

peak hours (when traffic on adjacent streets is at its highest) and over the course of a typical weekday. These ITE estimates are representative of buildings of this type but do not account for site-specific employee shift changes or site-specific needs related to 501 New York Avenue. The ITE trip generation estimates are conservatively higher than what would be projected using the site-specific employee and shift time data for the 501 New York Avenue project.

Weekday peak hour trip generation was calculated based on the methodology outlined in ITE *Trip Generation*, 11th Edition. This methodology was supplemented to account for the urban nature of the Project Site (ITE *Trip Generation* provides data for non-urban, low transit use sites) and to generate trips for multiple modes, as vetted and approved by DDOT as part of the Transportation Statement scoping process.

Trip generation for the previous use on the site was calculated using the ITE Land Use Code 730 (Government Office Building) in a General Urban/Suburban setting. The previous use of the Project Site includes an administrative building housing the MPD Traffic Safety & Specialized Enforcement Branch with 45 employees working in three (3) shifts of 15 MPD officers each.

Trip generation for the proposed site was calculated using the ITE Land Use Code 571 (Adult Detention Facility) in a General Urban/Suburban setting. The proposed use will have 27 employees, with nine (9) employees per shift. ITE land use 571 (Adult Detention Facility) is defined by ITE as “a facility in which a person is confined either for a short-term stay while awaiting trial (in a jail) or for a long-term stay while serving a sentence resulting from a conviction (a prison).” The proposed building use will be similar to the former, so it is believed that this land use adequately captures the peak hour and daily trip generation as compared to other sites with a similar number of employees. It should be noted that, while these trip generation estimates are based on the number of employees commuting to the site in both the existing and proposed conditions, these rates are intended to capture all peak hour and daily activity to the site in accordance with the historical data collected by ITE.

Table 1 shows the detailed mode split data from census (Traffic Analysis Zone) data for people who work near the Project Site as well as survey data from the WMATA Ridership Survey.

Table 2 shows the mode split assumptions for the proposed project. While data for the surrounding area shows a near even split between the Auto and Transit modes, site-specific adjustments were made to the splits to include a conservative analysis of single occupancy vehicle trip generation. The previous and proposed uses on the site are expected to generate more vehicle trips compared to other modes, as both uses are highly auto-dependent due to their unique operational needs. In the current condition, police officers rely heavily on personal vehicles to respond to traffic incidents throughout the day, making nearly all trips to and from the site vehicle-based. The availability of allocated curbside parking along the site's frontage exclusively for police use underscores the importance of vehicle access in supporting MPD services. In the proposed condition, the site will continue to be auto-dependent, with DOC vans required to securely transport detainees from across the District. While DOC employees will not be responding to traffic incidents, they will require similar flexibility to drive and park their vehicles at or adjacent to the site for security and safety reasons. Given these factors, it has been conservatively assumed that all trips generated by the site will be vehicle trips, significantly higher than the location-specific mode split estimates presented in Table 1.

Table 3 shows an auto trip generation summary of the proposed Project. As can be seen in the table, historical data predicts that the proposed use will generate considerably fewer trips as compared to previous use during peak hours. Additionally, the Project will generate fewer than 25 net new peak-hour vehicle trips in the peak direction in any study period. Based on this, per DDOT's CTR Guidelines, a vehicular capacity analysis is not required.

Table 1: Mode Split Data Sources

Information Source	Mode				
	Auto	Transit	Bike	Walk	Telecommute/Other
CTPP - TAZ Employees (TAZ 10192)	49%	42%	3%	0%	6%
CTPP - TAZ Employees (TAZ 10195)	61%	25%	5%	4%	5%
CTPP - TAZ Employees (TAZ 10196)	24%	55%	5%	3%	13%
WMATA Ridership Survey (average for <i>Suburban-Inside the Beltway</i>)	66%	30%	6%		

Table 2: Mode Split Assumptions

Land Use	Mode				
	Drive	Transit	Bike	Walk	Telecommute/Other
Government Office Building	100%	-	-	-	-
Adult Detention Facility	100%	-	-	-	-

Table 3: Auto Trip Generation Summary

Mode	AM Peak Hour			PM Peak Hour			Weekday
	In	Out	Total	In	Out	Total	
Proposed Adult Detention Facility (27 employees) ¹							
Auto	5 veh/hr	4 veh/hr	9 veh/hr	1 veh/hr	6 veh/hr	7 veh/hr	82 veh
Existing ² Government Office Building (45 employees) ¹							
Auto	20 veh/hr	7 veh/hr	27 veh/hr	3 veh/hr	14 veh/hr	17 veh/hr	180 veh
Net New Trips							
Auto	-15 veh/hr	-3 veh/hr	-18 veh/hr	-2 veh/hr	-8 veh/hr	-10 veh/hr	-98 veh

1. These estimates do not take employee shift times into account and should be used for comparison purposes only.
2. The building is no longer occupied, but the recent transition of the MPD allows to estimate its usage as “existing”.

Site-Specific Trip Generation

Additional transportation operations data provided by DOC was evaluated to present a better refined trip generation analysis. First, employee shift turnover times are scheduled at 5:30 AM, 1:30 PM, and 9:00 PM, all of which fall outside of typical peak periods. As such, there will be minimal to no employee trips during peak hours. The delivery of new arrestees to the site will occur randomly throughout the day, as will the arrival of any contractors and maintenance personnel, and is not expected to consistently occur during peak periods. The only traffic activity that may consistently occur during either peak hour is the transport of detainees to court each morning, starting at 9 AM. There will likely be two (2) shifts, starting with priority detainees at 9 AM; however, since the number of priority detainees may vary from day to day, the trip generation has conservatively assumed a worst-case scenario in which all detainees are transported collectively starting at 9 AM.

With an average daily headcount of 38 detainees and the assumption that each cargo van carries two (2) DOC employees and/or MPD officers and eight (8) detainees at its maximum capacity, a maximum of five (5) transport vans (or van trips to the courthouse) would be required each morning. Because at least two (2) DOC vans reside on site, a maximum of three (3) vans are expected to enter the site. As such, in the conservative case that all detainees are transported over the course of a single hour, the site would experience five (5) inbound trips (including the three (3) initial entering trips plus the return of the two (2) vans that live on-site) and five (5) outbound trips in the AM peak hour—an increase of one (1) trip over the ITE estimated trip generation of nine (9) vehicles per hour in the AM peak hour.

Due to limited staffing, it is unlikely that all five (5) vans could leave and return within a single hour or be simultaneously staffed. Assuming only one (1) van is in use at any one time and an average loading and transport time of 20 minutes, a maximum of three (3) van trips can be completed to and from the courthouse within a single hour. Consequently, the total trip generation during the AM peak hour would be limited to six (6) trips (3 inbound trips and 3 outbound trips)—less than the ITE estimated trip generation for the AM peak hour. As mentioned previously, no trips are expected in the PM peak hour as compared to the seven (7) PM peak hour trips estimated by ITE.

Over the course of an average day (assuming a maximum headcount of 38 detainees and that all detainees can be transported to court within a single hour), a maximum of 96 daily trips are expected in accordance with the following:

- Employees: 27 inbound trips, 27 outbound trips (54 trips)
- New Arrestee Transport: 15 inbound trips, 15 outbound trips (30 trips)
- Transport to Court: 5 inbound trips, 5 outbound trips (10 trips)
- Food Delivery: 1 inbound, 1 outbound (2 trips)

This daily trip estimate falls well below ITE's estimate for the previous use's daily trip generation, and a substantial net decrease in daily trips is expected as compared to the previous use. Additionally, as previously stated, a heavy majority of this activity is expected to occur outside of peak hours, thereby limiting the site's impact on the transportation network during commuter periods.

Site Access, Parking, and Circulation

A proposed circulation and ground floor plan including expected vehicle routes for the detainee van to the Project Site is shown in Figure 4. Under existing conditions, pedestrian access is primarily provided along the building's frontage on New York Avenue NW. Vehicular access for employees is provided via the existing curb cuts on L Street NW and New York Avenue NW. As this is an interior renovation, no updates to vehicular parking, pedestrian access, trash pick-up, or curbside management along the property frontage are proposed as part of this project. Consistent with operational patterns when the building has historically been used as a detainee holding facility, entry for detainee vans will be provided via the existing curb cut on L Street NW for access into the secure sallyport.

Vehicular Parking

As shown in Table 4**Error! Reference source not found.**, the site is not required by ZR16 requirements to provide parking spaces. Currently, there are four (4) off-street perpendicular surface parking spaces for police vehicle use. The Applicant proposes to maintain the existing off-street parking supply. Additionally, on-street parking dedicated to police vehicle is available along the site's frontage on L Street NW, New York Avenue NW, and 6th Street NW. As shown in Figure 5, approximately 14 perpendicular spaces are available on L Street NW for passenger vehicles, and approximately eight (8) parallel spaces are available on New York Avenue NW and 6th Street NW for vans and/or passenger vehicles. In total, the 26 on- and off-street parking spaces are deemed sufficient to meet the practical needs of the proposed use.

As mentioned previously, DOC will work with MPD on a staging plan that ensures no van queuing or parking occurs outside of the curbside areas that have been designated for police parking only. Based on the information provided by DOC, at least two (2) vans will be staged adjacent to the site at all times: one near the sallyport entrance off New York Avenue NW, ensuring the curb cut remains unblocked, and another in a reserved on-street parking space. The off-street surface parking lot will be used for staging vehicles as needed and can support up to four (4) vehicles as they wait to enter the sallyport.

Table 4: Vehicular Parking Requirements and Supply

Land Use	Building Size	ZR16 Requirement	ZR16 Minimum Required Parking	DDOT-Preferred Rates	Proposed Parking
Government, large-scale	9,900 SF	None	None	75% of ZR16 (0 spaces)	0 spaces

Bicycle Parking, Showers, and Lockers

As shown in Table 5, since the building size is greater than 7,500 SF, one (1) long-term bicycle parking space is triggered by the requirements in ZR16. However, per Subtitle C § 802.5, no bicycle parking is required as gross floor area dedicated to the use is not increasing by more than 25 percent. Furthermore, the site is expected to be nearly 100 percent auto-dependent and, due to the unique security and safety needs of the site, no bicycle traffic is anticipated.

Table 5: Bicycle Parking Requirements and Supply

Land Use	Building Size	ZR16 Requirements		Long-Term Required Parking (Min.)	Short-Term Required Parking (Min.)	Showers	Lockers
		Long-Term	Short-Term				
Government, large-scale	9,900 SF	1/7,500 SF	1/40,000 SF; no less than 6	0 spaces ¹	0 spaces	0 showers	0 lockers

1. *Per Subtitle C § 802.5*, “an addition to an existing building, or the expansion of a use within a building, triggers additional bicycle parking requirements only when the gross floor area of the building or use is expanded or enlarged by twenty-five percent (25%) or more beyond the gross floor area on the effective date of this title, or in the case of a new building, the gross floor area used to calculate the initial parking requirement.”

Loading

Per zoning requirements, a government, large-scale use less than 30,000 SF is not required to provide loading facilities. As such, the Applicant proposes no changes to the existing operations of waste removal and maintenance services.

Maneuvering Analysis

DDOT standards stipulate that truck movements should be accommodated without back-in movement through public space. While no truck activities are expected to occur on-site, the site will be utilized by vans transporting detainees as well as police and DOC vehicles. Van turning maneuvers into and out of the sallyport with head-in/head-out access to and from the public roadway network were created using AutoTURN and are provided in Figure 6.

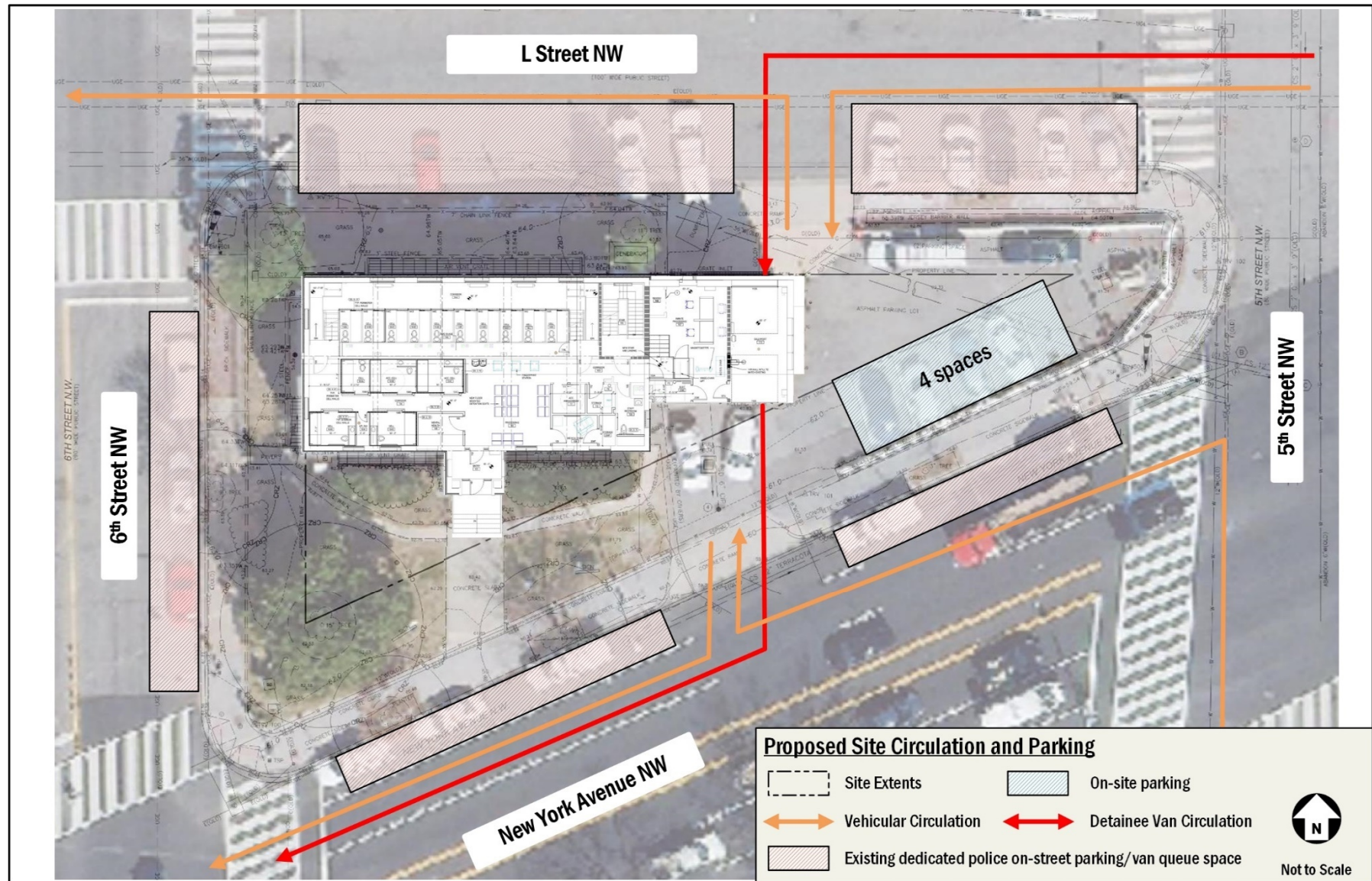


Figure 4: Proposed Site Plan and Circulation

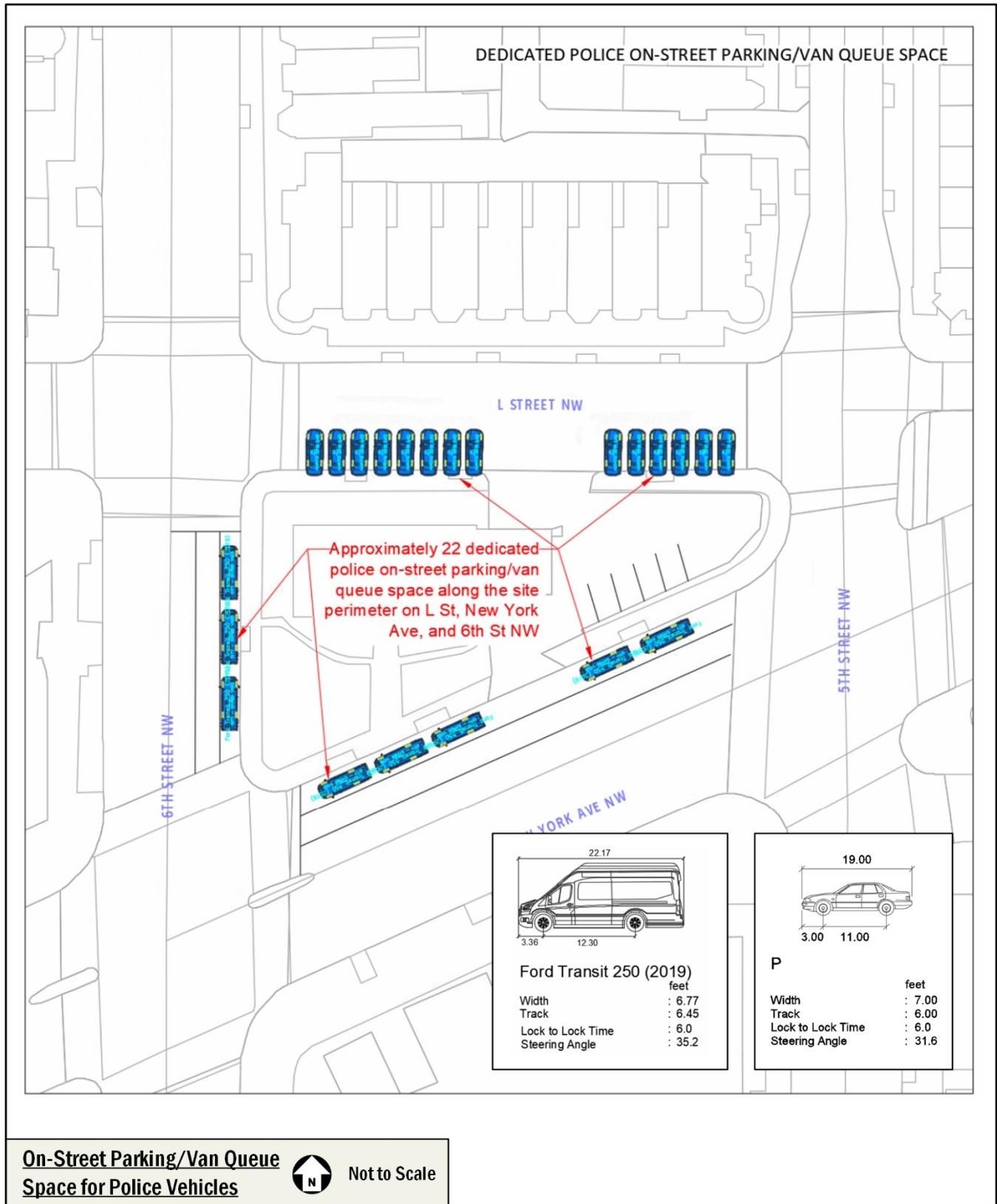


Figure 5: On-Street Parking/Van Queue Space for Police Vehicles

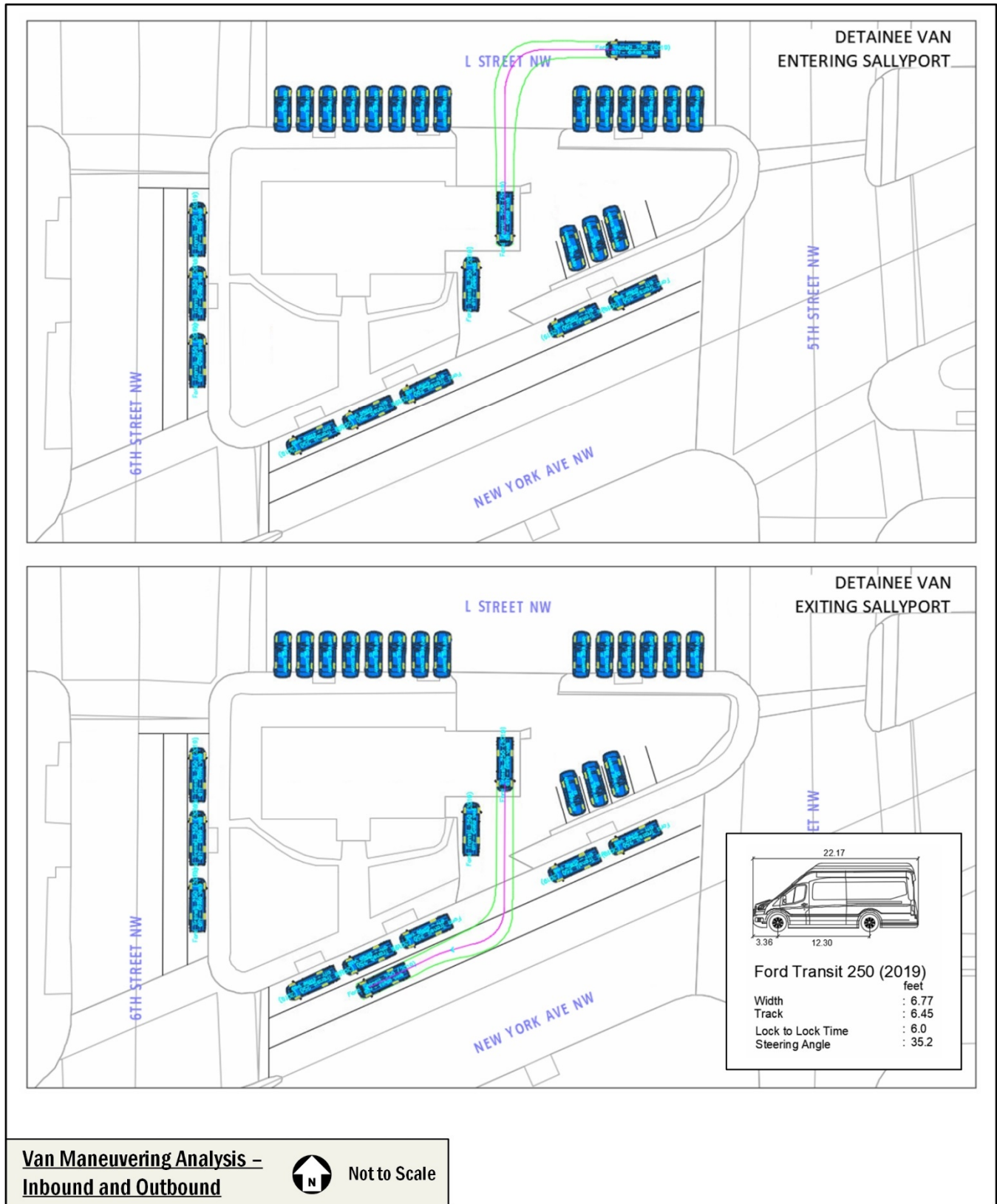


Figure 6: Van Maneuvering Analysis – Inbound and Outbound

Summary and Conclusions

The findings of this study conclude that:

- The vehicular network surrounding the Project Site is well-developed, supporting a high volume of car traffic to and from the site;
- The Project Site is well-integrated into a robust multimodal network, including public transit as well as bicycle and pedestrian routes, which could support alternative transportation modes. However, given the nature of previous and proposed building uses, which are heavily reliant on vehicular access for security and operational purposes, these multimodal options are not expected to noticeably reduce the site's vehicle traffic impact;
- Both existing curb cuts are vitally important to the secure operation of the site and use of the sallyport. As such, both curb cuts are proposed to be maintained;
- The existing off-street and on-street parking designated for police use only is required to support the operational needs of the proposed use, and are sufficient to satisfy the proposed parking and staging demand. DOC has committed to work with MPD on a staging plan that will mitigate traffic concerns and ensure no van queuing occurs in public space outside of the curbside areas that have been designated for police parking only;
- Based on information provided by DOC on employee shift times, the average daily headcount of detainees, and operational patterns concerning the transport of detainees to and from the facility, the proposed site is expected to generate a maximum of 96 vehicle trips per day, with between three (3) to five (5) inbound trips and three (3) to five (5) outbound trips occurring in the AM peak hour, and zero (0) inbound trips and zero (0) outbound trips occurring in the PM peak hour. As compared to ITE Trip Generation estimates for the site's previous use, the proposed use is expected to experience a substantial net decrease in peak hour and daily trips;
- A heavy majority of the site's vehicular activity is expected to occur outside of peak hours, thereby limiting the site's impact on the transportation network during commuter periods;
- The proposed project will ensure head-in/head-out van maneuvers through public space; and
- The proposed Project will have negligible impact on the surrounding transportation network as it generates fewer trips compared to existing conditions.