48	5.5	54	6.2	64	7.3	52	5.9	496	56.5	164	18.7	39.8	275
432	1109	78	7.0	77	6.9	74	6.7	71	6.4	659	59.4	150	13.5	36	505
450	1909	84	4.4	95	5.0	104	5.4	112	5.9	1274	66.7	240	12.6	36	85
452	1233	62	5.0	66	5.4	57	4.6	45	3.6	553	44.8	450	36.5	44.9	900
456	1285	73	5.7	99	7.7	110	8.6	101	7.9	788	61.3	114	8.9	33.4	115
476	1466	71	4.8	99	6.8	126	8.6	101	6.9	831	56.7	238	16.2	40.7	115
478	5586	327	5.9	285	5.1	318	5.7	325	5.8	3422	61.3	909	16.3	39.2	1100
502.02	1449	100	6.9	118	8.1	124	8.6	121	8.4	800	55.2	186	12.8	34.6	10
506	1562	94	6.0	113	7.2	121	7.7	106	6.8	918	58.8	210	13.4	35.7	65
524	1889	116	6.1	163	8.6	144	7.6	117	6.2	1063	56.3	286	15.1	35.6	65
Total	202,734	14,544	7.2	15,143	7.5	14,681	7.2	14,136	7.0	123,098	60.7	21,132	10.4		65,293
Estimated additional population since 2000*	2,066														349
Total	208,893														67,102

Notes: The residential study area includes all census tracts and population in the non-residential study area.
 * Assumes an annual growth rate of 0.5 percent for residential and employee populations from 2000 to 2006.
Sources: U.S. Census of Population and Housing, U.S. Bureau of the Census, 2000; 2000 journey-to-work census data compiled by NYCDOP.

Within the residential study area, adults comprise approximately 60 percent of the population. Children and teens make up approximately 30 percent of the residential population, while 10 percent of residents are age 65 or older. The residential population of the residential study area is highest in the Jamaica and Briarwood neighborhoods to the west and north of the CBD; in the

Hollis neighborhood to the east of the CBD; in the South Jamaica neighborhood to the south of the LIRR tracks, particularly in and around the South Jamaica Houses apartment complex; and in the St. Albans neighborhood in the southeastern portion of the study area.

Given the range of age groups present in the population, the residential study area has need for various kinds of active and passive recreation facilities, including those with amenities that can be used by children and adults. Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children 4 years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages 5 through 9 typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for such activities as ball playing, running, and skipping rope. Children ages 10 through 14 use playground equipment, court spaces, little league fields, and ball fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Adults between the ages of 20 and 64 continue to use court game facilities and fields for sports, as well as more individualized recreation such as rollerblading, biking, and jogging, requiring bike paths, promenades, and vehicle-free roadways. Adults also gather with families for picnicking, ad hoc active sports such as frisbee, and recreational activities in which all ages can participate. Senior citizens engage in active recreation such as handball, tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

STUDY AREA OPEN SPACES

NON-RESIDENTIAL STUDY AREA

Twenty-five public open space and recreational resources are located within the ¼-mile non-residential study area. These include many small playgrounds and several large parks such as Rufus King Park and Liberty Park in the Downtown Jamaica area and St. Albans Memorial Park in the southern part of the study area. Altogether, the open space resources in the non-residential study area total approximately 55.41 acres, 25.19 (45 percent) of which are considered to be for passive recreational use and 30.22 (55 percent) of which are considered to be for active recreational use (see Figure 5-2 and Table 5-3). It should be noted that this table includes three cemeteries that are accessible to the public. While these facilities can provide a passive open space for strolling, they have not been included in the open space acreage for the quantitative analysis.

Rufus King Park, the largest open space in the study area, is centrally located in the Downtown Jamaica business district. The 11.5-acre park, bounded by Jamaica Avenue, 153rd Street, 89th Avenue and 150th Street, provides opportunities for passive and active recreation and features handball courts, paved walkways, a field house, baseball/softball fields, landscaping, and benches. It also includes a historic resource, the Rufus King House, which is accessible to the public for tours. This park is in good condition and is heavily used.

Further to the west, on Archer Avenue between 138th Street and 138th Place, is the 1.38-acre Howard Von Dohlen Playground. Facilities in this park are predominantly for active recreation and include swings, slides, handball courts, baseball fields, and jungle gyms. Von Dohlen playground is in good condition and has a heavy level of use.

**Table 5-3
Inventory of Open Space Resources**

Map No.	Name	Location	Owner	Total Acres	Passive	Active	Amenities	Condition	Use Level
1	Rufus King Park	Jamaica Ave., 153rd St, 89th Ave.	DPR	11.5	8.05	3.45	Handball courts, baseball fields, walking/running paths, benches, jungle gyms, landscaping	Good	Heavy
2	Liberty Park/Detective Keith L. Williams Park	173rd St. b/w 106th and 107th Ave.	DPR	8	7.2	0.8	Pool, tennis courts, benches, play equipment, running track, baseball/soccer/football field	Excellent	Heavy
3	Peter's Field	183rd Pl. and Henderson Ave.	DPR	2.87	0.861	2.009	Benches, swings, slides, baseball/softball fields	Fair	<u>Moderate</u>
4	Harvard Playground	North of Jamaica Ave. on 170th Pl.	DPR	0.581	0.0581	0.5229	Play equipment, benches, basketball and handball courts	Fair	<u>Heavy</u>
5	Major Mark Park	173rd St. and Warwick Crescent	DPR	0.9	0.9	--	Benches, landscaping, walkways	Good	<u>Heavy</u>
6	Howard Von Dohlen Playground	Archer Ave., 138th Pl., 91st Ave., and 138th St.	DPR	1.381	0.2762	1.1048	Play equipment, handball courts, baseball/softball fields, benches	Good	<u>Heavy</u>
7	Prospect Cemetery		N/A	N/A	N/A	N/A			
8	St. Monica's Cemetery		N/A	N/A	N/A	N/A			
9	First Methodist Cemetery		N/A	N/A	N/A	N/A			
10	Norelli-Hargreaves Triangle	Liberty Ave., Sutphin Blvd., 146th St., and 101st Ave.	DPR	0.085	0.085	--	Lawn, trees	Fair	Low
11	PS 50 Play Yard	Liberty Avenue and 101st Avenue	DOE	0.83	--	0.83	Play equipment, basketball courts	Fair	Low
12	Proctor-Hopson Circle	Merrick Blvd., 108th Rd. and 169th Pl.	DPR	0.13	0.13	0	Trees, Lawn	Good	Low
13	Latimer Playground	109th Ave. and 167th St.	DPR	1.076	0.1076	0.9684	Play equipment, basketball and handball courts, walkways, benches	Good	<u>Heavy</u>
14	Brinkerhoff Mall	Merrick Blvd. between 110th Ave. and Brinkerhoff	DPR	0.396	0.396	0	Lawn	Fair	Low
15	St. Albans Memorial Park	Merrick Blvd. and Sayres Ave.	DPR	10.79	5.395	5.395	Landscaping, walkways, tennis, basketball, and handball courts, benches	Good	<u>Heavy</u>
16	Marconi Park	109th Ave., 157th St. 108th Ave., 155th St	DPR	4.635	0.4635	4.1715	Benches, play equipment, baseball/softball fields, walkways, <u>hand ball and basketball courts, exercise equipment</u>	Good	<u>Heavy</u>
17	Jamaica Playground (PS 40 play yard)	110th Ave. and 160th St.	<u>DOE and DPR</u>	3.21	0.321	2.889	Play equipment, benches, basketball and handball courts, <u>swings</u>	Fair	Low
18	Norelli-Hargreaves Playground	Van Wyck Expressway and 106th Ave.	DPR	1.427	0.1427	1.2843	Benches, basketball courts, swings, slides, jungle gyms	Good	Low
19	Walter Francis Bishop Elementary School Playground	109-59 Inwood St. b/w Ferndale and Glassboro Ave.	DOE	0.78	0.078	0.702	Swings, slides, handball courts, baseball/softball fields, benches, jungle gyms	Good	Low
20	Liberty Triangle	Liberty Ave., Farmers Blvd, and Hilbrun Ave.	DPR	0.16	0	0.16	Lawn	Fair	Low
21	Lorraine Hansberry School Playground	190th Pl. and 110th Rd.	DOE	0.62	0.062	0.558	Benches, jungle gyms, swings, slides, basketball courts, handball courts	Good	Low
22	Haggerty Park	Jamaica Ave. b/w 202nd and 204th Sts.	DPR	4.334	0.4334	3.9006	Swings, slides, basketball courts, handball courts, benches, jungle gyms	Good	Heavy
23	Pedestrian Mall on 165th Street	165th St. between Jamaica and 89th Aves.		N/A	N/A	N/A	Trees	Good	Heavy
24	Briarwood Playground	148th St. and 85th Ave.	DPR	1.56	0.156	1.404	Swings, slides, trees, jungle gyms, basketball courts, handball courts, benches	<u>Fair</u>	<u>Heavy</u>
25	Grass Strip	Van Wyck Expressway at Hillside Ave.	DPR	0.14	0.07	0.07	Lawn	Fair	Low

Table 5-3 (cont'd)
Inventory of Open Space Resources

Map No.	Name	Location	Owner	Total Acres	Passive	Active	Amenities	Condition	Use Level
NON-RESIDENTIAL STUDY AREA TOTALS				55.41	25.19	30.22			
26	Captain Tilly Park	Highland Ave. and Upland Pkwy.	DPR	9.16	6.412	2.748	Pond, lawn, landscaping, walkways, benches, jungle gym, swings	<u>Fair</u>	<u>Heavy</u>
27	Joseph Austin Playground	South of Grand Central Parkway and 164th Pl.	DPR	4.04	0.404	3.636	Handball courts, benches, baseball/softball fields, <u>jungle gyms, swings, slides, spray showers, basketball courts</u>	Fair	<u>Heavy</u>
28	Manton Playground	Van Wyck, 84th Rd., Manton St. and 83rd Ave.	DPR	5.2	0.52	4.68	Swings, slides, basketball and handball courts, benches, jungle gyms, <u>spray showers</u>	Fair	Heavy
29	Maple Grove Park	Queens Blvd. and 83rd Ave.	DPR	1.5	1.5	--	Landscaping, seating	<u>Good</u>	Low
<u>30</u>	Maple Grove Cemetery	Van Wyck Expy, Kew Gardens Age, 86th Rd, 83rd Ave		65	65	--	Seating, paths	Excellent	Low
<u>31</u>	Smokey Oval	95th Ave., 127th St., Atlantic Ave., 125th St.	DPR	4.353	0.4353	3.9177	Swings, slides, basketball and handball courts, baseball/softball fields, benches, jungle gyms	Good	Moderate
<u>32</u>	PS 140 Playground	116th Ave. b/w 166th and 167th Sts.	<u>DOE</u>	1.1	0.11	0.99	Benches, jungle gyms, swings, slides	Good	Moderate
<u>33</u>	Roy Wilkins Southern Queens Park (portion)	Baisley Boulevard, Merrick Boulevard, 115th Avenue	DPR	19.21	3.84	15.37	Baseball fields, running track, football field, landscaping, lawns, paths, <u>tennis courts, swimming pool</u>	Good	High
RESIDENTIAL STUDY AREA TOTALS				164.97	103.41	61.56			
Sources: AKRF field surveys, August 2005 and June 2006; New York City Department of Parks and Recreation web site, October 2005.									

Located on 179th Place north of Jamaica Avenue, Harvard Playground provides both passive and active recreation. This 0.581-acre park is equipped with swings, slides, handball courts, benches, jungle gyms, paved walkways, and trees. It is in fair condition with a heavy level of use.

Major Mark Park is a 0.90-acre park located on the corner of 173rd Street and Warwick Crescent. This well-maintained open space provides trees, benches, and paved walkways for passive recreation. Though the park is in good condition, the use level is low.

Haggerty Park, located at the easternmost edge of the study area on 202nd Street and the south side of Jamaica Avenue, offers predominantly active recreational space with amenities such as swings, slides, handball courts, and jungle gyms. It also provides walkways and benches for passive recreational use. The park is in good condition and is heavily used.

Briarwood Playground, located in the northwestern part of the non-residential study area at 148th Street and 85th Avenue, is a 1.56-acre park adjacent to J.H.S. 217 and owned and operated by DPR. This predominantly active open space includes amenities such as swings, slides, basketball courts, handball courts, benches, jungle gyms, trees, a fountain, and paved walkways. This playground is in good condition and is heavily used.

The portion of the non-residential study area south of the Long Island Rail Road (LIRR) tracks includes several large and medium-sized parks as well as a number of small open spaces and playgrounds, many of them associated with local schools. Liberty Park/Detective Keith L. Williams Park, an 8-acre open space located south of the LIRR tracks, was renamed in 1991 to honor the Jamaica resident and police officer Keith Williams who lost his life in the line of duty. This park, located at 173rd Street between 106th and 107th Avenue, features swings, an outdoor pool, tennis courts, slides, benches, a track, a soccer/baseball field, and jungle gyms. The park is

in excellent condition, and the new track and soccer/baseball field were recently completed. The park and its facilities are heavily used.

Peter's Field, a 2.87-acre park located on 183rd Place and Henderson Avenue provides amenities for both passive and active recreation, including swings, slides, baseball/softball fields, benches, jungle gyms, paved walkways, and landscaping. The park is in fair condition and has a moderate level of use.

Marconi Park, located at 109th Avenue and 157th Street, is a DPR-owned and operated open space with an array of amenities. Swings, slides, benches, jungle gyms, basketball courts, baseball/softball fields, trees, and paved walkways occupy this 4.64-acre park. Marconi Park is in good condition and is heavily used.

St. Albans Memorial Park is located at the southern edge of the proposed action area at Merrick Boulevard and Sayres Avenue. This approximately 11-acre park features lawns and landscaped areas as well as active recreational facilities including tennis, basketball, and handball courts. This park is in good condition and has a high level of use.

The non-residential study area includes several open spaces associated with local public schools. The play yard at P.S. 50, located at the intersection of 101st and Liberty Avenues, includes play equipment and basketball courts. Latimer Playground, adjacent to J.H.S 8, is located at 109th Avenue and 167th Street. Equipped with swings, slides, basketball courts, handball courts, and jungle gyms, this well-maintained park is devoted mostly to active recreation. This playground also includes benches, trees, lighting, and paved walkways to encourage passive recreation. Latimer Playground is in good condition with a low level of use. Jamaica Playground, adjacent to P.S. 40, is a 3.21-acre park located at 109th Street and Brinkerhoff Avenue. Equipped with swings, slides, basketball courts, handball courts, benches, jungle gyms, trees, and paved pathways, this park has amenities for both active and passive recreation. This playground is in fair condition with a low level of use.

The Walter Francis Bishop Elementary School playground is located east of Inwood Street between Glassboro and 110th Avenues. With a wide variety of amenities, this predominantly active recreation space is equipped with swings, slides, jungle gyms, handball courts, baseball/softball fields, paved walkways, benches, fences, and trees. This playground is in good condition and has a low use level.

The Lorraine Hansberry School (P.S. 118) playground, located next to the school on 110th Road and 190th Place, is an approximately 0.62-acre park open to both students and the public. Predominantly devoted to active recreation, this park is equipped with swings, jungle gyms, basketball courts, handball courts, as well as paved walkways, and landscaping. The Lorraine Hansberry School playground is in good condition with a low level of use.

Norelli-Hargreaves Playground is an open space devoted mainly to active recreation. This 1.427-acre park is located on the Van Wyck Expressway service road and 106th Avenue. The park's swings, slides, basketball courts, paved walkways, benches, jungle gyms, trees, and paved walkways are well-maintained and open to the public. This playground has a low use level but is in good condition.

In addition to the public parks, there are numerous public plazas and open spaces within the study area varying in scale, attractiveness, and amenities. For example, 165th Street is closed to traffic and functions as a pedestrian mall between Jamaica Avenue and 89th Avenue, where it is surfaced with bricks and has rows of trees.

Liberty Triangle is located on Liberty Avenue and Farmer's Avenue. This open space, which is owned and operated by DPR, can be used for passive recreation by nearby residents and workers. It is in fair condition and has a low use level. Brinkerhoff Mall, a 0.4-acre open space, is located at the intersection of Brinkerhoff Avenue, Merrick Boulevard, and 110th Road. This mall is in fair condition and has a low level of use. It is mainly an open space of trees and lawn with no amenities or facilities. Proctor Hopson Circle, located at the intersection of Merrick Road, 108th Road, and 169th Place, is devoted entirely to passive recreation. This 0.130-acre open space is well maintained and open to the public. Proctor Hopson Circle in good condition but has a low use level.

As stated above, the non-residential study area includes three cemeteries, which are conservatively excluded from the total acreage of open space. The largest of these is Prospect Cemetery, an approximately 4-acre cemetery located along 159th Street just south of the LIRR right-of-way. This historic cemetery, one of the oldest in Queens, is currently in disrepair and overgrown with weeds but has the potential to provide opportunities for passive recreational uses such as strolling and sitting. Restoration of the Prospect Cemetery Chapel began in the summer of 2007. Once this restoration work is completed, public programming will be provided through a non-for-profit organization. Additionally, York College recently created a pedestrian plaza by the chapel at Prospect Cemetery (by 159th Street) which has potential to host public programs during evenings and weekends. York College and the Greater Jamaica Development Corporation are developing a plan for public programming and access to these spaces once restoration of the Prospect Cemetery Chapel is complete.

Other cemeteries in the non-residential study area include St. Monica's on the southwest corner of Liberty Avenue and 160th Street and First Methodist Cemetery on Guy R. Brewer Boulevard, just south of Liberty Avenue. Although they are not included in the quantitative analysis, these spaces can also be used for passive recreational activities including sitting and strolling.

RESIDENTIAL STUDY AREA

Within the ½-mile residential study area, 34 public open spaces and recreational facilities serve the surrounding residential and worker populations. These include the 25 public open spaces in the non-residential study area plus an additional 9 open spaces (see Figure 5-1 and Table 5-3). Including all of the public parks and open spaces listed above in the non-residential study area, the residential study area contains a total of approximately 166.47 acres of public open space, approximately 62.31 (37 percent) of which are estimated to be for active recreational use and 104.16 (63 percent) for passive recreational use.

Several open spaces resources are found in the northern portion of the study area in the Jamaica Hills and Briarwood neighborhoods. Captain Tilly Park is one of the larger parks in the study area, with 9.16 acres of open space. Located on 165th Street between 85th Avenue and Highland Avenue, this well maintained park provides its users with a pond, benches, paved walkways, swings, and a jungle gym allowing for both passive and active enjoyment of the area. The park is in fair condition and has a high level of use.

The Joseph Austin Playground, located within the half-mile study area on the south side of Grand Central Parkway and 164th Place, is owned and operated by the DPR. Although this 4.04-acre park is devoted mainly to active recreation with amenities such as handball courts and baseball fields, it is also equipped with benches and paved walkways for passive enjoyment. This park is in fair condition with a high level of use.

Manton Playground, which is owned and operated and by DPR, is located at Manton Street and 83rd Avenue. Although characterized predominantly by active use, this 5.2-acre park is equipped with amenities for passive enjoyment as well. The well maintained swings, slides, basketball courts, handball courts, jungle gyms, benches, and paved walkways are open and easily assessable to the public. This heavily used playground is in fair condition.

The 1.5-acre Maple Grove Park, located at the northwestern edge of the residential study area along Queens Boulevard, consists of a tree-lined seating area. This park is in fair condition and has a low level of use. Just south of Maple Grove Park is the 65-acre, privately owned Maple Grove Cemetery. This cemetery, which is open daily from 8 AM to 5 PM, has pathways and landscaping that make it suitable for passive recreational use.

Located in the western portion of the study area at 125th Street and Atlantic Avenue in the Richmond Hill neighborhood, Smokey Oval lends itself to both passive and active recreation. Its 4.35 acres of open space house a variety of well kept amenities such as swings, slides, basketball courts, handball courts, baseball/softball fields, benches, jungle gyms, trees, and lighting. This park is in good condition and has a moderate level of use.

The P.S. 140 playground, located on 116th Avenue between 166th and 167th Streets at the southern end of the residential study area, is also predominantly devoted to active recreation and includes handball courts, jungle gym equipment, and paved walkways. The P.S. 140 playground has a moderate level of use and is in good condition.

The Roy Wilkins Southern Queens Park is located in a census tract of which less than 50 percent falls within a ½-mile radius of the proposed action area. However, because it is directly adjacent to the residential study area and is a major park with recreational amenities that draw visitors from a wide area, it is highly likely that many study area residents would use this park. Therefore, the portion of this park (approximately 19.21 acres) that falls within the ½-mile radius is included in this quantitative analysis. This area, which includes baseball fields, running track, football field, a swimming pool, tennis courts, landscaping, lawns, and paths, is heavily used and in good condition.

ADEQUACY OF OPEN SPACES

NON-RESIDENTIAL STUDY AREA

As described above, the analysis of the non-residential study area focuses on passive open spaces that may be used by workers or others coming to the area but not residing there. To assess the adequacy of the open spaces in the area, the ratio of workers to acres of open space is compared to DCP's planning guideline of 0.15 acres of passive space per 1,000 workers. In addition, the passive open space ratio for both workers and residents in the area is compared to the recommended weighted average ratio.

The non-residential study area includes 55.41 acres of open space, of which 25.19 acres are estimated to be for passive use. As stated above, it has a total residential and non-residential population of 194,091 including the students at York College.

Based on the data presented above, the non-residential study area has a passive open space ratio of 0.455 acres of passive open space per 1,000 workers; this is substantially higher than the DCP's guideline of 0.15 acres (see Table 5-4). However, the combined passive open space ratio (which includes local residents) is 0.129 acres per 1,000 residents and workers. This ratio is

Table 5-4
Existing Conditions: Adequacy of Open Space Resources

	Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-residents	55,268*	55.41	30.22	25.19	N/A	N/A	0.456	N/A	N/A	0.15
Combined non-residents and residents	<u>194,091</u>				N/A	N/A	0.130	N/A	N/A	0.400**
Residential Study Area										
Residents	208,893	<u>164.97</u>	<u>61.56</u>	<u>103.42</u>	<u>0.790</u>	<u>0.295</u>	<u>0.495</u>	2.5	2.0	0.50
Combined non-residents and residents	275,995				N/A	N/A	<u>0.375</u>	N/A	N/A	0.415**
Notes:										
* Includes 5,743 York College students, which represents total enrollment in 2004-2005 academic year.										
** Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.										

lower than the recommended weighted average ratio of 0.400 acres per 1,000 residents and workers and therefore indicates that there is a shortfall of passive open space given the numbers and proportion of residents and non-residents in the study area.

In terms of the applicable criteria for assessing the adequacy of existing open space as described in Chapter 3-D, Section 322.3 of the *CEQR Technical Manual*, the non-residential study area exceeds the City's desired planning goal for passive open space for workers, as described above, yet includes less passive open space than would be desired given the proportion of non-residents in that study area. The usability of the open spaces in the non-residential study area is not impaired by factors such as noise, air quality, shadows, design, or accessibility.

The LIRR viaduct that transects the study area from east to west has the potential to act as a barrier for users of open space. Pedestrian passage beneath the elevated railroad tracks is limited (e.g., in many locations the streets beneath the viaduct are aesthetically unappealing and poorly lit) and therefore may be perceived as unsafe. For these reasons, residents and workers are likely to use open spaces on whichever side of the viaduct that their homes or places of work are located, except in cases where specific amenities such as a baseball field or a running track are sought.

As described above, employment within the non-residential study area is most dense in the census tracts in the Jamaica Center CBD, in the tracts near the Jamaica LIRR station and immediately to the east near the Jamaica bus and subway stations, and in the tracts just west of the Van Wyck Expressway (where Jamaica Hospital and a number of commercial and industrial uses are located). These areas are served by Rufus King Park, which has benches, paths, and landscaping, and Major Mark Park, which has benches, paths, and landscaping. Employees in the area west of the Van Wyck Expressway have access to the 65 acres of passive open space at Maple Grove Cemetery.

RESIDENTIAL STUDY AREA

Within the residential study area, all passive and active open space ratios currently fall short of DCP's planning guidelines. With a total of 164.97 acres of open space, of which 61.56 are estimated to be for active use and 103.41 for passive use, and a total residential population of 208,893, the residential study area has an overall open space ratio of 0.790 acres per 1,000 residents. This is substantially less than DCP's planning guideline of 2.5 acres of combined active and passive open space per 1,000 residents.

The residential study area's residential passive open space ratio is 0.495 acres of passive open space per 1,000 residents, which is below the City guideline of 0.5 acres per 1,000 residents. The area's residential active open space ratio is 0.295 acres per 1,000 residents, which is substantially below DCP's planning guideline of 2.0 acres per 1,000 residents.

When the employees who work within the residential study area are added to the population, the passive open space ratio further diminishes. As described earlier, workers typically use passive open spaces during the workday. With a worker and residential population of 275,995, the combined passive open space ratio in the residential study area is 0.375, lower than the recommended weighted average guideline ratio of 0.415 acres per 1,000 residents and workers.

In terms of the criteria for assessing the adequacy of existing open space as described in Chapter 3-D, Section 322.3 of the *CEQR Technical Manual*, the residential study area falls short of the City's desired quantitative planning goals for passive and active open space, as described above. However, with respect to qualitative factors, based on field surveys, the usability of the open spaces in the non-residential study area is not impaired by factors such as noise, air quality, shadows, design, or accessibility.

As described above, the worker population is concentrated in the CBD, in the census tracts near the LIRR station, and in the tracts just west of the Van Wyck Expressway. The residential population, on the other hand, is most dense in the Jamaica, Briarwood, and Hollis neighborhoods surrounding the CBD and in the South Jamaica and St. Albans neighborhoods to the south and east. The residential populations of these neighborhoods are served by a variety of parks and playgrounds offering primarily active open space. As shown on Figure 5-2, most of the playgrounds and parks described above are located in the southern half of the residential study area and serve the neighborhoods of South Jamaica and St. Albans. However, several open spaces with active recreational amenities are also located in the northern part of the study area. These include Rufus King Park, Captain Tilly Park, Harvard Playground, and Howard Von Dohlen Playground.

As noted above, young children and teens comprise approximately 30 percent of the study area population. The study area includes many playgrounds with amenities such as play equipment, basketball courts, and handball courts that would serve this age group. There are also several fields suitable for baseball, softball, and soccer that can serve both adult and youth populations. Several of the area's small and large parks include lawns, paths, and benches that can serve the passive open space needs of adults and senior citizens.

Additionally, as described below under "Qualitative Considerations," residents and workers in the residential study area are served by large regional open spaces just outside the study area.

QUALITATIVE CONSIDERATIONS

As described above, there are several publicly accessible open spaces within the non-residential and residential study areas that were not included in the quantitative open space analysis. These include the three cemeteries located in the residential study area. Additionally, there are major open space resources just outside the open space study areas that would likely be used by some of the area's residential and working population but are not included in the quantitative analysis. These include Cunningham Park and the majority of the acreage of the Roy Wilkins Southern Queens Park. The Roy Wilkins Southern Queens Park, which is within the ½-mile residential study area along Merrick Boulevard. (This open space was not included in its entirety since the census tract in which open space is located is less than 50 percent in the study area. Instead, only the 19.21 acres of this park that fall within the ½-mile radius were included in the quantitative analysis.) This 53.31-acre park and recreation center features four tennis courts, an outdoor track, a pool, a pond, four basketball courts, a gym, two locker rooms, and a senior garden. To the northeast of the ½-mile residential study area is the approximately 350-acre Cunningham Park, which offers facilities for tennis, baseball, and bocci as well as picnic areas and playgrounds.

Additionally, recreational facilities are available at York College for students, faculty, and staff. The college's Health and Physical Education Complex houses a six-lane, 25-meter swimming pool, a gymnasium, a fitness center, a weight training room, a multipurpose room, and an indoor running track. Outdoor facilities include six tennis courts, five handball courts, a regulation outdoor running track, and a field for team sports.

D. THE FUTURE WITHOUT THE PROPOSED ACTIONS

STUDY AREA POPULATION

NON-RESIDENTIAL STUDY AREA

As discussed in Chapter 1, "Project Description," and Chapter 2, "Land Use, Zoning, and Public Policy," in the future without the proposed actions, it is estimated that a net total of 536,320 square feet of commercial space, 214,344 square feet of community facility space, and 69,918 square feet of industrial space would be added within the proposed action area on identified projected development sites. This development would add an increment of approximately 2,349 employees to the area.¹ Additionally, it is estimated that approximately 1,571 new dwelling units would be added within the proposed action area on projected development sites. Assuming an average household size of 3.13, this would add 4,917 new residents to the area.² It is also expected that approximately 139 residential units would be constructed on urban renewal sites in the South Jamaica I URA that do not coincide with sites on which development is projected in the future without the proposed actions in the Reasonable Worst Case Development Scenario (RWCDs).

¹ It is assumed that the ratio of employees to floor area is 1 employee per 400 square feet of retail or institutional space, 1 per 250 square feet of office space, and 1 per 1,000 square feet of industrial space. For the purposes of this analysis, it is assumed that half of the added commercial space would be retail and half office.

² The average household size in Community District 12, which covers most of the study area, is 3.13. This average was used in this analysis to calculate future expected residential populations.

In addition, several other residential and commercial developments within a ¼-mile radius of the proposed action area are expected to be developed in the future without the proposed actions. As discussed in Chapter 2, these developments are expected to include approximately 623 dwelling units,¹ with an estimated population of 1,950 residents. Therefore, in the future without the proposed actions, it is estimated that a total of approximately 2,194 dwelling units would be added to the ¼-mile open space study area by 2015. New commercial developments, including a Home Depot and a number of smaller retail spaces and offices, are also expected to add to the area's working population in the future without the proposed actions.

In total, it is expected that in the future without the proposed actions, 6,867 new residents and 3,100 new employees would be added to the ¼-mile non-residential study area by 2015. This would bring the total residential population to 145,690 and the total worker population to 58,368.

RESIDENTIAL STUDY AREA

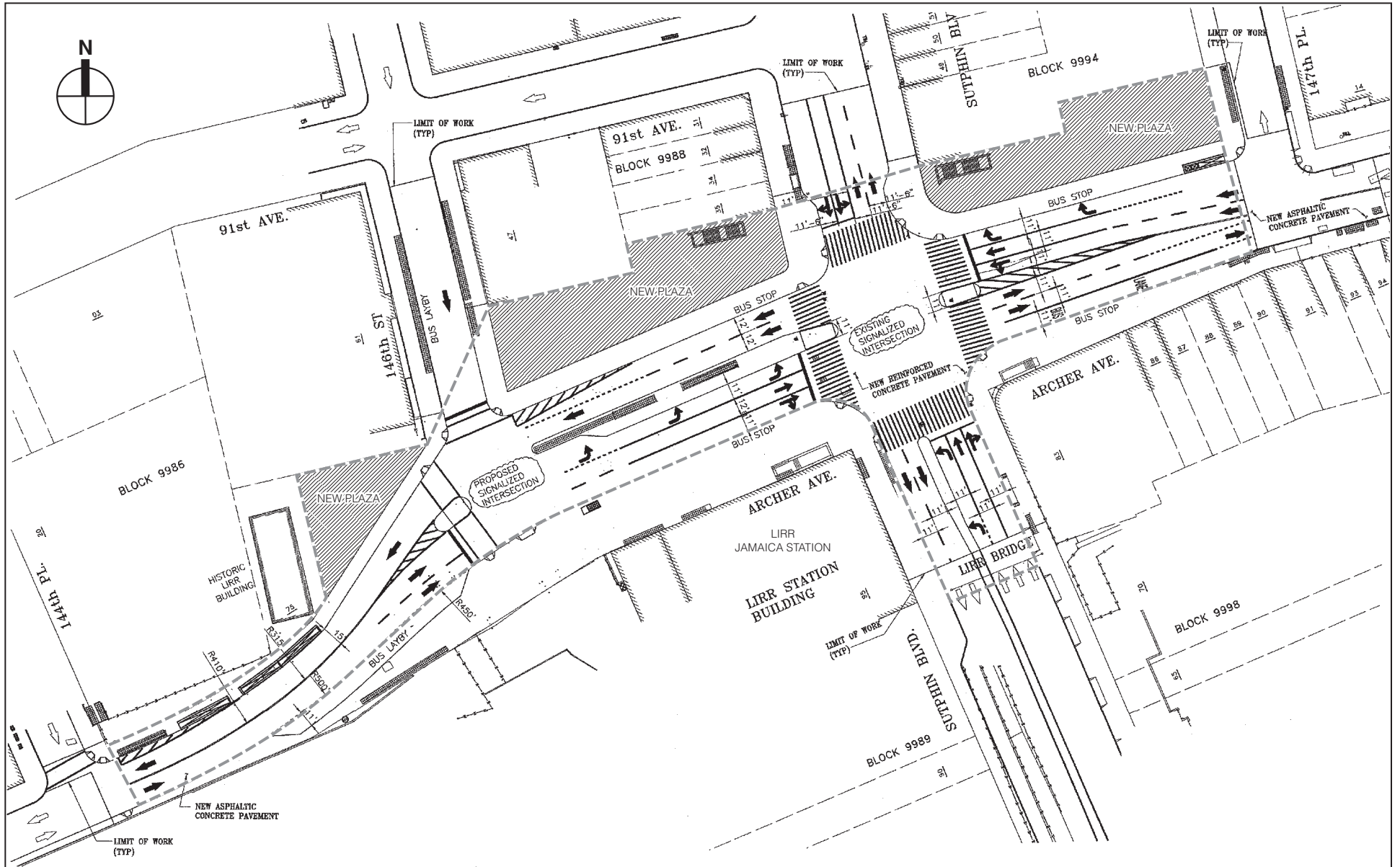
The residential population within the ½-mile residential study area is expected to increase slightly by 2015. In addition to the development described above that would occur in the ¼-mile non-residential study area, the only known residential development is a 15-unit building under construction in Briarwood on the southwest corner of 84th Drive and 143rd Street. The Kew Gardens-Richmond Hill Rezoning EAS projects that an additional 63 housing units and 29,740 square feet of commercial space would be developed in the residential study area. Thus, it is expected that a total of 78 residential units and 29,740 square feet of commercial space would be developed in the residential study area in addition to the development described above that is expected to occur within the non-residential study area. This would introduce approximately 244 residents and 74 workers in addition to those that would be added in the non-residential study area. Thus, the total residential population of the residential study area is expected to be approximately 216,004 and the total employee population is expected to be 70,276 by 2015.

STUDY AREA OPEN SPACES

NON-RESIDENTIAL STUDY AREA

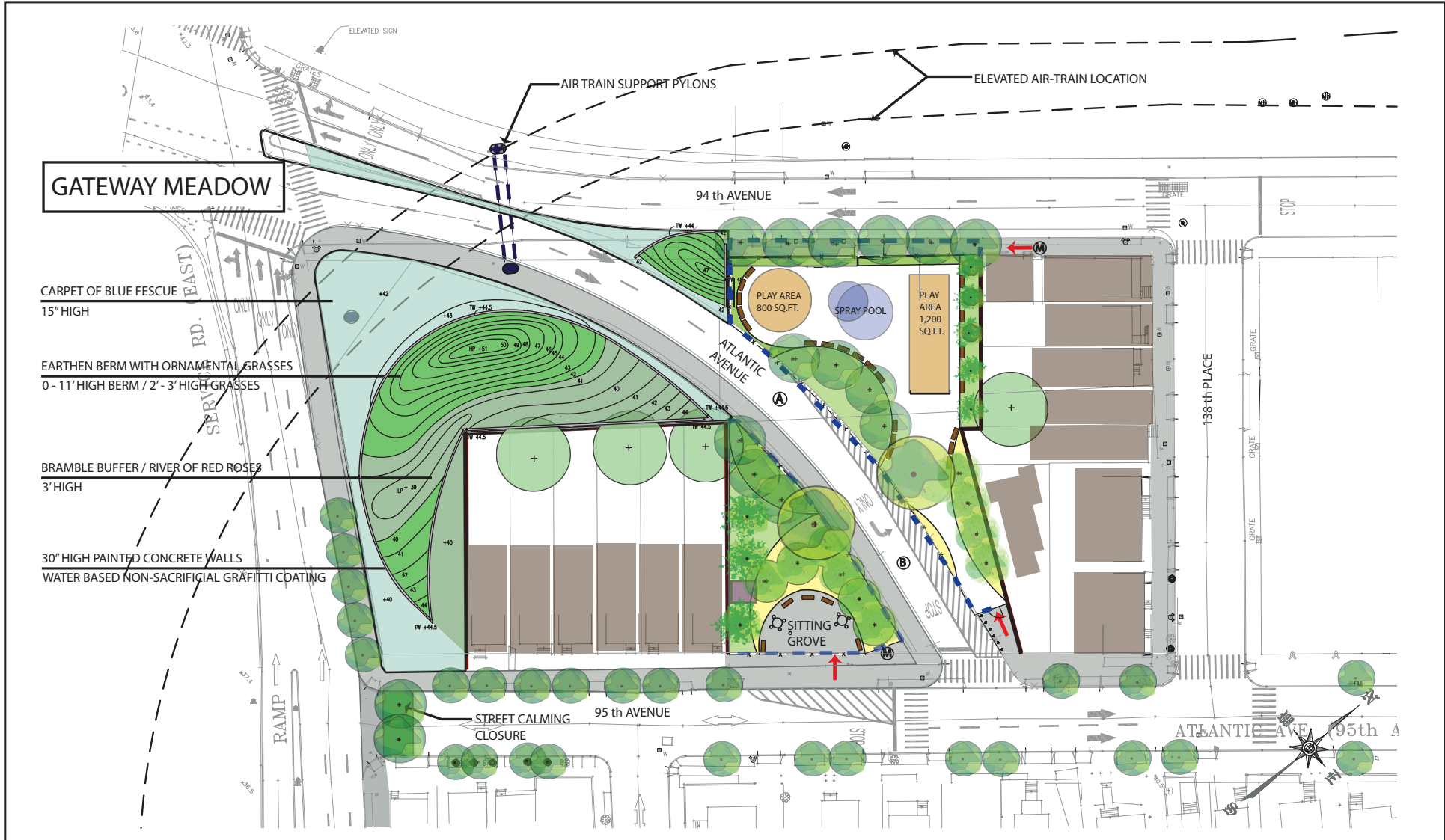
Absent the proposed actions, it is expected that approximately 1.38 acres of publicly accessible open space will be constructed in the study area as part of the Jamaica Transportation Center Intermodal Enhancements project (see Chapter 2, "Land Use, Zoning, and Public Policy"). This is expected to include approximately 0.52 acres of passive open space in the form of plazas along the north side of Archer Avenue at Sutphin Boulevard and at 146th Street (see Figure 5-3, "Station Plaza Enhancements"). Approximately 1.38 acres of open space will be created on the block bounded by 94th Avenue, 138th Place, 95th Avenue, and the Van Wyck Expressway (see Figure 5-4, "Atlantic Avenue Extension"). Design of these parks is ongoing; however, as shown in the preliminary design diagram (see Figure 5-4), it is envisioned that the north side could accommodate more active open space while the south side would be designed as a passive, gateway open space that would include sitting areas, plantings, and other elements. Based on current designs for this open space, approximately 20 percent, or 0.28 acres, would be for active use, while approximately 80 percent, or 1.1 acres, would be for passive use. These proposed

¹ As shown in Table 2-4, a total of 701 residential units are expected to be developed within a ½ mile of the study area in addition to the units in the RWCDS. Of these 701 units, 623 fall within the ¼ mile study area.



--- Station Plaza Enhancements

0 100 FEET
SCALE



- | | | | |
|--------------------------------|---|---|------------------|
| Residential Houses | Play Area | Benches | Maintenance Shed |
| Maintenance Entrance | Winter/ Summer Gateway with Evergreen Shrubs and Summer Flowering Trees | Seasonal Plantings | Park Entrance |
| Residential Fence (4'-5' High) | Park Fence | Spring/Fall Gateway with Bulbs and Rich • Bollards Fall Color Trees | Existing Trees |



Preliminary Design for
Atlantic Avenue Extension Open Space
Figure 5-4

open spaces would increase the total passive open space in the study area from 25.19 to 26.81 acres and the total active open space from 30.22 to 30.5 acres.

Several enhancements to open spaces within the non-residential study area are also expected in the future without the proposed actions. DPR is in the process of constructing a synthetic turf sports field at Rufus King Park. At Roy Wilkins Park, DPR has plans to reconstruct the indoor pool and to create a bubble around the existing tennis courts. DPR also has plans to enhance Liberty Park by adding lighting to the tennis courts. At Howard Von Dohlen Playground, DPR is planning a new comfort station and a renovation of the playground. Additionally, DPR is in the process of designing a natural turf baseball and cricket field for St. Albans Memorial Park. These enhancements would not expand acreage in the study areas, but would improve the quality of local open spaces.

Additionally, as noted above, restoration of the Prospect Cemetery Chapel is underway and once this restoration work is completed, public programming will be provided through a non-for-profit organization.

RESIDENTIAL STUDY AREA

It is not expected that any additional open spaces will be constructed within the ½-mile residential study area by 2015. The proposed increase in acreage, described above, would increase the inventory of passive space in the study area from 103.41 to 105.103 acres and active open space from 61.56 to 61.84 acres. In addition, the qualitative improvements described above would also occur.

ADEQUACY OF OPEN SPACES

NON-RESIDENTIAL STUDY AREA

In 2015 in the future without the proposed actions, the number of non-residents in the non-residential study area is expected to increase to 58,368 and the total amount open space is expected to increase to 57.31 acres. In 2015, the ratio of passive open space per 1,000 non-residents would be 0.459; this is higher than the City’s guideline of 0.15 acres (see Tables 5-5 and 5-6). For the combined residential and non-residential population, the passive open space ratio would be 0.131 acres per 1,000 people, which is lower than the recommended weighted average ratio of 0.400 acres per 1,000 residents and workers.

**Table 5-5
2015 Future Without the Proposed Actions: Adequacy of Open Space Resources**

	Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-residents	58,368	57.31	30.5	26.81	N/A	N/A	0.459	N/A	N/A	0.15
Combined non-residents and residents	204,058				N/A	N/A	0.131	N/A	N/A	0.400*
Residential Study Area										
Residents	216,004	166.87	61.84	105.03	0.773	0.286	0.486	2.5	2.0	0.50
Combined non-residents and residents	286,280				N/A	N/A	0.367	N/A	N/A	0.415*
Note: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.										

Table 5-6

2015 Future Without the Proposed Actions: Open Space Ratios Summary

Ratio	DCP Guideline	Existing Ratio	Future Without the Proposed Actions Ratio	Percent Change
Non-Residential Study Area				
Passive/non-residents	0.15	0.456	0.459	+0.66
Passive/total population	0.400*	0.130	0.131	+0.77
Residential Study Area				
Total/residents	2.5	0.790	0.773	-2.15
Passive/residents	0.5	0.495	0.486	-1.82
Active/residents	2.0	0.295	0.286	-3.05
Passive/total population	0.415*	0.375	0.367	-2.13
Note:	* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.			

RESIDENTIAL STUDY AREA

In the future without the proposed actions, the active open space ratio within the residential study area would decrease to 0.286 acres per 1,000 residents. The passive open space ratio for the combined population would decrease by approximately 2.13 percent, from 0.375 to 0.367 acres per 1,000 residents and workers. This ratio would remain below the recommended weighted average ratio of 0.415 acres per 1,000 residents and workers.

E. PROBABLE IMPACTS OF THE PROPOSED ACTIONS

STUDY AREA POPULATION

NON-RESIDENTIAL STUDY AREA

As described in Chapter 1, “Project Description,” it is projected in the reasonable worst case development scenario (RWCDS) that there would be an incremental increase of 3,565 housing units, 3,107,714 square feet of commercial space, and 245,180 square feet of community facility space would be constructed within the project area by 2015 as a result of the proposed actions, while there would be a decrease in industrial space of 379,752 square feet as compared to the future without the proposed actions. This development would add an increment of approximately 10,333 employees to the area.¹ Therefore, the population of the non-residential study area would include a total of 156,848 residents and 68,701 employees in the 2015 future with the proposed actions.

It is expected that most of the employment growth that would result from the proposed actions would occur within the CBD and in the areas near the Jamaica Air Train station and in the blocks immediately to the east, both north and south of the LIRR tracks. As shown in Table 1-6 in Chapter 1, “Project Description,” the RWCDS projects a substantial amount of new

¹ As in the future without the proposed action condition, it is assumed that the ratio of employees to floor area is 1 employee per 400 square feet of retail or institutional space, 1 per 250 square feet of office space, and 1 per 1,000 square feet of industrial space. For the purposes of this analysis, it is assumed that half of the added commercial space would be retail and half office.

commercial development, including retail and office uses, within the existing Jamaica Center CBD, on the blocks surrounding the Air Train station, and in the “LC” subarea between the LIRR Main Line tracks and Liberty Avenue. Therefore, it is expected that the population of non-residents would increase in these areas. Table 1-6 also shows that the bulk of the new residential population introduced by the proposed actions would be located in and near the CBD (in the JC1, JC2, and D and subareas and in the proposed Urban Renewal Area) and along major corridors including Hillside Avenue (subareas U and V), Merrick Boulevard (subarea R), and Liberty Avenue (subarea O).

Approximately 0.39 acres of open space is proposed as part of the Jamaica Urban Renewal Area (URA). While there is no preliminary design for that space at this time, it is assumed for analysis purposes to be a passive open space. However, because this open space would be located on a site that is designated as a potential development site rather than a projected site in the RWCDs, it is considered less likely to occur by the 2015 Build year and is therefore not included in the quantitative aspect of this analysis.

RESIDENTIAL STUDY AREA

All of the development described above under the RWCDs would also occur in the residential study area. With the proposed actions, the population of the residential study area is expected to include 227,162 residents and 80,609 employees in the future with the proposed actions. The open space proposed on a potential development site under the Jamaica URA would also be located within the residential study area.

As described above, the proposed actions are projected to direct most of the growth in the residential population to the Jamaica Center CBD area and to corridors including Hillside Avenue, Merrick Boulevard, and Liberty Avenue.

STUDY AREA OPEN SPACES

NON-RESIDENTIAL STUDY AREA

The total amount of active open space in the future with the proposed actions would therefore remain 56.79 acres. As stated above, the proposed Jamaica Gateway URA includes the addition of approximately 0.39 acres of passive open space in the form of a plaza on west side of Sutphin between 94th and 95th Avenues. However, because this open space is proposed on a site designated a potential development site in the RWCDs, it is considered only in the qualitative aspect of this analysis.

As described in Chapter 6, “Shadows,” the proposed actions would result in new shadows on six open spaces. These open spaces, which include Rufus King Park, the P.S. 50 playground, Norelli-Hargreaves Triangle, Brinkerhoff Mall, Liberty Park, and Major Mark Park, are all located in both the non-residential and residential study areas. The proposed actions would also result in new shadows on the planned Atlantic Avenue Extension Park. Following is a summary of the new incremental shadows on these open spaces:

- The Rufus King Park would experience incremental shadows in both the morning and evening hours on each of the analysis days, however, the shadow duration would be for less than two hours in the morning and evening hours and would not cover any significant passive recreation areas. In addition, the proposed action would not significantly reduce the amount of sun on the park.

- Incremental shadows on the Norelli-Hargreaves Triangle would be present for a relatively short amount of time or would move quickly across the Triangle. While the incremental shadows are greatest on the December analysis day, they would be limited to the eastern edge of the Triangle where the paved area is and there would be no adverse impacts to the Triangle on account of the proposed actions.
- The incremental shadows on the PS 50 Playground are for a short duration and are limited to the morning hours. The incremental shadows would not significantly reduce the amount of sunlight the Park receives throughout the day.
- New shadows on the Brinkerhoff Mall would last a short time and would be limited to the evening hours. There are no passive recreational amenities such as seating areas that could be impacted by new shadows, and the Mall would remain in sun for the majority of the analysis period on each of the analysis days.
- Liberty Park would experience incremental shadows only on a small section of the northwest corner of the Park, where the basketball courts are located. The use of active recreational areas such as basketball courts is not substantially diminished by shadows.
- Major Mark Park would experience new shadows on each of the four analysis days, though the Park would have full sun during the afternoon hours.
- Incremental shadows would reach the Atlantic Avenue Extension Park during the fall, spring and summer months. These incremental shadows would fall on the park for up to 2 hours and 3 minutes during the morning hours (this maximum shadow coverage would occur on the June analysis day). The proposed actions would therefore result in a significant adverse impact on this open space.

The proposed actions would not result in a perceptible increase in noise at any public open spaces, nor would they result in adverse effects with respect to air quality at public open spaces (see Chapter 19, “Noise”).

RESIDENTIAL STUDY AREA

The total amount of open space would remain 166.87 acres, with 105.03 acres of passive open space and 61.84 acres of active open space. As described above, the development projected to result from the proposed actions would cast new shadows on six open spaces within the residential study area. However, due to the location and duration of the shadows, they are not considered to have a significant adverse impact on open space resources.

ADEQUACY OF OPEN SPACES

NON-RESIDENTIAL STUDY AREA

Under the proposed actions, the combined passive open space ratio would decrease from 0.131 acres per 1,000 total population (non-residents and residents) in the future without the proposed actions to 0.119 acres with the proposed actions (see Table 5-7). This ratio was substantially below the recommended weighted average ratio of 0.394 and would represent an approximately 9.2 percent decrease in this combined open space ratio (see Table 5-8). With respect to the passive open space analysis for non-residents, this open space ratio would decrease from 0.459

Table 5-7
2015 Future With the Proposed Action: Adequacy of Open Space Resources

	Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-residents	<u>68,701</u>	<u>57.31</u>	<u>30.50</u>	<u>26.81</u>	N/A	N/A	<u>0.390</u>	N/A	N/A	0.15
Combined non-residents and residents	<u>225,549</u>				N/A	N/A	<u>0.119</u>	N/A	N/A	0.394*
Residential Study Area										
Residents	<u>227,162</u>	<u>166.87</u>	<u>61.84</u>	<u>105.03</u>	<u>0.735</u>	<u>0.272</u>	<u>0.462</u>	2.5	2.0	0.50
Combined non-residents and residents	<u>307,771</u>				N/A	N/A	<u>0.341</u>	N/A	N/A	0.410*
Note: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.										

Table 5-8
2015 Future With the Proposed Action: Open Space Ratios Summary

Ratio	DCP Guideline	Future Without the Proposed Action	Future with the Proposed Action	Percent Change
		Ratio	Ratio	
Non-Residential Study Area				
Passive/non-residents	0.15	<u>0.459</u>	<u>0.390</u>	<u>-15.03</u>
Passive/total population	0.395*	<u>0.131</u>	<u>0.119</u>	<u>-9.16</u>
Residential Study Area				
Total/residents	2.5	<u>0.773</u>	<u>0.735</u>	<u>-4.92</u>
Passive/residents	0.5	<u>0.486</u>	<u>0.462</u>	<u>-4.94</u>
Active/residents	2.0	<u>0.286</u>	<u>0.272</u>	<u>-4.90</u>
Passive/total population	0.415*	<u>0.367</u>	<u>0.341</u>	<u>-7.08</u>
Note: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.				

in the future without the proposed actions to 0.390 in the future with the proposed actions (see Table 5-8). This is an approximately 15 percent decrease when compared with the future without the proposed actions. However, this ratio, at 0.390, would continue to be appreciably higher than the DCP recommended ratio of 0.15 acres per 1,000 workers.

RESIDENTIAL STUDY AREA

In the future with the proposed actions, the total open space ratio within the residential open space study area would decrease to 0.735 acres per 1,000 residents, a decline of approximately 4.9 percent. This ratio is also substantially below the CEQR guideline of 2.5 acres per 1,000 residents. In addition, the active open space ratio would decrease to 0.272 acres per 1,000 residents, a decline of approximately 4.9 percent (see Tables 5-7 and 5-8). This open space ratio is also substantially below the guideline of 2.0 acres per thousand residents. The passive open space ratio would decline from 0.486 to 0.462 acres per 1,000 residents, a decline of 4.9 percent. However, the open space ratio for passive open space would remain near the CEQR guideline of 0.5 acres per 1,000 residents. The passive open space ratio for the combined (total) population would also decrease by approximately 7.1 percent, from 0.367 to 0.341 acres per 1,000 residents and workers. This ratio would remain near the City’s guideline of 0.410.

Much of the residential development expected to result from the proposed actions would improve open space conditions by including private recreational space available to residents. As shown on Figure 1-3 in Chapter 1, “Project Description,” the proposed zoning includes R6A, R7A, and R7X contextual districts, which require that new developments meet the standards of the New York City Zoning Resolution’s Quality Housing Program. Additionally, residential development under the proposed C4-4A and C4-5X would be governed by R7A and R7X regulations, respectively, and would therefore also be subject to the provisions of the Quality Housing Program. Under the Quality Housing Program, buildings with nine or more dwelling units must include recreational space amounting to 3.3 percent of the residential floor area. The recreational space provided must be accessible to all building residents and may be indoors or outdoors. The minimum size of any outdoor recreation space is 225 square feet, and the minimum size of any indoor recreation space is 300 square feet.

According to the RWCDs described in Table 1-4 of Chapter 1, “Project Description,” approximately 70 percent of the housing units created in the future with the proposed actions would be in contextual zoning districts where the Quality Housing program provisions apply. An R7X district is proposed along most of the Hillside Avenue corridor and R7A districts are proposed just west of the Jamaica Center CBD and along the eastern portion of the Hillside Avenue corridor. R6A districts are proposed along parts of Jamaica Avenue, Merrick Boulevard, Liberty Avenue, and Sutphin Boulevard as well as in the area just east of the Jamaica Center CBD. C4-4A and C4-5X districts are proposed within portions of the proposed Special Downtown Jamaica District, and open space would be required as part of development in these areas as well under the Quality Housing Program. While it is not accessible to the general public and therefore not included as part of the quantitative analysis, open space provided under the Quality Housing Program in these areas would help to meet the open space needs of the new residents that would be introduced to the area as a result of the proposed actions.

IMPACT SIGNIFICANCE

QUANTITATIVE DISCUSSION

Non-Residential Study Area

In the future with the proposed actions, the passive open space ratio for non-residents would remain well above DCP guidelines but would decline by 15 percent. However, the combined passive open space ratio for residents and non-residents (total population) would also remain below the DCP guideline recommended weighted average and would decrease by approximately 9.2 percent (see Table 5-8). Although the combined population open space ratio would continue to be below the levels recommended by DCP, it is recognized that this goal is not feasible for many areas of the City, and the open space ratios are not considered impact thresholds. However, because this 9.2 percent decrease in the passive open space ratio for residents and workers would occur in an area that already has a shortage of passive open space with respect to this combined population, it would constitute a significant adverse impact on passive open space within the non-residential study area. This significant adverse impact would be due primarily to the large number of new employees that would be added to the Jamaica Center CBD under the proposed actions relative to the available passive open space downtown. Mitigation for this significant adverse impact is described in Chapter 22, “Mitigation.”

Residential Study Area

Within the ½-mile residential study area, all open space ratios would remain below DCP guidelines in the future with the proposed actions. As shown in Table 5-8, the active, passive, and total open space ratios for residents would decline by approximately 4.90, 4.94, and 4.92 percent, respectively. The passive open space ratio for the total population, including residents and non-residents, would decrease by approximately 7.1 percent. However, the passive open space ratio would remain near the guidelines of 0.415 (see Table 5-8).

QUALITATIVE DISCUSSION

As discussed above, the proposed actions would result in a significant adverse qualitative impact on the proposed Atlantic Avenue Extension Park. Incremental shadows from potential development site 286 would reach the Atlantic Avenue Extension Park during the fall, spring and summer months. These incremental shadows would fall on the park for at most 2 hours and 3 minutes during the morning hours (this maximum shadow coverage would occur on the June analysis day). However, the park would experience sun during the afternoon hours. Since the Atlantic Avenue Extension Park is proposed and the program is not yet finalized, it is therefore possible that the incremental shadows may be cast on sun-sensitive features. Therefore, the proposed actions could result in a significant adverse impact on the proposed Atlantic Avenue Extension Park. Mitigation for this significant adverse impact is discussed in Chapter 22, “Mitigation.”

As described above, new shadows on other open spaces would be short in duration and would not substantially affect sun-sensitive areas. Therefore, none of the other open spaces in the study area would experience significant adverse impacts related to shadows. The development projected as a result of the proposed actions would not result in substantially increased noise levels or air pollution at any of these open spaces.

As described above, the provisions of the Quality Housing Program would apply to most of the development expected in the future with the proposed actions. Approximately 70 percent of the housing units projected to be created under the proposed actions would fall within contextual zoning districts in which developers of buildings with nine or more dwelling units would be required to provide recreational space onsite accessible to all building residents. Recreational space created under the Quality Housing Program would help to alleviate the shortage of open space available to residents within the study area, as it would address some of the open space needs of the new residents introduced under the proposed actions. However, as this recreational space would not be public open space, it would not improve the study areas’ open space ratios and the shortfalls in the open space ratios in the quantitative analysis described above would remain.

As previously described, the area just outside the two study areas includes major open space resources. The 53.31-acre Roy Wilkins Southern Queens Park falls partially within the ½-mile radius of the proposed action area. While the approximately 19-acre portion of this park that falls within a ½-mile radius of the proposed action area was included in the quantitative analysis, the remainder of the park was excluded because it is located in a census tract that is less than 50 percent within that radius. The population within the study areas would likely use the entire park, and therefore this park would help to alleviate the open space shortage identified in the future with the proposed actions.

In addition, it is noted that the York College student and employee populations were counted in the open space demand analysis; however, the college has extensive recreational facilities that are likely to meet much of this demand. The facilities include a swimming pool, gymnasium, fitness center, weight training room, multi-purpose room, and indoor running track. Outdoor facilities include six tennis courts, five handball courts, a regulation running track, and a field for team sports.

Additionally, just outside the ½-mile radius to the northeast of the study area is the 350-acre Cunningham Park, a major regional open space resource that would likely to be used by the residential population within the study areas. This park would contribute to meeting the open space needs of residents and workers in the northern part of the study areas.

F. CONCLUSIONS

NON-RESIDENTIAL STUDY AREA

As shown in Table 5-8, the passive open space ratio for non-residents in the non-residential study area would remain above the DCP planning guideline even though it would decline by approximately 15 percent. Because this ratio, at 0.390, would remain well above the planning guideline of 0.15, the decrease is not considered a significant adverse impact. However, the passive open space ratio for the combined non-residential and residential populations in the non-residential study area would remain below planning guidelines and would decrease by 9.2 percent. Because the proposed actions would introduce a substantial new population of users of passive open space in an area that already has a shortage of passive open space, there is a potential for significant adverse impacts on passive open space resources due to the added population. As described above, recreational space created under the Quality Housing Program in contextual districts in the future with the proposed actions would be available to residents of those buildings. While this could meet some of the passive open space needs of the resident population in the non-residential study area, the potential for significant adverse impacts on passive open space would remain because this open space would not be available to the area's non-residential population. Therefore, it is concluded that the proposed actions would result in a significant adverse impact on passive open space resources in the non-residential study area. Mitigation for this significant adverse impact is described in Chapter 22, "Mitigation."

The proposed actions would result in a significant adverse qualitative impact on the proposed Atlantic Avenue Extension Park. Incremental shadows from potential development site 286 would reach the Atlantic Avenue Extension Park during the fall, spring and summer months. These incremental shadows would fall on the park for at most 2 hours and 3 minutes during the morning hours (this maximum shadow coverage would occur on the June analysis day). However, the park would experience sun during the afternoon hours. Since the Atlantic Avenue Extension Park is proposed and not yet programmed, it is therefore possible that the incremental shadows may be cast on sun-sensitive features. Therefore, the proposed actions could result in a significant adverse impact on the proposed Atlantic Avenue Extension Park. Mitigation for this significant adverse impact is discussed in Chapter 22, "Mitigation."

RESIDENTIAL STUDY AREA

The passive open space ratios for the combined (total) non-residential and residential populations in the residential study area would also remain below planning guidelines under the proposed actions and would decrease by 7.1 percent. However, this open space ratio would

remain near the guideline (it would be 0.341 and the guideline is 0.415). In addition, recreational space created under the Quality Housing Program in the future with the proposed actions could help to meet the passive open space needs of the new residential population. While the decreases in active open space ratios in the future with the proposed actions do not constitute a significant adverse impact under CEQR criteria, the active open space ratios in the Jamaica area are below City guidelines and additional active open space and improvements to active open space are needed. As described above under "Future Without the Proposed Actions," DPR is addressing this need with a number of projects planned and underway that will improve active open spaces in the study area.

The proposed actions are also not expected to result in significant adverse impacts on passive open space ratios for the residential population (only) in the residential study area. In the future with the proposed actions, the passive open space ratio for residents would decrease from 0.486 to 0.462, a decline of 4.94 percent, and would remain just below the planning goal of 0.5 acres. The active and total open space ratios would decrease by 4.90 and 4.92 percent, respectively. With respect to active open space, there are a number of qualitative factors that serve to alleviate the shortage of open space in the residential study area. Just outside the study area there are open spaces that have the potential to relieve some of the open space inadequacy in the study area. For example, the 53.31-acre Roy Wilkins Southern Queens Park (only a portion of which was included in the quantitative analysis) and 350-acre Cunningham Park are partially within and just outside the study area. There are also the facilities at York College that are accessible to this student and academic population. Furthermore, much of the development projected in the future with the proposed actions would be in contextual zoning districts where buildings with nine or more dwelling units would be required to include recreational space available to all building residents. For these reasons, impacts on active open space with respect to residents in the residential study area are not concluded to be significant. *