A. INTRODUCTION

This chapter analyzes the effects of the proposed action on solid waste and sanitation services. According to the *CEQR Technical Manual*, a detailed solid waste and sanitation services analysis is appropriate if an action results in regulatory changes affecting the generation or management of solid waste or if the action involves the construction, operation, or closing of any type of solid waste management facility. In addition, actions involving construction of housing or other development generally do not require evaluation for solid waste impacts unless they are unusually large (a generation rate of less than 10,000 pounds per week, for example, is not considered large).

The proposed action would not involve any regulatory changes nor would it have any direct effects on any solid waste management facilities. However, a screening assessment for the proposed action determined it has the potential to generate more than 10,000 pounds per week of solid waste. While compliance with applicable requirements generally eliminate possible significant adverse impacts, disclosure of the proposed action's solid waste generation is warranted by the CEQR threshold and is provided herein. This entails the calculation of existing solid waste generation on the project site, as well as a comparison of equivalent calculations in the future with and without the proposed action in place. The analysis also discusses the City's comprehensive Solid Waste Management Plan and considers the proposed project's conformity with it.

As discussed in Chapter 1, "Project Description," the proposed action would facilitate a mixed-use development on the project site consisting of 900 DUs; 8,800 sf of local retail space; 330,000 sf of automobile dealership space; 20,000 sf of health club space; 36,000 sf of NYPD Mounted Unit stable facility; and 225 accessory parking spaces. As the analysis conservatively assumes that the project site will remain unoccupied under No-Build conditions, the proposed project represents the net development expected to occur on the site as a result of the proposed action. The residential and police uses would generate solid waste requiring municipal sanitation services while the retail, automobile dealership, and health club uses would generate solid waste requiring private sanitation services.

As shown in this analysis, the proposed action would not result in significant adverse solid waste and sanitation services impacts.

B. METHODOLOGY

The chapter describes existing and future New York City sold waste disposal practices and uses solid waste generation rates for typical land uses provided in the *CEQR Technical Manual* to estimate the solid waste generated by the proposed project. It then assesses the impacts of the project's solid waste generation on the City's collection needs and disposal capacity to determine

whether the City's municipal service can adequately handle the future solid waste demand for the proposed project.

The analysis employs a Build analysis year of 2011. In the future without the proposed action, the analysis assumes that project site would be vacant and this would serve as the baseline for comparing the effects of the proposed project, which is defined in Chapter 1, with additional relevant information provided in this chapter to facilitate the assessment of the project's expected environmental effects on solid waste and sanitation services.

C. EXISTING CONDITIONS

Description of Current Sanitation Services

Municipal Sanitation Services

In New York City, the Department of Sanitation (DSNY) is the City agency responsible for the collection and disposal of municipal solid waste and recyclable materials generated by residences, some nonprofit institutions, tax-exempt properties, and City, State, and Federal agencies. DSNY also collects waste from street litter baskets, street-sweeping operations, and lot cleaning activities. Most of the City's municipal solid waste is collected and delivered to transfer stations for sorting and transfer to larger "hopper" trucks and transported out of the City to out-of-state landfills. It is estimated that DSNY collects over 12,000 tons of residential and institutional refuse and recyclables per day.[1] According to the *CEQR Technical Manual*, the typical DOS collection truck for residential refuse carries approximately 12.5 tons of waste material and recycling trucks carry about 11.5 tons of paper or approximately 10 tons of metal and glass containers.

City's Comprehensive Solid Waste Management Plan

The City's solid waste management services are undertaken in accordance with the Solid Waste Management Plan (SWMP), which is the responsibility of the DSNY. The City Council of the City of New York adopted legislation to adopt the current SWMP and the mayor signed the bill into law (Local Law 33 of 2006) in July 2006. Following this, in October 2006 the NY State Department of Environmental Conservation (NYSDEC) notified DSNY that it had approved the plan.[2] This replaced the previous SWMP, adopted in 1992 and subsequently amended.

The SWMP establishes a hierarchy of preferred solid waste management methods to reduce and process solid waste generated within the City. The objectives of the SWMP are, in order of importance: waste minimization; reuse, recycling, or composting; and export out of the City for disposal. The SWMP mandates that solid waste be transferred to solid waste management facilities located in each borough, including special (hazardous materials) waste collection sites, composting facilities, and bulk residential waste sites. Local Law 19 of 1989 requires that DSNY and private

[1] DSNY website: <http://www.nyc.gov/html/dsny/html/about/about.shtml>

[2] *2006 DSNY Annual Report*

carters collect recyclable materials and deliver them to material recovery facilities. New York City residents are required to separate aluminum foil, glass, plastic and metal containers, and newspapers and other paper wastes from household waste for separate collection. The SWMP also mandates that commercial establishments are subject to recycling requirements. Businesses must source-separate certain types of paper wastes, cardboard, metal items, and construction wastes. Food and beverage establishments must recycle metal, glass, and plastic containers, and aluminum foil, in addition to meeting the commercial recycling requirements.

59th Street Marine Transfer Station and CD 4/4A/7 DSNY Garage

There are two notable DSNY facilities located in the Clinton area that serve the project site.

DSNY operates the West 59th Street Marine Transfer Station (MTS) on Hudson River Pier 99, at the foot of W. 59th Street, approximately a half-mile from the project site. Currently, it is used to transport paper and cardboard from Manhattan to Pratt Industries paper mill (formerly known as Visy Paper) on Staten Island to be processed for recycling. The paper recyclables are brought to the site by DSNY and some private carter in trucks and shipped via barge. Plans to convert this MTS into a commercial waste export facility are discussed below under the "Future Without the Proposed Action."

In addition, DSNY operates a garage facility on Twelfth Avenue (Route 9A) between W. 55th and W. 57th streets. As discussed in Chapter 2, "Land Use, Zoning, and Public Policy," this facility is being reconstructed and will serve as the Manhattan Community District 4/4A/7 DSNY vehicle storage and maintenance facility. This facility is located approximately a fifth of a mile from the project site. During reconstruction of the garage, DSNY has been storing sanitation vehicles across the street from this facility on Hudson River Pier 97, located at the foot of W. 57th Street. It is likely that DSNY trucks serving the area around the project site are based and maintained at this facility.

Private Sanitation Services

Commercial establishments (restaurants, retail establishments, offices, industries, etc.) in the City contract with private waste carters for waste and recyclables collection and disposal. Private carters charge a fee on a per-cubic-yard basis. Depending on the source, volume, and the collection route, private carters use either manual or containerized collection. Private carters typically deliver commercial waste to solid waste management facilities located both inside and outside of the City. The collected waste is unloaded from trucks, processed, and then loaded onto larger trucks or rail cars for transport to out-of-city disposal facilities. Overall these uses generate another 13,000 tons of refuse each day.[3] According to the *CEQR Technical Manual*, private carters typically carry between 12 and 15 tons of waste material per truck.

[3] *Op. Cit.*, DSNY Web site.

Project Site

As the project site currently is vacant, it does not contain any permanent generators of solid waste. In 2007 the applicant commenced with demolition of site buildings and excavation for an as-of-right development. This excavation work continued into 2008. Any solid waste generated by these activities must be properly disposed of by private carters in compliance with applicable solid waste and hazardous materials laws and regulations.

D. FUTURE WITHOUT THE PROPOSED ACTION

Changes to Sanitation Services

59th Street Converted Marine Transfer Station

Acting pursuant to the SWMP and its related long-term waste export plans, DSNY is implementing measures that will largely eliminate its reliance on trucks to export waste out of the City and instead use barge and rail. This is expected to include converting the 59th Street MTS into a waste containerization facility from which waste will be transported in container barges for disposal outside the City. It is expected that construction on the converted MTS will take two years to complete. This facility is expected to be used by private carters for commercial waste. (City plans call for paper recycling to be sent to a planned new marine transfer station for recyclable materials on Pier 52 on the Gansevoort Peninsula located near the Meat Packing District.)

Manhattan Community Districts 4/4A/7 NYC Department of Sanitation Garage

Reconstruction of the DSNY garage on Twelfth Avenue is expected to be completed in 2008. With the occupancy of this approximately 206,000 sf reconstructed facility, DSNY will discontinue using Pier 97 for vehicle storage and that pier will be converted to parkland as part of Hudson River Park.

Project Site

The analysis conservatively assumes that the project site will remain unoccupied in the 2011 future without the proposed action. As noted above, the applicant proceeded with excavation for an as-of-right development. Excavation debris and other construction waste is disposed of by private carters and in accordance with applicable solid waste and hazardous materials laws and regulations.

E. FUTURE WITH THE PROPOSED ACTION

The proposed project would be a mixed-use development with the following program (all approximate): 900 DUs; 8,800 sf of local retail; 330,000 sf of automobile dealership space; 20,000 sf of health club space; 36,000 sf of NYPD Mounted Unit stable facility; and 225 accessory parking spaces.

The 900 DUs are projected to be occupied by 1,631 residents and the NYPD Mounted Unit stable is expected to have approximately 47 employees. Both of these uses would be served by DSNY municipal sanitation service. The retail, automobile dealership, and health club space are expected to have approximately 378 employees combined. These uses would be served by private sanitation carters.

Table 12-1 shows the estimate of municipal and private solid waste that would be generated by the proposed project. As shown in the table, the proposed project would generate approximately 28,807 pounds (14.4 tons) per week of solid waste to be collected by DSNY. As also shown in the table, the project would generate approximately 35,192 pounds (17.6 tons) per week of solid waste to be collected by private carters. As the parking would be accessory to the residential and other proposed uses, a separate solid waste generation is not provided.

Table 12-1, Estimated Solid Waste Generation for the Proposed Project

Use	Program/ Users	DSNY (lbs. per week)	Private Carters (lbs. per week)	Total (lbs. per week)
Residential	900 DUs/ 1,631 residents	27,727	-	27,727
NYPD Stable	36,000 sf/ 47 employees	1,080	-	1,080
Local Retail	8,800 sf/ 26 employees	-	7,384	7,384
Automobile Dealership	330,000 sf/ 330 employees	-	26,070	26,070
Health Club	20,000 sf/ 22 employees	-	1,738	1,738
Total Solid Waste		28,807 (14.4 tons)	35,192 (17.6 tons)	63,999 (32.0 tons)

Source: Generation rates from *CEQR Technical Manual* Table 3M-1: 17 lbs./week/resident; 0.03 lbs./week/sf for government office (used for NYPD Stable); 79 lbs./week/employee for general retail (used for automobile dealership and health club); 284 lbs./week/employee for food stores (used for 8,800 sf local retail space)..

The City's SWMP is based on projected rates of growth in the generation of solid waste. The measures proposed to be implemented by the City pursuant to the SWMP are therefore designed to meet the goals of the SWMP notwithstanding further development within certain defined future conditions. In other words, the solid waste handling system assumed to be in place in the future analysis year was designed to accommodate future growth in the generation of solid waste, which includes growth from developments such as the proposed project.[4]

Municipal Sanitation Services

In the future with the proposed action, new residential and NYPD development at the project site would be served by existing DSNY collection routes with DSNY adjusting appropriate collection

[4] *West 61st Street Rezoning Project FEIS*, 2006.

levels to service the community. As the typical DSNY collection truck for trash carries approximately 12.5 tons of waste material, the 28,807 pounds per week (or 4,115 pounds per day) of solid waste generated by the proposed residential and NYPD uses would be equivalent to approximately 17 percent of the capacity of one truck (assuming a seven-day week schedule). This increase is not expected to overburden the DSNY's solid waste collection services. As noted above, the solid waste handling system assumed to be in place in the future analysis year was designed to accommodate future growth in the generation of solid waste, which includes growth from the proposed project. When compared to the estimated 12,000 tons per day of residential and institutional refuse and recyclables collected by DSNY, the 4,115 pounds per day (2.1 tons per day) is a minimal increase.

The new SWMP states that all municipal waste generated from this area of Manhattan (Community Districts 1, 2, 3, 4, 7, 9, 10, and 12) will be delivered via DSNY collection vehicles to the Essex County Resource Recovery Facility (RRF) in New Jersey for processing. This waste-to-energy plant owned by the Port Authority of New York and New Jersey is expected to have sufficient capacity to accommodate the incremental increase in municipal solid waste generated by the proposed project. (If an enclosed barge unloading facility were to be developed in the vicinity of the Essex County RRF in the future, then the City could possibly transport waste there via barge.)[5]

The proposed project would comply with the City's recycling program. The project would be designed to accommodate source separation of recyclables in conformance with City recycling regulations. This would include recycling paper, glass, metals, and certain plastics. With an effective recycling program, it is estimated that the waste stream could be reduced up to 25 percent.

As a result, the proposed project is not expected to have a significant adverse impact on solid waste handling and disposal methods or recycling in the City.

Private Sanitation Services

As noted above, the retail, automobile dealership, and health club uses would generate approximately 35,192 pounds per week of commercial solid waste. These private businesses, required to remove their own solid waste, would contract with private carters for collection and disposal services. This would not affect the municipal solid waste collection and disposal system.

If the planned conversion of the West 59th Street MTS occurs, then it is possible that commercial solid waste generated by the proposed project would be processed at that facility.

Any solid waste with special characteristics generated is required to be handled pursuant to all applicable laws and regulations to ensure safe disposal. For example, the automobile dealership would include vehicle services areas, which generate unique waste products, including motor oil and scrap metal. These materials would be either recycled or disposed of in accordance with all applicable City, State, and Federal regulations.

[5] *New York City Comprehensive Solid Waste Management Plan*, September 2006, accessed from DSNY web site <http://www.nyc.gov/html/dsny/html/reports/swmp-4oct.shtml>

The amount of solid waste generated by the proposed project should be understood in the context of the larger amount of wastes generated Citywide. As noted above, approximately 13,000 tons of private solid waste are generated per day in the City. The proposed project therefore would result in a negligible increase in the amount of solid waste handled daily by private carters.

As a result, the proposed project is not expected to have a significant adverse impact on private solid waste handling and disposal methods or recycling in the City.

F. CONCLUSION

The proposed project is not anticipated to result in significant adverse solid waste and sanitation services impacts. Municipal solid waste generated by the proposed project would be approximately 28,807 pounds (14.4 tons) per week. This is equivalent to approximately 17 percent of the capacity of a typical DSNY collection truck (assuming a seven-day week schedule). As the area is currently served by DSNY, which adjusts appropriate collection levels to service the community, and the resulting increase could be accommodated by the municipal solid waste handling system, the proposed action would not result in significant adverse impacts on the municipal solid waste and sanitation services. Commercial solid waste generated by the proposed project would be approximately 35,192 pounds (17.6 tons) per week and would be serviced by private carters.