Fountain Avenue Land Use Improvement and Residential Project
Draft Scope of Work to Prepare an Environmental Impact Statement (EIS)

A. INTRODUCTION

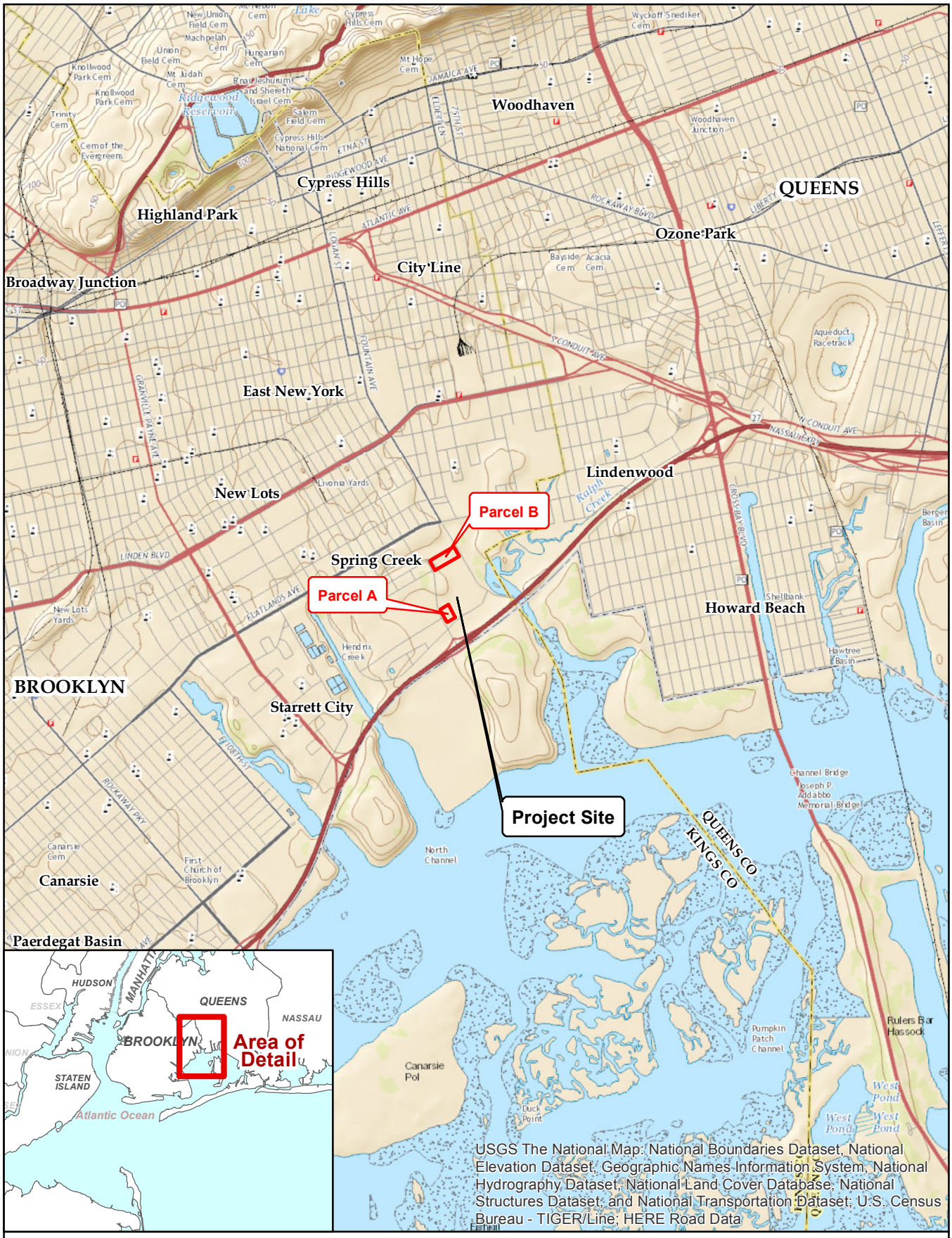
Pursuant to the New York State Environmental Quality Review Act ("SEQRA"), codified in Article 8 of the Environmental Conservation Law, and its implementing regulations (6 NYCRR Part 617), that the New York State Urban Development Corporation d/b/a Empire State Development ("ESD"), intends to prepare an Environmental Impact Statement ("EIS") for the proposed Fountain Avenue Land Use Improvement and Residential Project ("project") in Kings County, New York.

ESD would facilitate the sale of two currently unbuilt parcels (Block 4586, Lot 200 and Lot 500) in Kings County (Brooklyn), New York, to a designated developer (The Arker Companies). The two parcels comprising the project site (+/- 6.8 acres total), are currently part of the Brooklyn Developmental Center ("BDC"), which is scheduled for closure December 2015. ESD would adopt a General Project Plan ("GPP") to facilitate the construction of approximately 1,000 units of affordable housing and +/- 122,500 square feet ("sf") of commercial space. Construction would be undertaken in five phases; the first phase would commence in 2017, and the final phase would be complete in 2028. Each phase would entail the construction of a group of 2-4 connected buildings, up to 95 feet in height, containing about 200 housing units; each group of buildings would also include commercial space.

B. PROJECT IDENTIFICATION

Project Location

The project site is located within a block developed as the BDC campus, located in the Starrett City/Spring Creek neighborhood of eastern Brooklyn (Kings County), New York. (Please refer to Figure 1, Project Location.) The irregularly shaped block (Block 4586, Lot 300) is bounded by Vandalia Avenue to the north, Seaview Avenue to the south, Fountain Avenue to the east, and Erskine Street to the west. Parkland lies Across Fountain to the east and across Seaview Avenue to the south of the campus, with the Belt Parkway along the Jamaica Bay waterfront further to the south. The Gateway Center commercial area and the Gateway Estates residential development are to the west and north of the block.



USGS The National Map: National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line; HERE Road Data

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FIGURE 1: PROJECT LOCATION

Fountain Avenue Land Use Improvement and Residential Project

Source: USGS The National Map, 2015: National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line; HERE Road Data; STV Incorporated, 2015.

Empire State Development

The project site comprises two non-contiguous parcels, referred to as "Parcel A" and "Parcel B" (+/- 295,679 sf, or +/- 6.8 acres in total area), which are currently part of the BDC. Parcel A (Block 4586, Lot 500), which is +/- 2.0 acres (+/- 87,120 sf) is located at the southwestern corner of the block, and Parcel B (Block 4586, Lot 200), which is +/- 4.8 acres (+/- 208,559 sf) is located at the northern end of the block. Parcel A has frontage on both Seaview Avenue (south) and Erskine Street (west); Parcel B comprises the entire project site block frontage on Vandalia Avenue (north) and also has frontage on Fountain Avenue (east) and on Erskine Street (west). Both parcels are currently developed with driveways, parking areas, and lawn area maintained and utilized by the BDC.

Project Context

The area surrounding the block to the west and north has been developed as the phased build-out of the Starrett City Gateway Center commercial area and the Gateway Estates residential development. This development followed the Fresh Creek Urban Renewal Plan ("FCURP") established by the New York City Department of Housing Preservation and Development ("NYCHPD") in 1967; the FCURP was amended in 1982, following the 1972 construction of the BDC and surrounding streets, and then amended a second time in 1996, at which point the Gateway Estates II project was subject to environmental review, as part of the plan amendment, allowing for the development that is nearing completion. The block, including the project site, was not part of the FCURP.

As a separate initiative, both the New York State Office of Mental Health ("OMH") and the New York State Office for People with Developmental Disabilities ("OPWDD") have been in the process of evaluating the efficiency and efficacy of their State-run medical facilities. In recent years, OMH and OPWDD have sought to redevelop campuses to provide for more modernized treatment methods in newer facilities on their medical campuses. OMH and OPWDD also have sought to integrate some institutionalized population into facilities that allow patients' needs to be met on an outpatient basis. OPWDD is involved in the efforts to downsize and close the BDC by the end of 2015, assisting in efforts to transition individuals currently living at the facility to long-term supportive housing in the community.

Proposed Development Program

ESD would facilitate the sale of two New York State-owned parcels (Block 4586, Lot 200 and Lot 500) (the project site) to a designated developer (The Arker Companies has been conditionally designated by ESD). ESD would adopt a GPP to facilitate the construction of the Fountain Avenue Land Use Improvement and Residential Project ("project").

The proposed project would provide up to approximately 1,000 units of affordable housing and +/- 122,500 sf of commercial space. Construction would be undertaken in five phases; the first phase would commence in 2017, and the final phase would be complete in 2028. Each phase would entail the construction of a group of 2-4 connected buildings, up to 95 feet in height.

Specifically, preliminary designs indicate that Parcel A would be developed in the first phase of construction as a pair of attached buildings, containing a total of 297 residential units (+/-291,529 sf, total), 61,820 sf of commercial area, and 70 parking spaces. Parcel B would be developed throughout the subsequent four phases of project construction, as two separate groups (each comprising four attached buildings). Construction on Parcel B would introduce a total of 690 residential units (+/-683,140 sf, total), 60,704 sf of commercial area, and 254 parking spaces.

For the proposed project, a zoning override would be required, and in lieu of zoning on the two parcels, ESD would adopt a GPP for development of the site. As currently envisioned, the proposed project would conform to R7-A zoning equivalency (4.0 floor area ratio), with a C2-4 commercial overlay zone (2.0 FAR). R7-A zoning controls on the site would be similar to the surrounding R6 zoning that has facilitated the Gateway Estates development. As such, development that would occur on the project site would be primarily residential, with some ground-floor commercial space included in the base of the buildings on both parcels.

It is also expected that the GPP would require that 100 percent of the units developed as part the proposed project would be targeted to affordability levels at or below 60 percent of area median income ("AMI"), matching the current incomes of neighborhood residents. Twenty percent of the units would be designated for people with intellectual and developmental disabilities; and ten percent of the units would be adapted to be fully accessible and move-in ready for persons with mobility, hearing or vision impairment. The supportive housing components of the proposed project would be subject to funding by OPWDD.

C. PURPOSE AND NEED

The proposed action facilitates the construction of affordable housing in a significantly underserved portion of Brooklyn, in the area known as East New York. The proposed sale and redevelopment of the project site would allow for the reuse of substantial undeveloped acreage to provide affordable housing for New Yorkers, and would further accommodate people with intellectual and developmental disabilities or with mobility, hearing or vision impairment.

D. REQUIRED APPROVALS

The proposed project is expected to require the following actions and approvals:

- Disposition of parcels A and B from DASNY to ESD and sale by ESD to designated developer
- ESD adoption and affirmation of a General Project Plan, including possible overrides of certain aspects of the NYC Zoning Resolution ("ZR"), including:

  - Uses Permitted As of Right (ZR 22-10; ZR 32-10)
  - Quality Housing Program (ZR 23-011; 28-01)
  - Modification of Requirements for Public, Publicly-Assisted and Government Assisted Housing or for Non-profit Residences for the Elderly (ZR 25-25)
  - Open Space and floor area regulations (ZR 23-141)
  - Open Area Requirements for Residences (ZR 23-89)
  - Maximum Number of Dwelling Units or Rooming Units (ZR 23-22)
  - Parking (ZR 25-12; 25-23)
  - Height and Setback Regulations (ZR 23-631)
- Possible funding from the following:
  - New York City Department of Housing Preservation and Development
  - New York City Housing Development Corporation, and
  - New York State Homes and Community Renewal.

E. PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT

The EIS will contain:

- A description of the proposed project and its environmental setting;
- A statement of the environmental impacts of the proposed project, including its short- and long-term effects, and typical associated environmental effects;
- An identification of any significant adverse environmental effects that cannot be avoided if the proposed project is completed;
- A discussion of alternatives to the proposed project;
- An identification of any irreversible and irretrievable commitments of resources that would be involved if the proposed project is built; and
- A description of mitigation measures proposed to avoid or minimize any significant adverse environmental impacts.

As noted previously, the EIS analyses for the proposed project will be performed for 2028 (the "build year"), when the project is expected to be completed and fully operational. For this build year, the EIS will assess the potential for the proposed project to result in any significant adverse impacts by comparing conditions anticipated with the proposed project fully constructed and operational on the two parcels ("With Action conditions" or "Build conditions") to conditions expected without the proposed project ("No Action conditions" or "No Build conditions"). The EIS will assume that the physical condition of the project site without the proposed project would resemble existing conditions. As the BDC is scheduled for closure December 2015, the operations on the remainder of the project site

block without the proposed project will not resemble existing conditions; rather, it is currently understood that the BDC will no longer serve patients, though some administrative staff may remain at the BDC, maintaining ongoing business-related occupancy. In addition, the EIS also will account for other "background projects" and/or changes expected to occur independent of the proposed project but in the vicinity of the project site, as appropriate.

Because the proposed project would be developed in New York City, this EIS will be prepared following the format of the New York City Environmental Quality Review ("CEQR") *Technical Manual,* and EIS analyses will be conducted per the guidance of the *CEQR Technical Manual.* In this way, the proposed project may be assessed in a manner that appropriately reflects the urban conditions and setting of the project site.

Screening Analyses

Based on the guidance, methodologies and thresholds of the *CEQR Technical Manual*, it is expected that the following environmental areas will not require detailed analysis in the EIS. For each of these areas a brief screening analysis, following the guidelines of the *CEQR Technical Manual*, will be presented in the EIS, with further detailed analyses if the screening analyses indicate they are warranted:

SOCIOECONOMIC CONDITIONS

The proposed action would result in development of the project site in a manner consistent with surrounding development. The proposed project would provide low-income housing to meet a ready demand and would not affect the surrounding land pattern, nor be of a scale to substantially alter the socio-demographic composition of the area. Therefore, the development of the project site would neither directly displace residents or businesses, nor would it be expected to result in indirect displacement of surrounding businesses. In addition, the proposed project would neither affect the availability of goods and services, nor would it affect economic investment in a way that could change the socioeconomic character of the area.

Further, the proposed development would not adversely affect low-income populations, and to the extent that surrounding populations may experience effects associated with transportation, air quality and noise, such impacts will be investigated separately in the respective topical areas of the EIS (detailed analyses described further herein), and then collectively in the Neighborhood Character and Cumulative Effects chapters of the EIS, as appropriate.

For these reasons, a detailed socioeconomics study, pursuant to the guidance of the *CEQR Technical Manual,* is not warranted. However, demographic data will be provided in order to describe the social

context of the proposed action, as well as to inform detailed analyses of potential impacts to Schools, Child Care, Libraries, and Open Space, in particular:

- Existing population characteristics, based on 2010 U.S. Census data, will be presented for the existing conditions in the study area census tracts identified within a study area approximating a ¼-mile radius surrounding the project site. A profile of a residential population will be presented which includes: total number of residents, household size, income, age distribution and ethnicity. These data will be compared to corresponding data for Brooklyn and the City.

- No Action conditions will be represented as "no new development on or residential occupancy of the project site, and With Action conditions will represent the proposed project. Off-site development expected to occur by 2028, as determined in the Land Use, Zoning, and Public Policy chapter will be considered to estimate total No Action population in the study area.

COMMUNITY FACILITIES AND SERVICES – Healthcare and Police and Fire Services

The proposed project would not directly affect healthcare or police and fire service facilities, such as by relocating a community facility. The *CEQR Technical Manual* recommends an analysis of potential indirect impacts on public health care facilities and police and fire protection if an action would introduce a sizeable new neighborhood. The proposed action would not create a sizeable new neighborhood. However, a summary assessment will be provided as part of the EIS for both healthcare and police and fires services, as part of the Community Facilities and Services chapter:

- Pursuant to the guidance provided in the *CEQR Technical Manual*, the location of hospitals and public health clinics serving the site will be identified on a map, and the name and location of the facility, its size, and its population and/or service area will be determined and presented.

- For No Action conditions, the New York City Health and Hospitals Corporation ("NYCHHC") and the New York City Department of Health and Mental Hygiene ("NYCDHMH") will be contacted for information on hospitals and public health clinics respectively regarding information on physical changes planned at these facilities. In addition, No Action projects identified in the Land Use, Zoning, and Public Policy chapter will be summarized, as they could also potentially affect available capacity of healthcare resources in the No Action condition. On-site services, that may be included as part of the proposed project, and which would be coordinated with OPWDD, will be described in the EIS. To assess the potential effects of the proposed action, the NYCHHC or the NYCDHMH (as appropriate) will be consulted, and their written assessment will be recorded as a component of the EIS, summarized, and serve as the basis for determining potential impacts.

- The locations of New York City Police Department ("NYPD") and New York City Fire Department ("FDNY") facilities serving the site will be identified and included on a map to illustrate their proximity to the proposed site.
- The NYPD and FDNY will be contacted for the appropriate information (service area, service issues, etc.) and correspondence will be included, as appropriate, in the EIS.

SHADOWS

The project site contains no sunlight sensitive resources that could be potentially affected by shadowing resulting from the proposed development of the project site. However, preliminary plans indicate that on-site buildings would be up to 95 feet in height, and according to the *CEQR Technical Manual,* buildings over 50 feet in height (including mechanical space) are generally subject to an analysis of the effect of shadows cast by the development. Specifically, the *CEQR Technical Manual* requires a shadow analysis for proposed projects that have the potential to cast new shadows on a publicly accessible open space or historic resources with sun-sensitive features. Accordingly, a screening analysis will be prepared pursuant to the guidance of the *CEQR Technical Manual* to determine when new shadows would reach any open space or sun-sensitive features of historic resources, and if required, a more detailed analysis of shadows will be provided.

URBAN DESIGN AND VISUAL RESOURCES

Following the guidelines of the *CEQR Technical Manual*, a preliminary assessment is appropriate if the project would result in a physical change beyond what is allowed by existing zoning such as modifications of yard, height, and setback requirements or increase in floor area, and if such change is observable by the pedestrian. The preliminary assessment will include a description of the urban design and visual resources that exist in project area currently, and their anticipated conditions in the future without the proposed project.

Although the proposed action would facilitate development on the project site that physically would differ markedly from its current unbuilt condition, the proposed project would be consistent with the recently constructed residential development directly north of the project site. As such, the proposed project would be expected to reinforce the well-established, though recent, urban design of the surrounding neighborhood. The proposed action would not be anticipated to result in off-site effects, such as secondary development, or changes to the neighborhood street pattern or block configuration. Further, there are no visual resources known to be in the area that could be affected by development on the project site. Therefore, the discussion of urban design will be limited to the anticipated residential buildings anticipated to be constructed on the project site.

The chapter will describe and include photographs of the existing conditions of the site and surroundings, and explain future No Action conditions. The discussion of conditions with the proposed project will include photographs, zoning and floor area calculations, lot coverage, building heights, project drawings and site plans, and descriptions of view corridors, if present. Available architectural renderings of the proposed development will be included to support a description of the project site and its relation to the surrounding area with the proposed action.

NATURAL RESOURCES

Given that the project site is maintained as lawn area and paved driveways and parking areas, no plant or animal species of concern are anticipated on the project site. The New York State Department of Environmental Conservation ("NYSDEC") Natural Heritage Program and U.S. Fish & Wildlife Service ("USFWS") will be consulted, and a field inspection will be conducted. In addition, because the project site is located within the Jamaica Bay Watershed, a *Jamaica Bay Watershed Form* will be prepared and included in an appendix to the EIS, along with appropriate agency correspondence. Findings will be summarized in the EIS.

WATER AND SEWER INFRASTRUCTURE – Water Supply

As the proposed action would not likely result in an exceptionally large demand for water (e.g., one million gallons per day or more) and is not located in an area known to have consistently low water pressure, a detailed water supply assessment will not be necessary, per the guidance of the *CEQR Technical Manual*. Based on available information, the existing water distribution system serving the project area will be described, including known relevant factors such as any known weaknesses in the local water supply distribution systems, such as sites near pressure boundaries; with a one-way flow of water; far from the nearest pressure regulator; far from the nearest trunk main; or that contain a large number of six inch (or smaller) water mains, based on information obtained from the New York City Department of Environmental Protection ("NYCDEP").

The amount of water that may be utilized will be determined per the guidance provided in the *CEQR Technical Manual* for No Action and With Action conditions, and will be presented in tabular format and summarized in the EIS. The anticipated demand will be assessed to determine if there would be sufficient capacity to maintain adequate supply and pressure. The NYCDEP Bureau of Environmental Planning and Analysis ("BEPA") will be contacted for general assistance, as appropriate. Water conservation measures to be expected to be implemented as part of the proposed project also will be described.

SOLID WASTE AND SANITATION SERVICES

According to the *CEQR Technical Manual*, a solid waste and sanitation services assessment determines whether a project has the potential to cause a substantial increase in solid waste production that may overburden available waste management capacity or otherwise be inconsistent with the City's Solid Waste Management Plan ("SWMP") or with state policy related to the City's integrated solid waste management system. Few projects have the potential to generate substantial amounts of solid waste (50 tons per week or more) that could result in a significant adverse impact. However, it is recommended in the *CEQR Technical Manual* that the solid waste and service demand generated by a project be disclosed, based on standard waste generation rates. Therefore, the amount of solid waste that the proposed project would generate will be calculated, using solid waste generation rates provided in the *CEQR Technical Manual,* and disclosed in the EIS.

ENERGY

Per the *CEQR Technical Manual* a detailed analysis in the EIS is not required. According to the *CEQR Technical Manual*, all new structures requiring heating and cooling are subject to the New York City Energy Conservation Code. Therefore, the need for a detailed assessment of energy impacts is limited to projects that may significantly affect the transmission or generation of energy. The proposed project would not significantly affect the transmission or generation of energy. The energy demand of the site (operational energy consumption) will be determined and will be described in the EIS, pursuant to the guidance of the *CEQR Technical Manual*.

PUBLIC HEALTH

As described in the *CEQR Technical Manual,* a public health analysis would not be necessary for most projects; it may be necessary for projects where a significant unmitigated adverse impact is found in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise. It is likely that any such impacts that may be determined with the proposed action would be avoided, minimized or mitigated, and thus there would be no need for further consideration in a Public Health affects assessment.

NEIGHBORHOOD CHARACTER

The character of a neighborhood is established by numerous factors, including land use patterns, the scale of its development, the design of its buildings, the presence of notable landmarks, and a variety of other features that include noise levels, traffic, pedestrian patterns, shadows, and open space. It is anticipated that a preliminary assessment of neighborhood character would be appropriate, per the guidance of the *CEQR Technical Manual,* with consideration given to potential transportation and noise effects that may result with the proposed project. It is not anticipated that potential effects of the

proposed action would affect defining the features of the surrounding neighborhood, which is characterized by recently constructed residential development (similar to what is being proposed on the project site) to the north, a regional retail shopping area to the west (also recently completed), unbuilt open space (not publicly accessible) to the east, and the Belt Parkway to the south. The preliminary assessment will be summarized in the EIS, as appropriate, and if required a more detailed analysis of neighborhood character with regard to impacts determined in other technical areas, per the guidance of the *CEQR Technical Manual* will be provided.

Scope of Work for Detailed Analyses

TASK 1: PROJECT DESCRIPTION

The first chapter of the EIS will introduce the reader to the proposed project and set the context in which to assess impacts. The chapter will contain project identification; the background and history of the project and project site; a statement of purpose and need for the proposed project; a detailed description of the proposed actions necessary to achieve the project; a description of the development program, project siting, and design; and a discussion of approvals required, procedures to be followed, and the role of the EIS in the process. This chapter is the key to understanding the proposed project and its impacts, and gives the public and decision-makers a base from which to evaluate the project against the future without the proposed project.

TASK 2: LAND USE, ZONING, AND PUBLIC POLICY

Given that most of the area surrounding the project site is fully developed per the amended 1996 FCURP, it is unlikely that the proposed action would affect land use, zoning, or public policy off-site. However, a chapter will be prepared to provide an overview of the context in which the proposed action would occur (which includes the ESD zoning override/implementation of a GPP).

The land use and zoning analyses, consistent with the guidelines of the *CEQR Technical Manual*, will include a land use study area that encompasses a 400-foot radius from the project site. The chapter will consider the project's effect in terms of land use compatibility and land use trends as well as officially adopted plans and policies. This chapter will:

- Describe conditions on the project site, including the existing conditions and the underlying zoning;

- Describe the predominant land use patterns in the study area, including recent development trends. Generalized land use patterns and a discussion of trends in the surrounding neighborhood will also be presented;
- Describe existing zoning and recent zoning actions, as applicable, in the study area, as well as modifications to area plans, such as the FCURP and subsequent development of Gateway Estates in the area north and west of the project site;
- List future projects in the study area and describe how these projects might affect land use patterns and development trends in the study area in the future without the proposed action. Also, identify any pending zoning actions or other public policy actions that could affect land use patterns and trends in the study areas as they related to the proposed project;
- Describe the proposed zoning overrides and proposed GPP stipulations related to development on the project site;
- Assess the impacts of the proposed project on land use, zoning and public policy.

The project site is located within the City's Coastal Zone, and therefore, the consistency of the proposed action with the *Vision 2020: New York City Comprehensive Waterfront* Plan will be assessed; the New York State Department of State ("NYSDOS") Coastal Management Program Coastal Assessment Form ("CAF"), will be completed and included as part of the EIS.

TASK 3: COMMUNITY FACILITIES AND SERVICES

Given the likely size of the residential population that would be introduced with the proposed project, detailed analysis of schools, child care, and libraries will be conducted per the guidance of the *CEQR Technical Manual*.

Schools

- **Existing conditions.** The study area for the analysis of elementary, intermediate and high schools will be the school district's sub-district, based upon GIS files for the sub-district boundaries from the New York City Department of City Planning ("NYCDCP"). The locations of the elementary and intermediate schools will be illustrated on a map of the school district, with the sub-district study area identified, and information will be provided in the manner prescribed by the *CEQR Technical Manual*.
- **No Action and With Action conditions.** New York City Department of Education ("NYCDOE") enrollment projections will be obtained for the No Action condition, including special education students, and will be presented per the methodology found in the *CEQR Technical Manual*. Information on projected changes that may affect the availability of seats in the schools within

the study area will be obtained, including plans for changes in capacity, new programs, capital projects, and improvements. The guidance of the *CEQR Technical Manual* will be followed to estimate the number of elementary- and intermediate-level school children that would be generated by the proposed action with each phase of construction. These estimates will be compared to the No Action conditions to allow ESD to consult with NYCDOE in determining the potential effects that may be attributable to the proposed project with each phase of construction and occupancy. ESD will consult with NYCDOE to determine the available future capacity or resulting deficiency in school seats for the sub-district study area (and for the school district as a whole) elementary and intermediate schools, and for the borough for high schools, per the guidance of the *CEQR Technical Manual*. It is expected that NYCDOE would advise suitable mitigation where project-generated demand is not expected to be accommodated within NYCDOE capital planning efforts.

Child Care

- **Existing conditions.** The locations of publicly funded child care and Head Start centers within approximately 1.5 miles of the project site will be illustrated on a map, and information regarding location, capacity, and enrollment for existing publicly funded group child care and Head Start facilities within the study area will be obtained from Administration for Children's Services' ("ACS") Division of Child Care and Head Start, and provided in the manner prescribed by the *CEQR Technical Manual*.

- **No Action and With Action conditions.** ACS will be contacted to obtain information on any changes planned for child care programs or facilities in the area of the proposed project. If changes are planned, they will be incorporated into the No Action capacities, together with any off-site development expected in No Action conditions (as identified in the Land Use, Zoning, and Public Policy chapter). Table 6-1b of the *CEQR Technical Manual* will be used to estimate the number of eligible children under age 6, including planned residential development projects that include a substantial number of affordable housing units within the study area. The available capacity or resulting deficiency in slots and the utilization rate for the study area will be calculated for the proposed action. The projected demand for the proposed project will be added to the No Action conditions.

Libraries

- **Existing conditions.** A brief description of existing libraries within the study area, their information services, and their user population will be provided, and the location of each identified branch library within the study area will be illustrated on a map. The Brooklyn Public Library, or NYCDCP, will be contacted to obtain available information on services provided and circulation, as well as an assessment of existing conditions and levels of utilization. The branch

holdings (print and electronic media) and circulation data (from NYCDCP's *Selected Facilities and Program Sites* database) will be identified.

- **No Action and With Action conditions.** Information will be obtained from the Brooklyn Public Library, concerning any planned new branches serving the study area and changes to existing branches in the No Action scenarios is then estimated. No Action projects identified in the Land Use, Zoning, and Public Policy chapter will be considered, as appropriate. Holdings per resident in the With Action scenario will be estimated and compared to the No Action holdings estimate and presented in a table. With input obtained from management at the affected library branch and any other branches that would be expected to absorb the demand, the effects of the added population (including the No Action and With Action Scenarios) on special programs, facilities, or collections will be qualitatively discussed.

TASK 4: OPEN SPACE

No direct adverse effects to open space resources would be expected with the proposed action, as the project site contains no publicly accessible open space or park. Therefore, the open space analysis is only concerned with potential indirect effects to open space.

The neighborhood containing the project site is not identified as either "Well-Served" or "Under-Served," according to the *CEQR Technical Manual*, and thus the threshold for requiring an analysis is 200 residents or 500 workers. The proposed project would introduce more than 200 residents, and so residential analysis would be required; fewer than 500 workers would be attributable to the site, and so no analysis of potential impacts to open space as a result of workers is required.

The analyses of open space will be undertaken as described following:

- **Existing conditions.** A study area for the preliminary open space assessment for potential indirect effects associated with residential population introduced by the proposed action would be developed according to a one-half mile radius of the project site. All census tracts with at least 50 percent of their area within the generalized study area will be included as part of the study area for analysis. All open spaces within the defined study area will be identified and confirmed in the field. The acreage for each of the open spaces within the study area will be determined, and the total for the study area calculated.
    - Residential population in the study area will be based on 2010 U.S. Census data (with a population adjustment based on subsequent population estimates from DCP, as appropriate).
    - Per the guidance of the *CEQR Technical Manual*, open space ratios (acres of open space per 1,000 residents) will be calculated for both active open space (such as baseball fields

and basketball courts) and passive open space (such as lawn or sitting areas). These open space ratios will be relied upon as a benchmark for determining potential impact on open space resources with the introduction of new residential population expected to be introduced by the proposed action.

- **No Action and With Action conditions.** Open space ratios will be calculated, as prescribed by the *CEQR Technical Manual*, for the proposed project. Populations and open space expected to be introduced by No Action projects identified in the Land Use, Zoning, and Public Policy chapter will be considered, as appropriate.

TASK 5: HISTORIC AND CULTURAL RESOURCES

The *CEQR Technical Manual* identifies historic resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archeological importance. This includes designated NYC Landmarks; properties calendared for consideration as landmarks by the New York City Landmarks Preservation Commission ("NYCLPC"); properties listed on or determined eligible for the State/National Register of Historic Places ("S/NR") or contained within a district listed on or determined eligible for S/NR listing; properties recommended by the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP") for listing on the S/NR; and National Historic Landmarks.

OPRHP will be consulted with regard to on-site archaeology. An Archaeological Documentary Study ("Phase IA") was previously prepared for parcels A and B. This documentary study will provide OPRHP with an understanding of the potential for archaeological resources of significance to be within the limits of the proposed development projects. The Phase IA, and related documentation will be included together with OPRHP correspondence, as appropriate, as an appendix to the EIS. The findings of the Phase IA and the determinations of the OPRHP will be summarized in this chapter of the EIS, and the potential for significant adverse impacts to archaeological resources will be assessed.

TASK 6: HAZARDOUS MATERIALS

As explained in the *CEQR Technical Manual*, consideration of hazardous materials in the EIS process examines whether the proposed action may increase the exposure of people or the environment to hazardous materials, and whether the proposed action may result in potential significant impacts to public health or the environment. As stated in the *CEQR Technical Manual*, the potential for significant adverse impacts from hazardous materials depends on the type of materials present and their location on the project site, their levels, and whether exposure to the hazardous materials would be associated with the proposed action, either during construction or during subsequent occupancy of the project site.

Therefore, environmental studies, such as Environmental Site Assessments ("ESAs"), which have been conducted to determine the potential presence of hazardous materials on the project site, will be

reviewed in the EIS. The EIS will evaluate whether human exposure to hazardous materials would be expected to occur with the proposed action, and whether potential hazardous materials exposure could affect on-site or surrounding natural resources or the proposed action could exacerbate existing environmental contamination.

A Phase I ESA was previously prepared for the project site in July 2014, and a Phase II ESA was subsequently prepared in August 2014. The Phase II ESA made no recommendations for additional testing or remedial action, but recommended that any exported urban fill soils and landfill materials should be handled and disposed in accordance with NYSDEC guidelines and recommendations. The Phase II ESA also recommended that any new building structures should have an engineered vapor barrier installed under the foundation slabs in order to prevent any accumulation of methane gas under building structures and to eliminate potential vapor migration into the building structure. The Phase II ESA proposed that a Remedial Action Plan ("RAP") detailing the installation of a vapor barrier and a Construction Health and Safety Plan ("CHASP") should be in place to protect site workers during construction. These Phase I ESA and the Phase II ESA reports may be incorporated by reference, or included as appendices to the EIS; the reported findings will be summarized in the EIS, together with explanation of recommended protocols, such as a CHASP, which may be appropriate.

The conclusions and recommendations provided as part of the previously prepared ESAs will be evaluated and summarized in the EIS. The EIS will disclose potential impacts relating to hazardous materials exposure that could result with the proposed action, and include explanation of any measures required to ensure that impacts are avoided to the greatest extent practicable.

TASK 7: WATER AND SEWER INFRASTRUCTURE

Sewers and Stormwater Assessment

The project site is located in an area with a separate sewer system and is served by the 26th Ward Wastewater Treatment Plant ("WWTP"). The proposed action would introduce a mixture of land uses in amounts greater than the thresholds found in the *CEQR Technical Manual* and would thus require a preliminary wastewater/stormwater analysis.

The preliminary analysis of sewers focuses on the effects of increased sanitary and stormwater flows on the City's infrastructure serving the site. Therefore, the study area for the proposed action will include the 26th Ward WWTP and the conveyance system comprising the plant's drainage basin and affected combined sewer system. The study area will be defined in accordance with the *CEQR Technical Manual*, and the following steps will be completed per CEQR methodologies:

- **Existing conditions.** Describe the existing wastewater and stormwater conveyance systems and the 26th Ward WWTP and determine the existing sanitary flows or treated wastewater flows resulting from the area of the proposed action.

- **No Action and With Action conditions.** Future No Action estimates of the expected sanitary flows or treated wastewater flows will be determined based on *CEQR Technical Manual* guidance; should other topical areas (e.g., Land Use, Zoning, and Public Policy) reveal No Action projects, they may be included in the future No Action conditions for the assessment of water supply, if appropriate. The volume and peak discharge rates of stormwater and sewage expected from the site with the proposed project will be determined for a range of rainfall events. The NYCDEP matrix in Worksheet 2 in the *CEQR Technical Manual* will be utilized for this purpose. If the matrix analysis indicates an increase of 2 percent or more over existing conditions for dry and wet weather flows from the proposed site for any rainfall event that would discharge to the Jamaica Bay watershed, then, per the *CEQR Technical Manual* procedure. Conditions on the project site with and without the proposed project will be described in the EIS and presented in a tabular format per the guidance of the *CEQR Technical Manual* and summarily described in the EIS.

TASK 8: TRANSPORTATION

The transportation analyses conducted for the proposed action will include traffic, bus, and pedestrian analyses to determine the potential impacts associated with the proposed action. In addition, vehicular and pedestrian safety evaluations will also be prepared. Parking demand generated by the proposed action will also be considered in a parking analysis. Analyses of subway ridership will not be conducted, since the closest subway stations are over one mile northwest from the site, indicating that there would not be demand sufficient to warrant impact analyses for this travel mode.

Traffic Analysis

According to the *CEQR Technical Manual*, significant adverse impacts would be unlikely (and a detailed traffic assessment typically not warranted) with a project that would generate fewer than 50 new vehicle trips in any peak hour. However, the proposed project would be expected to exceed the 50-trip *CEQR Technical Manual* analysis threshold, compared to No Action conditions. Therefore, detailed traffic analyses are proposed. These traffic analysis tasks will be undertaken as described following:

- **Existing conditions.** To develop the understanding of existing conditions, data collection will be undertaken as follows:

    - Conduct traffic counts at traffic analysis locations via a mix of automatic traffic recorder ("ATR") machine counts and manual intersection turning movement counts. ATRs will provide continuous 24-hour traffic volumes for a minimum of nine days (including two

weekends) along the principal corridors serving the project site. ATRs will be placed on Fountain and Vandalia avenues. Manual vehicle classification turning movement counts will be conducted during the weekday AM, midday, and PM peak periods. Where applicable, available information from recent studies in the vicinity of the study area will be compiled.

Time periods. Data will be collected for Weekday AM, midday, and PM peak hours.

Study intersections. The nine traffic study intersections identified include the peripheral roadway "corner" intersections along Fountain and Vandalia avenues and Erskine Street, as follows and as illustrated on the following figure, "Proposed Traffic Study Area":

- Fountain Avenue at Flatlands and Vandalia avenues, and at Linden Boulevard
- Flatlands Avenue at Elton Street and at Schenck Avenue
- Erskine Street at Vandalia and Seaview avenues, and at the Belt Parkway east and westbound ramps.

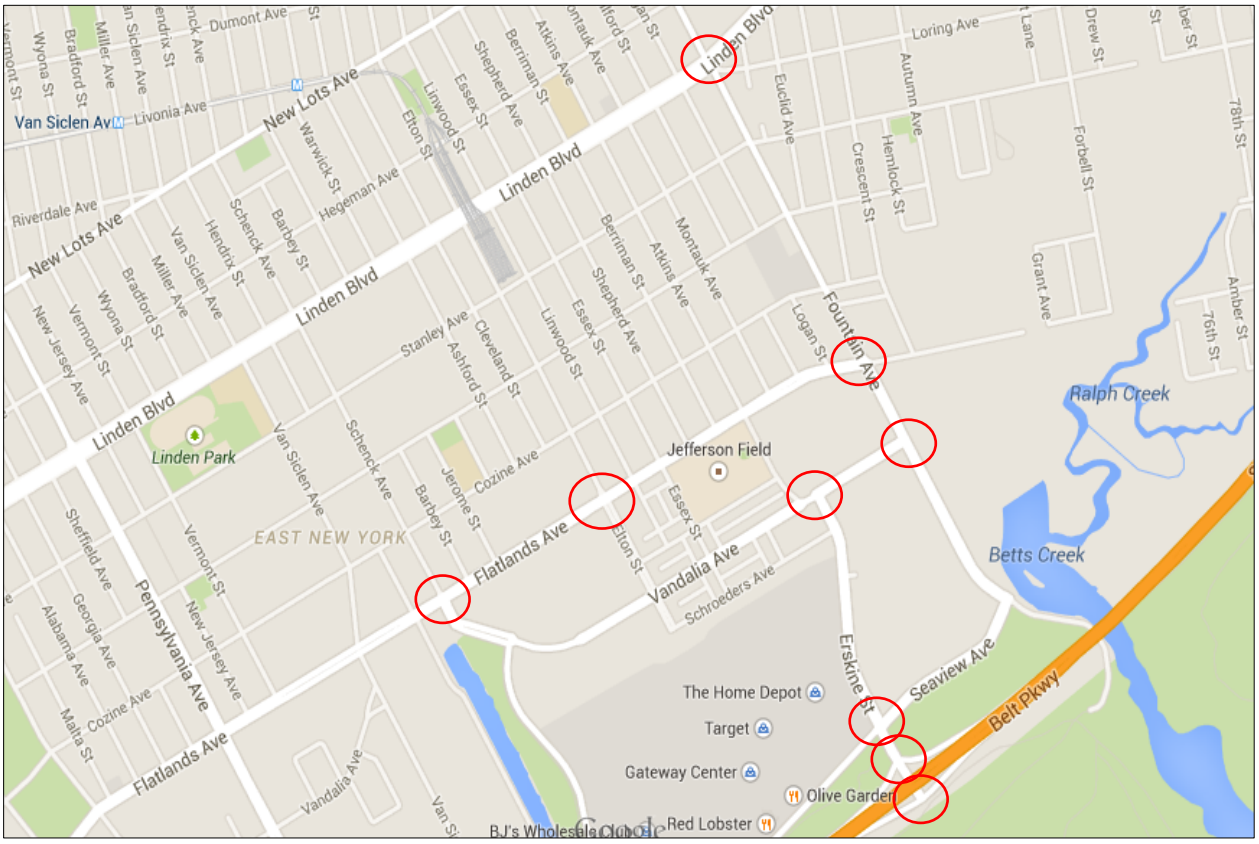

Figure 2: Proposed Traffic Study Area

The analysis will continue with:

- Conduct travel speed and delay studies along principal corridors in the study area to provide supporting data for air quality and noise analyses. These speed-and-delay studies will be conducted in conjunction with the traffic volume counts, and will be conducted along Fountain and Flatlands avenues.

- Inventory physical and operational data as needed for capacity analysis purposes at each of the analyzed intersections. The data collected will be consistent with current *CEQR Technical Manual* guidelines and will include such information as street widths, number of traffic lanes and lane widths, pavement markings, turn prohibitions, parking regulations, and signal phasing and timing data. Official signal timings will be obtained from NYCDOT.

- Using *2000 Highway Capacity Manual* methodologies, determine existing traffic conditions at each analyzed intersection including capacities, volume-to-capacity ("v/c") ratios, average control delays per vehicle and levels of service ("LOS") for each lane group and intersection approach, and for the intersection overall.

• **No Action conditions.** For the proposed project, planned projects that would be developed in the area in the future without the proposed project (the No Action condition) will be identified, and the associated future No Action travel demand generated by these projects will be determined. The future traffic volumes from No Action projects will be estimated using published environmental assessments or forecasted based on current *CEQR Technical Manual* guidelines, U.S. Census data, and/or data from other secondary sources. An annual growth rate (typically, such factors are in the 0.5 to 1.0 percent range) will be applied to existing traffic volumes to account for general background growth, per *CEQR Technical Manual* guidelines. Mitigation measures planned for No Action projects will also be reflected in the future No Action traffic network as will any relevant initiatives planned by NYCDOT and other agencies. No Action traffic volumes will be determined, v/c ratios, and levels of service will be calculated, and congested intersections will be identified.

• **With Action conditions.** The following steps will be taken for analyses of the proposed project:

- Based on available sources, U.S. Census data, standard references, and other approved EIS documents, forecast the travel demand generated by the proposed project's land uses, and the modes of transportation expected to be used for these trips.

- Determine the volume of vehicle traffic expected to be generated by the proposed project, assign that volume of traffic in each analysis period to the approach and departure routes likely to be used, and prepare balanced traffic volume networks for the future condition with the proposed project (the With Action condition) for each analysis period.

- Determination of potential traffic impacts will again follow a two-step process similar to that for the No Action conditions. Determine the resulting v/c ratios, delays and LOS for the future With Action condition, and identify significant traffic impacts in accordance with current *CEQR Technical Manual* criteria.

- Identify and evaluate potential traffic mitigation measures, as appropriate, for all significantly impacted locations in the study area in consultation with the lead agency and NYCDOT. Potential traffic mitigation could include both operational and physical measures such as changes to lane striping, curbside parking regulations and traffic signal timing and phasing, roadway widening, and new traffic signal installations.

Bus Analysis

As the proposed project potentially would add 50 or more trips per direction through the peak load point on one or more bus routes, a bus analysis is warranted and will be undertaken according to the following steps:

- **Existing conditions.** A detailed bus-line haul analysis will be performed for the AM and PM peak hours for all bus routes that exceed *CEQR Technical Manual* thresholds for analysis. Existing peak hour bus service levels and maximum load-point ridership will be documented, including counts of ONs, OFFs, and bus occupancies. The study will focus on the B13, B84, and Q8 routes that surround the block and the bus stops nearest the site.

- **No Action and With Action conditions.** Future No Action and With Action conditions will be determined, in a manner similar to that described above for traffic analyses. The effects of new project-generated peak hour trips will be determined, and bus transit mitigation, if warranted, will be identified in consultation with New York City Transit ("NYCT").

Pedestrian Analysis

This task will be undertaken in accordance with the following steps:

- **Existing conditions.** Project-generated pedestrian demand may be significant given the proposed number of dwelling units, which would be expected to generate substantial numbers of walk trips in the immediate area to connect to bus stops and local commercial uses. Pedestrian locations that serve the local buses in the area will be examined, including sidewalks and crosswalks in the immediate vicinity of the project site. A quantitative analysis of pedestrian conditions will be prepared focusing on sidewalks, corner areas and crosswalks in the vicinity of the project site expected to be used by 200 or more project-generated pedestrian trips during one or more peak hours.

- **No Action and With Action conditions.** The analysis will evaluate No Action and Action conditions during the weekday AM, midday and PM peak hours, and the potential for incremental demand from the proposed project to result in significant adverse impacts based on current *CEQR Technical Manual* criteria. Potential measures to mitigate any significant adverse pedestrian impacts will be identified and evaluated.

Vehicular and Pedestrian Safety Evaluation

An examination of vehicular and pedestrian safety issues will be conducted. Accident data for study area intersections from the most recent three-year period will be obtained from NYCDOT. These data will be analyzed to determine if any of the studied locations may be classified (according to *CEQR Technical Manual* criteria) as "high" vehicle crash or high pedestrian/bike accident locations and whether trips and changes resulting from the proposed project would adversely affect vehicular and pedestrian safety in the area. If any high-crash locations are identified, feasible improvement measures will be explored to alleviate potential safety issues. As appropriate, improvements expected to alleviate identified potential vehicular and pedestrian safety issues will be described in the Transportation chapter of the EIS.

Parking Analysis

Parking demand attributable to the proposed action will be analyzed. To begin, on-site parking proposed on each parcel will be evaluated to determine whether project-generated demand will be accommodated. A detailed parking assessment will be conducted. The parking assessment will be conducted as a singular effort but with differentiated results for Parcel A and Parcel B, and combined to reflect potential cumulative effects for the entirety of the proposed action. The detailed parking assessment will comport with guidance provided in the *CEQR Technical Manual* and consist of the following steps:

- **Existing conditions.** Inventory existing public parking lots and garages within ¼-mile (which represents a typical "walkable" radius) of the project site, noting locations, capacities, and peak weekday and Saturday utilization levels.

- **No Action conditions.** Future parking availability in the ¼-mile study area will be projected, based on anticipated background growth rates and forecasts of demand from new development. Any existing off-street parking facilities expected to be displaced or new facilities expected to be developed in the future will be reflected in this projection of No Action conditions.

- **With Action conditions.** The future conditions with the proposed action will be evaluated based on consideration of two factors: the proposed on-site parking supply attributable to the proposed project, and the potential capacity off-site that would be expected to be available to accommodate any overflow parking demand from the proposed project, thus adding to the

overall new on-street parking demand. Any potential parking shortfall within the study area will be identified. If the parking analysis determines that on-site parking supply would meet future parking demands, then an analysis of the off-site parking supply would not be warranted or conducted for the EIS.

TASK 9: AIR QUALITY

Air quality analyses will be carried out in accordance with the *CEQR Technical Manual*, as well as other relevant guidance and protocols provided by NYSDEC, NYCDEP, and the U.S. Environmental Protection Agency ("USEPA"). If available and if three years or less in age, environmental studies for other projects within the vicinity will also be reviewed, in accordance with the *CEQR Technical Manual* guidance. The proposed air quality analyses will evaluate both stationary source impacts and mobile source impacts, to consider:

- The potential for traffic volumes and the potential redistribution of traffic associated with the proposed development to result in significant mobile source air quality impacts;
- The potential for emissions from the heating, ventilating, and air conditioning ("HVAC") systems of the proposed development to result in stationary sources pollutants that would significantly impact existing land uses;
- The potential for emissions from construction-related vehicles and activities to result in significant impacts on sensitive land uses.

Should exceedances of the National Ambient Air Quality Standards ("NAAQS"), Significant Threshold Values, or *de minimis* values be predicted, mitigation measures that could be undertaken to reduce these values (e.g*.,* additional retrofit technologies, alternative construction schedules alternative staging area) would be identified and the effectiveness of these measures would be discussed qualitatively as a component to respective discussions of analyses and findings.

Project-Induced Mobile Source Air Quality Impacts Assessment

Emissions from project-related traffic, and other traffic associated with existing uses, have the potential to increase mobile source emissions significantly at nearby sensitive land uses. Therefore, screening thresholds contained in the *CEQR Technical Manual* will be used to determine whether detailed mobile source analyses would be required. If this screening of mobile sources identifies intersections requiring further analysis, the EIS would determine whether future traffic during peak traffic periods would cause or exacerbate a violation of the 8-hour ambient air quality standard for carbon monoxide ("CO"), the 24-hr or annual particulate matter with a diameter of 10 micrometers or less ("PM_{10}") standard or exceed the NYCDEP CO *de minimis* criteria and 24-hr and annual Significant Threshold Values for particulate matter with a diameter of 2.5 micrometers or less ("$PM_{2.5}$") near any of these locations.

- **Screening.** A screening level analysis based on procedures found in the *CEQR Technical Manual*, will be conducted to identify those air quality intersections that will be studied in detail under the proposed development scenario. This will be conducted for the 2028 build year for the weekday AM, Midday and PM peak periods.

  For the CO microscale analysis, a volume screening threshold of 170 vehicles as defined by the *CEQR Technical Manual* screening guidelines for this area of the Brooklyn will be utilized. These sites will include locations of critical roadway links and heavily congested intersections, locations adjacent to sensitive land uses, and representative locations throughout the study area that may be affected by the traffic generated by the proposed developments. One air quality analysis site will be selected based on the results of this screening level analysis.

  For $PM_{2.5}$, NYCDEP has developed an interim guidance policy that recommends a detailed quantitative analysis be conducted if the number of project-generated heavy duty diesel vehicles traveling through any given intersection exceeds the screening threshold defined in the *CEQR Technical Manual*. If the screening value is exceeded, a quantitative $PM_{2.5}$ analysis will be conducted at one "worst-case" analysis site. For PM_{10}, project-generated heavy duty diesel truck and/or bus trips, as well as high volumes of existing trucks and/or buses (the Metropolitan Transportation Authority's Spring Creek Bus Depot is nearby) will be examined in relation to the sensitive locations. PM_{10} 24-hr and annual levels will be estimated at one analysis site for the existing and future No Action and With Action conditions. $PM_{2.5}$ 24-hr and annual levels will be estimated at one analysis site for future conditions. Incremental $PM_{2.5}$ levels will be determined at each receptor.

- **Detailed microscale mobile source analysis ("dispersion modeling").** Detailed microscale mobile source analysis using *CEQR Technical Manual* procedures will be conducted to estimate potential impacts near congested locations. This analysis will employ the USEPA CAL3QHC (Version 2) dispersion model for the CO microscale analysis, the CAL3QHCR dispersion model for the PM_{10} and the $PM_{2.5}$ analyses and the latest USEPA emission factor algorithm (currently MOVES 2014). Intersection geometries will be developed for each analysis site.

  Worst-case meteorological conditions, including wind speed, stability class, ambient temperature, and persistence factor, will be selected for the microscale CO analysis. Modeling inputs appropriate for the study area, as well as background levels, will be obtained from the NYSDEC and NYCDEP. For the PM_{10} and $PM_{2.5}$ microscale analysis, the latest five years of meteorological data from La Guardia Airport will be used.

- **Parking.** Exiting vehicles, which are in cold-start mode, have higher emissions of CO than arriving vehicles. Proposed parking facilities will be analyzed according to the guidelines in the

CEQR Technical Manual Appendices. Vehicles will be divided into "auto" and "SUV" classifications according to information from the traffic study. Emission factors for autos and SUVs will be obtained from the MOVES model. Analyses will be based on the worst-case peak period(s) for parking facilities, which is typically the hour that has the highest number of exiting vehicles.

Stationary Source Air Quality Impacts Assessment

- **Project HVAC Emissions.** An assessment of project-generated HVAC emissions on surrounding land uses (including within the project itself) will be conducted. Assessing the potential impact of project HVAC emissions is a function of fuel type, estimated stack heights, building size (gross floor area), and location of each emission source relative to a nearby sensitive receptor site. Emissions from boilers and generators will be calculated using AP-42, manufacturer's data and MOVES2014. The analyses of the potential impacts will address the NAAQS, in particular the 1-hour and annual standards for nitrogen dioxide ("NO_2"), the 1- and 3-hour standards for sulfur dioxide ("SO_2"), and the 24-hour PM_{10}/$PM_{2.5}$ and annual standards for $PM_{2.5}$. The analysis will be performed using the USEPA's AERMOD model, based on the latest appropriate USEPA guidance. The most recent five years of meteorological data will be used for these simulation analyses. Predicted values will be compared with NAAQS for NO_2, SO_2, $PM_{2.5}$ and PM_{10}.

  The study of selected scenarios will assume worst-case conditions with respect to the assessment of project-generated HVAC system emissions for the 2028 full build-out year. This stationary source assessment will be provided assuming full development of the proposed project.

- **Existing Sources in Vicinity of Site.** An assessment of emissions onto the project site from surrounding land uses will be conducted for the proposed action in the total build condition.

- **Air Toxics Analysis.** This analysis will address the potential impacts that identified off-site toxic emission sources may have on the proposed development. The following procedures will be used to estimate the potential air quality impacts of these toxic emissions:

  - A survey of manufacturing and industrial uses within a 400-foot radius of each new residential area will be conducted using USEPA, NYSDEC (Air Guide-1), and NYCDEP (Bureau of Air Resources) databases to identify facilities that have the potential to impact the proposed redevelopment area.

  - Air permits for these facilities will be acquired and reviewed (if available from NYCDEP). Dispersion analyses will then be conducted to determine the potential of the toxic emissions released from the existing permitted emission sources to adversely affect the new development.

- The NYSDEC Air Guide-1 model, which uses very simple and conservative calculations, will be used to perform a screening-level analysis. If the screening indicates the need to perform a more detailed analysis, the AERMOD model will be used in consultation with the NYCDEP to perform a refined analysis to estimate impacts of carcinogenic and non-carcinogenic toxic air pollutants using unit risk factors and hazard indexes. Estimated pollutant concentrations will be compared to short-term or annual health guidelines values (i.e., short-term guideline concentrations or annual guideline concentrations) and findings reported.

Odors Assessment

This assessment is appropriate for the proposed project because of the proximity of the 26th Ward WTTP east of the project site. A qualitative assessment of potential odor releases near the project site will be conducted, referencing existing reports recently conducted for 26th Ward WTTP.

TASK 10: GREENHOUSE GAS EMISSIONS

Acc*ording to the CEQR Technical Manual*, a greenhouse gas ("GHG") emissions assessment is typically conducted for larger projects (350,000 sf or greater) undergoing an EIS. Because of the size of the proposed project would be greater than 350,000 sf, potential GHG emissions will be examined according to the guidelines provided in the *CEQR Technical Manual*. Findings will be summarized in the EIS.

TASK 11: NOISE AND VIBRATION

Both temporary and long-term increases in noise and vibration levels in the immediate vicinity of the project site could result from development use and occupancy, as well as construction period activities. The principal issues of concern with respect to the development proposed for the site include:

- Mobile and stationary source noise from on-site operations;
- Off-site noise that may affect the proposed project (i.e., traffic, ventilation equipment, etc.); and
- Temporary elevations in ambient noise and vibration resulting from construction activities.

The noise and vibration assessments will be conducted according to the guidance contained in the *CEQR Technical Manual*. If available and relevant, environmental studies for other projects in close proximity to the study area will also be reviewed.

Existing Ambient Noise Conditions – Noise Monitoring

Sources of "ambient" noise may include manufacturing/industrial sources and noise from roadways interior and exterior to the site. The following monitoring activities will be conducted to determine ambient noise in the vicinity of the project site, which will serve as an analytical "baseline:"

- **24-hour noise monitoring.** Monitoring will be conducted at those locations that are anticipated to experience increases due either to construction- or occupancy-related traffic increases. Where appropriate, simultaneous traffic counts will also be performed.

- **Peak-hour traffic noise monitoring.** In support of the noise assessment, peak-hour traffic noise monitoring will be conducted at up to ten (10) locations to establish baseline noise conditions within and surrounding the project area.

Noise Assessment

- **Screening.** A screening analysis will be conducted per the *CEQR Technical Manual*. Mobile source conditions will correspond to the traffic analyses. If traffic analyses identify locations that would receive a doubling of passenger car equivalents with the proposed action, then a detailed analysis for mobile source noise will be performed.

- **Detailed mobile source analysis:** The detailed noise analysis will consider existing, No Action, and With Action conditions, and assess the magnitude of any impacts expected to result from traffic generated by the proposed project.

- **Noise abatement in project design.** Should the ambient noise conditions dictate a need for specific control measures to be considered in the design and construction of the residential buildings on the project site as part of the proposed action, these measures would be identified and the effectiveness of these measures will be addressed in a qualitative manner, based on fundamental noise attenuation principles and assessment procedures referenced within the *CEQR Technical Manual*.

TASK 12: CONSTRUCTION IMPACTS

The *CEQR Technical Manual* provides guidance on when it is appropriate to include a detailed assessment of construction impacts. According to the *CEQR Technical Manual*, construction duration is often broken down into short-term (less than two years) and long-term (two or more years). The EIS will include a consolidated review of potential construction period effects attributable to project construction. In particular, the Construction Impacts chapter of the EIS will summarize the assessments prepared to consider potential construction-period impacts to air quality and construction-related noise and vibration assessment. This chapter will also provide the singular description of construction activities such as phasing, staging plans, equipment that would be utilized, and schedule, all as provided by the designated developer for inclusion in the document.

Air Quality

The assessment of construction period air quality impacts is concerned with pollutants introduced on-site and off-site by project construction activities. This analysis will be performed for a worst-case construction period to be identified and presented in the analysis. The detailed assessment will determine whether the projected construction operations would cause or exacerbate violations of applicable NAAQS; and/or, cause impacts greater than NYSDEC's significant threshold values established by NYSDEC and NYCDEP for CO, particulate matter, 24-hour PM_{10}, 1-hour SO_2, annual and 1-hour NO_2. The following data elements will be utilized in the analysis:

- Types of equipment, fuel used, and operations anticipated at the construction site, and duration of construction activities;
- Numbers of vehicles (trucks and automobiles) entering and leaving the construction site daily and during peak periods, and the effects of these vehicles on the traffic conditions of heavily traveled roadways and congested intersections; and
- Locations of nearby sensitive existing and future land uses.

On-Site Construction Activity Impacts

The analysis of the potential impacts from on-site activities at the construction site will include estimation of emissions generated by construction equipment and dust-generating activities at sensitive receptors neighboring the project site. Quantification of construction-related impacts will be based on the worst-case period, utilizing peak month, peak 24 hours and peak hour of construction activity for the proposed project. The analysis will follow the steps below:

- Evaluation of construction areas and nearby sensitive land uses, construction schedules, levels and duration of construction activities, and a determination of the areas with the greatest potential for construction-phase air quality impacts;
- Estimation of emissions generated by construction activities (demolition, excavation, construction) at the construction site during the years of peak construction activity, including emissions from fugitive dust and exhaust from diesel-powered equipment and trucks;
- Estimation of hourly, daily, monthly, and annual emissions for CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ for the various stages and types of construction activities associated with the proposed project; and
- Dispersion modeling, using USEPA's AERMOD dispersion model, of construction-phase emissions of each construction area for the highest period for each pollutant, to determine the potential for significant adverse impacts at sensitive receptor locations.

Off-Site (Mobile Source) Construction Activity Impacts

The additional truck and automobile (worker) trips generated by the construction activities could affect traffic conditions along heavily traveled roadways and congested intersections. The potential air quality impacts of these trips will be estimated as follows:

- Guidelines developed in the *CEQR Technical Manual* will be utilized to select intersection locations subject to a preliminary screening-level analysis. This analysis will estimate the potential to significantly impact PM_{10} and $PM_{2.5}$ levels near these sites. Screening will be conducted per the mobile source procedures outlined in the operational analysis.

- Pollutant concentrations will be screened at each analysis site for future No Action and With Action (construction) conditions for one critical "worst-case" future-year analysis and peak time period, which will be determined based on peak construction-related truck activities.

Cumulative On-site plus Off-Site Impacts

The cumulative (on-site and off-site) modeling results of the proposed action construction impacts will be compared to the NAAQS for each applicable pollutant. In addition, the estimated impacts of the construction activities will be compared with applicable significant threshold levels.

Noise and Vibration

Construction-Site Noise Assessment

Noise from the construction site would result from machinery, equipment vehicles and associated activities, and a construction site noise assessment will be conducted for the worst-case period. The Federal Highway Administration's ("FHWA") Roadway Construction Noise Model ("RCNM") or an appropriately developed noise spreadsheet model will be utilized to determine noise equipment source levels and to assess the potential for noise impact at sensitive receptors nearby the project construction site. Modeled results will be compared to existing noise levels and the relevant FTA construction noise criteria. The extent and duration of potential noise impacts at each potentially affected noise receptor location during the worst case phase of construction will be considered.

Construction-Site Vibration Assessment

Potential impacts from construction-related vibration will be assessed with respect to both human annoyance and building damage. As with the noise assessment, the Federal Transit Administration ("FTA") construction criteria will be used for the analyses. Construction schedule, phasing, activity and equipment data will be developed for the noise and vibration assessments, including particular activities such as impact pile driving and blasting, which represent the two worst vibration causing activities. Results will be reported in the EIS.

TASK 13: MITIGATION

If significant project impacts are identified in the analyses discussed above, measures will be identified and assessed to mitigate those impacts. This chapter will summarize those findings. Where impacts cannot be mitigated, they will be identified in the EIS as unavoidable adverse impacts.

TASK 14: ALTERNATIVES

The purpose of an alternatives analysis is to examine reasonable and practicable options that avoid or reduce project-related significant adverse impacts while achieving the goals and objectives of the proposed project. As stated in the *CEQR Technical Manual,* "SEQR requires that alternatives to the proposed project be identified and evaluated in an EIS so that the decision-maker may consider whether alternatives exist that would minimize or avoid adverse environmental effects."

Although, there are no alternative sites for the proposed action (the sale of this specific site and its subsequent development), it is understood that the alternatives under consideration are No Action and With Action alternatives. The No Action conditions represent the closure of the BDC care facility adjacent to the project site, and no new development on parcels A and B. If significant adverse impacts are identified that could not be mitigated, the EIS may evaluate an alternative project design that would be expected to avoid unmitigated impacts.

TASK 15: CUMULATIVE EFFECTS

As noted in the task descriptions provided in this scope of work for other topical areas, such as open space, community facilities, transportation, air quality, noise, and construction impacts, analyses will be considered in combination to represent the entirety of the proposed action. In particular, the relationship of the proposed action, which includes the ESD development of the GPP, will be assessed as a matter of land use, zoning, and public policy, for determination of potential cumulative effects related to other recent or proposed development in the surrounding neighborhood. This information will be summarized in the Cumulative Effects chapter.

TASK 16: SUMMARY CHAPTERS

The EIS will include the following summary chapters:

Executive Summary

This chapter will include the key information that has been ascertained through this SEQRA environmental review process, and that is disclosed within the body of this EIS and its accompanying appendices. The information comprising the executive summary will include findings of analyses, identification of impacts and proposed mitigation measures.

Unavoidable Adverse Impacts

No unavoidable adverse impacts are presently anticipated, given the opportunity to control site development through the institution of the GPP. However, should ESD, as lead agency, decide that it is in the State's interest to proceed with the proposed action in such a way as predicted unavoidable adverse impacts may be expected, then these effects would be summarized in this chapter.

Growth-Inducing Aspects of the Proposed Project

The proposed action is not anticipated to induce growth off-site, and the GPP would be in place to control development on the project site.

Irreversible and Irretrievable Commitments of Resources

This chapter will summarize the development associated with the proposed action, as commitments of resources for development of this site.