

6.0 Landover Alternative

Chapter 6 describes existing conditions of the affected environment and identifies the environmental consequences associated with the consolidation of the FBI HQ at the Landover site. A detailed description of the methodologies employed to evaluate impacts for each resource and the relevant regulatory framework is given in chapter 3, *Methodology*.

The Landover site consists of approximately 80 acres of vacant land located near the intersection of Brightseat Road and Landover Road in Prince George's County, Maryland. It is bound on the north by Evarts Street, on the east by the Capital Beltway, on the south by Landover Road, and on the west by Brightseat Road. Previously, the site was home to the Landover Mall, which operated between 1972 and 2002. As of December 2014, all facilities associated with Landover Mall have been demolished, and only the surface parking lot and retaining walls remain on-site. Commercial uses in proximity to the site include Woodmore Towne Centre, located across the Capital Beltway (Interstate [I]-95) to the east, and the Arena Plaza Shopping Center. South of Landover Road is the Maple Ridge apartment complex, while H.P. Johnson Park, additional apartment and single-family residential communities are located north of the site. FedExField football stadium is located approximately three-quarters of a mile to the southwest of the site.

The analysis of environmental impacts for the Landover Alternative is based on the conceptual site plan shown in Figure 6-1. This site plan is informed by both site planning principles and design requirements based on FBI program needs. These site plans are conceptual in nature and represent a program-compliant layout that would yield the most conservative estimate of the environmental impacts associated with each alternative. Ultimately, the layout and design of the proposed FBI HQ could potentially be altered during the final design process with the selected exchange partner. GSA would perform supplemental NEPA analysis, as necessary, if there is substantial variance from what is considered in this EIS.

Figure 6-1: Landover Conceptual Site Plan



LANDOVER EARTH RESOURCES AFFECTED ENVIRONMENT OVERVIEW

- The topography of the site slopes downward to the north with an elevation of approximately 180 feet AMSL along the southern-most boundary by Landover Road to approximately 100 feet AMSL along Evarts Street to the north.
- The Landover site is classified as typical of the Upper Cretaceous Age Brightseat-Severn Formation as detailed in the Geologic Map of Prince George’s County, Maryland.
- USDA-NRCS has identified six major soil associations within the Landover site, including Urban Land-Russet-Christiana Complex, Urban Land-Adelphia Complex, Urban Land-Collington West, Adelphia-Holmdel-Urban Land Complex, Christiana-Downer-Urban Land Complex, and Collington-Wist-Urban Land Complex.

FACIES

A body of rock with specified characteristics.

AMSL

Above mean sea level (AMSL) is the average level for the surface of one or more of Earth’s oceans from which heights such as elevations may be measured.

PHYSIOGRAPHIC PROVINCE

A geographic region with a characteristic geomorphology and often specific subsurface rock type or structural elements.



Example of manmade grades remaining from construction and demolition of Landover Mall

6.1 Affected Environment

The following sections describe the Affected Environment for the Landover site and associated study areas at each resource topic evaluated in this Environmental Impact Statement (EIS).

6.1.1 Earth Resources

The following sections describe the affected environment for earth resources for the Landover site. Earth resources encompass geology, topography, and soils.

6.1.1.1 Geology and Topography

The topography of the site slopes downward slightly to the north with an elevation of approximately 180 feet above mean sea level (AMSL) along the southern-most boundary by Landover Road to approximately 100 feet AMSL along Evarts Street to the north, as shown in figure 6-2. Localized moderate to steep slopes, associated with regrading that occurred to accommodate the construction and operation of the Landover Mall, are located along the remaining foundation of the demolished mall buildings. Demolition debris exists in piles throughout the site and further contribute to variations in topography on this site.

The geology of the Landover site is typical of the Upper Cretaceous Age Brightseat-Severn Formation as detailed in the Geologic Map of Prince George's County, Maryland. Minerals within this formation consist of gray to medium gray, poorly sorted fine-grained sand that directly underlies on-site soils. The base of the Brightseat-Severn Formation may contain localized clusters of small pebbles, phosphorous clasts, and fossilized shark teeth. The Brightseat-Severn Formation is estimated to be approximately 50 feet thick in the vicinity of the site and directly overlies the sand and gravel facies of the Potomac Group (Glaser 2003). The Potomac Group is Lower Cretaceous in age and consists of the undifferentiated Patapsco, Arundel, and Patuxent Formations. In the vicinity of the site, the Potomac Group is composed of white to yellow-brown interbedded quartz sand and silty clay lenses. The Potomac Group is estimated to be more than 200 feet thick for areas underlying the site (Glaser 2003). General geological attributes, including attributes of the Atlantic Coastal Plain physiographic province are described in sections 5.1.1. Figure 6-3 illustrates the location of the Landover site within the Coastal Plain Physiographic Province, and figure 6-4 illustrates the geology of the Landover site and its environs.

Figure 6-2: Landover Topography

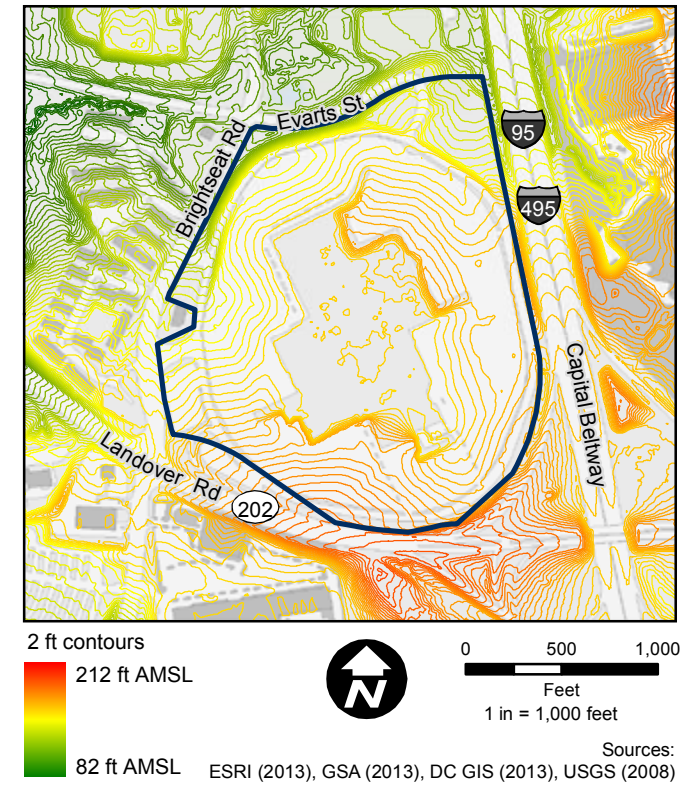


Figure 6-3: Physiographic Provinces of the National Capital Region

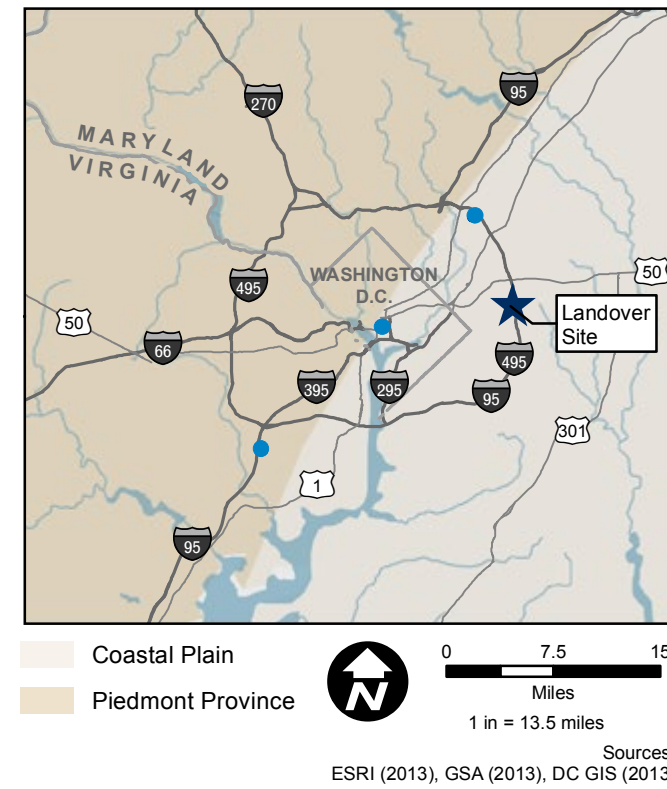
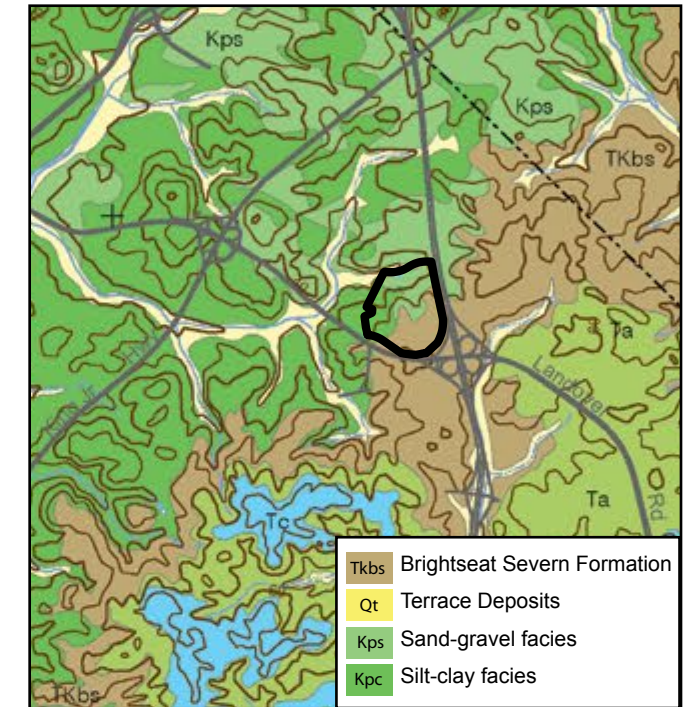


Figure 6-4: Landover Geology Overview



The potential of erosion for soil types is demonstrated using the **erosion K factor**, which indicates the susceptibility of a soil to erosion by water. K values range from 0.02 to 0.69. All other factors being equal, the higher the value, the more susceptible the soil is to erosion by water.

Table 6-1: Landover Site Soil Characteristics

Soil Type	Acres within Site	Slopes (percent)	Water Erosion Factor (K factor)	Wind Erosion Factor	Building potential	Drainage and flooding potential	Hydric
Urban land-Russet-Christiana complex	29	0 - 5	N/A	N/A	N/A	Moderately well-drained and nearly zero flooding potential	No
Urban land-Adelphia complex	17	0 - 5	N/A	N/A	N/A	Moderately well-drained and nearly zero flooding potential	Yes
Urban land-Collington-Wist complex	27	0 - 5	N/A	N/A	N/A	Well-drained and nearly zero flooding potential	No
Adelphia-Holmdel-Urban land complex	6	0 - 5	0.37	3	Very limited	Moderately well-drained and nearly zero flooding potential	No
Christiana-Downer-Urban land complex	1	5 - 15	0.49	6	Very limited	Moderately well-drained and nearly zero flooding potential	No
Collington-Wist-Urban land complex	4	5 - 15	0.20	3	Very limited	Well-drained and nearly zero flooding potential	No

6.1.1.2 Soils

The United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) have identified six major soil associations within the Landover site, as shown in table 6-1 and figure 6-5. The vast majority of the site has been previously developed and 90 percent of the site is currently impervious surfaces. Each of the site soil associations include an urban land component, meaning the soils have been or are currently altered by development. None of the soils identified at the site are considered highly erodible soils nor are any of the soils considered to be prime farmland (USDA 2015a). The potential of erosion for soil types is demonstrated using the erosion K factor, which indicates the susceptibility of a soil to erosion by water. K values range from 0.02 to 0.69. All other factors being equal, the higher the value, the more susceptible the soil is to erosion by water. Susceptibility of soils to wind erosion is detailed using a wind erodibility group rating system, in which soils are assigned to a number ranging from 1 to 8, with soils assigned to group 1 having the greatest susceptibility to wind erosion and those in group 8 being the least susceptible. From west to east, soil associations are as follows:

Urban Land-Russet-Christiana Complex

The Urban Land-Russet-Christiana Complex is located along the western site boundary and central portion of the site and comprises 36 percent of the site. This soil complex consists primarily of fine sandy loam and sandy clay loam and is typically located along interstream divides and swales, with slopes ranging from 0 to 5 percent. This soil association is deep, moderately well drained, and has nearly a zero percent chance of flooding, with flooding occurring on these soils less than once in 500 years. These soils have not been rated for building potential due to the high composition of urban land and associated alterations in them. Similarly, this soil has not been given a K factor or a wind erosion rating (USDA 1967, 2015a).

Urban Land-Adelphia Complex

The Urban Land-Adelphia Complex is located along the southwestern boundary and center portion of the site and comprises 20 percent of the site. This soil complex consists primarily of silt loam to fine sandy loam and is typically located along swales and drainage ways. Its slopes range from 0 to 5 percent. This soil association is deep, moderately well drained, and has nearly a zero percent chance of flooding, similar to the Urban-Land-Russet-Christiana Complex. These soils have not been rated for building potential as a result of the high composition of urban land and associated alterations in them. Similarly, this soil has not been given a K factor or a wind erosion rating (USDA 2015a). However, this soil complex meets the criteria of hydric soils, which may indicate the presence of wetlands in the past.

Urban Land-Collington-Wist Complex

The Urban Land-Collington-Wist Complex is located at the center of the site and along the southern/southeastern site boundary and comprises 32 percent of the site. This soil complex consists primarily of fine sandy loam and sandy clay loam and is typically located along interstream divides and interfluves, with slopes ranging from 0 to 5 percent. This soil association is deep, well drained, and has nearly a zero percent chance of flooding. These soils have not been rated for building potential as a result of the high composition of urban land and associated alterations in them. Similarly, this soil has not been given a K factor or a wind erosion rating (USDA 2015a).

Adelphia-Holmdel-Urban Land Complex

The Adelphia-Holmdel-Urban Land Complex is located in the northeast portion of the site and comprises 7.5 percent of the site. This soil complex consists primarily of fine sandy loam and sandy clay loam and is typically located in depressions, interfluves, swales, and drainage ways, with a slope ranging from 0 to 5 percent. This soil association is deep, somewhat poorly drained, and has nearly a zero percent chance of flooding. These soils have a limited building potential due primarily to the shallowness of the saturated zone. This soil type has a K factor of 0.37 and a wind erosion rating of 3 (USDA 2015a).

Christiana-Downer-Urban Land Complex

The Christiana-Downer-Urban Land Complex is located along the northeastern boundary of the site and comprises less than 1 percent of the site. This soil complex consists primarily of silt loam and clay loam and is located in interfluves, hillslopes, and swales. Its slopes range from 5 to 15 percent. This soil association is deep, moderately well drained, and has nearly a zero percent chance of flooding. These soils have a very limited building potential based on their slope and have a K factor of 0.49 and a wind erosion rating of 6 (USDA 2015a).

Collington-Wist-Urban Land Complex

The Collington-Wist-Urban Land Complex is located along the eastern and southeastern boundary of the site and comprises 5 percent of the site. This soil complex consists primarily of fine sandy loam and clay loam and is located in interfluves and interstream divides, with slopes ranging from 5 to 15 percent. This soil association is deep, well drained, and has nearly a zero percent chance of flooding. These soils have a very limited building potential based on their slope and have a K factor of 0.20 and a wind erosion rating of 3 (USDA 2015a).

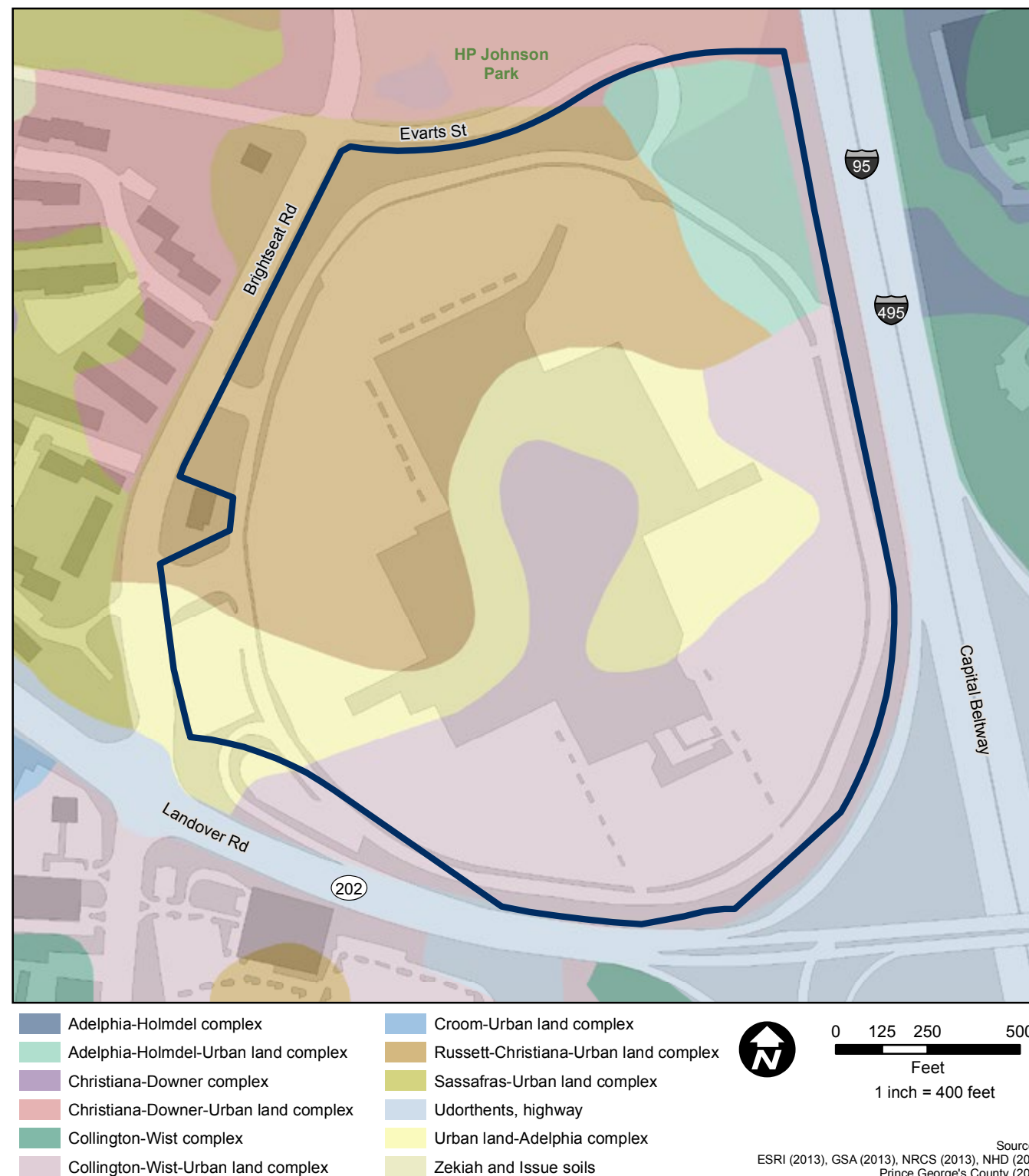
INTERFLUVE

A narrow, elongated, and plateau-like or ridge-like landform between two valleys, or high ground between two rivers in the same drainage system.

LOAM

A fertile soil of clay and sand containing humus.

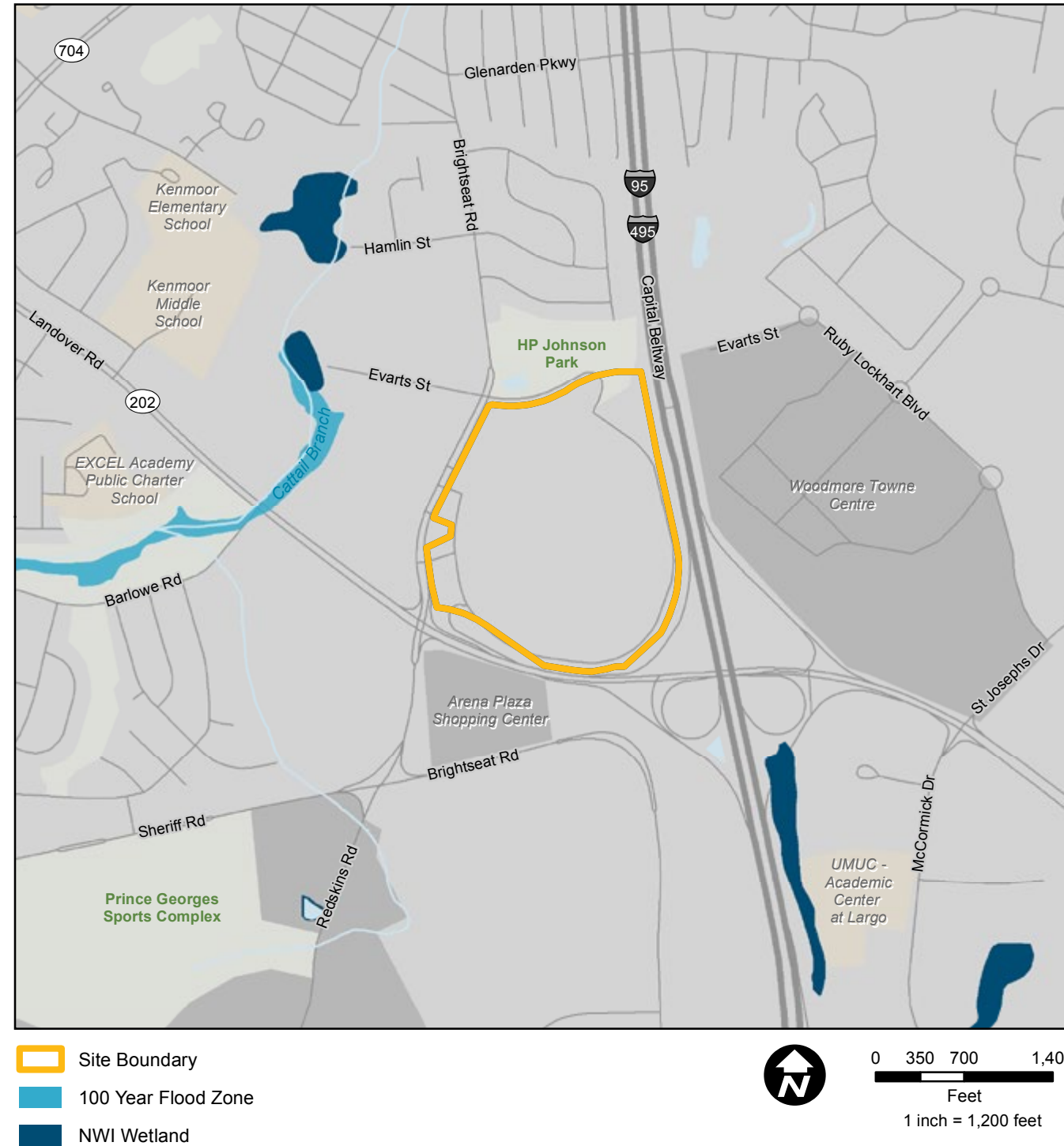
Figure 6-5: Landover Soil Map



**LANDOVER WATER RESOURCES
AFFECTED ENVIRONMENT
OVERVIEW**

- The Landover site is located within the Lower Anacostia River watershed and the larger Chesapeake Bay watershed; however, there are no surface waters within the site. Therefore, the hydrology of the site is composed of stormwater runoff rather than natural surface waters.
- There are no floodplains within the site; however, a small buffer surrounding Cattail Branch to the west is classified as flood zone AE.
- There are no wetlands at the Landover site.

Figure 6-6: Landover Water Resources Map



Sources:
ESRI (2013), GSA (2013), FEMA (2013), NHD (2013)
Prince George's County (2013)

6.1.2 Water Resources

The following sections describe the affected environment for water resources for the Landover site. Water resources encompass surface water, groundwater, hydrology, wetlands, and floodplains.

6.1.2.1 Surface Water

The Landover site is located primarily within the subwatershed of the Lower Anacostia River, which is a tributary of the mainstem Anacostia River and the Potomac River. A small eastern portion of the site is in the Southwest Branch of the Western Branch Patuxent River subwatershed. Both subwatersheds are part of the larger Chesapeake Bay watershed. No surface water bodies or streams exist on the site, as shown in figure 6-6. There are multiple small perennial ponds near the site. The largest water body near the site is Northampton Lake, located 2.8 miles to the southeast. The nearest surface water to the site is Cattail Branch, an intermittent/perennial tributary of Beaverdam Creek, located approximately 1,200 feet to the west across Brightseat Road. Beaverdam Creek flows into the Anacostia River, which ultimately discharges into the Potomac River. As previously described in sections 4.1.2 and 5.1.2, the Potomac and Anacostia Rivers are impaired due to multiple pollutants.

6.1.2.2 Hydrology

The Landover site consists of a large amount of impervious surface with no natural surface waters; therefore, the hydrology of the site is composed primarily of stormwater runoff. During the operation of Landover Mall, the site had an extensive stormwater collection system. Stormwater was discharged off-site through numerous storm sewers located throughout the paved areas. While the underground infrastructure remains, it is not actively used. Therefore, stormwater follows topography and drains into neighboring storm sewers. The site lies within the area of the Landover Gateway Sector Plan of 2009 (M-NCPPC 2009). The plan addresses the management of stormwater quality and quantity to improve water quality in the local area watersheds. One element of the plan suggests the protection and improvement of green infrastructure within the study area of the plan, including around the site, especially Cattail Branch. Additional recommendations include placing a priority on stormwater filtration throughout the area and the restoration and enhancement of water quality, including the implementation of stormwater best management practices (BMPs).

6.1.2.3 Groundwater

Groundwater in the region of the site is contained generally within semi-consolidated sand or gravel aquifers of the North Atlantic Coastal Plain aquifer system (USGS 2003). Aquifers within Prince George's County include Aquia, Magothy, Patapsco, and Patuxent (Richardson 1976; Maryland Geological Survey 2014). Based on a review of local topography and surface water bodies, shallow groundwater is anticipated to be encountered at approximately 30 feet below ground surface, and is expected to flow southwest towards Cattail Branch under natural conditions. Groundwater flow direction may vary based on pumping, dewatering, underground utilities, and seasonal fluctuation (GSA 2014d). Groundwater monitoring wells located approximately 3.5 to 8 miles from the site recorded water levels within the local aquifers ranging from approximately 15 feet to 181 feet below the surface (USGS n.d.).

Surface water withdrawals provide the majority of the water supply for Prince George's County; however, some smaller water systems in the southern part of the county use groundwater (MDE 2005; MWCOG n.d.). In the region, groundwater resources also can provide emergency backup water supplies for hospitals, government facilities, and embassies (USGS 2010).

A Phase I Environmental Site Assessment was performed at the site in October 2014 (GSA 2014d). No groundwater contamination was observed at the time; however, historical operations by several former tenants, including a dry cleaner, manufactured gas plant, and auto repair shop may have previously adversely impacted groundwater. Additionally, the Phase I Environmental Site Assessment documented evidence of underground storage tanks as well as a sewage treatment plant north of Everts Street that was likely installed at the time the mall was constructed and demolished sometime between 1980 and 1992, which may have impacted the groundwater.

6.1.2.4 Wetlands

According to the National Wetlands Inventory (NWI), no wetlands are located on the site (USFWS 2015b). Freshwater forested, scrub/shrub, and emergent wetlands that are seasonally flooded are located along Cattail Branch southwest of the site. Freshwater forested and scrub/shrub wetlands are located along manmade drainage ditches associated with I-495, located approximately 1,700 feet southeast of the site.

6.1.2.5 Floodplains

According to both the preliminary revised Flood Insurance Study and the effective Flood Insurance Rate Map (FIRM) for Prince George's County, there are no floodplains within the Landover site boundaries (FEMA 1996, 2013a). The closest floodplain is located to the west and is associated with Cattail Branch as shown in figure 6-6. This is classified as flood zone A and described as "areas subject to inundation by the 1-percent-annual-chance flood event"; however, there are no base flood elevations for this floodplain (FEMA 2014a).

FLOOD INSURANCE RATE MAP (FIRM)

A map created by the National Flood Insurance Program for floodplain management and insurance purposes that shows base flood elevations, flood zones, and floodplain boundaries.

FLOODPLAIN DEFINITIONS

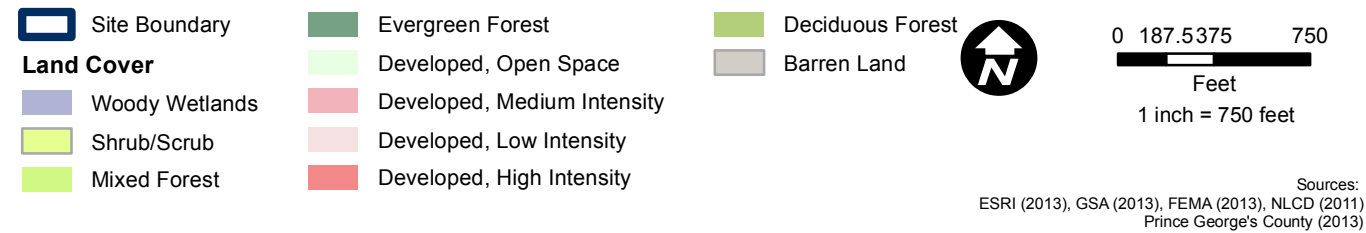
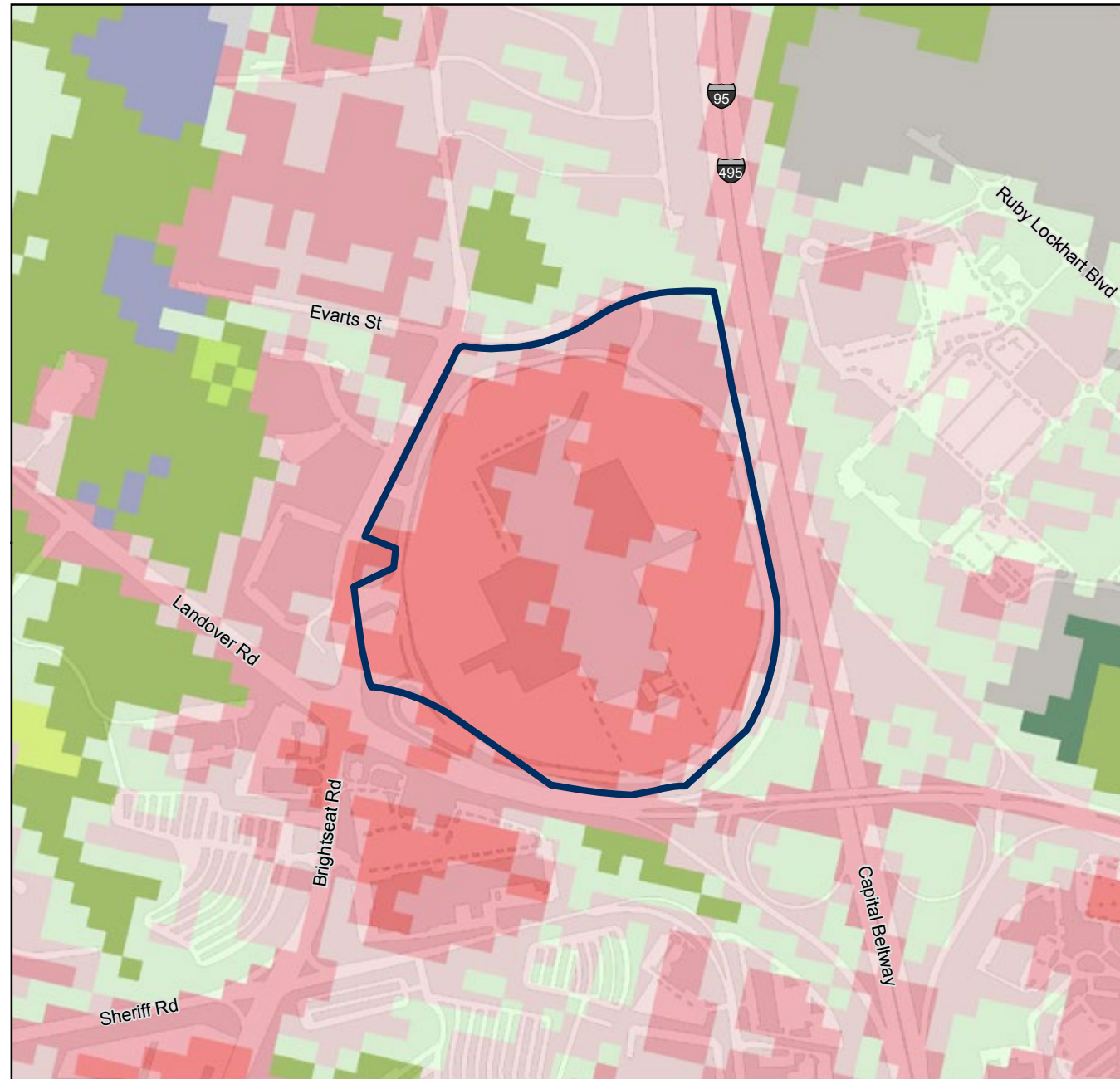
100-year flood - A flood event that has a 1% probability of occurring in any given year.

500-year flood - A flood event that has a 0.2% probability of occurring in any given year.

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

A report that identifies potential or existing environmental contamination liabilities for real estate.

Figure 6-7: Land Cover Classes for the Landover Site



LANDOVER BIOLOGICAL RESOURCES AFFECTED ENVIRONMENT OVERVIEW

- The Landover site is a previously developed site with minimal vegetation, the vegetation that does occur on the site consists of strips of woodland along the perimeter; trees on parking islands of the former Sears department store; and some grasses, weeds, and shrubs.
- There is no surface water, and therefore no aquatic habitats on the site to support aquatic species.
- The Landover site lacks many terrestrial species because there is inadequate vegetation present on the site. However, those species that do exist on or adjacent to the site include Virginia opossum, eastern cottontail, coyote, eastern chipmunk, squirrel, raccoon, and species of bat.

6.1.3 Biological Resources

The following sections describe the affected environment for biological resources for the Landover site. Biological resources include vegetation, aquatic plant and animal species, terrestrial plant and animal species, and special status species.

6.1.3.1 Vegetation

The Landover site is a previously developed site, with minimal vegetation. The vegetation that is present on the site consists of strips of woodland along the perimeter and trees on parking islands of the former Sears department store. There are woodlands in proximity to the site, and a wooded stream valley (Cattail Branch) approximately 1,000 feet to the west of the site. As illustrated in figure 6-7, the mapped National Land Cover Database (NLCD) land cover class for the site is low to medium intensity developed (USGS 2011). This land cover class is defined by the U.S. Environmental Protection Agency (USEPA) (2001) as impervious surfaces accounting for 20 to 79 percent of the total cover, and includes former and existing developments.

6.1.3.2 Aquatic Species

There are no surface water bodies located on the Landover site. As a result, no aquatic habitats are present on-site.

6.1.3.3 Terrestrial Species

The presence of wildlife species in any particular location depends on the amount of available habitat and resources. The site likely lacks many terrestrial species since there is inadequate vegetation present. There are streetscape trees, landscaped areas, limited bushes, and small areas of forest in and around the site. Mammal species common to Maryland may occur in or adjacent to this site, particularly in the forested areas surrounding Cattail Branch, and wooded areas north of the park along Evarts Street. These include Virginia opossum, eastern cottontail, coyote, eastern chipmunk, squirrel, raccoon, and species of bat.

Avian species, such as sparrow species, starlings, and grackles are common in Maryland and in suburban environments, and may be observed on the site. Migratory songbird species and raptors (hawks and falcons) may perch or rest in the area.

Reptiles common to Maryland, such as the eastern rat snake and the five-lined skink, may occur in the wooded perimeters of the site and on adjacent properties. They are not likely to occur in the paved areas of the site.

A variety of terrestrial insects common to Maryland that may occur on the site include the following: ants, bees and wasps, beetles, moths and butterflies, and grasshoppers (Maryland State Archives 2014). Arachnid species, such as ticks and spiders, are also common in Maryland and presumably occur on the site, although specific lists were not readily available.

6.1.3.4 Special Status Species

Special status species are species of plants or animals that require special consideration and/or protection. These species are listed as rare, threatened, or endangered by Federal and/or state governments. State species of greatest conservation concern are also covered in this section and include federally listed rare, threatened, and endangered species, as well as species that have a declining population in the state and are considered at risk.

As noted earlier in this chapter, the site is a developed area with limited vegetation and natural habitat. It is unlikely that special status species are present in the study area.

The federally listed Hay's spring amphipod (*Stygobromus hayi*) and 39 historical state-listed animal species (2 terrestrial mammals, 8 birds, 1 fish, and 28 invertebrates) are listed for Prince George's County, Maryland. Similarly, there are 151 state-listed plant species and 1 state and federally listed plant species (sensitive joint-vetch [*Aeschynomene virginica*]) in Prince George's County (MDDNR 2010b). In 1990, an occurrence of the purple passionflower (*Passiflora incarnata*) was recorded along Brightseat Road and may possibly still exist. However, it is likely that this population was introduced as a landscape plant and therefore does not warrant protection. The current status of this species in Maryland is "SU" (uncertain) (Golden 2015). Of those animal and plant species, none are known to be present at the site (USFWS 2014b).

The northern long-eared bat (*Myotis septentrionalis*) was listed as threatened in May 2015. Consultation with the U.S. Fish and Wildlife Service (USFWS) in December 2014 and the Maryland Department of Natural Resources (MDDNR) confirmed that the northern long-eared bat does not occur within or adjacent to the site (Byrne 2015; USFWS 2014b).

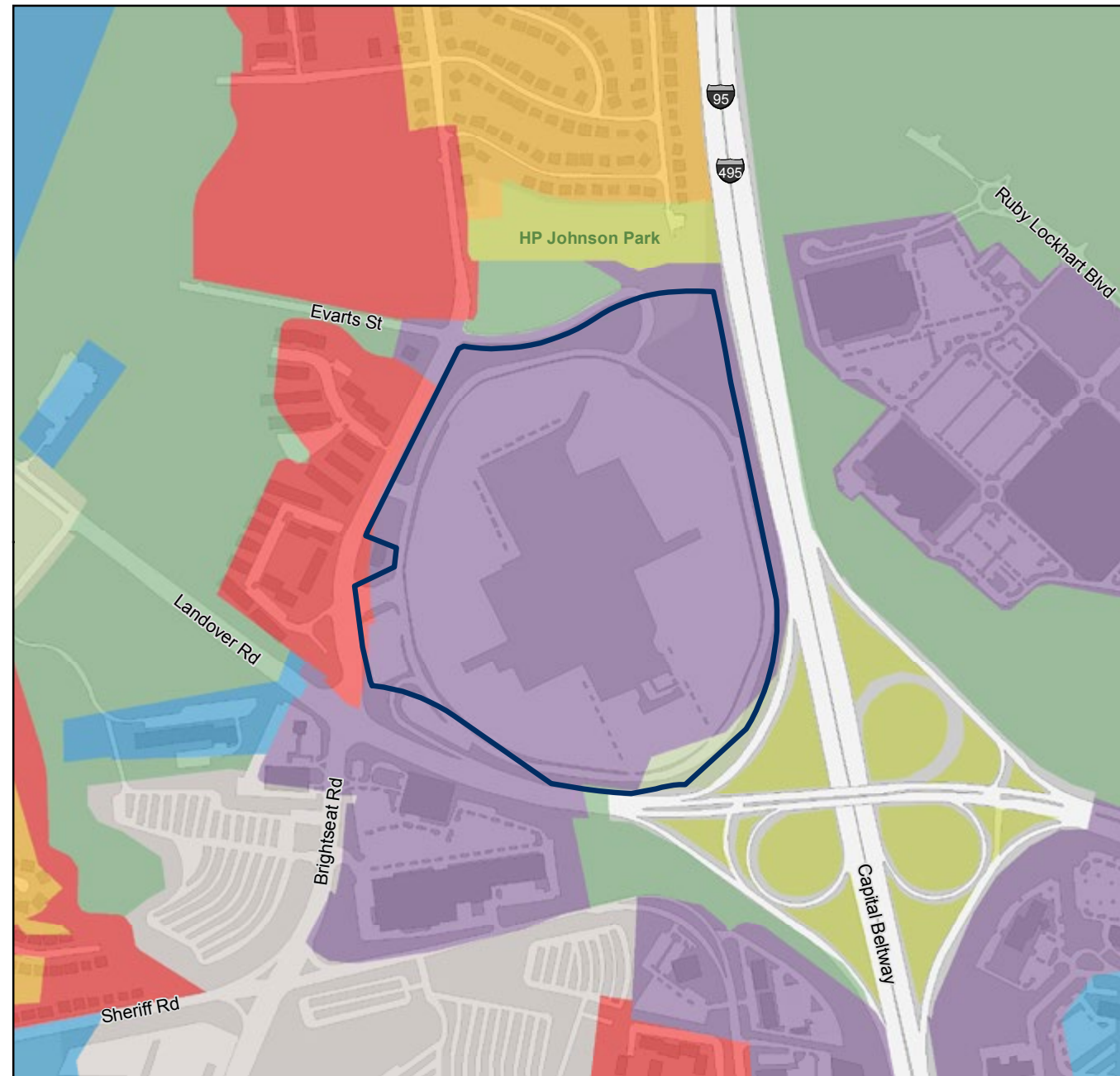
The site has 24 federally listed migratory birds of conservation concern associated with its location, as detailed in table 6-2. Due to the lack of natural habitat on the site, it is possible that these species may fly over, perch, and forage at the site, but it is unlikely that any nest in this location.

Table 6-2: Federally Listed Migratory Birds of Conservation Concern in the Vicinity of the Landover Site

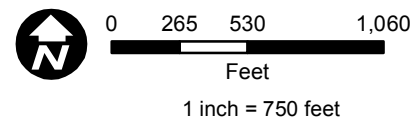
Common Name	Scientific Name	Use of Site
American oystercatcher	Haematopus palliatus	Year-round
American bittern	Botaurus lentiginosus	Wintering
Bald eagle	Haliaeetus leucocephalus	Year-round
Black-billed cuckoo	Coccyzus erythrophthalmus	Breeding
Blue-winged warbler	Vermivora cyanoptera	Breeding
Cerulean warbler	Setophaga cerulea	Breeding
Fox sparrow	Passerella iliaca	Wintering
Gull-billed tern	Gelochelidon nilotica	Breeding
Kentucky warbler	Oporornis formosus	Breeding
Least bittern	Ixobrychus exilis	Breeding
Pied-billed grebe	Podilymbus podiceps	Breeding
Prairie warbler	Dendroica discolor	Breeding
Prothonotary warbler	Protonotaria citrea	Breeding
Purple sandpiper	Calidris maritima	Wintering
Red-headed woodpecker	Melanerpes erythrocephalus	Year-round
Red knot	Calidris canutus	Wintering
Rusty blackbird	Euphagus carolinus	Wintering
Seaside sparrow	Ammodramus maritimus	Year-round
Saltmarsh sparrow	Ammodramus caudacutus	Year-round
Short-billed dowitcher	Limnodromus griseus	Wintering
Short-eared owl	Asio flammeus	Wintering
Snowy egret	Egretta thula	Breeding
Wood thrush	Hylocichla mustelina	Breeding
Worm-eating warbler	Helmitheros vermivorum	Breeding

Source: USFWS 2014b

Figure 6-8: Landover Existing Land Use Map



- | | |
|-----------------------|----------------------------|
| Site Boundary | High-Density Residential |
| Land Use | Medium-Density Residential |
| Bare Ground | Institutional |
| Commercial/Industrial | Mixed Forest |
| Deciduous Forest | Open Urban Land |



Sources:
ESRI (2013), GSA (2013)
Prince George's County (2013)

LANDOVER LAND USE AFFECTED ENVIRONMENT OVERVIEW

- Land uses in the vicinity of the site are primarily residential, however there are commercial uses in the area in addition to the proposed mixed-use development across the Capital Beltway east of the site.
- The site is zoned as Mixed-Use, Transportation Oriented (M-X-T).
- Land use plans and studies that guide development for the Landover site and the surrounding area include Plan Prince George's 2035, Landover Gateway Sector Plan and Sectional Map Amendment, and the Comprehensive Plan for the National Capital Region: Federal Elements.

6.1.4 Land Use

The Landover site was the previous location for the Landover Mall. There is an automotive maintenance business directly adjacent to the site, fronting Brightseat Road. Land uses surrounding the former mall site are primarily residential. Residential uses consist of the Maple Ridge apartment complex, located along the west side of Brightseat Road, across from the site, and single-family homes to the north and west. Forty-nine buildings associated with the Glenarden apartments, located to the northwest of the site along Brightseat Road, were demolished in 2014 because of their poor condition (Washington Post 2014). Commercial uses in the study area include a liquor store on Brightseat Road, opposite the site, the Arena Plaza shopping center across Landover Road, to the south of the site, and Phase 1 of Woodmore Towne Centre, a planned mixed-use development across the Capital Beltway to the east of the site. The 345-acre site currently contains several big box retail stores, and upon completion would feature up to 700,000 square feet (SF) of retail, 1 million SF of office space, 922 residential units, 2 hotels and a conference center (Prince George's County Economic Development Corporation 2013). There is no farmland in the study area.

Recreational uses in the study area include Maryland-National Capital Park & Planning Commission's (M-NCPPC's) H.P. Johnson Park to the north of the site (Prince George's County Planning Department 2009), and the Prince George's County Sport and Learning Complex, approximately 0.75 mile to the southeast of the site. FedExField is located approximately 1 mile to the southwest. Figure 6-8 illustrates the land uses within a 0.25-mile radius of the site, as defined by Maryland Department of Planning.

6.1.4.1 Zoning

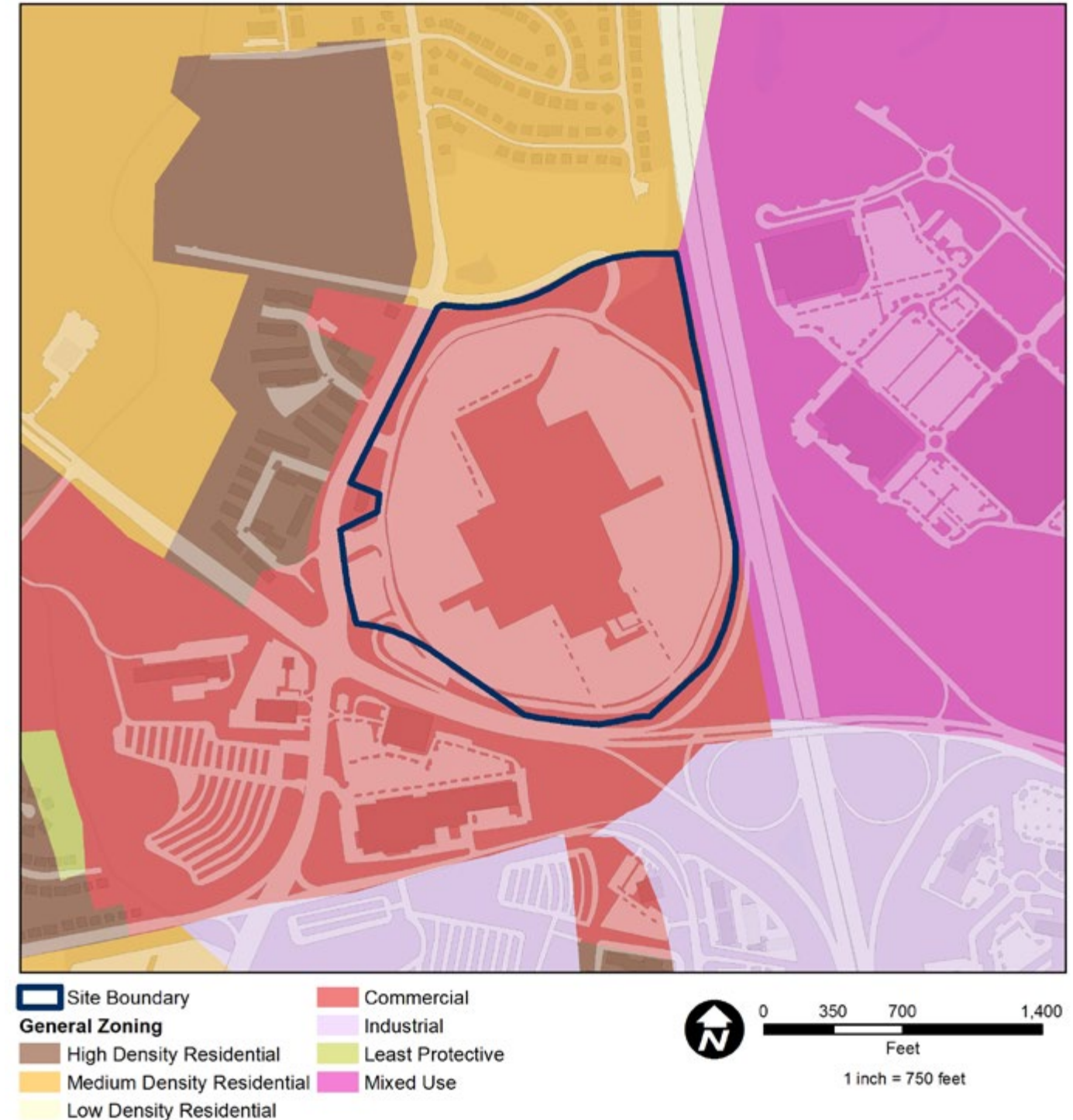
According to the Prince George's County zoning map, the Landover site is zoned as Mixed-Use Transportation Oriented (M-X-T). More information regarding the M-X-T zoning ordinance is found in section 5.1.4.2. The zoning of the site and its environs is provided in figure 6-9.

The Floor-to-Area Ratio (FAR) and building height are two important development parameters that contribute to the development of the site. The allowable FAR for the M-X-T zone as described in section 5.1.4.2 is 0.4 without the optional method, and 8.0 with the optional method (Prince George's County Planning Department 2010). The optional method provides an alternative choice of development that would allow for greater density to encourage a high degree of urban design, increased pedestrian-oriented activities and amenities, and provide uses that encourage 24-hour programming.

The Landover Sector Plan and Sectional Map Amendment (hereafter referred to as the Landover Sector Plan) does not provide height restrictions; however, the plan does provide building height projections for the proposed redevelopment of the Landover site (Prince George's County 2009). In the Landover Sector Plan, the Landover site is separated into three neighborhoods, each with individual height projections. Those neighborhoods include: Landover Civic Center, Main Street/Commercial Core, and Downtown Neighborhood. Building height projections for each neighborhood are provided in the following list and are based on the assumption that each individual story is 15 feet tall:

- Landover Civic Center: Buildings on the east side may rise to be 20 stories (300 feet), and buildings along Center Street step down to be 4 to 12 stories (60 to 180 feet).
- Main Street Commercial Core: Buildings may range in height from 4 to 10 stories (60 to 150 feet).
- Downtown Neighborhood: Building heights may range in height from 2 to 8 stories (30 to 120 feet).

Figure 6-9: Landover Existing Zoning Map



Sources:
ESRI (2013), GSA (2013)
Prince George's County (2013)

FLOOR-TO-AREA RATIO

FAR is the total square feet of a building divided by the total square feet of the lot on which the building is located. Higher FARs indicate a higher density of development.

PRINCE GEORGE'S COUNTY OPTIONAL METHOD OF DEVELOPMENT

The optional method provides an alternative choice of development that would allow for greater density to encourage a high degree of urban design, increased pedestrian-oriented activities and amenities, and provide uses that encourage 24-hour programming.

6.1.4.2 Regional and Local Land Use Studies

Plan Prince George's 2035

Plan Prince George's 2035 initiated by M-NCPPC, includes comprehensive recommendations for guiding the future development within Prince George's County. The plan aims to direct the majority of the county's incentives and new infrastructure to a limited number of places in the near-term to accelerate their development as viable economic engines over the next 5 to 10 years (M-NCPPC 2014a). This concentration of development would strengthen neighborhoods; enhance transit-rich centers; preserve environmentally sensitive and rural areas; and create state-of-the-art public facilities, schools, and parks and recreations services.

Plan Prince George's 2035 identifies Landover as one of 26 local centers. These local centers would be focal points for development and civic activity based on their access to transit or major highways. The plan contains recommendations for directing medium to medium-high residential development, along with limited commercial uses, to these locations, rather than scattering them throughout the county. These centers are envisioned as supporting walkability, especially in their cores and where transit service is available.

The Largo Town Center Metro Station, the closest Metro Station to the site, is categorized as one of eight Regional Transit Districts. These eight centers have potential for extensive transit and transportation infrastructure and the long-term capacity to become mixed-use, economic generators for the county. These medium- to high-density areas are envisioned to feature high quality urban design, incorporate a mix of complementary uses and public spaces, provide a range of transportation options, and provide a range of housing options. Furthermore, the plan intends to designate New Carrollton Metro Station and Largo Town Center Metro Station as initial downtowns for Prince George's County. As a result, Prince George's County will encourage the relocation of government agencies to catalyze development and investment; create walkable communities; market downtowns to prospective developers, federal agencies, nonprofits, and retail trade groups as the county's prime opportunity sites; and incentivize compact development (Prince George's County Planning Department 2014).

Landover Gateway Sector Plan and Sectional Map Amendment

The Landover Sector Plan was adopted by M-NCPPC and developed for the town of Landover and its immediate vicinity in response to a recommendation for the redevelopment of the area from a 2006 Urban Land Institute study (Planning Commission Prince George's County Planning Department 2009). section 5.1.4.3 provides more detail on the jurisdictional authority of local agencies pertaining to the Sector Plan's contribution to development in the area. The Sector Plan amends the applicable portions of the 1993 Approved Landover and Vicinity Master Plan and Sectional Map Amendment, Planning Area 72, the 1990 Largo-Lottsford Master Plan and Sectional Map Amendment, Planning Area 73, and applicable functional plans.

The purpose of the Landover Sector Plan is to identify future uses for the former Landover Mall site and plan for the revitalization and redevelopment of the site and adjacent properties. Additionally, the plan identifies needed transportation and pedestrian improvements; ensures efficient use of existing infrastructure and investment; protects environmentally sensitive land; fulfills the General Plan vision for the Developed Tier as a network of sustainable, transit supporting, mixed-use, pedestrian-oriented, medium- to-high density neighborhoods; and produces a comprehensive plan and a redevelopment phasing plan for the Sector Plan area.

The Sector Plan boundary covers approximately 591 acres, which are partly within the incorporated area of the city of Glenarden, and include Woodmore Towne Centre at Glenarden and Glenarden apartments. The Sector Plan focuses generally on the former Landover Mall site and the commercial and residential properties located within approximately a half mile radius of the former mall site. This area is also known as the Landover Gateway, which falls within both the developed and developing tiers, with the Capital Beltway serving as the dividing line between the two tiers.

With the closure of the Landover Mall in 2002, Landover is no longer the primary retail provider for Prince George's County. The Sector Plan was initiated to recapture Landover as the county's retail center. The plan seeks to improve the economic vitality in the area by designing a new downtown with enhanced pedestrian activity; a vibrant array of mixed-use development; enhanced residential communities to accommodate residents of all incomes; and amenities such as retail, entertainment, and cultural uses, as well as public open space, schools, and designs for a multiplicity of uses flexible enough to respond to changing markets.

The plan is divided into five sectors: development patterns, housing, infrastructure, community development, and implementation. Each component addresses an aspect of initiating the objective of the Sector Plan by describing goals and policies to ensure success of the plan. Those elements that are applicable to this action include:

Development Pattern

The development pattern of the Sector Plan describes the vision for land use, development, and community character in the Landover Gateway area. The purpose of the development pattern is to promote economic vitality, promote a sustainable pattern of development that encourages a balanced use of existing and proposed public facilities, enhance the quality and character of communities and neighborhoods, and protect environmentally sensitive lands.

Goals and Guidelines:

- Encourage a high concentration of land uses and economic activities that attract employers, workers, and customers.
- Encourage high- and moderate-density residential development.
- Ensure that Landover Gateway can be effectively served by mass transit and that future development is transit supportive.
- Promote compact, mixed-use development at moderate to high densities.
- Ensure transit-supportive and transit serviceable development.
- Require pedestrian-oriented and transit-oriented design.
- Ensure compatibility with surrounding neighborhoods.

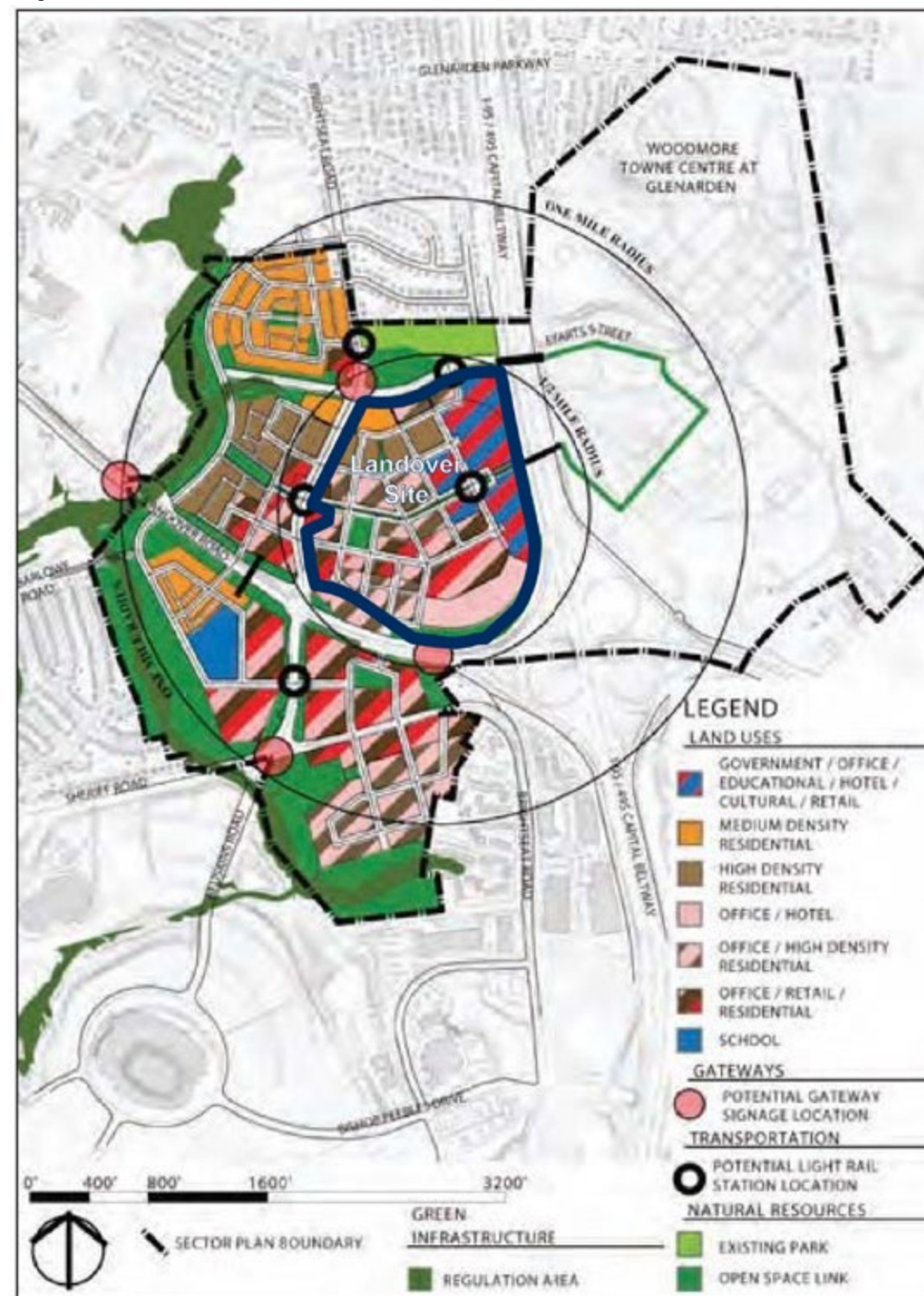
Policies:

To achieve success outlined in the goals and guidelines, the Landover Planning Board developed an array of policies to enact these goals and guidelines.

1. Create a vibrant new downtown for Prince George's County in and around the former Landover Mall site. The new Landover downtown is envisioned as a high density town center with a mix of uses and activities that will foster a vibrant, 24-hour downtown environment and incorporate a wide variety of neighborhoods.
2. Improve connectivity in the sector area by creating a compact network of pedestrian-friendly streets creating a range of block sizes with many small blocks, providing alternative routes that bypass major thoroughfares such as Brightseat Road and MD 202.
3. Integrate open spaces, green connections, and public focal places into Landover Gateway's neighborhoods and connect them to the street system; these open spaces should be bounded by streets on at least two sides.

The Planning Board also intends to establish a complementary relationship between Landover Gateway and the Woodmore Towne Centre Development. This plan involves the approval and construction of new pedestrian and vehicular connections between Landover Gateway and Woodmore Towne Centre, including a heavily landscaped promenade along the Everts/Campus Way over the Capital Beltway (I-95/I-495) connection. The two developments should also be linked through future transit connections, including interim circulatory bus shuttle service and future light transit service. Figure 6-10 provides a map of the future projected land uses in the area as outlined in the goals, guidelines, and policies.

Figure 6-10: Future Land Uses under the Landover Sector Plan



Source: Planning Commission Prince George's County Planning Department (2009)

Housing Elements

The Landover Gateway Sector Plan area is envisioned as a vibrant, mixed-use community that includes a variety of high-quality mixed-income housing. The Sector Plan hopes to initiate the development of duplex, triplex, or quadruplet units to reverse current trends favoring single family housing. Goals and guidelines and policies applicable to the housing element are summarized as follows:

Goals and Guidelines:

- Implement mixed-income housing and ensure that new developments are compatible with surrounding neighborhoods. Provide a variety of housing types for a range of incomes, including workforce housing and active adult housing.
- Promote mixed-use development to establish a healthy community where housing, employment, retail, and civic uses are located close to each other.
- Reduce any high concentration of distressed/desolate housing in and outside the Sector Plan area.

Policies:

1. Work with developers to make sure they build a variety of housing types in and around the core area to enhance the vitality and character of the community and establish a market base for local businesses. The proposed neighborhoods should become the cornerstone of Landover Gateway and a community.
2. Identify and implement policies and mechanisms that give existing residents the option of remaining in Landover Gateway as the area redevelops.

Infrastructure Elements

The vision of the future environmental infrastructure in the Sector Plan area is an interconnected system of public and private lands that contains locally significant areas of woodlands, wetlands, wildlife habitat, and other sensitive areas that are connected to compact urban communities. It incorporates design concepts that limit paved surfaces, reduce vehicle trips, and increase urban tree canopy. The goals of the infrastructure elements look to preserve and enhance, where appropriate, and restore environmentally sensitive features. The Sector Plan's desired development should be implemented while protecting environmentally sensitive features.

The infrastructure elements include environmental infrastructure, transportation systems, trails and pedestrian access, and public facilities, all of which contribute to land use in the area. The goals and guidelines and policies applicable to the infrastructure elements are summarized as follows:

- Preserve, enhance, and restore environmentally sensitive features, including the existing urban tree canopy, while implementing the Sector Plan's desired development pattern.
- Provide an integrated multi-modal transportation system that attracts high-quality transportation-oriented design development.
- Incorporate appropriate pedestrian, bicycle, and transit-oriented design and transit-supporting design features in all new development within centers and corridor nodes.
- Develop a variety of urban school models for use in centers and corridors, as well as in other land-constrained areas of Prince George's County.

Community Elements

The community vision of the Landover Gateway area is for a vibrant mixed use center that incorporates opportunities to live, work, and play (Planning Commission Prince George's County Planning Department 2009). Daytime operations will be provided by major governmental, institutional, and other offices and will be synergistic with other uses such as local restaurants, retail shops, and other commercial, entertainment, and cultural uses to promote a 24-hour programming. The designs of the town center will provide for a multiplicity of uses flexible enough to respond to changing markets. The goals and guidelines and policies applicable to the community elements are summarized as follows:

- Market the "focal" attractions, including the recruitment of a Federal and state agencies and universities, as well as organizing festivals.
- Improve public facilities to support redevelopment and enhance residents' quality of life.
- Develop a community cultural center to attract youth and adults from across the county.

Comprehensive Plan for the National Capital

The Comprehensive Plan for the National Capital is a document that guides future planning and development in Washington, D.C., and the surrounding National Capital Region (NCR). The plan is divided into two components – the Federal Elements and the District Elements. The Federal Elements are prepared by NCPC and provide a policy framework for the Federal Government in managing its operations and activity in the NCR. The District Elements, which are applicable only in the District of Columbia, are developed by the District of Columbia to address traditional city planning issues such as land use, housing, and economic development. For this site, only the Federal Elements are applicable and only as they apply to the future development of Federal facilities. The Federal elements are described in detail in section 5.1.4.3.

6.1.5 Visual Resources

The Landover site is characterized by the barren remains of the Landover Mall, which was demolished between 2002 and 2014. A dirt surface covered with overgrowth and debris now exists where the mall once stood. A minimally maintained paved parking lot encloses the dirt remnants of the mall. The majority of the light fixtures have been removed. Trees and overgrown planting islands throughout the parking lot provide some greenery to the otherwise barren landscape. An internal circulation road encircles the parking lot providing access around the entire perimeter connecting the site to Brightseat Road and Landover Road. A small row of trees buffer the proposed site from the Capital Beltway to the east and Landover Road to the south. HI-TECH Auto Services, an operating enterprise, is located between the former Landover Mall and Brightseat Road. West of Brightseat Road is a small garden apartment housing development surrounded by a densely wooded area.

The general visual character of the surrounding area is typical of suburban landscapes with commercial and residential development interspersed with wooded areas. Currently, views of the Landover site are limited due to the lack of notable building heights present on the site. Areas directly adjacent to the site have views into the site.



This photograph of the Landover site typifies the existing visual character of the site.



HI-TECH Auto, located adjacent to the site. Image courtesy of Google Street View.

LANDOVER VISUAL RESOURCES AFFECTED ENVIRONMENT OVERVIEW

- The Landover site is characterized by the barren remains of the Landover Mall, which was demolished in 2002. A dirt surface covered with overgrowth now exists where the mall once stood.
- The general visual character of the surrounding area is typical of suburban landscapes with commercial and residential development interspersed with wooded areas.



Maple Ridge Apartments



Glenarden



Palmer Park School, now the Bonnie F. Johns Educational Center

6.1.6 Cultural Resources

GSA, in consultation with the Maryland Historic Trust (MD SHPO) and in accordance with the regulations implementing Section 106 of the National Historic Preservation Act (NHPA), has determined the Area of Potential Effect (APE) of the Proposed Action on historic properties. The APEs for the Landover site are illustrated in figure 6-11.

6.1.6.1 Archaeological Resources

No known archaeological studies have been completed within the site boundary. The Landover site in its entirety was disturbed during the construction of the Landover Mall in the 1970s. Therefore, there is low potential for archaeological resources to exist on the site, because any archaeological sites that may once have been present have likely been disturbed.

6.1.6.2 Historic Resources

The Landover site contains no historic structures or districts. The site was developed in 1972 as the Landover Mall, but none of the buildings remain extant.

No previous historic resource surveys for standing structures have occurred within the APE for the Landover site. The APE contains a mixture of residential and commercial development. Buildings older than 50 years of age within the APE are single-family and multi-family housing and a school built post World War II. Additional commercial and residential development within the APE, particularly along the eastern edge, was built in the last 20 to 30 years. The Maple Ridge apartment complex, located across Brightseat Road east of the Landover site, is a group of three-story apartment buildings constructed between 1964 and 1966. Southwest of the site, on the south side of Landover Road, is the former Palmer Park School (now the Bonnie F. Johns Educational Media Center), built in 1965. An additional garden apartment complex, the Lansdowne apartments, stand along the southern edge of the APE, on the west side of Sherriff Road. This complex was built between 1964 and 1966. The residential subdivision of Royale Gardens is north of the Landover site, between I-495, Brightseat Road, and H.P. Johnson Park. This neighborhood consists of single-family houses built between 1962 and 1964. These subdivisions and apartment complexes represent typical post World War II suburban development within the Washington, D.C., metropolitan area and do not appear to be prototypes of this development phenomenon. They have not been formally evaluated for their potential to meet criteria for listing in the National Register of Historic Places (NRHP).

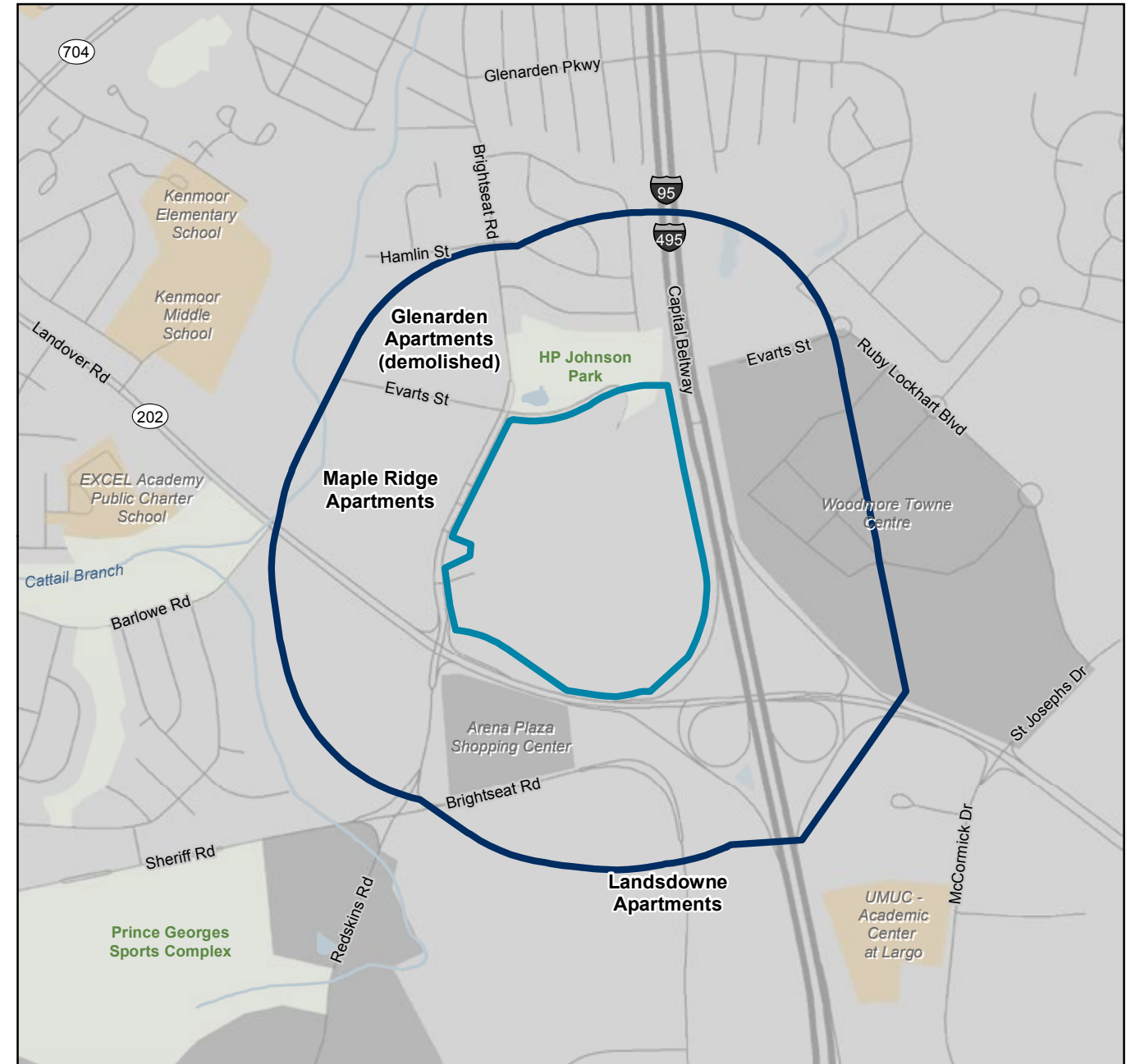
**LANDOVER CULTURAL RESOURCES
AFFECTED ENVIRONMENT
OVERVIEW**

- There are no archaeological studies that have been completed within the site boundary, however due to the disturbance during the construction of the Landover Mall in the 1970s, there is low potential for archaeological resources to exist on the site.
- The Landover site contains no historic structures or districts. Additionally, no previous historic resource surveys for standing structures have occurred within the APE for the Landover site.

GARDEN APARTMENT

Generally, a low-rise apartment building surrounded by landscaped grounds and arranged around courtyards.

Figure 6-11: Landover Historic Resource Map



Site Boundary/Ground Disturbance APE
 School
 Parks

Draft Viewshed APE



0 500 1,000
Feet
1 inch = 1,200 feet

Sources:
ESRI (2013), GSA (2013)
Prince George's County (2013)

LANDOVER SOCIOECONOMICS AFFECTED ENVIRONMENT OVERVIEW

- The population in Prince George's County increased by 9% to 873,481 between 2000 and 2013 and is expected to grow by 15% between 2010 and 2040.
- In 2013, the total employed labor force in Prince George's County was 299,713 people, and the average, annual median wage between 2009 and 2013 for all occupations was \$73,623.
- Between 2000 and 2013, total unemployment in Prince George's County increased from a low of 3.6% of the total labor force in 2007 to a high of 8% in 2010. In 2013, Prince George's County's annual unemployment rate was 6.8%.
- In 2013, in Prince George's County, approximately 15% of the total jobs were in state and local government industry and almost 11% were in the retail trade industry.
- Between 2005 and 2040, the number of households in Prince George's County is projected to grow by 20%.
- Prince George's County Public Schools is one of the nation's 25 largest school districts, with 205 schools, more than 124,000 students, and more than 18,000 employees.

6.1.7 Socioeconomics and Environmental Justice

The following sections describe the socioeconomic and environmental justice affected environment for the Landover site. Socioeconomic and environmental justice covers these subtopics: population, housing, employment, income, taxes, schools, community facilities, community services, recreation, environmental justice and protection of children. The region of influence (ROI) for socioeconomics and environmental justice is defined as the Washington-Arlington-Alexandria Metropolitan Statistical Area (Washington, D.C., MSA).¹ See section 3.8 for more detailed information on the Washington, D.C., MSA and the methodology used for this section.

The affected environment for socioeconomics for the Landover site is the same as the affected environment described for the Greenbelt site in section 5.1.7, with the exception of taxes, community services public health and safety; recreation; environmental justice; and protection of children. All other sections in this analysis are the same as those described under the affected environment for the Greenbelt site in section 5.1.7.

¹ The current Washington-Arlington-Alexandria Metropolitan Statistical Area (Washington, D.C., MSA), as defined by the U.S. Census, contains the following 22 counties or independent governments: Frederick County, Maryland; Montgomery County, Maryland; District of Columbia; Calvert County, Maryland; Charles County, Maryland; Prince George's County, Maryland; Arlington County, Virginia; Clarke County, Virginia; Fairfax County, Virginia; Fauquier County, Virginia; Loudoun County, Virginia; Prince William County, Virginia; Spotsylvania County, Virginia; Stafford County, Virginia; Warren County, Virginia; Alexandria city, Virginia; Fairfax city, Virginia; Falls Church city, Virginia; Fredericksburg city, Virginia; Manassas city, Virginia; Manassas Park city, Virginia; and Jefferson County, West Virginia (U.S. Census 2003).

6.1.7.1 Taxes

Taxes for Prince George's County, Maryland, and the State of Maryland are described in section 5.1.7.3. As the property that is the subject of this analysis is currently owned by a private entity, it is not tax exempt. The property is currently classified unimproved land, and has a 2015 assessment value of \$32,266,740, with a total property tax liability of \$361,339 for the same year.

6.1.7.2 Community Services, Facilities, and Recreation

The following sections describe the existing conditions for a variety of community facilities, including police services, fire and emergency services, medical facilities, libraries, schools, childcare facilities, and houses of worship.

Police Services

A description of police services in Prince George's County is provided in section 5.1.7.5. The Landover site is located in Prince George's County's Police District 3. Landover Station, approximately 1.7 miles away, services the site. Further details on police services for the Landover site were provided in section 6.1.8.1.

Fire and Emergency Services

A description of fire and emergency services in Prince George's County is provided in section 5.1.7.5. Battalion 1 serves all communities in the general vicinity of Capitol Heights, Landover, and Largo (Prince George's County 2014b). It is approximately 1.3 miles from the site and is shown in figure 6-12. Further details on fire and emergency services for the Landover site are provided in section 6.8.2.

Medical Facilities

Prince George's County's Health Department headquarters is located in Largo, Maryland, but includes an administrative location (Largo West) in Landover, Maryland. There are also two community service programs located in Landover: the Healthy Teens Center and the Women, Infants and Children Program (Prince George's County 2013f). The closest medical center to the Landover site is Largo Medical Center (shown in figure 6-12), located 1.25 miles to the southeast. This medical center offers urgent care, laboratory, radiology, and pharmacy, 24 hours a day, 7 days a week. The closest hospital to the project site is Prince George's County Hospital Center, located approximately 4 miles west of the project site.

Other Community Facilities

In addition to schools, police, fire and emergency, and recreation facilities, there are numerous other community facilities within 1 mile of the Landover site that are commonly located in suburban environments, such as childcare centers, houses of worship, universities, and libraries.

There are six childcare centers catering to the suburban population and concentration of employment in Landover. Those childcare centers within 1 mile of the Landover site include Park View Child Development Center located at 7900 Oxman Road, Greater Landover; Children – The Future Child Care located at 8585 Landover Road, Kent; Kayla's Daycare at 2900 Brightseat Rd, Glenarden; Aunt Tia's Daycare at 2324 Brightseat Rd, Landover; Nana's Day Care at 7778 Burnside Rd, Landover; and Rising Generations at 3030 Brightseat Road #1010, Lanham.

The Glenarden Branch Library is located within a mile of the Landover site at 8724 Glenarden Parkway, Glenarden.

Several houses of worship are located within a mile of the site. The University of Maryland, University College, is also located within a mile of the site at 1616 McCormick Drive, Largo.

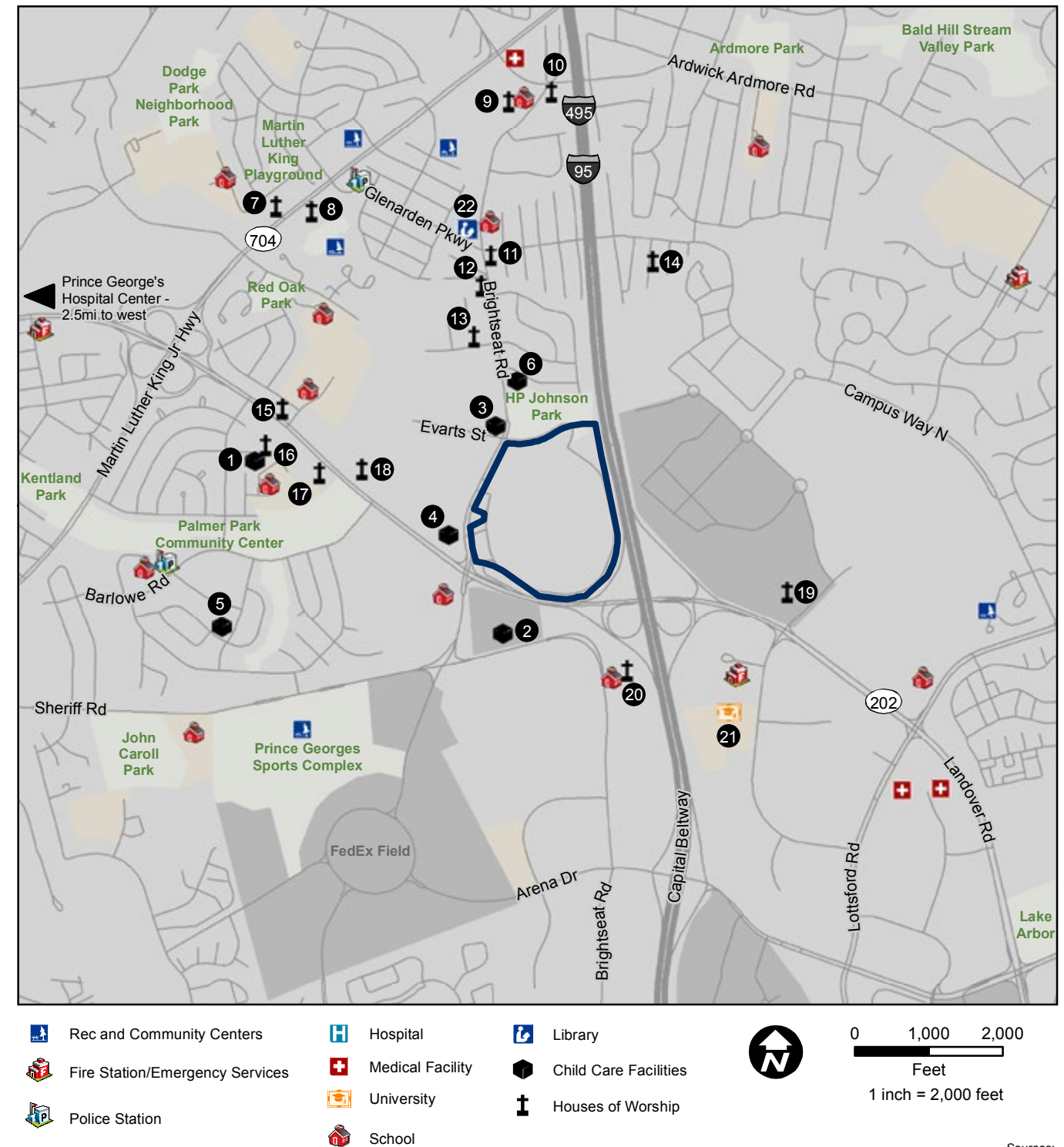
Table 6-3 provides a comprehensive list of all the community facilities found within a mile radius of the Landover site, and figure 6-12 illustrates their location.

Table 6-3: Landover Community Facilities

Facility	Map ID	Description
Child Care	1	Park View Child Development Center
	2	Children - The Future Child Care
	3	Kayla's Daycare
	4	Aunt Tia's Daycare
	5	Nana's Day Care
	6	Rising Generations
Houses of Worship	7	Saint Joseph's Church
	8	Lord's Church - Transformation
	9	Zion Church
	10	Shiloh Baptist Church
	11	Holy People For Christ Church
	12	Glenarden Church of Christ
	13	Christ Mission Church
	14	Holy Flock of Christ
	15	Eastern Community Church
	16	Parkview Baptist Church
	17	Faith in Christ Church
	18	New Home Baptist Church
	19	St. Joseph's Catholic Church
	20	Living Word Love Fellowship
University	21	University of MD University College
Library	22	Glenarden Branch Library

Source: Google Maps (2014); DC GIS (2014)

Figure 6-12: Landover Community Services, Facilities, and Recreation



Sources:
ESRI (2013), GSA (2013), FEMA (2013), NHD (2013)
Prince George's County (2013)

LANDOVER COMMUNITY SERVICES, FACILITIES, AND RECREATION

- All 800,000 citizens of Prince George's County are served by the Prince George's County Police Department. The city of Landover site is protected by the Landover Station, within Prince George's County Police District 3.
- Battalion 1, of the seven response areas (battalions) of Prince George's county, serves the Landover site location.
- Prince George's County's Health Department headquarters is located in Largo, Maryland, but includes an administrative location (Largo West) in Landover, Maryland. The closest hospital to the Landover site is the Largo Medical Center, located 1.25 miles to the southeast.
- There are several recreation resources and parks near the Landover site, including Kentland Park, National Harmony Park, H.P. Johnson Park, Glenarden Community Center, Red Oak Park, Palmer Park, and Prince George's Sports and Learning Complex.
- Within a mile of the site, there are 6 childcare centers, 14 houses of worship, 1 university, and 1 library.

Recreation

A general description of parks and recreation resources in Prince George's County is provided in section 5.1.7.5. There are several recreation resources and parks near the Landover site, including Kentland Park, National Harmony Park, H.P. Johnson Park, Glenarden Community Center, Red Oak Park, Palmer Park, and Prince George's Sports and Learning Complex. FedExField, a football stadium, is located about 1 mile from the Landover site. Palmer Park Community Center, located less than a mile west of the site, resides on the 44-acre Palmer Park site and has a gym, two dance rooms, computer lab, fitness room, play area, tennis court, and basketball court (Prince George's County Department of Parks 2015). Glenarden Community Center, located approximately 1 mile northwest of the project site, has a gym, an arts and crafts room, computer lab, multipurpose room, fitness room, game room, and outdoor facilities, including a softball field, football/soccer overlap, two basketball courts, two tennis courts, and a picnic area (Prince George's County Department of Parks 2015). Figure 6-12 shows parks that are within a 1-mile radius of the Landover site.

6.1.7.3 Environmental Justice

Census tracts with minorities and persons living in poverty within 1 mile of the Landover site in Prince George's County are identified in figure 6-13. Minority and poverty information for the State of Maryland, Washington, D.C., MSA, and Prince George's County are provided in table 5-8.

In 2013, there were 12 census tracts located within 1 mile of the Landover site in Prince George's County. Of these, two census tracts (8035.08 and 8035.09) reported at least 20 percent of their populations living below the poverty level in 2013. All 12 of the census tracts within 1 mile of the Landover site have proportionately high minority populations compared to the rest of Prince George's County (8033, 8034.01, 8034.02, 8035.08, 8035.09, 8035.14, 8035.19, 8035.21, 8035.24, 8035.25, 8036.01, and 8036.02). Census tracts with minority and impoverished populations within 1 mile of the Landover site in Prince George's County, Maryland, are identified in figure 6-13 (U.S. Census Bureau 2013a, 2013f). Details on Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, are provided in section 3.8.3.3.

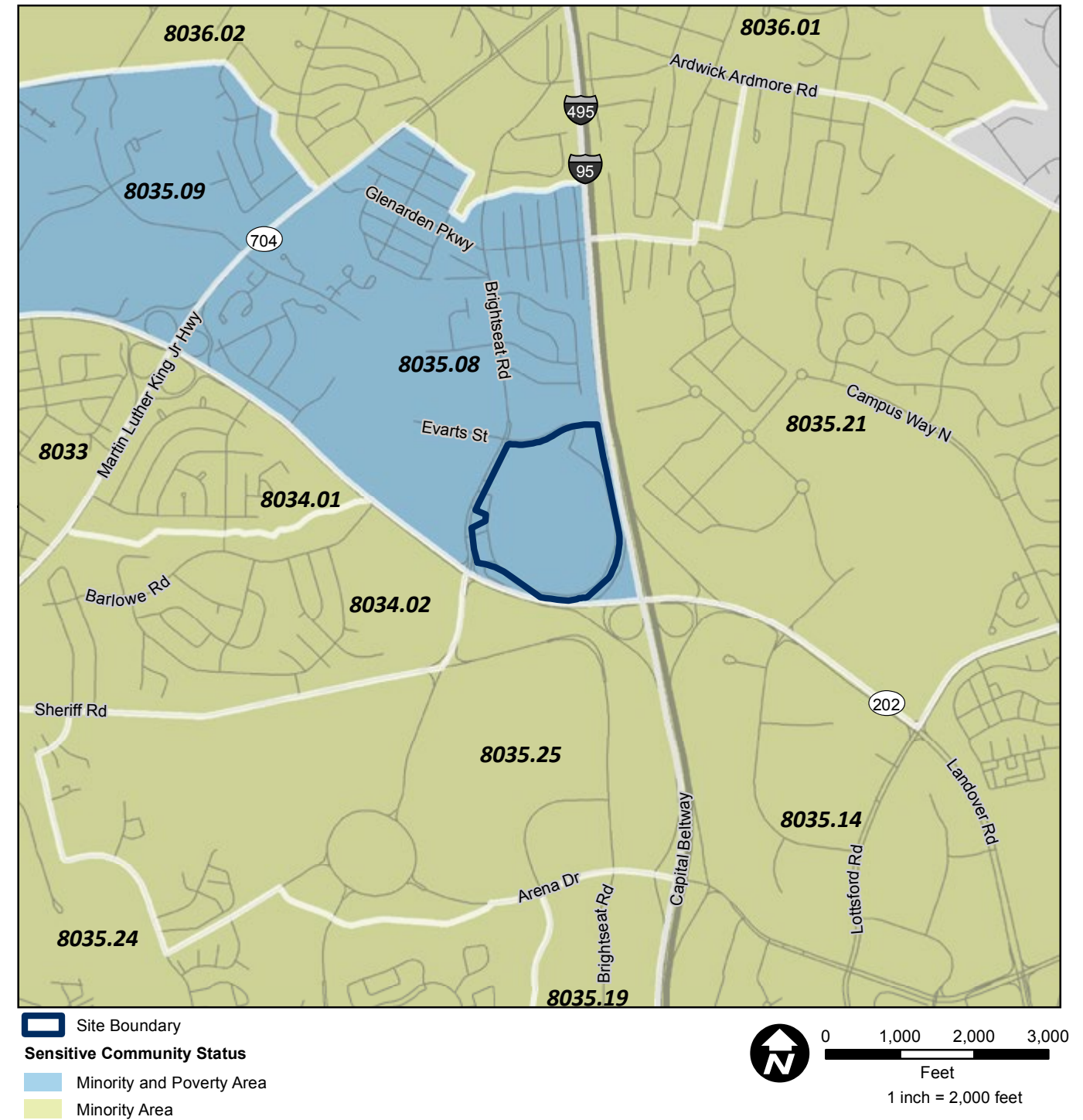
6.1.7.4 Protection of Children

There are a number of childcare centers within a 1-mile radius of the Landover site. These include Aunt Tia's Daycare, Kayla's Daycare, Rising Generations, Park View Child Development Center, Future Leaders Daycare, and Nana's Day Care. In addition, there are several elementary schools within a 1-mile radius of the Landover site. The Foundation Schools of Prince George's County is the closest school to the site. Other schools located within 1 mile of the site include: Excel Academy Public Charter School, Kenmoor Elementary and Middle School, Jericho Christian Academy, Genesis Christian Day School, and Woodstream Christian Academy. In total, there are at least 600 children attending schools within 1 mile of the project site (Prince George's County PS 2015b). It is likely that there are many more children attending schools within 1 mile of the site; enrollment data was unavailable for four of 6 six schools within 1 mile of the site. There are also neighborhoods located to the west and northwest of the project site where children make up approximately 25 percent of the residents of the census tract (8035.08) that contains these neighborhoods (U.S. Census Bureau 2013f). EO 13045, *Protection of Children from Environmental Health and Safety Risk*, is described in section 3.8.3.3.

LANDOVER ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

- Of the 655 census tracts within the ROI, 12 census tracts are located within 1 mile of the Landover site. Of these, 2 census tracts reported at least 20% of their population living below poverty in 2013, and all 12 of the census tracts have proportionately high minority populations compared to the rest of the county.
- There are several elementary schools within a 1-mile radius of the Landover site, the closest of which is the Foundation Schools of Prince George's County.

Figure 6-13: Landover Sensitive Populations



Sources:
 ESRI (2013), GSA (2013),
 U.S. Census Bureau (2014), NHD (2013)
 Prince George's County (2013)

LANDOVER PUBLIC HEALTH AND SAFETY / HAZARDOUS MATERIALS

- The Landover site is protected by Police District 3, the Henry District, which serves the cities of Glenarden, Landover, Chapel Oaks, Capital Heights, Seat Pleasant, Fairmont Heights, and FedExField.
- Emergency services provided for the Landover site are provided by Prince George’s County Fire and Emergency Services, and the closest station to the site is the Kentland Volunteer Fire Department (Company 33).
- Police and fire/emergency response times to the site are approximately 2-3 minutes.
- A site assessment was conducted at the Landover site in November 2014, which identified current Recognized Environmental Conditions associated with a Sears automotive center that was formerly located at the site. Several Closed Oil Control Program Cases were identified at the site, and the report indicates that these cases involved spills that were reported as early as 1988.
- A search using USEPA’s EnviroMapper tool identified six sites within 0.5 mile of the site that are classified as either hazardous waste sites or brownfields.

Table 6-4: Landover Police and Emergency Services

Facility	Response Time (Minutes)	Distance From Site (Miles)	Description
Fire Station/Emergency Services	3.0	1.5	Kentland Volunteer Fire Department 33
Police Station	2.3	1.0	Prince George’s County Police Department – District III Station
	2.7	1.3	Glenarden Police Department
Hospital	8.6	4.0	Prince George’s County Hospital Center

Note: Police and emergency response times were calculated by applying the ArcGIS Network Analyst routing function to a network dataset based on the 2014 ESRI detailed streets layer. The streets layer records the average travel time, in minutes, to traverse each road segment. Travel time data originates with TomTom North America, Inc. The route function summarizes the time cost for each route. Actual response times may vary from this reported time depending on traffic conditions and the average speeds of the response vehicles, which are unknown at this time.

6.1.8 Public Health and Safety/ Hazardous Materials

6.1.8.1 Public Health and Safety

The Landover site is located in Prince George’s County’s Police District 3, which includes two sectors, George and Henry. The Landover site falls in the Henry District, which serves the cities of Glenarden, Landover, Chapel Oaks, Capitol Heights, Seat Pleasant, Fairmont Heights, and FedExField. District 3 employs approximately 180 sworn officers and 7 civilian employees (Prince George’s County 2013d). The Landover Police Station, located at 76000 Barlowe Road in Landover, is approximately a 1.7-mile drive from the site.

Prince George’s County Fire and Emergency Services is combined into one department and consists of seven battalions throughout the county. Battalion 1 serves the site and the communities and general vicinity of Capitol Heights, Landover, and Largo. The closest station to the site is the Kentland Volunteer Fire Department (Company 33). This fire department includes two firehouses with 50 volunteers, 15 to 20 of whom live at the fire house. Company 33 operates one class “A” engine, a mini-pumper, a combination class “A” engine/heavy rescue, and a 75-foot Baker-Aerial Scope Tower Ladder (Kentland Volunteer Fire Department 2015). The station, located at 7701 Landover Road in Hyattsville, is approximately a 1.3-mile drive from the site. Police and emergency service response times are provided in table 6-4.

6.1.8.2 Hazardous Material

A Phase I Environmental Site Assessment was conducted at the Landover site in November 2014 (Louis Berger 2014b). At the time of the assessment, facilities associated with the Landover Mall were still standing. The assessment identified Recognized Environmental Conditions associated with a Sears automotive center that was formerly located at the site. During field investigations, heavily stained floors, a suspected parts washing station, several floor drains, and suspected former lift locations were observed inside the building. Although no chemicals or petroleum products were observed during the field investigation, former use and storage of these materials in the building is likely. Additionally, field investigations identified four suspected underground storage tank vent pipes along the western exterior wall of the former Sears auto repair center. The vent pipes were situated near underground vaults that are suspected to provide access to the underground storage tanks. Interviews conducted with the site owner also suggest that the site was formerly occupied by a dry cleaner, which was a tenant in the former Landover mall. Based on this information, it is possible that soil and groundwater at the site have been impacted by these prior uses.

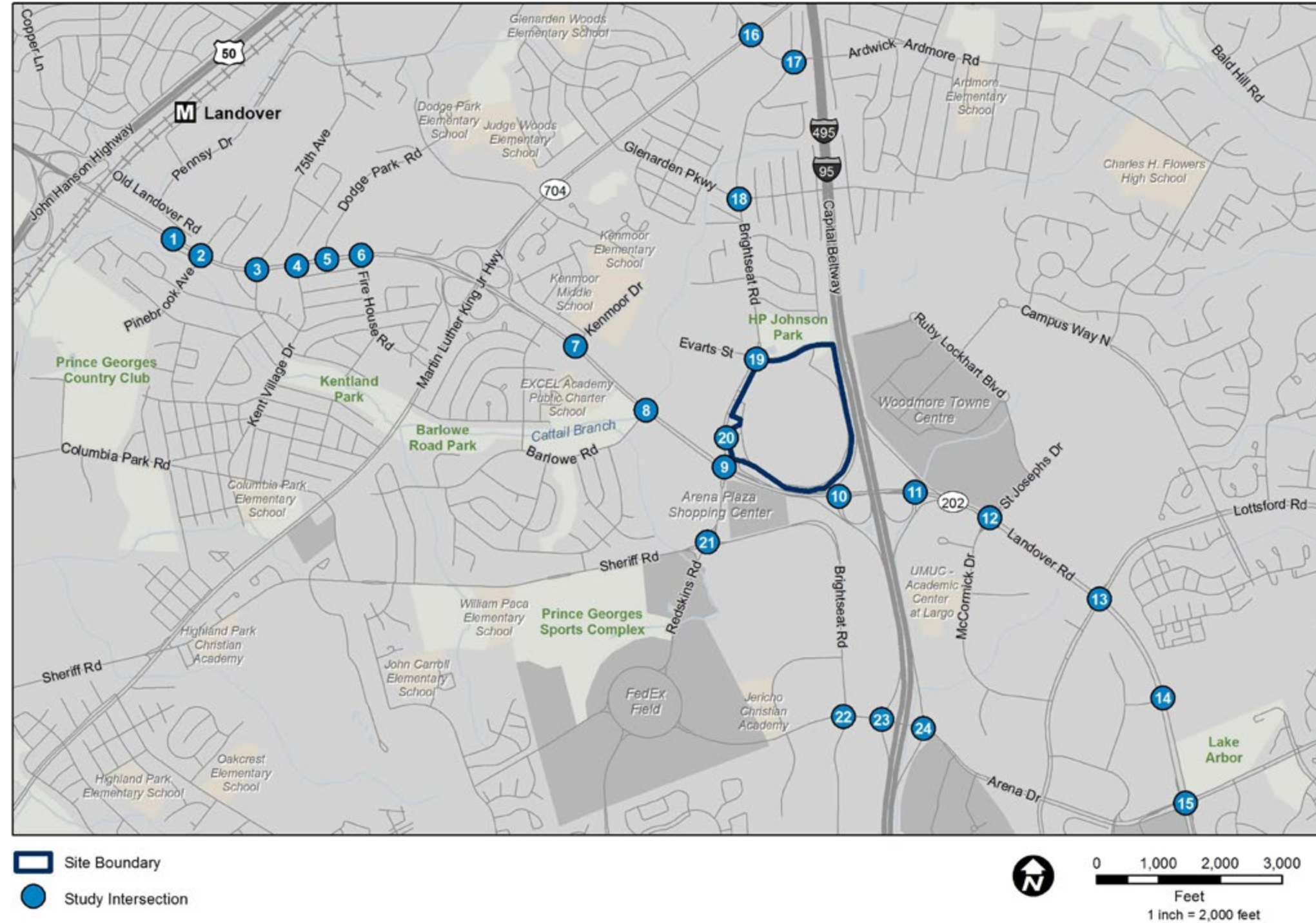
According to an environmental database report provided by Environmental Data Resources (2014), several Closed Oil Control Program Cases were identified at the site. The database report indicates that these cases involved spills that were reported as early as 1988; however, all cases were closed by the Maryland Department of Environment (MDE) by 2006. A 20,000-gallon heating oil underground storage tank was removed from the site in September 2006 and approximately 1,500 tons of petroleum-impacted soil were removed in January 2007. Two 25,000-gallon underground storage tanks and an 8,000-gallon underground storage tank were abandoned in place at the site in October 1988. The case was closed in 1991. The Maryland Historical Underground Storage Tank database contains an inventory of reported historic leaking underground storage tank incidents prior to 1999. The site was identified in the database as Sears Auto Center, located at 2101 Brightseat Road. According to the database, a 1,000-gallon used oil tank was removed and no active remediation is present, only sampling of monitoring wells. The case has been closed. Three other facilities within a 0.25-mile radius appeared in the Maryland Underground Storage Tank database, which documents existing underground storage tanks. Based on assumed hydraulic gradient, absence of reported releases and/or case status, these off-site underground storage tanks would not be likely to impact the Landover site.

The Landover site was identified on the list of conditionally exempt small quantity generators in the Resource Conservation and Recovery Act database (USEPA 2015f). Conditionally exempt small quantity generators generate less than 100 kilograms (kg) of hazardous waste, or less than 1 kilogram of acutely hazardous waste per month. Small quantity generators generate between 100 and 1,000 kg of hazardous waste per month. Large quantity generators generate more than 1,000 kg of hazardous waste, or more than 1 kg of acutely hazardous waste per month. Non-generators no longer generate hazardous waste. One small quantity generator, two conditionally small quantity generators, and one non-generator were identified within a 0.25-mile radius of the site.

A search using USEPA's EnviroMapper tool identified 6 sites within 0.5 mile of the site that are classified as either hazardous waste sites or brownfields. All six sites are associated with automotive-related uses (USEPA 2015h).

Neither the Landover site nor any other facilities within a 1-mile radius of the site were identified on the Comprehensive Environmental Response, Compensation, and Liability Information System database as National Priorities List (NPL), delisted NPL, or proposed NPL sites (USEPA 2015e). The Phase I Environmental Site Assessment identified no state hazardous waste sites within 1 mile of the site and no solid waste disposal facilities or landfills within 0.5 mile of the site. Based on a search conducted as part of the Environmental Site Assessment, neither the site nor any other facilities within a 0.5-mile radius were identified as brownfields in the U.S. or Maryland brownfields databases (Louis Berger 2014b).

Figure 6-14: Landover Transportation Study Area Intersections



6.1.9 Transportation

The following sections describe the affected environment for the Landover site, and provide a summary of existing transportation conditions in the study area as of May 2015.

6.1.9.1 Study Area Description

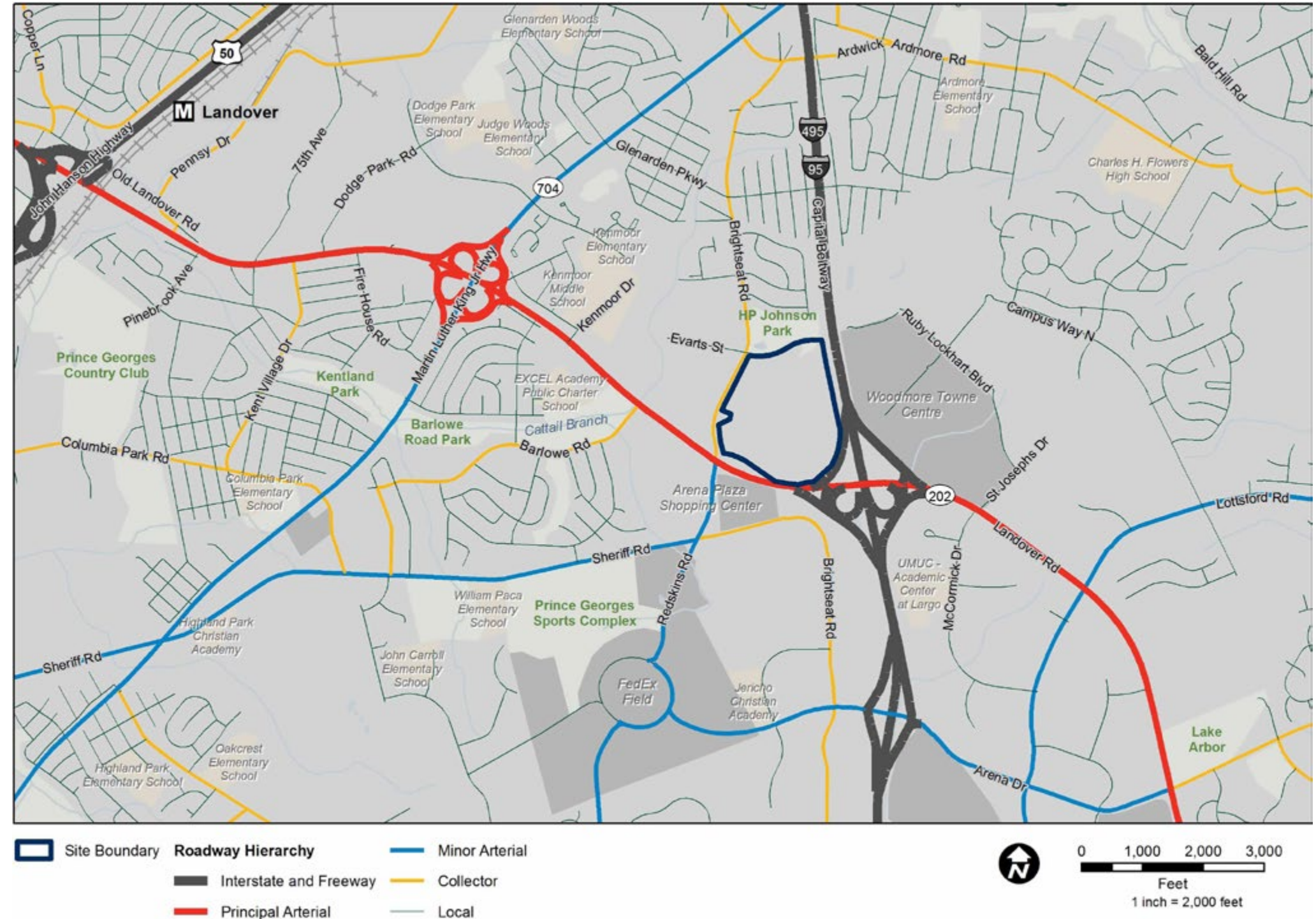
The larger vehicular transportation study area, as shown in figure 6-14, extends from just east of U.S. Route 50 to the west to Ardwick-Ardmore Road to the north, Landover Road to the east, and Arena Drive to the south. Section 3.10.1 contains the methodology used to select the appropriate vehicular and other transportation mode study area. The study area only includes the selected intersections, but it does not have a clearly defined study boundary; it was established in consultation with Prince George's County, M-NCPPC, and Maryland SHA and includes a total of 24 intersections for the Existing Condition analysis.

6.1.9.2 Project Area Accessibility and Roadway Functional Classification

The Landover site is currently accessible via two locations on Brightseat Road to the west, one location on Evarts Street to the north, and an in-bound only access point from Landover Road. Landover Road provides regional east-west connections and direct access to the Capital Beltway, which borders the Landover site on the east side. The Capital Beltway provides regional access to Montgomery County and lower Prince George’s County, in Maryland, as well as access to Northern Virginia. U.S. Route 50 (John Hanson Highway), slightly more than 1 mile west of the site via Landover Road, provides regional access to Washington, D.C. on the west and Annapolis on the east.

Figure 6-15 shows a map of roadway functional hierarchy classifications within the study area according to Maryland State Highway Administration (Maryland SHA 2014a). Functional classification is the process by which public streets and highways are grouped into classes according to the character of service they are intended to provide. Interstates, freeways, and expressways provide the highest LOS at the greatest speed for the longest uninterrupted distance, followed by principal arterials, minor arterials, collector roads, and finally local roads. The primary interstate within the study area providing regional access is the Capital Beltway (I-495). John Hanson Highway (U.S. Route 50), which is slightly more than 1 mile northeast of the site, also provides regional access and is classified as an “other freeway or expressway” by Maryland SHA. Within the study area, Landover Road (Maryland Route 202) is classified as a principal arterial. Minor arterials include Martin Luther King Jr. Highway (Maryland Route 704), Sheriff Road, Redskins Road, Crescent Road, and Arena Drive. In addition, collector roads in the study area include Brightseat Road, Ardwick Ardmore Road, Barlow Road, and Kent Village Drive. Local roads in the study area include Evarts Street, Glenarden Parkway, Pinebrook Avenue, 75th Avenue, Dodge Park Road, Fire House Road, Kenmoor Drive, McCormick Drive, and Ruby Lockhart Boulevard.

Figure 6-15: Landover Roadway Hierarchy and Classification



Sources: ESRI (2013), GSA (2013), Prince George’s County (2013), Maryland SHA (2014)

6.1.9.3 Roadway Descriptions

The following section describes the most relevant roadways within the study area, including all roads classified as principal arterials and above, and the most relevant remaining roads in terms of access and travel patterns to and from the site. Descriptions include the Maryland SHA roadway functional classification from 2013, the number of lanes in each direction, the latest Annual Average Daily Traffic (AADT) volumes (12-months of traffic volumes averaged) available from Maryland SHA from 2013, and any noteworthy characteristics such as the roadway's role within the transportation network and whether bike lanes are present. The information was collected from Maryland SHA's 2013 Functional Class GIS data (Maryland SHA 2014a), observations in the field, aerial imagery, and Maryland SHA's AADTs of stations for 2007–2013 (Maryland SHA 2014b).

Capital Beltway, also known as I-495 and I-95 in Landover, is north to south oriented along the eastern perimeter of the Landover site; the entire beltway completes a circle around Washington, D.C. and its inner suburbs, and connects Maryland and Virginia at two Potomac River crossings. The roadway is classified as an interstate by Maryland SHA and comprises four to six lanes in each direction (2014a). The Capital Beltway connects to Landover Road, southeast of the site, and to John Hanson Highway (U.S. Route 50), northeast of the site. The speed limit of the Capital Beltway is 55 miles per hour (mph). From Landover Road (MD 202) to U.S. 50, the AADT volume on the Capital Beltway in 2013 was 226,800 vehicles (Maryland SHA 2014b).

John Hanson Highway, also known as U.S. Route 50, is classified as an "Other Freeway or Expressway" by Maryland SHA and has an east-west orientation (2014a). In each direction, there are three to five through lanes that extend southwest connecting with New York Avenue near Washington, D.C., and east towards Annapolis. In the vicinity of the Landover site, the roadway connects with the Capital Beltway, Martin Luther King Jr. Highway, and Landover Road. John Hanson Highway has a speed limit of 65 mph near the study area and has a 7.5 mile stretch of high occupancy vehicle (HOV) lanes between the Capital Beltway and U.S. 301 (Crain Highway) to the east (Maryland SHA 2015). West of the study area, John Hanson Highway had an AADT of 97,000 vehicles in 2013 (Maryland SHA 2014b). East of the study area, it had an AADT of 146,100 vehicles in 2013.

Landover Road, also known as Maryland Route 202, has a curvilinear path with a general northwest to southeast orientation. It is classified by Maryland SHA as a principal arterial roadway and has three to six through lanes traveling in each direction, periodic left turn lanes, and a protected median (2014a). The roadway connects with the Arena Drive, Lottsford Road, the Capital Beltway, Brightseat Road, Martin Luther King Jr. Highway, and John Hanson Highway in the vicinity of the Landover site. Landover Road has a 40 mph speed limit west of the Landover site and a speed limit of 50 mph as Landover Road passes over the Capital Beltway. Directly south of the study area on Landover Road, the AADT was 52,200 vehicles in 2013 (Maryland SHA 2014b).

Martin Luther King Jr. Highway, also known as Maryland Route 704, is classified by Maryland SHA as a minor arterial roadway and primarily contains three through lanes in each direction near the study area, periodic left turn lanes, and a protected median (2014a). The roadway has a northeast to southwest orientation and connects with John Hanson Highway (U.S. Route 50), Ardwick Ardmore Road, Landover Road, and Sheriff Road in the vicinity of the Landover site. Martin Luther King Jr. Highway has a speed limit of 40 mph. Northwest of the study area on Martin Luther King Jr. Highway, the AADT was 26,600 vehicles in 2013 (Maryland SHA 2014b).

Brightseat Road is classified by Maryland SHA as a major collector road and has three lanes running north to south in each direction between Evarts Street to the north and Sheriff Road/Redskins Road to the south, with a protected median (2014a). North of Evarts Street and the Landover site, the roadway narrows to one wide lane in each direction, allowing street parking on either side of the road. To the south of the site, Brightseat Road turns east at the intersection with Sheriff and Redskins Roads, where it travels east for a short while before again traveling south; this stretch of Brightseat Road has two through lanes in each direction. The roadway provides connections to multiple residential neighborhoods as well as Evarts Street and Ardwick Ardmore Road to the north of the site and Landover Road, Redskins Road, Sheriff Road, and Arena Drive to the south. Brightseat Road has a speed limit of 35 mph. The AADT for Brightseat Road in 2013 was 11,800 vehicles (Maryland SHA 2014b).

Redskins Road is classified as a minor arterial road by Maryland SHA and connects Sheriff Road and Brightseat Road with the FedExField and parking lot (2014a). The road has a north-south orientation that extends from where Brightseat Road turns at the intersection with Sheriff Road to the FedExField. Although there are four lanes in each direction, only three lanes in each direction are used on normal (non-game) days with the two lanes in the center intended to be used only on game days. On game days, the lane assignments are dynamic, changing based on demand. Redskins Road has a speed limit of 35 mph. In 2013, Redskins Road had an AADT of 8,400 vehicles (Maryland SHA 2014b).

Sheriff Road is classified by Maryland SHA as a minor arterial roadway. Sheriff Road has an east-west orientation that becomes Brightseat Road to the west at its intersection with Redskins Road (2014a). There are two through lanes of traffic in each direction with no median and center turning lanes at intersections. The residential properties line this roadway, which also acts a connector to other larger roadways such as Martin Luther King Jr. Highway and Redskins Road/ Brightseat Road. In some parts of the roadway where residential properties front the street, on-street parking can be found along both directions. The road has a 35 mph speed limit. In 2013, the AADT for Sheriff Road was 13,600 vehicles (Maryland SHA 2014b).

Evarts Street travels east to west across Brightseat Road north of the Landover site. On its eastern end, the roadway turns south to become a perimeter access road around the east side of the Landover site. The road is classified as a local roadway and has a 25 mph speed limit (2014a). On the west side of Brightseat Road, Evarts Street traverses a residential neighborhood and has one through lane in each direction. On-street parking is allowed except at the intersection with Brightseat Road. Evarts Street has one wide eastbound lane and two westbound lanes, and has no on-street parking restrictions. Prince George's County envisions the extension of Evarts Street over the Capital Beltway to create a better street network and connect development west of the beltway with the Woodmore Towne Centre.

Glenarden Parkway provides access to residential neighborhoods and generally travels northwest to southeast. The roadway is classified as a local road by Maryland SHA (2014a). Glenarden Parkway traverses a residential neighborhood with sidewalks on both sides and one through lane in each direction, and provides ample space for on-street parking. The road connects Brightseat Road north of the site to Martin Luther King Jr. Highway on the west and over the Capital Beltway to the east, connecting with more residential neighborhoods. Glenarden Parkway has a speed limit of 25 mph.

Barlowe Road is classified by Maryland SHA as a major collector road (2014a). The roadway connects Landover Road to a series of subsidiary residential roads west of the site. In addition to residential properties, Barlowe Road also serves a neighborhood commercial shopping center and several community and government facilities. Barlowe Road has one through lane in each direction and includes protected sidewalks for pedestrians on both sides of the street. The roadway has a speed limit of 25 mph and on-street parking is allowed along select portions of the roadway. Barlowe Road had an AADT of 5,400 vehicles in 2013 (Maryland SHA 2014b).

A detailed inventory of the lane geometry was conducted through field reconnaissance and a study of aerial imagery. Based on this information, the existing lane geometry and traffic control type (signalized or unsignalized) of intersections in the study area is shown in figure 6-16.

Figure 6- 16: Landover Existing Lane Geometry and Traffic Control Type

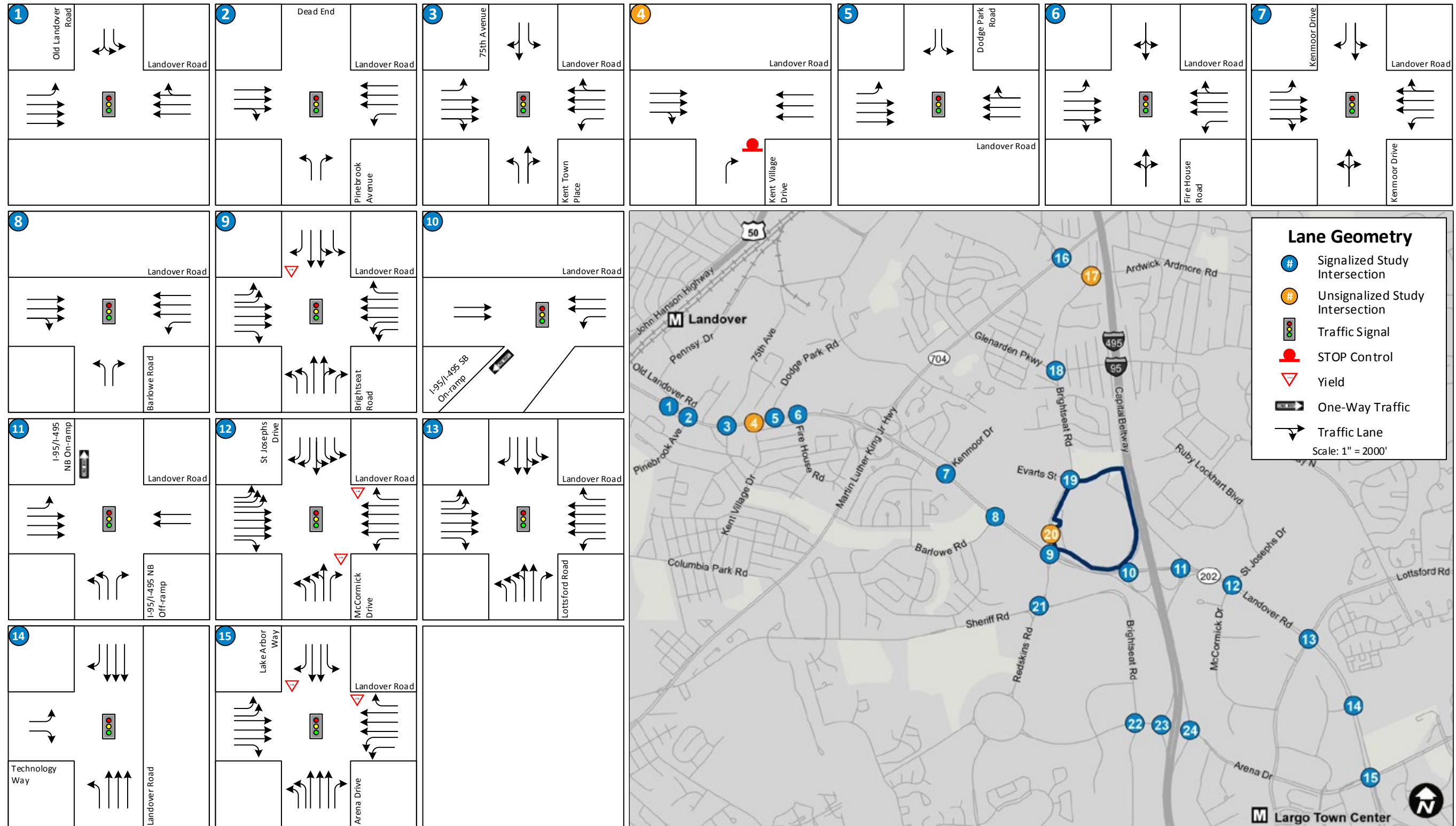


Figure 6-16: Landover Existing Lane Geometry and Traffic Control Type (continued)

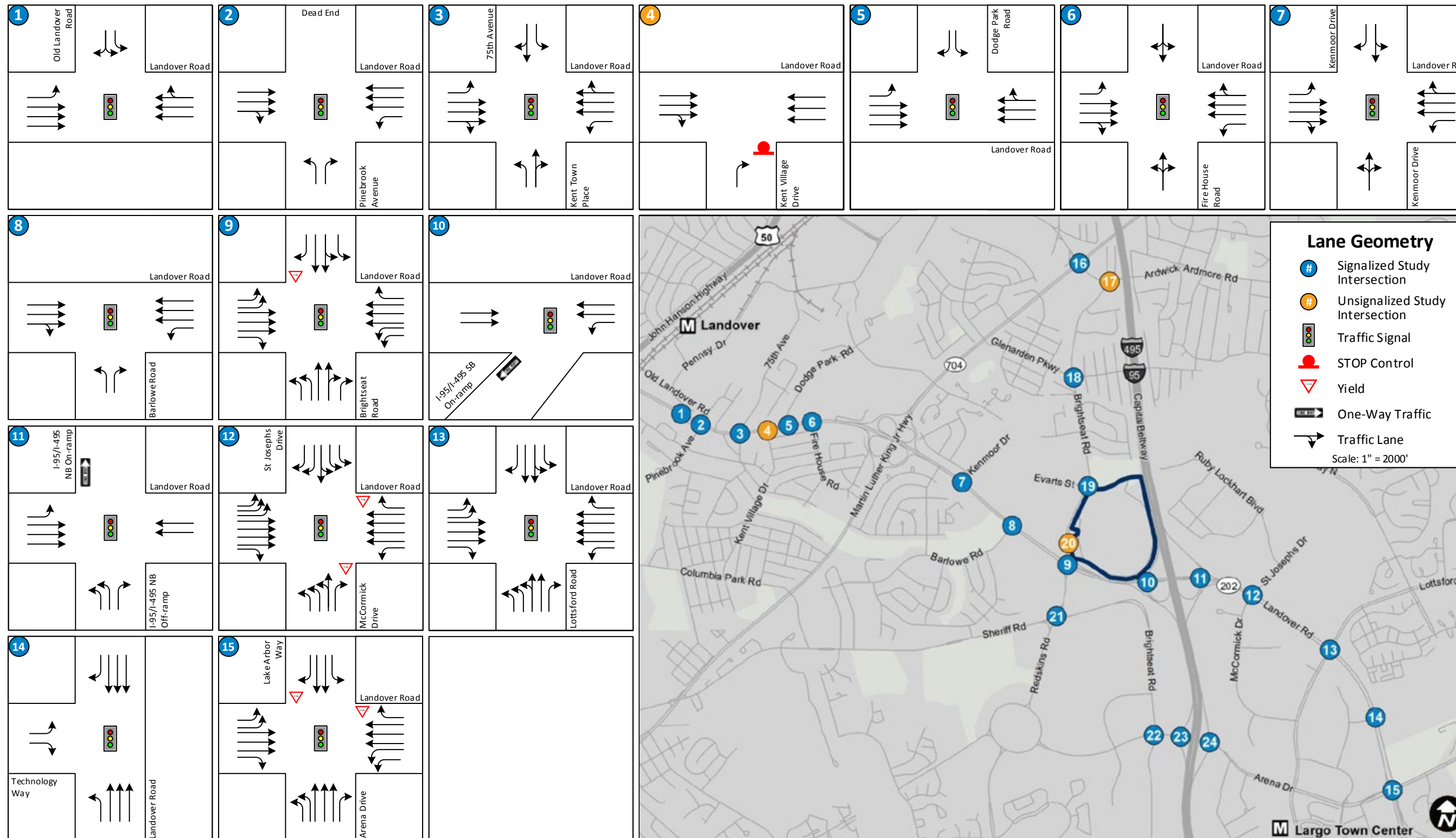


Figure 6-17: Landover Intersection (Arterial) Cumulative AM Volumes

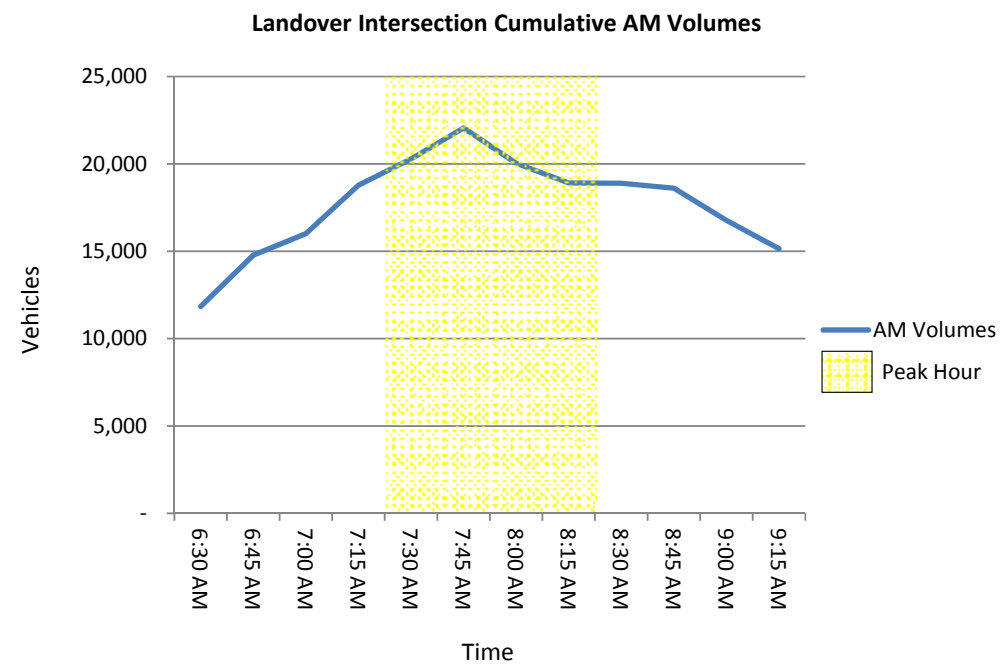
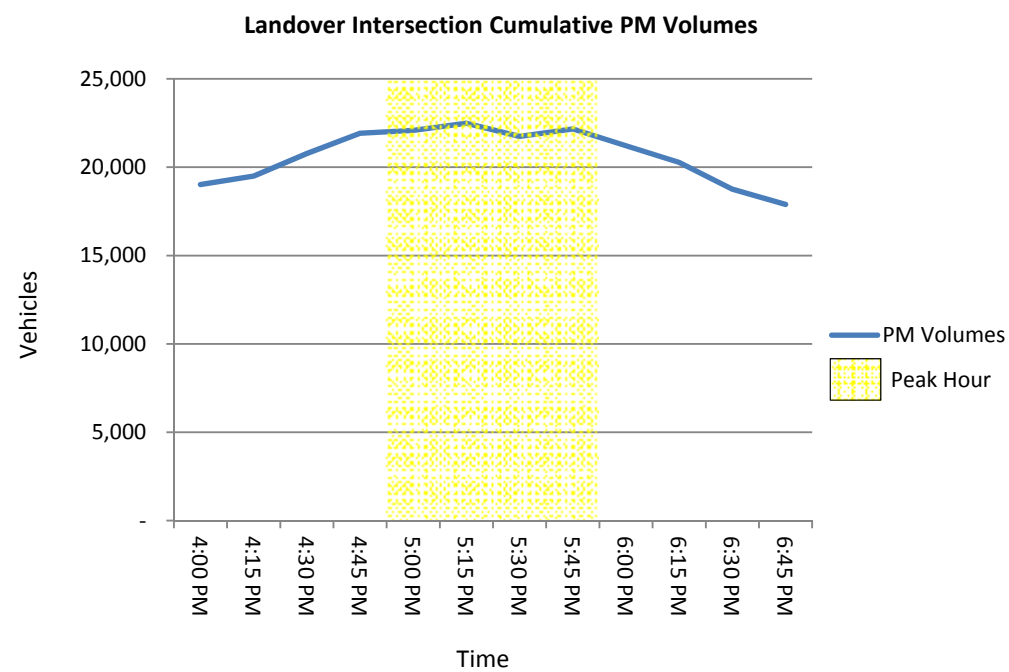


Figure 6-18: Landover Intersection (Arterial) Cumulative PM Volumes



6.1.9.4 Data Collection

Section 3.10.4.1 provides an overview of all data collected as part of the study. After examining the count collection data for the study area, the peak AM and PM traffic hours were determined for both the arterial transportation system, using intersection counts, and the interstate system, using Automated Traffic Recorders (ATRs) for the mainlines and a combination of ATR and intersection counts for the ramps. These peak hours are shown in yellow bands on the charts in figures 6-17 through 6-19. These charts show the traffic volumes for all turning movement volumes for all study area intersections summed together. The cumulative turning movement volumes for all study area intersections are shown in a blue line. The determination of a peak hour relied on the arterial system peak hour because the arterial system would be most impacted by the addition of a consolidated FBI HQ facility. In addition, the interstate system morning peak hour is within 15 minutes of the arterial system and afternoon flows remain near the peak through the arterial system peak hour. The overall weekday AM peak hour used for the analysis occurs between 7:30 AM and 8:30 AM, and the weekday PM peak hour occurs between 5:00 PM and 6:00 PM. Figure 6-20 shows the existing AM and PM weekday peak hour turning movement volumes occurring in the study area.

Figure 6-19: Landover Interstate Volumes

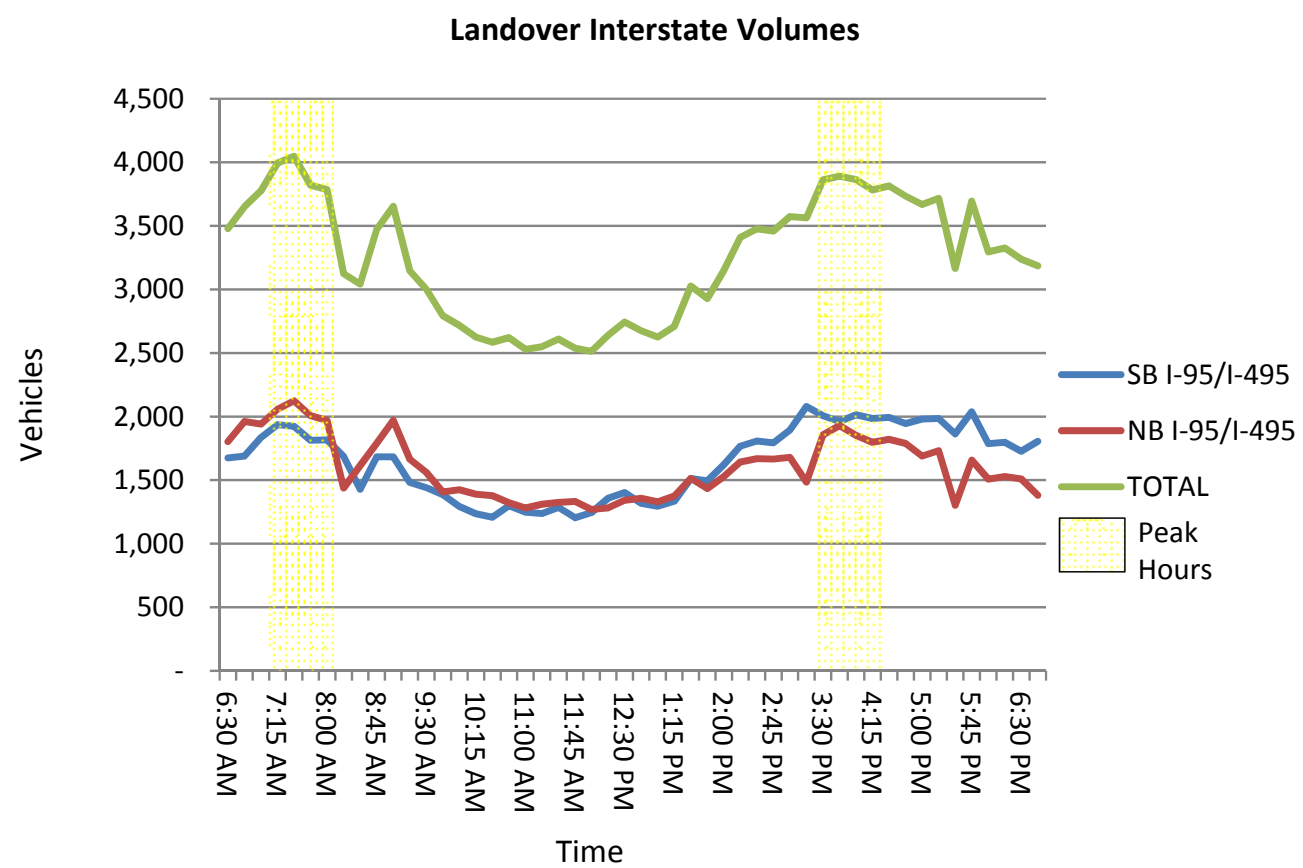


Figure 6-20: Landover Existing Condition AM and PM Peak Hour Turning Movement Volumes

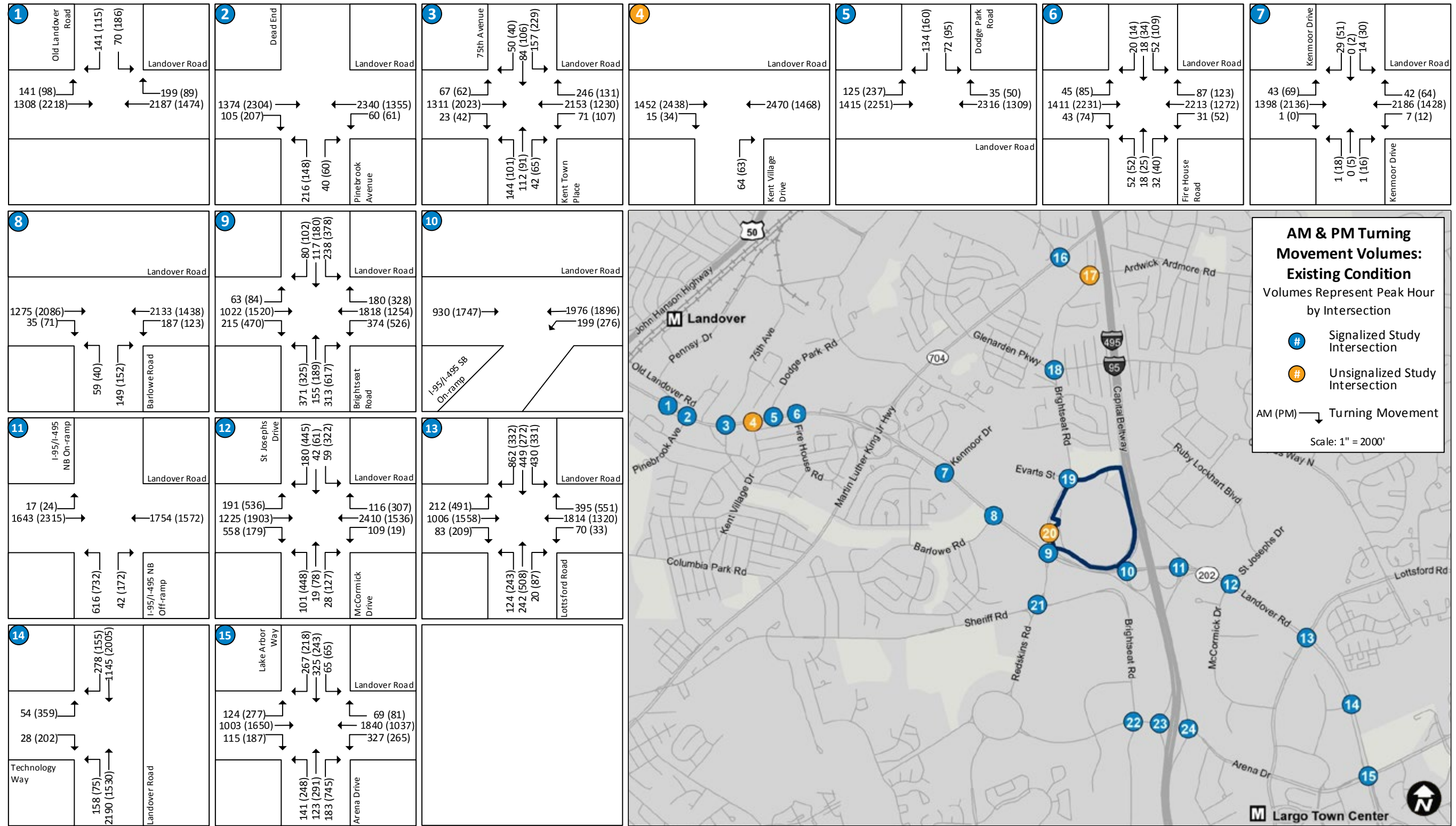
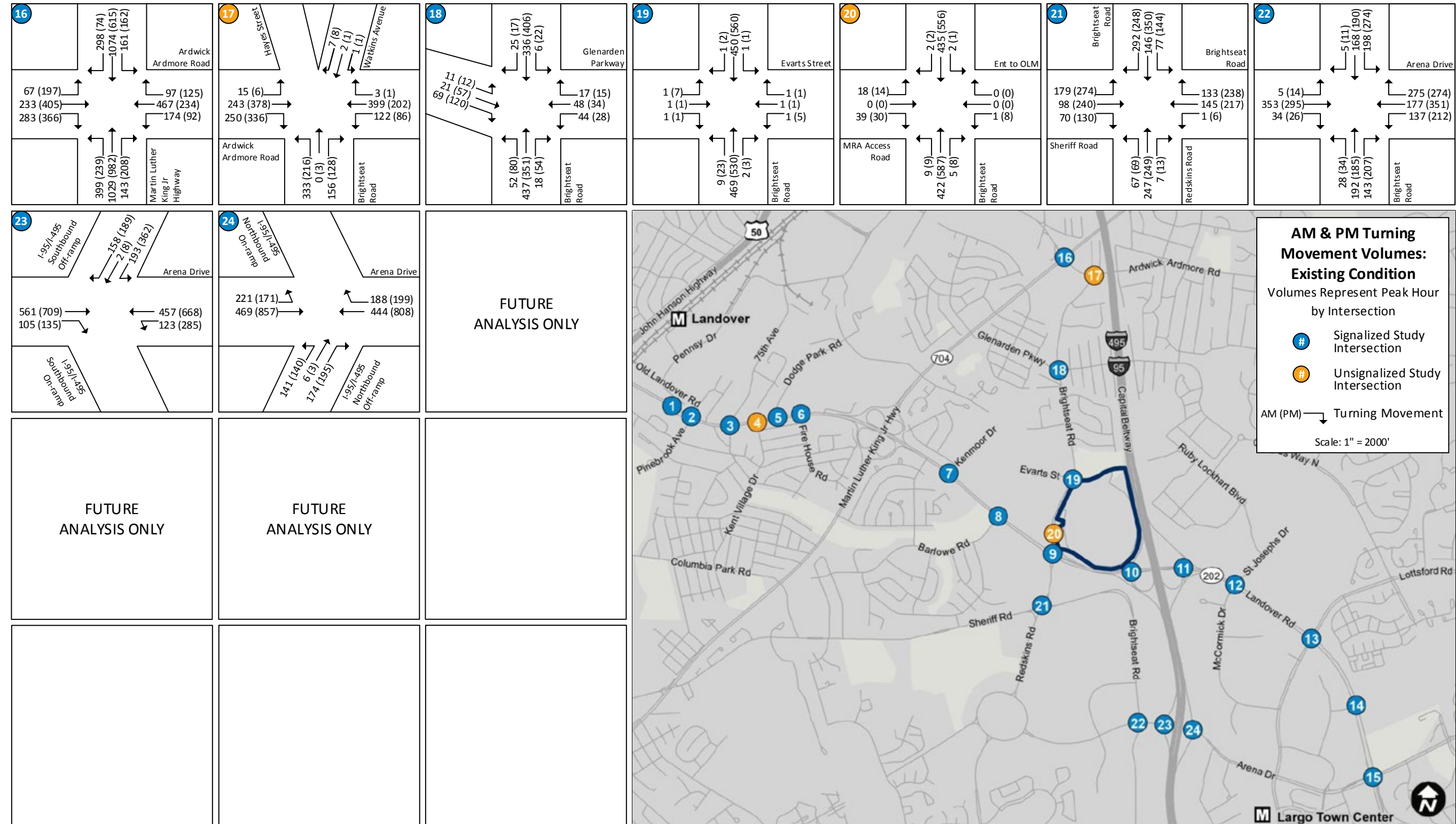


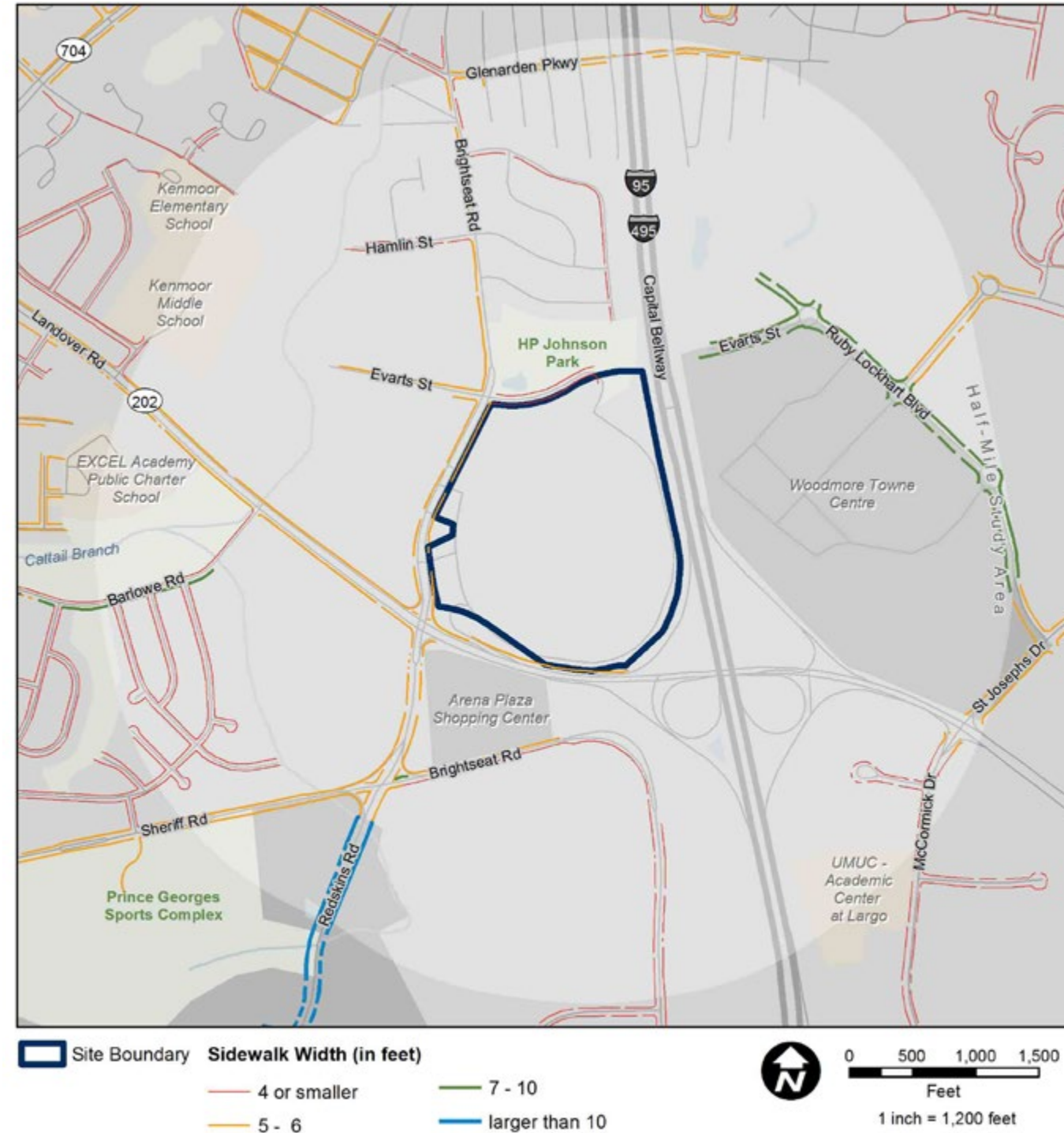
Figure 6-20: Landover Existing Condition AM and PM Peak Hour Turning Movement Volumes (continued)



LANDOVER PEDESTRIAN NETWORK AND ADA COMPLIANCE

- Sidewalk accommodations are provided on most streets in the 0.5-mile radius of the non-vehicular study area except on Landover Road as it passes over the Capital Beltway. Overall pedestrian network and pedestrian conditions in the study area are fair.
- The origins and destinations of pedestrian trips in the study area are a mix of retail, recreational, and residential.
- More than half of the intersection crosswalks in the study area are ADA compliant; however, some intersections do not have crosswalks, ramps, or pedestrian signs/signals.

Figure 6-21: Landover Existing Pedestrian Network



Sources:
 ESRI (2013), GSA (2013)
 Prince George's County (2013), Google Maps (2015), Louis Berger (2015)

6.1.9.5 Pedestrian Network

Sidewalk accommodations are provided on most streets within the study area, except on Landover Road as it passes over the Capital Beltway. While the overall pedestrian network and conditions are fair, the lack of east-west connections across the Capital Beltway; unsafe pedestrian conditions at the intersection of Landover Road and Brightseat Road; and issues with width, vegetation overgrowth, and/or accessibility compliance at intersections are deficiencies within the system. Figure 6-21 shows the existing pedestrian network.

Sidewalk Description and Pedestrian Activity

Sidewalks are provided along a majority of the roads throughout the study area, including Brightseat Road, Evarts Street, and sections of Landover Road west of the Beltway. Towards the edge of the 0.5-mile study area, Glenarden Parkway, Sheriff Road, Redskins Road, Barlowe Road, Ruby Lockhart Boulevard, and McCormick Drive/St. Joseph's Drive also have sidewalks. There are sections of roadway along Landover Road west of the Beltway and Brightseat Road that do not have walkways on both sides of the street, and Landover Road does not have sidewalks on either side of the street on the overpass over the Capital Beltway and west of the Beltway overpass. The majority of intersections in the study area have adequate accommodations—the sidewalks are in good condition (with only little overgrowth or few cracks) and pedestrian facilities such as crosswalks, signs/signals, and ramps are present at intersections.

The origins and destinations of pedestrian trips in the study area are a mix of retail, recreational, and residential. The Landover site is surrounded by residential neighborhoods that can produce dispersed pedestrian traffic along roadways. In the immediate vicinity of the Landover site, there is little foot traffic because of the lack of attractions and designated areas to walk. However, Brightseat Liquor, at the southwest corner of Brightseat Road and Evarts Street, likely receives a reasonable amount of local pedestrian traffic given the pedestrian paths worn through the grass on the property. To the south of the site, many pedestrians use FedExField and the surrounding parking during special events.

Commonly used walkways around the Landover site include paths used to navigate to public transportation and residential locations, as well as Brightseat Liquor, as noted in the Existing Condition pedestrian, bicycle and public transit maps shown in the Landover Transportation Impact Assessment (TIA) (Appendix D). These walkways include Brightseat Road for the A12 and F14 Metrobus routes and nearby residential areas. As described in section 3.4.2 of the Landover TIA, the bus stops with the highest weekday activity within the study area are the A12 and F14 bus stops at Brightseat Road and the Maple Ridge apartment complex adjacent to the site, with average total weekday activity of between 175 and 215 total trips.

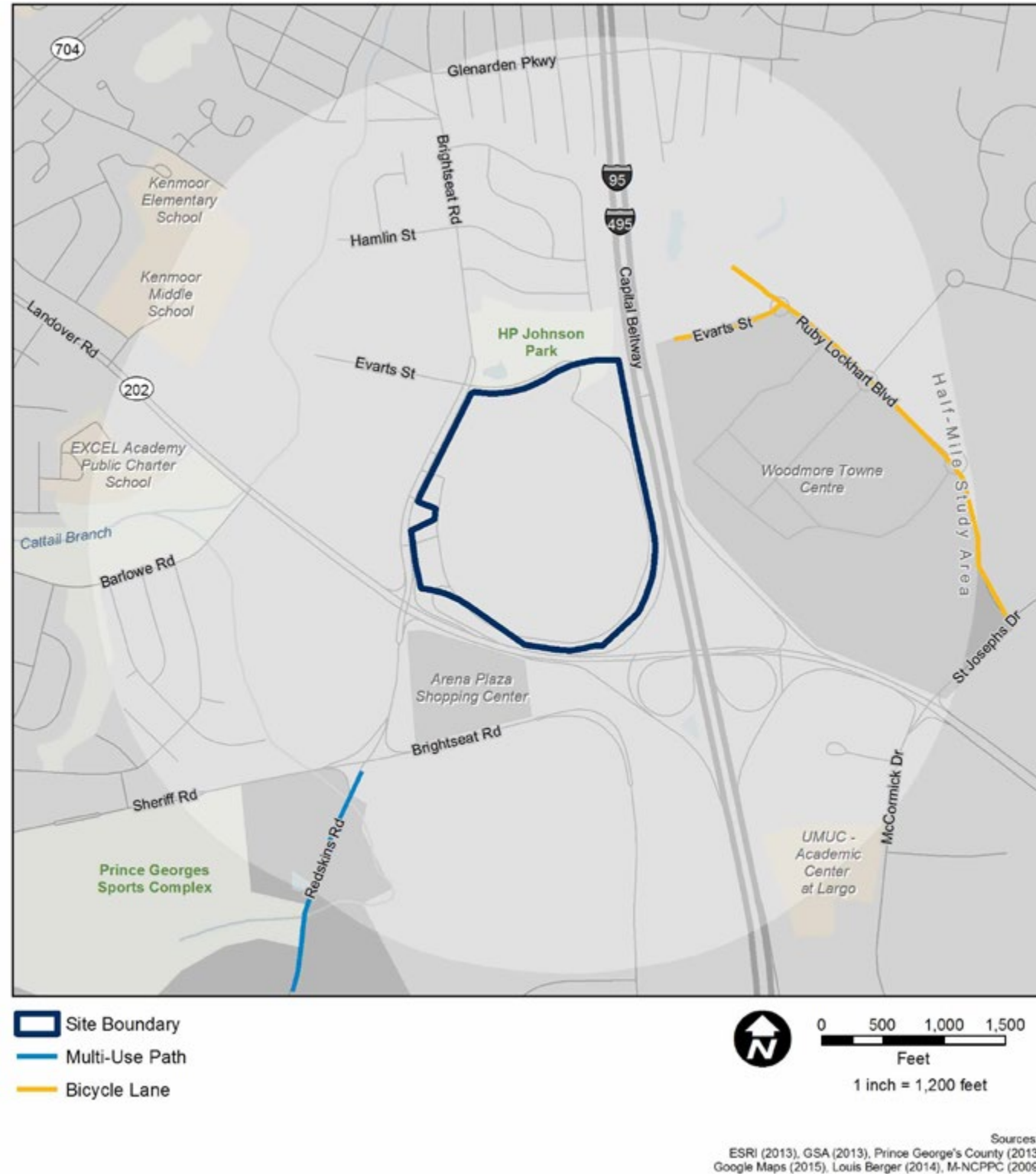
In addition to those places where the sidewalk network is fragmented or without adequate accommodations, there are a few areas of concern within the study area that negatively impact the quality and attractiveness of walking, including narrowed sidewalks due to vegetation overgrowth, uneven pathways, cracked pavement, and sidewalks that are less than 5 feet wide. The intersection of Brightseat Road and Landover Road (Route 202) was specifically identified as an area needing pedestrian safety improvements in the Landover Gateway Sector Plan and Sectional Map Amendment (M-NCPPC 2009). Additionally, the major roads in the study area, such as Landover Road and the Capital Beltway, divide the area and make non-motorized transportation very difficult.

ADA Compliance

Refer to section 3.10.4.3 for the Americans with Disabilities Act (ADA) compliance guidelines. More than half of the intersection crosswalks in the study area are ADA compliant; however, some intersections do not have crosswalks, ramps, or pedestrian signs/signals. The majority of intersection crosswalks and their associated curb ramps in the study area did not meet ADA requirements and they lacked detectable warnings.

The Federal Highway Administration (FHWA) minimum sidewalk width recommendation was not met for several residential community sidewalks including Barlowe Road, Ray Leonard Road, Palmer Park Road, Reicher Street, and Manson Street, where sidewalks are less than 5.0-feet wide. Sidewalks on Brightseat Road, Evarts Street, and McCormick Drive are also less than 5.0-feet wide. Since many of the sidewalks narrower than 5.0-feet wide do not have 5-foot turn-arounds at periodic locations, they are also not ADA compliant.

Figure 6-22: Landover Existing Bicycle Facilities



6.1.9.6 Bicycle Network

The Landover non-vehicular study area has three roadways with on-road bicycle accommodations: Ruby Lockhart Boulevard, a short portion of Campus Way North, and Evarts Street, all located east of the Capital Beltway (I-95/I-495) from the site. A mixed-use path, or sidepath, is located along Redskins Road connecting the intersection of Sheriff and Brightseat roads to FedExField. These mixed-use paths continue around FedExField and along portions of Arena Drive south of the study area. There are no bicycle accommodations directly adjacent to the site and there are no bikeshare services in the Landover site study area. Table 6-5 and figure 6-22 summarize bicycle accommodations in the study area.

6.1.9.7 Public Transit

This section describes the Existing Condition of Metrorail, rail, local and commuter bus, shuttles, ridesharing (slugging), and carsharing within the Landover study area. There are no main transit hubs within the study area.

Largo Town Center Metro Station

The site is located approximately 1.9 miles from the Largo Town Center and Morgan Boulevard Metro stations, both served by the Blue and Silver lines (see figure 6-23). The project site is also located approximately 2.4 miles from the Landover Metro Station, which is served by the Orange line. GSA and the FBI have determined that if the Landover site is selected, an employee shuttle to/from the site would use the Largo Town Center Metro Station. As a result, this analysis evaluates conditions at this Metro station.

This figure is a map of the Landover site, surrounding areas, and associated bicycle network. This map depicts on bicycle lane to the east of the site, and one multi-use path south of the site.

Table 6-5: Bicycle Facilities in Landover Study Area

Name	To/From	Type
Ruby Lockhart Boulevard	From northwest terminus (at St. Nicholas Way) to St. Joseph's Drive	Bicycle Lane (no bicycle lanes through roundabouts)
Campus Way North	Ruby Lockhart Boulevard to Campus Way North roundabout	Bicycle Lane
Evarts Street (Section East of the Beltway)	Entire length to Ruby Lockhart Boulevard	Bicycle Lane
Redskins Road	From Sheriff Road/Brightseat Road intersection to FedEx Way (circular road around FedExField)	Mixed-Use Path

Source: Largo Town Center Station Site Visit, 12/19/14; Google Maps; M-NCPPC 2009

Largo Town Center Metro Station Frequency of Service

During peak periods, a Blue line train is scheduled to serve Largo Town Center every 12 minutes, and a Silver line train every 6 minutes, effectively making the wait time for a train only 4 minutes with 15 trains arriving every hour. During midday and evening hours, trains are scheduled to serve the station every 6 minutes, but after 9:30 PM, trains are scheduled to serve the station every 10 minutes. On weekends, Blue and Silver line trains are scheduled to serve the station with an effective headway of every 6 to 10 minutes. Table 6-6 summarizes scheduled headways and spans of service by line at Largo Town Center Metro Station.

Table 6-6: Metrorail Frequency of Service at Largo Town Center Metro Station

Day	Period	Span of Service	Headway (Minutes)		
			Blue	Silver	Effective Headway
Weekday	Peak	5:00 AM to 9:30 AM/ 3:00 PM to 7:00 PM	12	6	4
	Midday	9:30 AM to 3:00 PM	12	12	6
	Evening	7:00 PM to 9:30 PM	12	12	6
	Late Night	9:30 PM to 12:00 AM ^a	20	20	10
Saturday	Daytime	7:00 AM to 9:30 PM	12	12	6
	Late Night	9:30 PM to 3:00 AM	20	20	10
Sunday	Daytime	7:00 AM to 9:30 PM	15	15	7.5
	Late Night	9:30 PM to 12:00 AM	20	20	10

^a Service is extended to 3:00 AM on Fridays
 Note: Effective headways are calculated by dividing an hour (60 minutes) by the total number of trains that are scheduled to serve the station during an hour. For example, 12 minute headway = 5 trains/hour, 6 minute headway = 10 trains/hour, 5+10 = 15 trains/hour and 60 ÷ 15 = 4 minute effective headways.
 Source: WMATA (2014b)

Figure 6-23: Landover Study Area Metrorail Stations

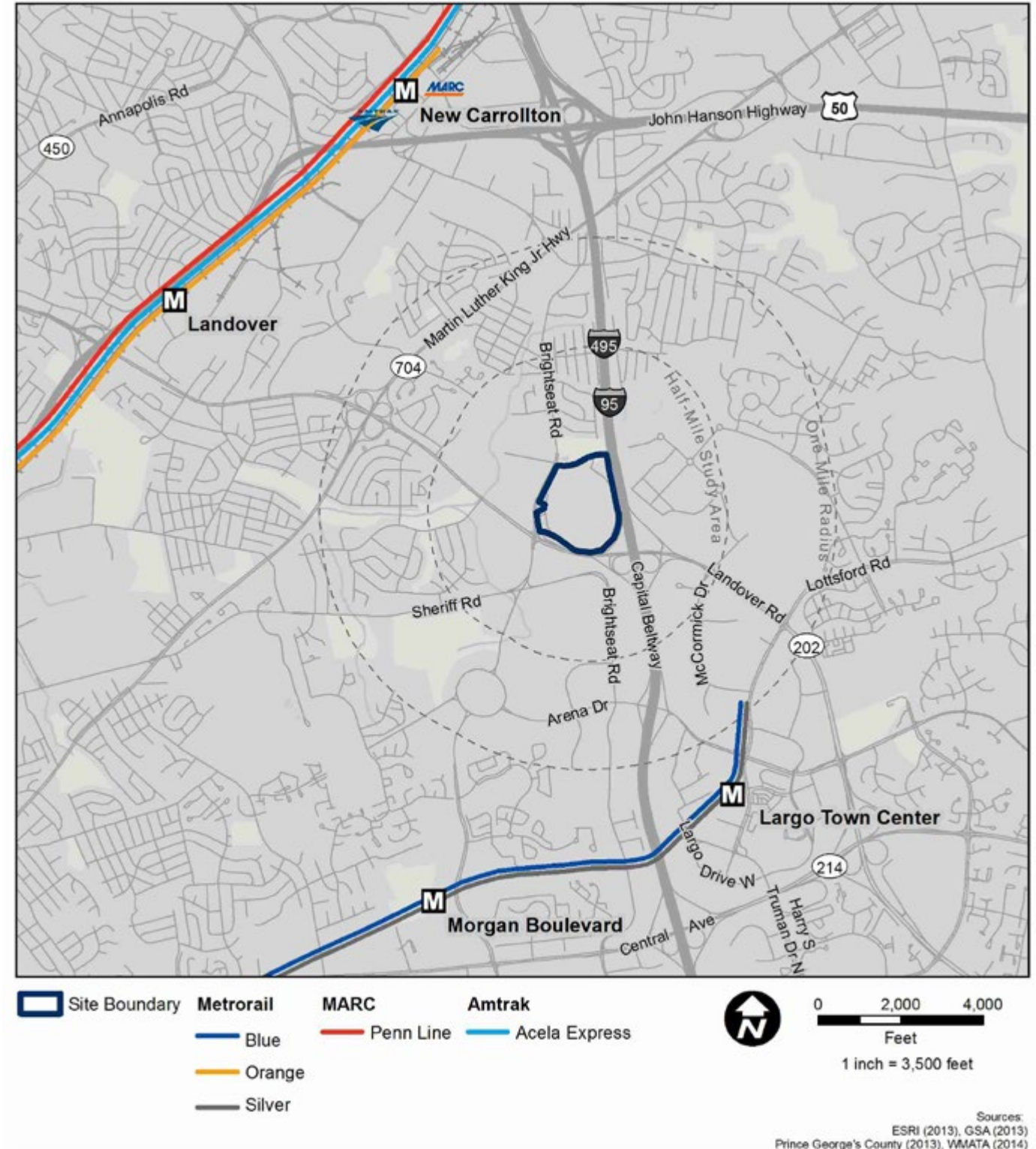
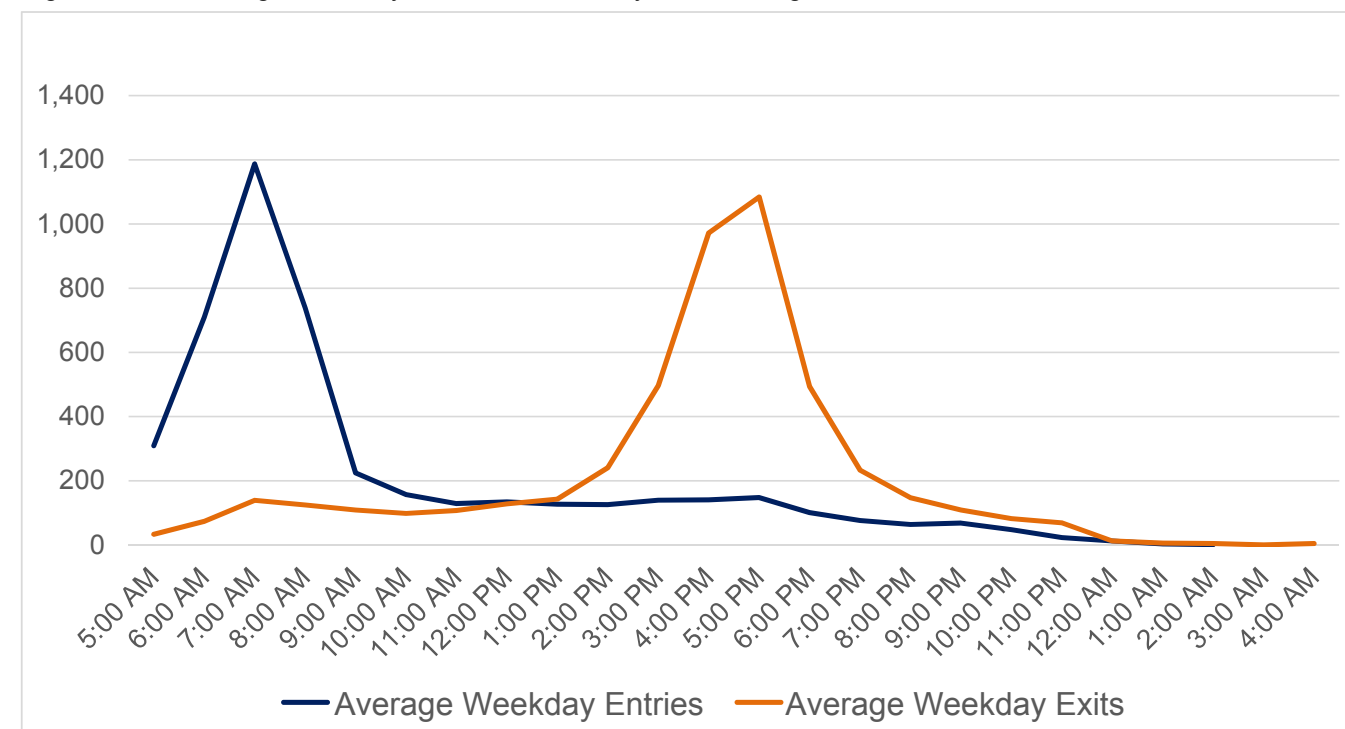


Figure 6-24: Average Weekday Entries and Exits by Hour at Largo Town Center Metro Station



Source: WMATA (2014k)

AVERAGE WEEKDAY ENTRIES
 1,187 Entries during the AM peak hour
 1,084 Exits during the PM peak hour

Largo Town Center Metro Station Ridership

Ridership details for Largo Town Center Metro Station were obtained from WMATA for October 2014. October data are commonly used by transit agencies for analysis because October is considered a stable month that is affected less by tourism, weather, and holidays than other months. Average weekday boardings (entries) at the station during this period totaled 4,740 passengers, and average weekday alightings (exits) totaled 4,911.

The peak entry hours at Largo Town Center Metro Station on weekdays are between 6:00 AM and 9:00 AM. The peak hour, 7:00 AM to 8:00 AM, had 1,187 entries. After 9:00 AM, entries steadily decrease and remain between 100 and 160 until 7:00 PM, when they decrease further. The large number of entries during the AM peak period compared to the PM peak period indicate that station serves suburban residents who commute to D.C. or other jurisdictions to the west.

Exits at Largo Town Center Metro Station peak between 4:00 PM and 6:00 PM. The peak hour, 5:00 PM to 6:00 PM, had 1,084 exits. After 6:00 PM, exits slowly drop through the remainder of the evening. Exits remain below 200 during most of the morning and midday periods. Figure 6-24 summarizes ridership by hour at Largo Town Center Metrorail Station.

At Largo Town Center Metro Station, weekday entries peak between 7 AM and 8 AM. Weekday exits peak between 5 PM and 6 PM.

Largo Town Center Metro Station Capacity Analysis

Section 3.10.4.3 describes the methods employed to evaluate Metro Station capacity analysis Largo Town Center Metro Station. The peak 15-minute period of total ridership activity (entries and exits) was between 5:00 PM and 5:15 PM. At Largo Town Center Metro Station, there are two sets of vertical elements, those between the platform and the mezzanine level, and those between the mezzanine level and the Kiss & Ride lot and the Park & Ride garage, which are located at street level. None of the vertical elements, faregates, and fare vending machines are above capacity, defined as a volume-to-capacity (v/c) ratio of 0.7 by WMATA. Additionally, there is sufficient capacity to accommodate the peak number of passengers on the station platform simultaneously at pedestrian level of service (LOS) B. Appendix D contains further details the Largo Town Center Metro Station capacity analysis.

The Landover TIA (Appendix D) contains more information on the Largo Town Center Metro Station infrastructure, mode of access, bus loop, peak 15-minute ridership by station entrance, Metrorail origin-destination data, and emergency evacuation analysis.

LANDOVER PUBLIC TRANSIT AND PARKING

- Public transportation facilities in the study area include Metrorail, commuter and local bus services, and limited carsharing services via 3 Enterprise vehicles at the Largo Town Center Metro Station.
- The site is located approximately 1.9 miles from the Largo Town Center and Morgan Boulevard Metro Stations and 2.4 miles from the Landover Metro Station, which serve the Blue and Silver lines and the Orange line, respectively.
- Parking near the Landover site includes restricted surface lots and on-street parking. On-street parking is limited to parallel parking in the study area and includes permit-only parking and non-restricted on-street parking.

Figure 6-25: Bus Routes Serving the Landover Study Area



Sources:
ESRI (2013), GSA (2013)
Prince George's County (2013), WMATA (2014)

Table 6-7: Major Service Characteristics of Bus Routes Serving the Landover Study Area

Route	Agency	Description	Stop Serving Landover Site	Route Type	Major Destinations
21	TheBus	Upper Marlboro/ New Carrollton	Brightseat Road	Feeder	New Carrollton Metro Station, Largo Town Center Metro Station, Prince George's Community College, Equestrian Center
21X	TheBus	Prince George's Community College/ New Carrollton	Brightseat Road	Express	New Carrollton Metro Station, Prince George's Community College, Motor Vehicle Administration
22	TheBus	Morgan Boulevard/ Brightseat Road	Brightseat Road	Feeder	Morgan Boulevard Metro Station, Centre Point Office Park, Prince George's Sports Complex
23	TheBus	Seat Pleasant	Prince George's Sports Complex	Feeder	Addison Road Metro Station, Prince George's Sports Complex, Cheverly Metro Station, Seat Pleasant
28	TheBus	Inglewood Shuttle	9400 Peppercorn Place	Feeder	Largo Town Center Metro Station, Woodmore Towne Centre, Capital Centre
A11	WMATA	Martin Luther King Jr. Highway	Brightseat Road	Feeder	Capital Plaza, Prince George's Hospital, Seat Pleasant, Addison Road Metro Station
A12	WMATA	Martin Luther King Jr. Highway	Brightseat Road	Feeder	Capital Plaza, Prince George's Hospital, Landover Metro Station, Seat Pleasant, Addison Road Metro Station
F14	WMATA	Sheriff Road-Capitol Heights	Brightseat Road	Feeder	New Carrollton Metro Station, Seat Pleasant, Capitol Heights Metro Station, Addison Road Metro Station, Bradbury Heights, Fairfax Village, Naylor Road Metro Station

Source: WMATA (2014); Prince George's County (2013b)

Bus: Local

The Landover non-vehicular site study area is served by three WMATA Metrobus routes and four Prince George's County "TheBus" routes. All of these routes serve Metrorail stations in Prince George's County, including New Carrollton Station (Orange line), Morgan Boulevard Station (Blue and Silver lines), Addison Road Station (Blue and Silver lines), and Largo Town Center Station (Blue and Silver lines). TheBus Routes 21 and 22 both connect the New Carrollton Metro Station and the Largo Town Center Metro Station. Metrobus Routes A11 and A12 connect Prince George's Hospital and Seat Pleasant with the Addison Road Metro Station, while Route F14 connects the New Carrollton Metro Station, Seat Pleasant, the Naylor Road Metro Station, and the Capitol Heights Metro Station. Tables 6-7 and 6-8 and figure 6-25 summarize the major characteristics of the bus routes that serve the study area.

Bus Frequency of Service

Weekday headways (wait time between bus arrivals) and span of service (hours of operation) by route and direction are detailed by time period in table 6-9. TheBus routes typically operate between 6:00 AM and 7:00 PM on weekdays only. No weekend service is provided on any TheBus route. Headways on TheBus routes vary from 20 minutes on Route 21X during the midday period (9:00 AM to 3:00 PM) to 51 minutes on Route 21 in the southbound direction during the midday period.

Service on Metrobus routes varies, with certain routes operating on weekdays or weekends only. Route A11 operates on Saturday mornings only, Route A12 operates seven days per week, and Route F14 operates on weekdays (including the late night period) and Saturdays. Weekday headways on Metrobus routes vary from 20 minutes on Route A12 during the PM peak period (3:00 PM to 7:00 PM) to 51 minutes on Route F14 southbound during the midday period. Route A12 has the most service of all the routes serving the study area, with 99 weekday trips and weekend service.

Ridership by Route

Weekday ridership by route (see table 6-8) was available for the Metrobus routes that serve the study area. Overall, Route A12 had the highest ridership, with an average of 3,688 passenger boardings per day. Route F14 had slightly less, with slightly more than 3,000 passenger boardings per day. Metrobus route A11 does not provide weekday service, and therefore is not shown. TheBus did not provide ridership data for this report. Ridership by route and direction and stop level ridership can be found in the Landover TIA (Appendix D).

Table 6-8: Average Weekday Ridership by Bus Route Serving the Landover Study Area

Route	Agency	Description	Average Weekday Boardings
A12	WMATA	Martin Luther King Jr. Highway	3,688
F14	WMATA	Sheriff Road-Capitol Heights	3,035
21	TheBus	Upper Marlboro/New Carrollton	NA
21X	TheBus	Prince George's Community College/New Carrollton	NA
22	TheBus	Morgan Boulevard/Brightseat Road	NA
28	TheBus	Largo/Inglewood Shuttle	NA

Note: Ridership data unavailable for TheBus
Source: WMATA (2014e)

Table 6-9: Frequency of Service on Bus Routes Serving the Landover Study Area

Route & Direction	Agency	Weekday							Saturday		Sunday		
		Headways (minutes)						Number of Trips	Span of Service	Headway (Minutes)	Span of Service	Headway (Minutes)	Span of Service
		4AM to 6AM	6AM to 9AM	9AM to 3PM	3PM to 7PM	7PM to 11PM	11PM to 4AM						
21 North	TheBus	-	26	45	34	-	-	22	6:08 AM to 7:03 PM	-	-	-	-
21 South	TheBus	1 trip	26	51	27	1 trip	-	25	5:55 AM to 8:02 PM	-	-	-	-
21X North	TheBus	-	-	20	24	3 trips	-	-	9:02 AM to 8:20 PM	-	-	-	-
21X South	TheBus	-	23	20	30	2 trips	-	-	6:55 AM to 7:50 PM	-	-	-	-
22 North	TheBus	-	36	40	40	-	-	20	6:00 AM to 7:10 PM	-	-	-	-
22 South	TheBus	-	36	40	40	-	-	20	6:00 AM to 7:09 PM	-	-	-	-
23 North	TheBus	-	30	30	30	2 trips	-	28	6:07 AM to 8:38 PM	-	-	-	-
23 South	TheBus	-	30	30	30	2 trips	-	28	6:00 AM to 7:10 PM	-	-	-	-
28 North	TheBus	-	40	40	40	-	-	20	6:00 AM to 7:10 PM	-	-	-	-
28 South	TheBus	-	40	40	40	-	-	20	6:00 AM to 7:10 PM	-	-	-	-
A11 South	WMATA	-	-	-	-	-	-	-	-	5:50 AM to 6:59 AM	69	-	-
A12 North	WMATA	30	23	28	20	30	75	49	4:55 AM to 1:20 AM	6:00 AM to 12:02 AM	45	7:10 AM to 11:06 PM	60
A12 South	WMATA	30	23	26	20	30	75	50	5:10 AM to 1:19 AM	6:25 AM to 12:03 AM	48	6:05 AM to 11:56 PM	60
F14 North	WMATA	30	30	45	34	60	-	29	4:39 AM to 9:48 PM	10:02 AM to 7:19 PM	51	-	-
F14 South	WMATA	40	30	51	34	3 trips	-	26	5:06 AM to 9:46 PM	9:30 AM to 6:53 PM	51	-	-

Source: WMATA (2014i); Prince George's County (2013b)

Bus Commuter

There are currently no commuter bus routes that serve the study area.

Shuttles

There are currently no shuttle bus routes that serve the study area.

Ridesharing (Slugging)

There are currently no slug lines in the Landover study area.

Carsharing

Previously, Zipcar was the only carshare company servicing the Landover study area, with four Zipcars parked at the Largo Town Center Metro Station (Zipcar 2015). Beginning on June 1, 2015, WMATA began a new partnership with Enterprise CarShare and ended its partnership with Zipcar (WMATA 2015b). Enterprise currently has three vehicles available at the Largo Town Center Metro Station (Enterprise Carshare 2015).

6.1.9.8 Parking

Parking near the Landover site includes restricted surface lots and on-street parking. On-street parking is limited to parallel parking in the study area and includes permit-only parking and non-restricted on-street parking. Information about parking in the study area was gathered using 2012/2014 Google Maps and observations during a May 1, 2015, site visit that were focused on areas within 0.5 mile of the site (figure 6-26).

Within 0.5 mile of the Landover site, there are several restricted surface lots. Arena Plaza Shopping Center is located immediately to the south of the Landover site, east of Brightseat Road. It has several hundred parking spots; however, the spots are permit parking only. According to signs on the property, if a vehicle is discovered on the premises without a permit, it will be towed. A partially paved field is also located off of Brightseat Road, across the street from the Arena Plaza Shopping Center south of the IAD Auto Dealership. The dealership does not allow parking for off-site visitors; however, the partially paved field is likely used for parking for large events at FedExField, but is otherwise marked as private property. Although a portion of the FedExField parking is also included in the 0.5-mile study area, more than half of the FedExField parking is more than 0.5 mile from the site to the south. This parking is restricted for stadium special event use only, and the parking lots are a combination of partially and fully paved surface lots. An apartment neighborhood located southwest of both the Landover site and the abandoned Arena Plaza Shopping Center also has surface parking along the drive aisles providing access to the apartment buildings. Parking in that location is only valid with a permit; cars without a permit will be towed. Some of the surface parking lots for the commercial buildings southwest of both the Landover site and the Arena Plaza Shopping Center are restricted to users (violators will be towed); however, some of the commercial lots do not have parking restrictions posted.

Although the Woodmore Towne Centre and the office buildings near the intersection of Landover Road and McCormick Drive are within 0.5 mile of the Landover site, the beltway acts as a barrier between the Landover site and these facilities and their parking lots. With no sidewalks along the stretch of Landover Road that crosses the Capital Beltway, it is unlikely people parking at these locations would walk to the Landover site, therefore these lots would not be considered as a possibility for parking.

North of the Landover site, on-street parking in the single family residential neighborhoods north of the Landover site (Girard Street, Hamlin Street, and streets north) does not appear to be restricted to certain users. H.P. Johnson Park, north of the site, has about ten non-handicapped spaces intended for users of the park, and it does not appear to be connected to Evarts Street via sidewalks. Paved parking lots just to the northeast of the site, south of Evarts Street, are fenced off and marked as private property. Palmer Park is another residential neighborhood that is partially located within the study area west of the site and north of FedExField. This neighborhood has available permitted street parking; however, the permit is enforced only on special event days at the football stadium. During the football off-season and days when an event is not occurring, the parking spots in the neighborhood are available. These parking spots were observed on Barlowe Road, Allendale Drive, Barlowe Place, and Ray Leonard Road.

Due west of the Landover site, approximately 40 surface parking spots are available at the Brightseat Liquor. The lot is 0.1-mile away from the Landover site and there are no parking restrictions posted. South of Brightseat Liquor, across Brightseat Road from the site is the Maple Ridge apartment complex. Based on site visits in March and April 2014, there are approximately 400 surface parking spots available in the apartment complex; however, the spots are restricted to use by Maple Ridge apartment complex residents, and cars without an appropriate apartment sticker will be towed. There is minimal on-street parking directly south of the Maple Ridge apartment complex on an unnamed side street that provides access to the apartment complex, across the street from the Old Landover Mall entrance on Brightseat Road. This street may be additional parking for the apartment complex, but there are no restriction signs posted. Also west of the Landover site, the surface parking lot at the New Home Baptist Church north of Landover Road is restricted for church users only.

As previously noted, most of the residential streets typically allow on-street parking without permits as shown in figure 6- 26. Although there are almost no expressly dedicated on-street parking spaces within the study area, some on-street parallel parking does exist along Sheriff Road at the very edge of the study area. Additionally, it appears that on-street parking is available along Evarts Street, just north of the Landover site. East of Brightseat Road, Evarts Street is two-lanes westbound and one extra wide lane eastbound with very little traffic. West of Brightseat Road, it appears vehicles may also park on Evarts Street if they park west of the “no parking” areas close to the intersection of Evarts Street and Brightseat Road, an area previously used for parking by residents of the adjacent apartment buildings that are no longer present.

6.1.9.9 Truck Access

The currently vacant Landover site does not receive regular truck traffic. When the site was formerly occupied, truck access to the Landover site was the same as the access for regular vehicles.

6.1.9.10 Traffic Analysis

Section 3.10.4.3 explains the analysis methodology, tools, concepts, and definitions for analyzing the traffic operations as well as the process used to analyze the study area intersections. The following section describes the traffic analysis results for the Existing Condition. The analysis for the freeways is performed in the Landover TIA (Appendix D).

The 24 Existing Condition intersections analyzed consisted of 21 signalized intersections and 3 unsignalized intersections.

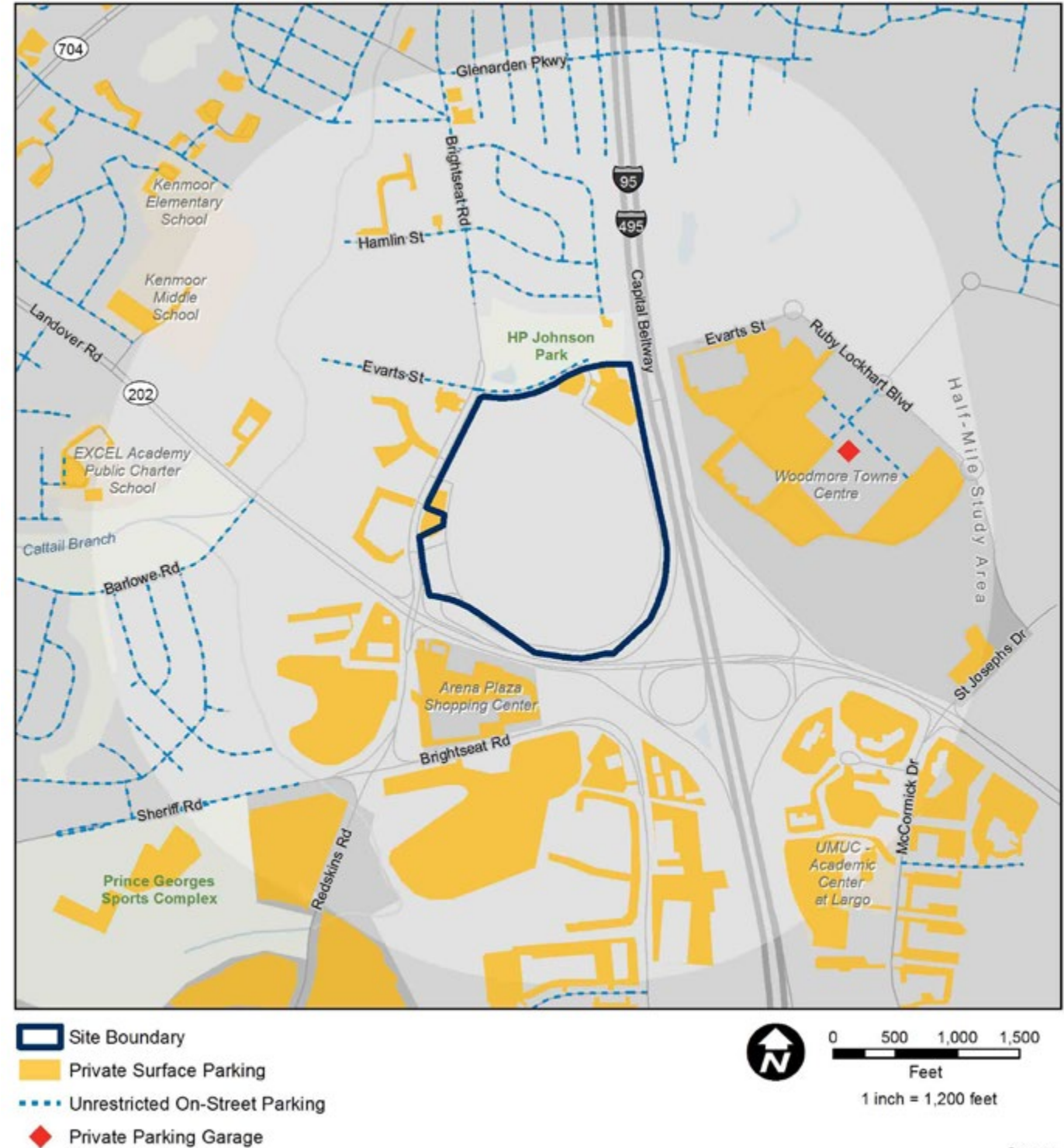
Intersection Operations Analysis

Section 3.10.4.3 introduces the traffic analysis methods used for each study area intersection and which tools were used to obtain the results. Based on the Synchro™ and critical lane volume (CLV)-based Excel worksheet analysis, the majority of study intersections operate at acceptable overall conditions during the morning and afternoon peak hours. However, the following intersection in the study area operates with overall unacceptable conditions:

- Landover Road and Brightseat Road (Intersection #9) during the PM peak hour.
- Landover Road and Lottsford Road (Intersection #13) during the PM peak hour.
- Martin Luther King Jr. Highway and Ardwick Ardmore Road (Intersection #16) during the AM and PM peak hours.

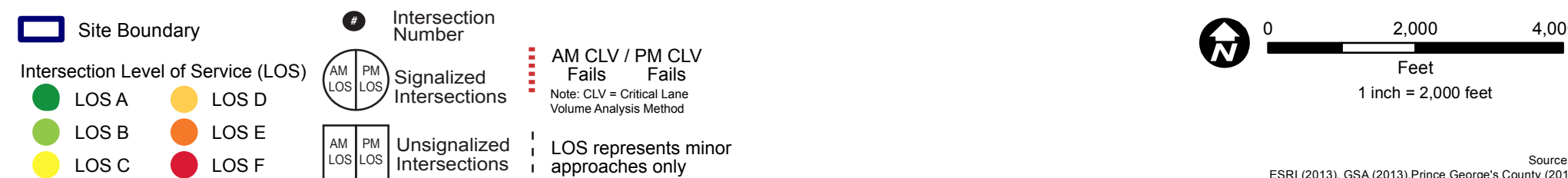
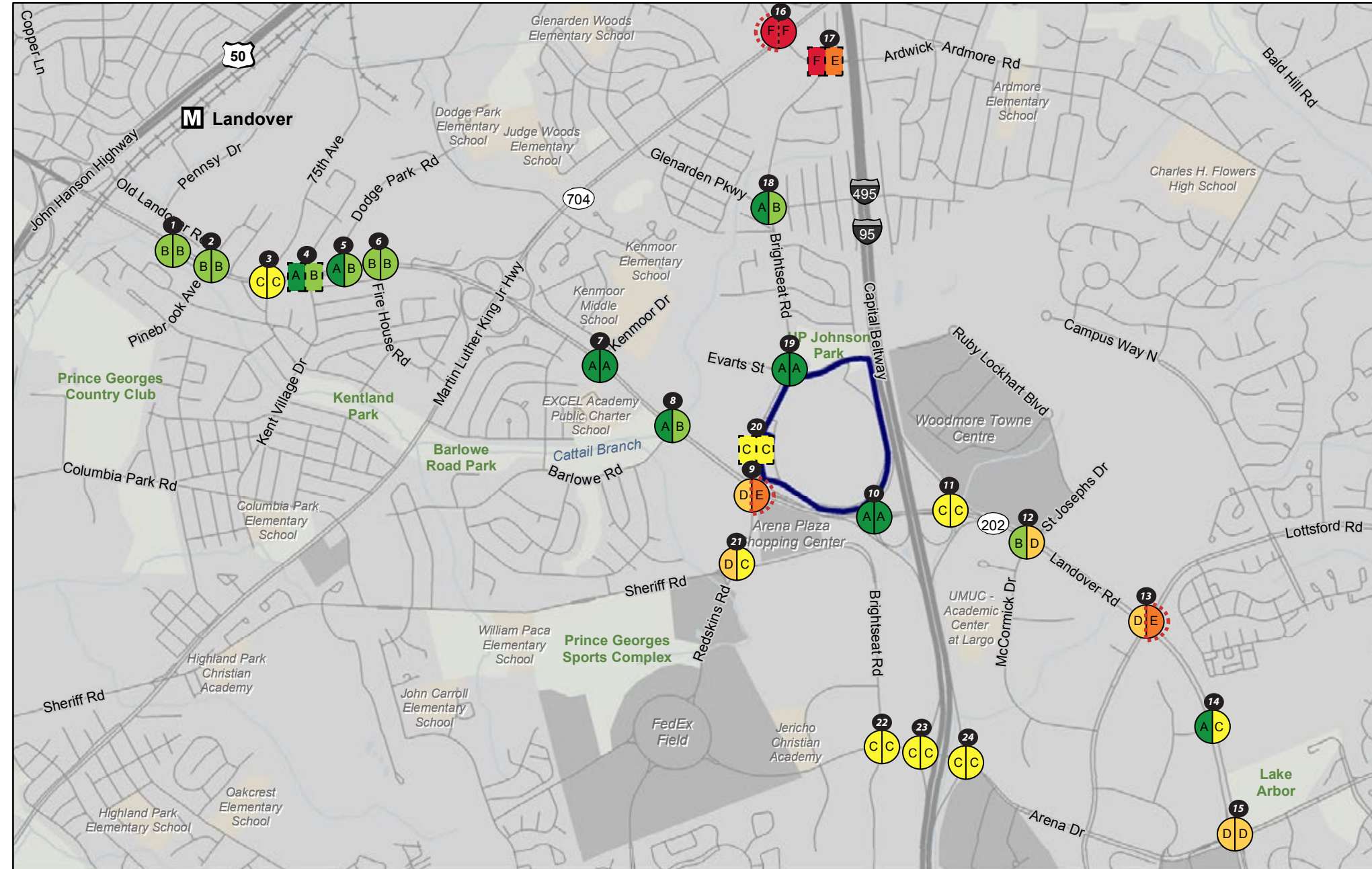
A total of 16 signalized intersections and one unsignalized intersection experience unacceptable conditions for one or more turning movements. The Landover TIA (Appendix D) contains a more detailed Existing Condition traffic operations analysis.

Figure 6-26: Parking in the Landover Study Area



Sources:
 Prince George's County (2013), Google Maps (2015), Louis Berger (2015)

Figure 6-27: Landover Existing Condition Intersection LOS for AM and PM Peak Hours



Sources: ESRI (2013), GSA (2013), Prince George's County (2013)

The overall intersection LOS grade are depicted in figure 6-27 for AM and PM peak hours. Table 6-10 shows the results of the LOS capacity analysis and the intersection vehicle delay for the Existing Condition during the AM and PM peak hours.

Intersection Queuing Analysis

Section 3.10.4.3 introduces the queuing analysis methods used for each study area intersection and which tools were used to obtain the results. Based on the Synchro™ and SimTraffic™ analysis, 11 signalized intersections would experience queuing lengths that would exceed the available storage capacity. The remaining intersections in the study area would provide sufficient storage for the anticipated demand. The Landover TIA (Appendix D) contains a more detailed Existing Condition traffic queuing analysis.

Table 6-10: Landover Existing Condition AM and PM Peak Hour Operations Analysis

#	Intersection	AM Peak Hour					PM Peak Hour				
		HCM 2000		CLV		Check	HCM 2000		CLV		Check
		Delay (sec/veh)	LOS	Critical Lane Volume	LOS		Delay (sec/veh)	LOS	Critical Lane Volume	LOS	
1	Landover Road & Old Landover Road (Signalized)	10.3	B	1,332	D	Pass	13.7	B	1,048	B	Pass
2	Landover Road & Pinebrook Avenue (Signalized)	11.1	B	1,082	B	Pass	18.5	B	1,268	C	Pass
3	Landover Road & Kent Town Place/75th Avenue (Signalized)	20.3	C	1,421	D	Pass	28.9	C	1,283	C	Pass
4	Landover Road & Kent Village Drive (TWSC)	0.2	-	N/A	N/A	Pass	0.2	-	N/A	N/A	Pass
5	Landover Road & Dodge Park Road (Signalized)	8.4	A	1,089	B	Pass	12.5	B	928	A	Pass
6	Landover Road & Fire House Road (Signalized)	14.7	B	1,110	B	Pass	18.6	B	1,182	C	Pass
7	Landover Road & Kenmoor Drive (Signalized)	7.6	A	883	A	Pass	6.1	A	873	A	Pass
8	Landover Road & Barlowe Road (Signalized)	8.0	A	848	A	Pass	10.9	B	961	A	Pass
9	Landover Road & Brightseat Road (Signalized)	43.3	D	1,141	B	Pass	59.2	E	1,489	E	Fail
10	Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)	1.3	A	711	A	Pass	3.8	A	1,237	C	Pass
11	Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)	31.6	C	1,352	D	Pass	32.1	C	1,328	D	Pass
12	Landover Road & St. Joseph's Drive/McCormick Drive (Signalized)	18.7	B	900	A	Pass	42.6	D	1,106	B	Pass
13	Landover Road & Lottsford Road (Signalized)	46.1	D	1,264	C	Pass	59.0	E	1,244	C	Fail

#	Intersection	AM Peak Hour					PM Peak Hour				
		HCM 2000		CLV		Check	HCM 2000		CLV		Check
		Delay (sec/veh)	LOS	Critical Lane Volume	LOS		Delay (sec/veh)	LOS	Critical Lane Volume	LOS	
14	Landover Road & Technology Way (Signalized)	3.8	A	1,022	B	Pass	33.3	C	1,176	C	Pass
15	Landover Road & Arena Drive/Lake Arbor Way (Signalized)	39.3	D	1,033	B	Pass	35.2	D	1,053	B	Pass
16	Martin Luther King Jr Highway & Ardwick-Ardmore Road (Signalized)	115.1	F	1855.0	F	Fail	80.7	F	1,453	E	Fail
17	Brightseat Road & Ardwick-Ardmore Road (TWSC)	209.8	-	N/A	N/A	Fail	12.5	-	N/A	N/A	Pass
18	Brightseat Road & Glenarden Parkway (Signalized)	9.8	A	492	A	Pass	10.6	B	527	A	Pass
19	Brightseat Road & Evarts Street (Signalized)	1.7	A	261	A	Pass	2.1	A	308	A	Pass
20	Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd) (TWSC)	0.9	-	N/A	N/A	Pass	0.8	-	N/A	N/A	Pass
21	Brightseat Road/Redskins Road & Sheriff Road/Brightseat Road (Signalized)	37.1	D	396	A	Pass	33.8	C	580	A	Pass
22	Brightseat Road & Arena Drive (Signalized)	20.7	C	1,066	B	Pass	23.5	C	1,425	D	Pass
23	Arena Drive & I-95/I-495 Southbound Ramps (Signalized)	20.4	C	708	A	Pass	26.6	C	1,089	B	Pass
24	Arena Drive & I-95/I-495 Northbound Ramps (Signalized)	22.0	C	918	A	Pass	23.8	C	1,096	B	Pass

Notes:

LOS = Level of Service

TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is Measured in Seconds Per Vehicle.

Red cells denote intersections operating at unacceptable conditions.

LANDOVER GREENHOUSE GAS EMISSIONS AND AIR QUALITY

- Prince George’s County is within the same airshed (AQCR 47) as the JEH parcel.
- An AQI (Air Quality Index) over 300 has not been recorded in the area in the 2010-2014 period.

LANDOVER NOISE

- Maximum sound levels are established in the City of Hyattsville Charter and Code, which are applicable for the day and night in specific land uses.
- The Landover site exists within a semi-developed urban area, and the primary noise sources include vehicular traffic along I-495, activities stemming from events at FedExField, and from both the Arena Plaza and Woodmore Towne Centre commercial areas.

6.1.10 Greenhouse Gas Emissions and Air Quality

6.1.10.1 Global Climate Change and Greenhouse Gases

The affected environment for greenhouse gases (GHG) and climate change for the Landover site is the same as described for the JEH parcel in section 4.1.10.

6.1.10.2 Air Quality

Prince George’s County is within the same airshed (Air Quality Control Region [AQCR] 47) as the JEH parcel. All airshed-wide indicators are provided in section 3.11.2. Data specific to Prince George’s County is provided in section 5.1.10. As discussed in section 3.11.2, the Landover site is located in a nonattainment area for the 8-hour ozone (O₃) standard and a maintenance area for particulate matter (PM_{2.5}) and carbon monoxide (CO).

6.1.11 Noise

Noise at the Landover site is regulated by the City of Hyattsville Charter and Code Chapter 79 – Noise. The city noise ordinance permits construction noise, including the delivery and operation of machinery, from 8:00 AM to 8:00 PM on weekdays, provided that such activity does not exceed a level of 90 A-weighted decibels (dBA), for properties that hold all applicable and necessary building permits (City of Hyattsville 2014). Maximum sound levels are established in the City of Hyattsville Charter and Code (Chapter 79; Section 792), which are applicable for the day and night in specific land uses, as shown in table 6-11.

The Landover site exists within a semi-developed urban area. The primary noise sources within the area include the vehicular traffic along I-495, activities stemming from events at FedExField, and from both the Arena Plaza and Woodmore Towne Centre commercial areas. The site itself was the former Landover Mall and is currently vacant; all previously existing buildings have been demolished and no noise is currently generated at the site.

Sensitive noise receptors in the study area include H.P. Johnson Park directly adjacent to the site to the north and multi-family and single-family residences directly adjacent to the north and west of the parcel.

6.1.12 Infrastructure and Utilities

The following sections describe the affected environment for infrastructure and utilities for the Landover site. Infrastructure and utilities include water, wastewater, electric power, natural gas, telecommunications, and stormwater management.

6.1.12.1 Water Supply

Water service for the Landover site is provided by Washington Suburban Sanitary Commission (WSSC). A description of the WSSC system is provided in section 5.1.12.1. The Landover site is currently served by a 12-inch connection to the 8-inch water main along Brightseat Road and a 12-inch connection to the 42-inch water main that runs through the southwestern corner of the site, and has an associated 50 foot easement. There also a 60-inch transmission line with an associated a 50-foot easement along the eastern boundary of the site, and an 84-inch transmission main east of I-495. WSSC indicated site pressures are estimated to be between 45 and 55 psi (WSSC 2015d).

Table 6-11: Hyattsville, Maximum Noise Levels

Land Use	Maximum Noise Level (dBA)	
	Daytime (8:00 AM to 8:00 PM)	Nighttime (8:00 PM to 8:00 AM)
Residential	60	50
Commercial	67	62
Industrial	75	75

Source: City of Hyattsville (2014)

6.1.12.2 Wastewater Collection and Treatment

Wastewater service for the Landover site is also provided by WSSC. A description of the WSSC sanitary service area is provided in section 5.1.12.2. Wastewater from the Landover site is conveyed to the Blue Plains Advanced Wastewater Treatment Plant (AWTP) for treatment. Wastewater from the site is conveyed to a 10-inch gravity sewer along Brightseat Road, then proceeds westward through various sized gravity sewers and discharges into a 48-inch trunk line adjacent to Beaverdam Creek. This trunk line then conveys the flow to the Anacostia No. 2 pump station and storage facility (WSSC 2015d). An existing 6-inch sewer along Brightseat Road and ten-inch sewer along Evarts Street are available for future tie-in, and drain to the same basin.

6.1.12.3 Electric Power

The current electric power service for the Landover site is provided by PEPCO. A description of the PEPCO service area is provided in section 5.1.12.3. The Landover site lies within a 13-kilovolt (kV) distribution network, and there are existing overhead power lines along Brightseat Road and Landover Road (Route 202). The closest substation, the Lanham substation, is part of the 13kV distribution system.

6.1.12.4 Natural Gas

Washington Gas is the sole natural gas purveyor in the region. A description of the history of the service area is provided in section 4.1.12.4. Gas service is currently provided to the site from the west via a 12-inch line with an operating pressure of 50 psi. Based on information obtained from Washington Gas, this line is fed from a 16-inch gas main along Brightseat Road that is supplied by a 24-inch main along Landover Road. Both of these natural gas mains also operate at 50 psi. According to available mapping, there appears to be an existing distribution system on-site ranging from 2 inches to 8 inches in diameter (Washington Gas 2015b).

6.1.12.5 Telecommunications

Verizon, RCN, Cox, and Comcast are the major telecommunications service providers in the Washington metropolitan region. However, it should be noted that more than 100 companies have applied for and received authority to offer service in Maryland. Verizon is currently providing cable service in many areas of the county (Prince George's County 2013c).

Verizon has overhead service on Route 202 and Brightseat Road that could service the site (Brunton 2014). The nearest secure fiber service is along John Hanson Highway (U.S. Route 50) approximately 1.5 miles north of the site.

6.1.12.6 Stormwater Management

Prince George's County regulates stormwater management and maintains infrastructure, as described in section 5.1.12.6. The Landover site is almost completely impervious (90 percent) and has an extensive stormwater collection system that discharges off-site at various locations around the perimeter. The site lies within the area of the Landover Gateway Sector Plan of 2009 that, according to the Expression of Interest dated December 17, 2013, has an approved Storm Drain, Fine Grading and Sediment Control Plan and Natural Resources Inventory Plan (Prince George's County 2013e).

Prince George's County is considered a large MS4 regulated area and has a Phase I National Pollutant Discharge Elimination System (NPDES) permit (11-DP-3314 MD0068284) for stormwater discharges from the MS4. This permit requires the county to reduce stormwater runoff related pollutants through watershed mapping; watershed assessments; management programs for stormwater, erosion and sediment control, illicit discharges; public outreach; restoration projects; and funding (MDE).

LANDOVER INFRASTRUCTURE AND UTILITIES

- Water and wastewater service for the Landover site is provided by WSSC.
- The current electric power service for the Landover site is provided by PEPCO.
- Washington Gas is the sole natural gas purvey in the region.
- Verizon, RCN, Cox, and Comcast are the major telecommunications service providers in the Washington metropolitan region, however, Verizon is currently providing cable service in many areas of the Prince George's County.

6.2 Environmental Consequences

LANDOVER GEOLOGY & TOPOGRAPHY ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: Direct, short- and long-term, adverse impacts.

LANDOVER SOILS ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: Direct, short-term, adverse impacts.

The following sections describe the environmental consequences of the Landover Alternative. Both direct and indirect impacts are evaluated under the Landover Alternative for each resource topic. The evaluation of these impacts use the No-action Alternative as a baseline for comparison. Under the No-action Alternative at Landover, the former Landover Mall would remain as a vacant site. While the Prince George's County Office of Economic Development has advocated for redevelopment of the site, there are no other development approvals. This EIS assumes there would be no substantial changes from the existing condition.

To comprehensively understand the impacts of the Proposed Action, the impacts described in this chapter would be paired with the indirect impacts caused by the future redevelopment of the JEH parcel. Descriptions of the No-action Alternative as well as the Landover Alternative and the RFDS's at the JEH parcel can be found in section 2.4.4. The impacts at the JEH parcel are described in section 4.2.

6.2.1 Earth Resources

The following sections describe the environmental consequences for earth resources under both the No-action Alternative at Landover and the Landover Alternative.

EARTH RESOURCES ASSESSMENT OF SIGNIFICANCE

Impacts to earth resources would not result in significant impacts, as defined in section 3.2.3.

Geology and Topography

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to either geology or topography because there are no approved plans for future redevelopment that would disturb geologic features or alter the topography.

Landover Alternative

Under the Landover Alternative, there would be no measurable long-term impacts to topography at the Landover site. Re-grading of the site would occur during construction to remove soil and demolition debris and to accommodate the consolidated FBI HQ campus; however, the site's topography would remain relatively unchanged once construction is complete. There would be direct, short-term, adverse impacts during the construction period, as the existing topography would be regraded to accommodate a consolidated FBI HQ campus.

Land disturbance associated with development of a consolidated FBI HQ would directly impact geology. Construction activities would impact geology primarily through excavation, grading, leveling, filling, compaction, the drilling of footers, and the installation of below-grade campus components. The geologic features at the site have been previously disturbed and their natural composition altered by the previous construction of the Landover Mall facilities, and as such, the consolidation of FBI HQ would not affect any features that have not been previously impacted. Given the fact that there would not be a substantial change in site characteristics at the Landover site, there would be direct, long-term adverse impacts to geologic features, however these impacts would be minimal.

Transportation Mitigations

There would be no measurable long-term impacts to topography associated with required traffic mitigation measures because the recommended improvements are not expected to noticeably alter existing topography. There would be direct, short-term impacts to topography associated with any regrading and disturbance to slopes along roadways requiring improvements during construction.

Construction along approximately 1,890 linear feet of roadways requiring substantial widening, including along Landover Road, Brightseat Road, and the construction of a new connector road connecting the site south access to Brightseat Road, as shown in figure 6-40, would have the potential to disturb intact geologic features. With the exception of the new connector road, the potential impacts to geology in these areas would be minimal because they would occur within previously disturbed areas adjacent to existing roadways. There would be approximately 400 linear feet of new roadway construction associated with the site south access connector road that would pass through relatively undisturbed land. Given the small area of new disturbance, there would be no impacts to significant geologic features. Therefore, any impacts to geology associated with traffic mitigation measures would be direct, long-term, and adverse.

6.2.1.1 Soils

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to soils because there are no approved plans for future redevelopment that would alter soil conditions.

Landover Alternative

The soils within the Landover site have been previously altered by commercial development and are classified as Urban soil associations. Furthermore, 90 percent of the site is currently covered by impervious surfaces. Construction activities would temporarily impact soils primarily through excavation, grading, leveling, filling, compaction, the drilling of footers, and the installation of below-grade campus components. The majority of the potential impacts to soil resources are short term, limited in geographic extent, and associated with the construction phase only. Soils at the site have been previously disturbed, their natural composition altered, and all productivity removed by historic construction activities. Therefore, under the Landover Alternative, there would be no impacts to previously undisturbed soils.

During construction, there would be direct, short-term, adverse impacts resulting from soil disturbance that would temporarily expose soils and potentially lead to increased erosion from stormwater runoff. Stormwater runoff carrying sediment could enter the MS4 stormwater system and discharge downslope to Cattail Branch, a tributary of the Anacostia River, leading to impacts to water quality within the watershed. This potential for adverse impacts stemming from erosion would be minimized by compliance with applicable regulations required under local, state, and Federal law, and the implementation of required sediment and erosion control plans, stormwater pollution prevention plans, and best management practices (BMPs), as described in section 3.3. 4.

In addition to the short-term impacts from construction activities, the establishment of landscaped and vegetated areas would reduce the overall amount of impervious surface and erosion potential at the site and could result in improved soil productivity. Based on the conceptual site plans, there would be a 43 percent increase in the amount of pervious surface across the site. This increase in pervious surface cover creates opportunities for improving infiltration and soil productivity. Soils may require improvement and/or stormwater BMPs implemented to increase infiltration.

Transportation Mitigations

Construction along approximately 1,890 linear feet of roadways requiring substantial widening, including along Landover Road, Brightseat Road, and the construction of a new connector road connecting the site south access to Brightseat Road, as shown in figure 6-40,, as shown in figure 6-40, would have the potential to disturb soils during construction. With the exception of the new connector road, the potential impacts to soils in these areas would be minimal because they would occur within previously disturbed areas adjacent to existing roadways. There would be approximately 400 linear feet of new roadway construction associated with the site south access connector road that would pass through relatively undisturbed land. This land is classified as Udorthents, highway and further detailed study would be required to understand its erosion potential and engineering properties. Over the long-term, it is expected that the engineering and design of the improvements would minimize any continuing adverse impacts to the extent that they are not measurable.

6.2.2 Water Resources

The following sections describe the environmental consequences for water resources under both the No-action Alternative at Landover and the Landover Alternative.

WATER RESOURCES ASSESSMENT OF SIGNIFICANCE

Impacts to water resources would not result in significant impacts, as defined in section 3.3.3.

6.2.2.1 Surface Water

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to surface water because there are no surface water features on the site.

Landover Alternative

No surface waters occur within the site. Therefore, there would be no measurable long-term impacts to surface water as a result of the Landover Alternative.

However, there could be direct, short-term, adverse impacts to surface water. During construction, soils would be temporarily exposed, which would increase the potential for the transport of sediment into Cattail Creek and other downstream surface waters. Operation of construction equipment would increase the likelihood of accidental leaks or spills of fuel, lubricants, or other materials which could contaminate nearby surface water. Soil disturbance and the use of construction equipment would increase the potential for the transport of sediments or contaminated solids into surrounding surface waters and increase sediment loading.

LANDOVER SURFACE WATER ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: No measurable impacts.

LANDOVER HYDROLOGY ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: Direct, short-term, adverse impacts and direct, long-term, beneficial impacts.

Construction activities would be subject to stormwater, sediment and erosion control, and other regulations that would avoid adverse impacts to surface water. Because the extent of land disturbance on-site during construction would be greater than 5,000 SF, sediment and erosion control and stormwater management BMPs, as required under NPDES construction activity permit, including non-structural BMPs and other environmental site design techniques would be required. The Chesapeake Bay Total Maximum Daily Load for Maryland outlines targets which limit allowable sediment loads in order to meet state water quality standards. Sediment targets would be met through a focus on the implementation strategies outlined in Maryland's Chesapeake Bay Watershed Implementation Plan. Compliance with NPDES permits, stormwater and sediment and erosion control plans, and implementation of BMPs would minimize adverse impacts to surface waters to the extent they would not be measurable.

Transportation Mitigations

Construction along approximately 1,890 linear feet of roadways requiring substantial widening, including along Landover Road, Brightseat Road, and the construction of a new connector road connecting the site's south access to Brightseat Road, as shown in figure 6-40, would have the potential to adversely impact surface water. Impacts would be minimized because construction activities would conform to existing regulations and BMPs and would occur within previously disturbed areas adjacent to existing roadways, with the exception of approximately 400 feet of new roadway construction associated with the site's south access connector road. Over the long-term, it is expected that the engineering and design of the improvements would minimize any continuing adverse impacts to the extent that they are not measurable. Therefore, there would be no measurable impacts to surface water from the recommended traffic mitigation measures.

6.2.2.2 Hydrology

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to hydrology because the existing hydrology would not be altered.

Landover Alternative

There would be direct, short-term, adverse impacts to stormwater hydrology as a result of the temporary alteration of the existing stormwater drainage pattern during construction. Construction activities would disturb the site and temporarily alter existing stormwater drainage patterns. The conceptual site plans would increase the amount of pervious surface on the site by 34.3 acres (43 percent of total site acreage) resulting in a total of 42 pervious acres (52.8 percent of total site acreage). Over the long-term, this increase in pervious area would increase the infiltration of stormwater and reduce stormwater runoff volume leaving the Landover site, therefore beneficially impacting hydrology.

Transportation Mitigations

Construction along approximately 1,890 linear feet of roadways requiring substantial widening, including along Landover Road, Brightseat Road, and the construction of a new connector road connecting the site's south access to Brightseat Road, as shown in figure 6-40, would have the potential to adversely impact hydrology water during construction as a result of temporary changes and interruptions to existing hydrology. The potential impacts to would be minimized because construction would generally occur within previously disturbed areas adjacent to existing roadways and would be subject to permitting and regulatory requirements that would minimize adverse impacts to water quality. Approximately 400 feet of new roadway construction associated with the site's south access connector road would be constructed in a previously undisturbed area, which would contribute to an incremental increase in stormwater runoff within the watershed. Over the long-term, the implementation of recommended traffic mitigations are not expected to noticeably alter hydrologic processes within the study area.

6.2.2.3 Groundwater

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to groundwater because existing groundwater resources would not be altered.

Landover Alternative

Under the Landover Alternative, there could be direct, short-term, adverse impacts to groundwater. Construction has the potential to disturb groundwater and introduce contaminants. The presence of shallow groundwater within the site may require dewatering operations to facilitate excavation and grading activities during construction. Potential impacts to local groundwater resources include modification of groundwater levels through drawdown or diversion of flow. Under groundwater quality standards, MDE or local agencies issue permits for activities with the potential to introduce contaminants to groundwater. These include permits for groundwater discharge, hazardous and solid waste management, and stormwater management (MDE 2012). If the construction of a consolidated FBI HQ at the Landover site require discharge of groundwater from dewatering activities, authorization under an NPDES permit and applicable requirements related to water quality concerns would be required. Compliance with the NPDES General Construction Permit, stormwater pollution prevention plan, and stormwater BMPs would prevent or minimize possible pollutant loading to groundwater and protect groundwater quality during construction. Implementation of BMPs and low-impact development (LID) measures would improve groundwater quality and allow for stormwater infiltration and groundwater recharge. There would be direct, long-term, beneficial impacts as a result of improved groundwater recharge and protection of water quality.

Transportation Mitigations

Construction along approximately 1,890 linear feet of roadways requiring substantial widening, including along Landover Road, Brightseat Road, and the construction of a new connector road connecting the site's south access to Brightseat Road, as shown in figure 6-40, could have the potential to adversely impact shallow groundwater resources. The potential impacts in these areas would be minimized to the extent they are not measurable because construction would generally occur within previously disturbed areas adjacent to existing roadways and would be subject to permitting and regulatory requirements that would minimize adverse impacts to water quality. Approximately 400 feet of new roadway construction associated with the site's south access connector road is currently undisturbed and the existing level of quality of groundwater in this area is unknown. Further study would be required to categorize potential adverse impacts to groundwater associated with this construction. Over the long-term, the implementation of recommended traffic mitigations are not expected to alter groundwater within the study area.

6.2.2.4 Wetlands

No-action Alternative

Under the No-action Alternative at the Landover site, no measurable impacts to wetlands are anticipated because there are no wetlands present on the Landover site.

Landover Alternative

Under the Landover Alternative, there would be no measurable impacts to wetlands at the Landover site, because no wetlands are present on the site or in the vicinity of any recommended transportation mitigations.

6.2.2.5 Floodplains

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to floodplains because there would continue to be no floodplains present on the Landover site.

Landover Alternative

Under the Landover Alternative, there would be no measurable direct impacts to floodplains at the Landover site, because no floodplains are present on the site or in the vicinity of any recommended transportation mitigations.

6.2.3 Biological Resources

The following sections describe the environmental consequences for biological resources under both the No-action Alternative at Landover and the Landover Alternative.

BIOLOGICAL RESOURCES ASSESSMENT OF SIGNIFICANCE

Impacts to biological resources would not result in significant impacts, as defined in section 3.4.3.

6.2.3.1 Vegetation

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to vegetation because there would be no changes to existing vegetation.

Landover Alternative

Under the Landover Alternative, there would be no measurable short-term impacts to vegetation. The small amount of existing vegetation on the site would be removed prior to the construction of a consolidated FBI HQ. Over the long-term, vegetation, including trees, shrubs, and grasses, would be reintroduced to portions of the previously disturbed and currently impervious portion of the site. This would result in direct, long-term, beneficial impacts to vegetation at the Landover site as a result of the improvement in the quality and quantity of vegetation.

LANDOVER WETLANDS ENVIRONMENTAL CONSEQUENCES SUMMARY

 **No-action Alternative:** No measurable impacts.

 **Landover Alternative:** No measurable impacts.


LANDOVER FLOODPLAINS ENVIRONMENTAL CONSEQUENCES SUMMARY

 **No-action Alternative:** No measurable impacts.

 **Landover Alternative:** No measurable impacts.


LANDOVER VEGETATION ENVIRONMENTAL CONSEQUENCES SUMMARY

 **No-action Alternative:** No measurable impacts.


 **Landover Alternative:** Direct, long-term, beneficial impacts; direct, long-term, adverse impacts.


LANDOVER AQUATIC SPECIES ENVIRONMENTAL CONSEQUENCES SUMMARY

 **No-action Alternative:** No measurable impacts.

 **Landover Alternative:** No measurable impacts.

LANDOVER TERRESTRIAL SPECIES ENVIRONMENTAL CONSEQUENCES SUMMARY

 **No-action Alternative:** No measurable impacts.

 **Landover Alternative:** Direct, short-term, adverse impacts; direct, long-term, beneficial and adverse impacts.

Transportation Mitigations

Construction along approximately 1,890 linear feet of roadways requiring substantial widening, including along Landover Road, Brightseat Road, and the construction of a new connector road connecting the site south access to Brightseat Road, as shown in figure 6-40, would require the permanent removal of vegetation along the side(s) of the affected roadway to accommodate the recommended road improvements. The majority of the affected vegetation would consist of grasses; however, the construction of the new connector road would convert an approximately 400 linear feet of forested area to roadway. Therefore, impacts to vegetation associated with traffic mitigation measures would be direct, long-term, and adverse.

6.2.3.2 Aquatic Species

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to aquatic species because there are no approved plans for future redevelopment that would impact water quality and therefore the health of aquatic habitat.

Landover Alternative

Under the Landover Alternative, there would be no measurable impacts to aquatic species because there are no surface water bodies or aquatic species present in proximity of the site. While warmwater fish occurrences in the watershed (Golden 2015) could be impacted by a decline in water quality from increased sediment and pollution loading during the construction period, the absence of these habitats in proximity to the site and the recommended transportation mitigations would indicate that any contaminated stormwater would infiltrate nearby soils or be captured in stormwater infrastructure before the impact to aquatic species would occur.

6.2.3.3 Terrestrial Species

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to terrestrial species because there are no approved plans for future redevelopment that would impact terrestrial habitat.

Landover Alternative

Under the Landover Alternative, there would be a range of direct impacts to terrestrial wildlife at the Landover site as a result of the increase of usable habitat, but also increased noise, human activity, and light sources.

The site currently has little existing vegetation or usable habitat. During construction, there would be direct, short-term, adverse impacts caused by construction vehicles noise and equipment which may cause wildlife to temporarily vacate the small amount of existing habitat on-site, and move to adjacent areas to forage. Once construction is complete, wildlife would likely return to the area. Landscaping and the increased quantity and quality of vegetation associated with the FBI HQ campus would increase the amount of usable habitat, including food sources and cover, resulting in a direct, long-term, beneficial impact to terrestrial species. However, several factors would limit the extent to which terrestrial species would repopulate the site, including increased human activity and noise, site lighting, and the perimeter fence, which would present a barrier to surrounding habitat and water sources, resulting in direct, long-term, adverse impacts.

Transportation Mitigations

Construction along approximately 1,890 linear feet of roadways requiring substantial widening, including along Landover Road, Brightseat Road, and the construction of a new connector road connecting the site south access to Brightseat Road, as shown in figure 6-40, would require minimal removal of habitat, and habitat that would be disturbed is generally of low quality due its proximity to existing roadways. Construction activities would temporarily disturb terrestrial species due to noise and increased human activity, resulting in direct, short-term, adverse impacts. There would also be direct, long-term, adverse impacts to terrestrial species from the conversion of forest habitat to roadway for the approximately 400 linear feet of roadway construction required to connect the southern exit of the site to Brightseat Road.

6.2.3.4 Special Status Species

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to special status species because there are no approved plans for future redevelopment that would impact habitat used by these species.

Landover Alternative

Under the Landover Alternative, there would be no measurable impacts to special status species at the Landover site, including federally and state-listed wildlife or state rare plant species, because federally and state-listed wildlife and state rare plant species are not present at the site (USFWS 2014b; Golden 2015).

Due to the presence of trees around the borders of the site, there is a slight likelihood that species of migratory birds of conservation concern may be present at the Landover site year-round or for breeding or wintering purposes. Displacement to year-round or wintering avian species would temporarily increase as a result of increased human activity and noise associated with construction on-site, resulting in direct, short-term, adverse impacts. These impacts to birds of conservation concern would be minimal because of the relatively small area being affected and because there are other areas adjacent to the site where displaced individuals could move. Over the long term, the increased lighting of the campus may interfere with migratory birds' instinctive behavior that assists them in migrating (Florida Atlantic University n.d.), however the use of full cut-offs would minimize the potential for this impact.

Transportation Mitigations

All transportation mitigation activities that require construction efforts would require minimal removal of existing habitat. Transportation mitigation that would involve construction of new lanes, including the approximately 400 linear feet of roadway construction required to connect the southern exit of the site to Brightseat Road, as shown in figure 6-40, could have long-term direct impacts to special status species because small strips of grasslands and forested habitat along existing thoroughfares would be replaced with roadway. There could also be direct, long-term, adverse impacts to special status species from the conversion of forest habitat to roadway for the approximately 400 linear feet of roadway construction required to connect the southern exit of the site to Brightseat Road. Given the relatively low quality of this habitat and its location in a suburban area, it is unlikely that special status species would be impacted. It is anticipated that the migratory birds that potentially use this habitat would either not be present at the areas designated for construction or would avoid the area because of noise and human interaction, which could result in direct, long-term, adverse impacts.

6.2.4 Land Use, Planning Studies, and Zoning

The following sections describe the environmental consequences for land use and zoning under both the No-action Alternative at Landover and the Landover Alternative.

LAND USE, PLANNING STUDIES, AND ZONING ASSESSMENT OF SIGNIFICANCE

Impacts to land use, planning studies, and zoning would not result in significant impacts, as defined in section 3.5.3.

6.2.4.1 No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to land use or zoning because there are no approved plans for future redevelopment that would alter the current zoning, the existing or planned land uses, nor the vision for the site under the various relevant land use studies.

6.2.4.2 Landover Alternative

Zoning

The site is zoned as M-X-T. This zoning mandates that at least two of the following categories must be present on the site (1) retail businesses; (2) office/research/industrial; or (3) dwellings, hotel/motel. The Landover Alternative would satisfy only the office use category. As a result, there could be indirect, long-term, adverse impacts to land use and zoning if the site were under private ownership.

LANDOVER SPECIAL STATUS SPECIES ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.



Landover Alternative: No measurable impacts.

LANDOVER ZONING ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts to zoning.

Landover Alternative: No measurable impacts to zoning.

**LANDOVER LAND USE
ENVIRONMENTAL CONSEQUENCES
SUMMARY**

-  **No-action Alternative:** No measurable impacts.
-  **Landover Alternative:** Direct, long-term, beneficial and adverse impacts.

Development on a federally controlled site is not subject to zoning; however, GSA and the exchange partner would cooperate with state and local officials through the development process to ensure compatibility with surrounding development. Therefore, under the Landover Alternative, there would be no measurable impacts to zoning.

Transportation Mitigation

The recommended transportation mitigations, as shown in figure 6-40, would result in property takings that would alter land use along roadways recommended for improvement to mitigate traffic impacts in the study area. The proposed recommended mitigation measures may require property strip takings at three intersections: Landover Road and Brightseat Road, the Brightseat Road and Site South Access road, and Brightseat Road and Arena Drive. The Landover Road and Brightseat Road mitigation measures would impact the eastbound approach addition of a new lane beginning 400 feet west of the intersection and continuing 560 feet east of the intersection. The impacts at this intersection would also include a new lane added to Brightseat Road in the northbound direction beginning 360 feet prior to the intersection. Lastly, the Brightseat Road and Site South Access intersection impact would include the 400-foot exit-only driveway between the intersection and Landover Road underpass.

In total, three parcels would be impacted by these mitigation measures, resulting in direct, long-term, adverse impacts. All parcels are owned by commercial entities; two are currently commercial properties while one is industrial. During the design phase, the property impacts would be refined to minimize property takings and use design measures that could lessen the impact, such as narrowing travel lanes or shifting the roadway alignment.

Regional and Local Land Use Studies

Plan Prince George's 2035

The Landover Alternative would align with some of the land use goals outlined in Plan Prince George's 2035. The Landover Alternative would align with the plan's goals to transform Landover into a viable economic engine by providing a competitive office complex, centralizing a multitude of jobs, and thereby fostering economic development in proximity to the site. The Landover Alternative would also facilitate the goals of Plan Prince George's by strengthening the value of the neighborhood by contributing economically and restoring degraded resources by redeveloping the previous site of the Landover Mall. Impacts to land use at the Landover site as they relate to alignment with Plan Prince George's 2035 would be direct, long-term, and beneficial.

However, for some issues, the Landover Alternative would not align with the goals of Plan Prince George's 2035. Consolidating the FBI HQ at the Landover site would not promote higher density, compact, mixed-use developments as outlined in the goals for Plan Prince George's 2035; instead the site would contain an ample amount of unused space and, in order to comply with the requirements of an Interagency Security Committee (ISC) Level V facility, would not be designed in a compact manner. Furthermore, the site would be designated for a single use. The Landover Alternative would not promote walkable communities, nor would it enhance the mobility and connectivity between neighborhoods, employment centers, cultural historic resources, and regional attractions because a perimeter fencing and security setbacks would isolate the site from the surrounding community. Because some elements of the Landover Alternative would not align with the goals of Plan Prince George's 2035, there would be direct, long-term, adverse impacts to land use.

Landover Gateway Sector Plan and SMA

The Landover Alternative, would align with some of the land use goals outlined in Landover Gateway Sector Plan and Sectional Map Amendment (hereafter referred to as the Landover Sector Plan). Goals of the Landover Sector Plan include building a new downtown that would facilitate economic growth and redeveloping the site previously occupied by the Landover Mall. The Landover Alternative would completely fulfill the goal of redeveloping the site, but would only moderately fulfill the goal of building a new downtown. Although the consolidation would provide an office complex that would move a large employer to the area and foster economic growth, it would not contain the uses or density to qualify as a downtown. As a result of these alignment with elements of the Landover Sector Plan, impacts to land use at the Landover site would be direct, long-term, and beneficial.

However, the Landover Alternative would not align with other goals of the Landover Sector Plan. The Landover Sector Plan calls for a mix of land uses on the site, including high density residential; office, retail, and residential; office/hotel; medium density residential; office/high density residential; and government/office/educational/hotel/cultural/retail. The Landover Alternative would only provide a single use, Federal office space. Other goals mentioned in the Landover Sector Plan include creating a vibrant new downtown in the area on and around the site of the former Landover Mall; improving connectivity by creating a network of pedestrian friendly streets; and integrating open spaces, green connections, and public focal places into the Landover Gateway's neighborhoods.

The Landover Sector Plan designates the site of the former Landover Mall as the focal point of development that would provide a network of pedestrian friendly streets as well as a mix of uses. The Landover Alternative would discourage this type of development because the HQ would consume the entire site for one purpose, and public access to the site would be restricted. This type of development would also limit connectivity between developments in Landover, especially the east-west connections outlined in the Landover Sector Plan between the site of the former Landover Mall to the west and Woodmore Towne Centre to the east of the Capital Beltway. Although the Evarts Street Bridge is recommended as a transportation mitigation measure, other possible connections would be unlikely because the site design and limited public access would discourage walkability and reduce connectivity through the site. The lack of mixed uses, pedestrian amenities and inadequate connections through the site in conjunction with the restriction of public access to the site, would result in a direct, long-term, adverse impacts to land use in Landover.

Comprehensive Plan for the National Capital Region

The Landover Alternative, would fulfill some of the objectives of Federal Elements of the Comprehensive Plan for the NCR. The Landover Alternative would enhance operational efficiencies and contribute to developing the economy in Landover area. As a result of the alignment with some elements of the Federal Elements, impacts to land use at the Landover site would be direct, long-term, and beneficial.

However, the Landover Alternative does not align with the Federal Element goal regarding public transportation. Although the Landover site is located near multiple bus routes, the site is just under 2 miles from the closest Metrorail station, which would be disadvantageous for employees and visitors commuting to the Landover site using public transit. Additionally, the Landover Alternative does not utilize underdeveloped Federal sites or available space in Federal buildings as recommended in the Federal Elements. Because the Landover site would be inconsistent with some elements of the Federal Elements, impacts to land use at the Landover site would be direct, long-term, and adverse.

6.2.5 Visual Resources

The following sections describe the environmental consequences for visual resources under both the No-action Alternative at Landover and the Landover Alternative.

**VISUAL RESOURCES
ASSESSMENT OF SIGNIFICANCE**

Impacts to visual resources would not result in significant impacts, as defined in section 3.6.3.

6.2.5.1 No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to visual resources because there are no approved plans for future redevelopment that would alter the aesthetics or existing views of the site.

6.2.5.2 Landover Alternative

Based on the conceptual site plan and preliminary estimates, the Main Building, which would be constructed within the 15.81-acre Main Building Developable Area, is assumed to have a maximum building height of approximately 11 stories in the Draft EIS. Parking structures at the site are assumed to not exceed 10 stories while the Central Utility Plant (CUP), Remote Delivery Facility (RDF), gatehouses, and visitor's center would not exceed 2 stories in height. In order to envisage the visibility of the Main Building to the surrounding area, a viewshed analysis for the Landover site was completed for the Main Building Developable Area in ArcMap. The analysis applied the assumed Main Building height (154 feet) to the entirety of the Main Building Developable Area, and calculated views based on the existing ground topography and the obstruction caused by trees in the viewshed. Considering the elevation of the building footprint and surrounding area, the Landover Alternative would be visible from most locations within 0.25 mile. It would be highly visible from the Capital Beltway and Landover Road because of their location adjacent to the site. The results of the viewshed analysis for the Landover site is shown in figure 6-28.

Under the Landover Alternative, there would be direct, long-term, adverse impacts to visual resources. The height of the Main Building would be distinctively higher than the surrounding area, aside from FedExField, which stands 128 feet high as a seven level stadium (Clark Construction 2014). Although the height of the Main Building would be noticeably different than the surrounding area, it would consistent with the overall visual character of this portion of Prince George's County, in which isolated, tall buildings dot the skyline along the Capital Beltway. The height of the remaining buildings would be more in line with the visual character of the surrounding area because they would not exceed 2 stories. Therefore, under the Landover Alternative, there would be direct, long-term, adverse impacts to visual resources.

The Landover site would be visually distinct from the residential developments to the north and west of the site, but would blend in with existing commercial and industrial development throughout the vicinity. Likewise, density changes would be noticeable but would also correspond with the commercial and industrial development throughout the rest of the area. Notwithstanding the adverse impacts, the changes in the visual character of the Landover site are envisioned for the North Core by Prince George's County as outlined in the Landover Sector Plan and Plan Prince George's 2035 and other local and regional planning initiatives. Furthermore, the transition from an overgrown and barren vacant lot and empty mall to a state of the art government campus would have direct, long-term, beneficial impacts to visual resources.

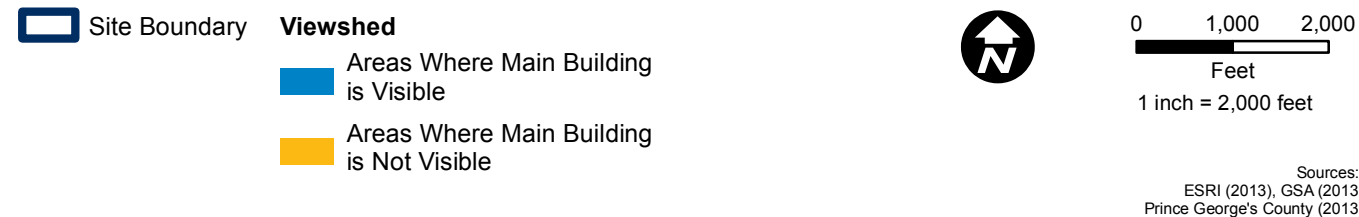
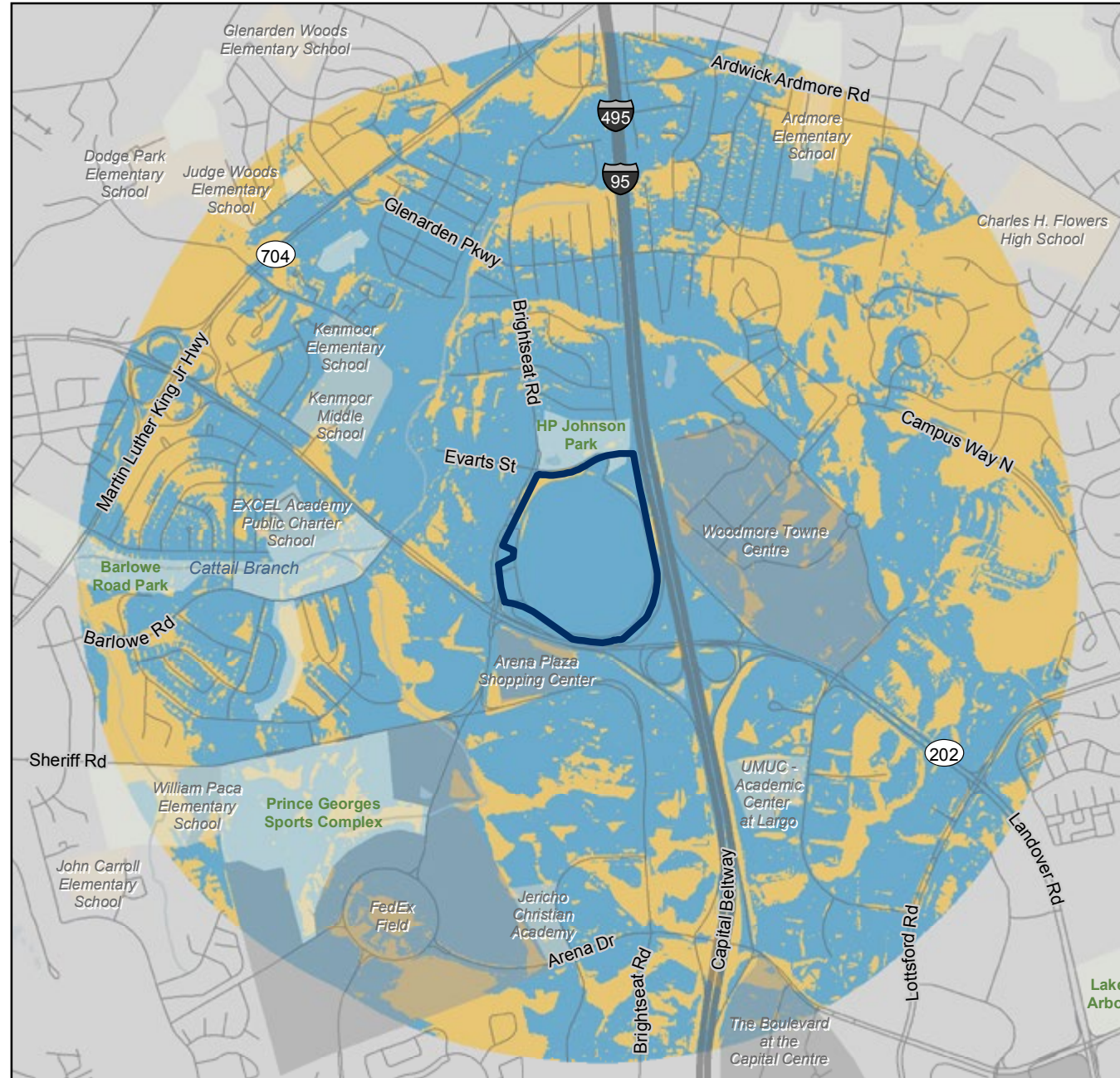
**LANDOVER VISUAL RESOURCES
ENVIRONMENTAL CONSEQUENCES
SUMMARY**

	No-action Alternative: No measurable impacts.
	Landover Alternative: Direct, long-term, beneficial and adverse impacts.

FULL CUT-OFF

A light system that prevents light from being cast upward or outward and therefore contributing to light pollution. No light is emitted directly from the luminaire into the sky.

Figure 6-28: Landover Viewshed Analysis



Shadow Analysis

In order to complement the visual analysis, a shadow analysis was performed to estimate how shadows cast by the Main Building may impact the surrounding area, as described in section 3.6. Using ArcScene, a sun-shadow analysis model was created to determine shadows that would be cast by the Main Building at the Landover site. As shown in figure 6-29, shadows are more pronounced in the winter than in the summer. During winter mornings, long shadows would extend to the west/northwest of the Main Building and would potentially cover a small portion of Brightseat Road, however they would not be expected to impact the Maple Ridge apartment complex. During winter evenings, long shadows would extend to the northeast of the building onto the Capital Beltway. The results of the shadow analysis for the Landover site are shown in figure 6-29.

Lighting

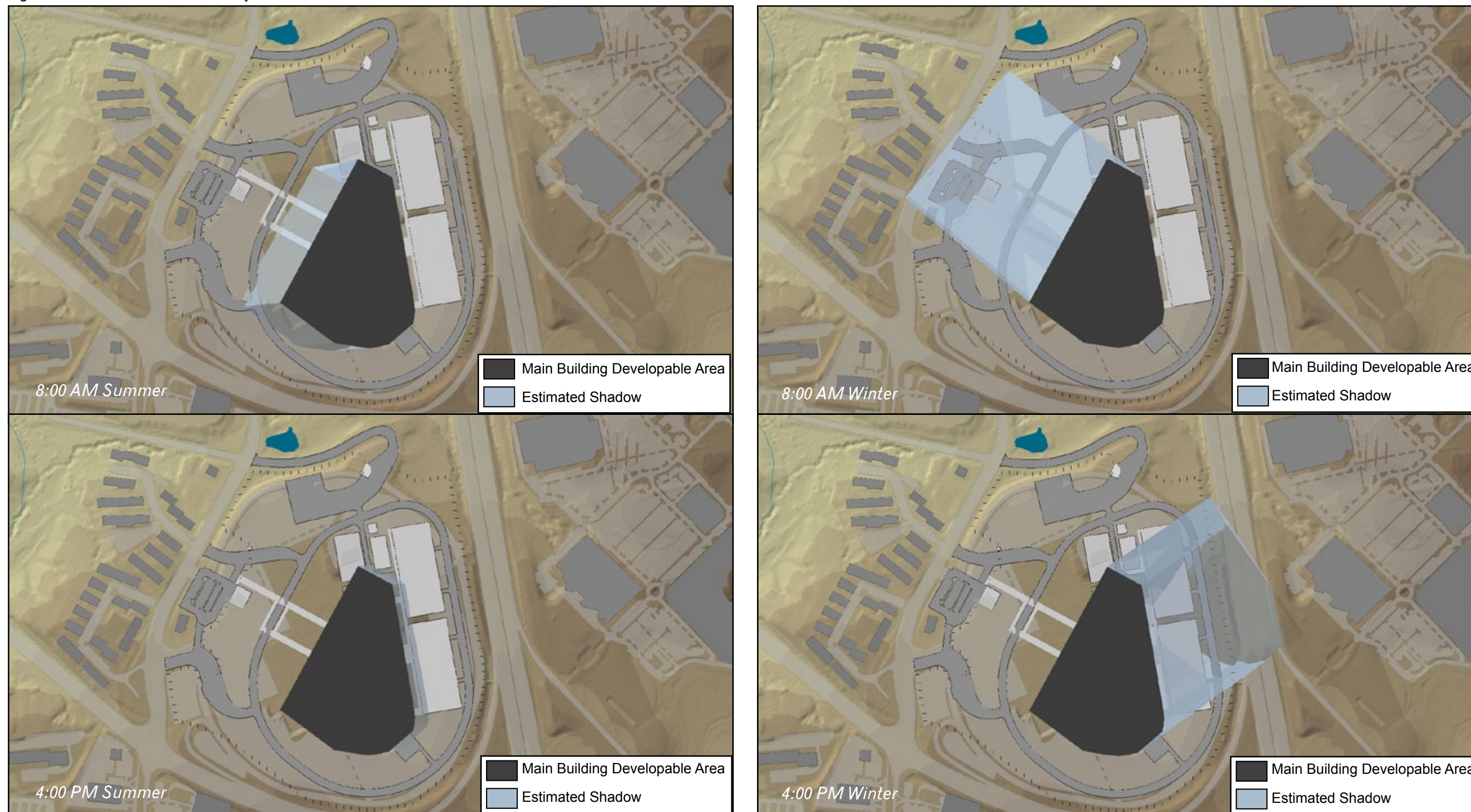
Due to security requirements, the consolidated FBI HQ would be a well-lit facility, with a minimum of 1 foot candle across the entire site during non-daylight hours. Full cut offs would be used to minimize light pollution to the surrounding area. Illumination from the consolidated FBI HQ would have an additive effect with the lighting along Landover Road and the Capital Beltway. It is unlikely that this lighting would be noticeable within adjacent neighborhoods. The Landover site was previously a shopping mall, so although lighting levels at the site would be comparable to when the shopping mall was in operation, when compared to the No-action Alternative, under which the site is not lit, there would be a direct, long-term, adverse impacts to visual resources resulting from increased lighting levels at the Landover

site. It is not expected that additional impacts to visual resources would result from the implementation of the recommended traffic improvements. There could be direct, long-term, adverse impacts to visual resources resulting from the lighting along the new south exit road, but given the already high levels of ambient lighting from Landover Road, the Capital Beltway, and Arena Plaza there are no additional impacts to visual resources expected. All recommended mitigations, including the construction of the south exit road, would occur in areas.

Transportation Mitigation

There would be no measurable impacts to visual resources associated with the recommended traffic mitigation measures within the transportation study area, as shown in figure 6-40. All mitigation measures requiring construction would be along the existing roadways, with minimal tree clearing and lighting continuing to be confined to the existing transportation corridor.

Figure 6-29: Landover Shadow Analysis



LANDOVER ARCHAEOLOGY ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: No measurable impacts.

LANDOVER HISTORIC RESOURCES ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: No measurable impacts.

6.2.6 Cultural Resources

The following sections describe the environmental consequences for cultural resources under both the No-action Alternative at Landover and the Landover Alternative.

CULTURAL RESOURCES ASSESSMENT OF SIGNIFICANCE

Impacts to cultural resources would not result in significant impacts, as defined in section 3.7.3.

6.2.6.1 Archaeological Resources

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to archaeological resources because there would continue to be a low potential for intact artifacts at the site and there are no approved plans for future redevelopment that would disturb the ground surface.

Landover Alternative

Under the Landover Alternative, there would no measurable impacts to archaeological resources at the Landover site, because there is a low potential for intact resources to exist on the site due to previous disturbance.

Should there be an unanticipated discovery of archaeological resources during construction, GSA would continue Section 106 consultation with the MD SHPO and other parties through the standard review process under 36 CFR § 800. Through this ongoing process, any impacts to archaeological resources would be avoided or mitigated to the extent that they would not be measurable. This stipulation would be included in the Section 106 PA for the project.

6.2.6.2 Historic Resources

No-action Alternative

Under the No-action Alternative at the Landover site, there would no measurable impacts to historic resources, because no historic resources exist within the boundaries of the APE.

Landover Alternative

Under the Landover Alternative, there could be direct, long-term, adverse impacts to historic resources. As noted in section 4.7, GSA initiated consultation under Section 106 of the NHPA with the MD SHPO on May 14, 2015. On August 17, 2015, the MD SHPO commented on the potential for historic resources in the APE, noting that there would not be substantive historic preservation or archaeological resource issues.

Architectural resources 50 years of age or older within the APE are unlikely to be eligible for listing on the NRHP as historic districts or as individual resources. Regardless, visual impacts would be minimal. The consolidated FBI HQ would be visible from the Maple Ridge apartment complex because of its proximity to the Landover site. Views from Royale Gardens would be limited by H.P. Johnson Park, which is located between the Landover site and this neighborhood. Vegetative buffers along the perimeter of the former Palmer Park School and the Lansdowne apartment complex would also limit views toward the Landover site.

Although the Main Building would be taller than surrounding commercial buildings, the overall development of the Landover site would be in keeping with the character of the area and it is anticipated that the Landover Alternative would not visually impact any potential historic resource to the extent that it would diminish its integrity. The eligibility of these resources for listing in the NRHP is dependent on further agency consultation. In addition, any adverse impacts to historic resources in the APE would be mitigated by Section 106 consultation under the PA.

6.2.7 Socioeconomic and Environmental Justice

Impacts related to changes in population and demographics as a result of consolidating FBI HQ at the Landover site are considered in the context of the local economy of Prince George's County, the Washington, D.C., MSA, and the State of Maryland. Impacts to tax revenues, population, housing, schools, and community facilities and services of Prince George's County, the Washington, D.C., MSA and the State of Maryland, are all described qualitatively. Benchmarks for some impacts, such as impacts to construction employment, have been created by identifying the greatest annual change over a recent historical period to create a quantitative threshold for the magnitude of impacts to each resource. Impacts to Prince George's County and the Washington, D.C., MSA are similar to those described in the environmental consequences analysis for the Greenbelt site, described in section 5.2.7, and are incorporated by reference where applicable.

SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE ASSESSMENT OF SIGNIFICANCE

Impacts to socioeconomics and environmental justice would not result in significant impacts, as defined in section 3.8.3.

6.2.7.1 Population and Housing

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to population and housing because there are no approved plans for future redevelopment that would alter the current population and housing patterns in Prince George's County or the Washington, D.C., MSA.

Landover Alternative

Population

Impacts to the population of Prince George's County, and the Washington, D.C., MSA resulting from the Landover Alternative would be similar to those described for the Greenbelt site in section 5.2.7. Therefore there would be no measurable impacts to population in Prince George's County or the Washington, D.C., MSA under this alternative.

Housing

Impacts to housing in Prince George's County and the Washington, D.C., MSA would be similar to those described for the Greenbelt site in section 5.2.7. The total amount of employees that would relocate to the County from outside the County is unknown; therefore, the housing impacts of these relocations on Prince George's County cannot be assessed due to insufficient information at this time.

6.2.7.2 Employment and Income

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to employment and income because there are no approved plans for future redevelopment that would alter the current employment or income levels in Prince George's County or the Washington, D.C., MSA.

Landover Alternative

Construction and Operations-Related Spending

Impacts to construction and operations-related spending, construction employment and income, and operations-related employment and income in Prince George's County, and the Washington, D.C., MSA resulting from the Landover Alternative would be similar to those described for the Greenbelt site in section 5.2.7. However, under this alternative there would be indirect, short-term, beneficial impacts to Prince George's County and the Washington, D.C., MSA as a result of construction-related spending. Additionally, there would be indirect, long-term, beneficial impacts to both Prince George's County and the Washington, D.C., MSA as a result of operations-related spending.

Construction Employment

Similar to the Greenbelt Alternative, it is expected that there would be approximately 2.4 million gsf of construction under this alternative. This level of construction would require 6,720 full-time equivalent construction workers for a one-year period, resulting in approximately \$315 million in construction wages that would result directly from project spending. However, it is not likely that all 6,720 construction workers would be employed for only one year and, instead, the project would occur over multiple years which would reduce the impact to the local construction industry.

Similar to the findings under RFDS 1 and the alternatives at the Greenbelt site, most of the construction workforce is expected to come from within the Washington, D.C., MSA. However, due to the specialization requirements of some construction jobs and the high number of future construction projects, it is possible that some construction workers could relocate to the Washington, D.C., MSA in order to construct the facilities under this alternative during the construction period. Any temporary relocation of construction workers to the Washington, D.C., MSA would have direct, short-term, beneficial impacts to the local lodging, food and beverage, and retail sectors when these construction workers spend their income in the Washington, D.C., MSA.

LANDOVER POPULATION & HOUSING ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: No measurable impacts to population in Prince George's County or the Washington, D.C., MSA. Impacts to housing in Prince George's County cannot be assessed due to insufficient information at this time.

LANDOVER EMPLOYMENT & INCOME ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: Indirect, short- and long-term, beneficial impacts.

**LANDOVER TAXES
ENVIRONMENTAL CONSEQUENCES
SUMMARY**

No-action Alternative: No measurable impacts.

Landover Alternative: Indirect, short- and long-term, beneficial impacts to income and sales tax revenues. Indirect, long-term, adverse impacts to property tax revenues.

**LANDOVER SCHOOLS &
COMMUNITY SERVICES
ENVIRONMENTAL CONSEQUENCES
SUMMARY**

No-action Alternative: No measurable impacts.

Landover Alternative: Insufficient information available to determine impacts to community services. No measurable short-term impacts to schools. Insufficient information available to determine long-term impacts to schools.

Operations Employment

Because current FBI HQ employees work within the Washington, D.C., MSA, there would be no new impacts to the Washington, D.C., MSA as a result of the employment of operations-related employees. There would be indirect, long-term, beneficial operations-related impacts to sales, income, and employment in Prince George's County as a result of commuting employees who spend their income locally during the workday and those employees who choose to relocate their primary residence to Prince George's County as a result of the project.

6.2.7.3 Taxes

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to taxes because there are no approved plans for future redevelopment that would alter the current sales, income or property tax levels in Prince George's County or the Washington D.C. MSA.

Landover Alternative

The transfer of the Landover site from a privately owned to a federally owned parcel would cause indirect, long-term, adverse impacts to property tax revenues in Prince George's County. As of the year 2015, there were \$361,339 in property taxes paid annually on this property, and no taxes would be paid if the site were to be transferred to the Federal Government (Prince George's County Property Tax Assessor 2015).

Impacts to sales and income taxes in Prince George's County and the Washington, D.C. MSA would be similar to those described under the Greenbelt Action Alternative and are listed in section 5.2.7.3. These increases in sales and income taxes would result in indirect, short- and long-term, beneficial impacts to tax revenues in Prince George's County.

6.2.7.4 Schools and Community Services

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to schools and community services because there are no approved plans for future redevelopment that would alter the current condition of schools and community services in Prince George's County or the Washington, D.C., MSA.

Landover Alternative

Impacts to schools and community services in Prince George's County and the Washington, D.C., MSA resulting from the Landover Alternative would be similar to those described for the Greenbelt Alternative in section 5.2.7.4. The Landover Alternative could result in the potential relocation of some of the current FBI HQ's total employed workforce. Some of these employees could relocate with their families. However, as described in the Population and Housing analysis, it is assumed that many of these employees currently reside in the Washington, D.C., MSA and if they relocate their primary residences as result of this alternative, the new residence would likely be located within the Washington, D.C., MSA. Therefore, there is no net change in impacts, and, subsequently, there would no measurable impacts to schools in the Washington, D.C., MSA as a result of employees changing permanent residences within the Washington, D.C., MSA.

Some FBI HQ employees may choose to relocate to Prince George's County from outside of Prince George's County in order to be closer to the consolidated FBI HQ location under this alternative. Any movement of families into Prince George's County could have a direct, adverse impact to schools as a result of increasing the student load on the local school system until the system adjusts to the increase in the number of students and a direct, long-term, beneficial impact as a result of increased school funding through increased property taxes. However, there is insufficient information available at this time to determine the impact to schools in Prince George's County as we do not know the number of persons that would relocate to Prince George's County as a result of this alternative.

The Landover Alternative could result in direct, short-term, adverse impacts to police services, fire and emergency services, and medical facilities by increasing the demand for these services during the construction period. However, there is insufficient information available at this time to determine these impacts as the amount of additional demand that would be placed on community services during the construction period is unknown. There would be no measurable impacts to schools in the short-term. Impacts to community services as a result of employees permanently relocating to Prince George's County or the Washington, D.C., MSA are expected to be indirect, short-term, and adverse while these services adjust to changes in the level of the population to be serviced.

6.2.7.5 Recreation and Other Community Facilities

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to recreation resources or other community facilities because there are no approved plans for future redevelopment that would alter the current condition of recreation facilities in Prince George's County or the Washington, D.C., MSA.

Landover Alternative

Impacts to recreation resources and other community facilities in Prince George's County and the Washington, D.C., MSA resulting from the Landover Alternative would be similar to those described for the Greenbelt site in section 5.2.7.5. Both indirect, long-term, adverse and beneficial impacts to recreation resources and other community facilities could occur due to increased visitation at these sites and as a result of FBI Headquarters employees spending their income at these resources, respectively. However, there is insufficient information available at this time to determine the impacts that would occur to recreation and other community facilities under this alternative.

6.2.7.6 Environmental Justice

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no change to employment, housing, income, population, schools, or community services in Prince George's County or the Washington, D.C., MSA. Therefore, there would be no measurable impact to low income or minority populations and no environmental justice impacts.

Landover Alternative

Of the 12 census tracts within 1 mile of the Landover site, there are 2 tracts that have relatively high minority populations and 20 percent of their population lives below the poverty line, and 10 tracts that have only relatively high minority populations. Therefore, all of the census tracts within 1 mile of the Landover site contain sensitive communities.

The Landover Alternative could result in the creation of jobs in Prince George's County as new businesses open to support construction workers and FBI HQ employees. These new businesses could beneficially impact the local community and the Washington D.C., MSA through the creation of new income, employment, and sales in both the short and long term. Some new construction-related jobs would also be created in the short term, which could result in the creation of additional income and employment for local residents. Some of the local residents that fill these jobs could come from the low-income or minority communities identified in section 6.2.7.6. However, actual hiring practices would be determined by the construction contractor for this project or by proprietors who own these businesses; therefore, it is not certain that any jobs created under this alternative would be filled by persons from low-income or minority communities.

Several neighborhoods reside directly west of the Landover site that could be impacted by construction and commuter traffic that would result from this alternative. Adverse traffic impacts under this alternative would be mitigated to the extent practicable and permitted by regulations to the No-build Condition or better than the No-build Condition. In addition, Brightseat Road, which is the access road servicing these neighborhoods, is expected to see higher construction and operations-related traffic. This road is classified as a collector under the Federal functional classification system for roadways. Because this road is a collector, even though traffic levels on the road would increase as a result of this alternative, it would perform up to its functional level as a result of this alternative. Therefore, there would be no adverse impacts related to traffic as the road would perform as it was designed under the Landover Alternative, and there would be no adverse impacts to sensitive communities located to the west of this site as result of transportation impacts.

Air quality impacts, while adverse, would disperse across an area wider than the 1-mile radius of the site used for the environmental justice analysis and would therefore impact more census tracts than those identified as Environmental Justice communities. Furthermore, National Ambient Air Quality Standards (NAAQS) would not be exceeded at the closest sensitive receptors (see figures 6-40 and 6-41). Because any air quality impacts would occur to census tracts both within and outside the 1-mile boundary of the Landover site, there would be no disproportionate impacts to sensitive populations. In addition, because NAAQS would not be exceeded, there would be no adverse impact. Therefore, there would be no environmental justice impacts under this alternative in the short term, and because there would be no adverse air quality impacts anticipated in the long-term, there would be no long-term environmental justice impacts resulting from air quality impacts.

Impacts from noise would be direct, short-term, and adverse during the short term. However, it is expected that construction crews would follow local noise ordinances, including timing of construction noise, to mitigate adverse impacts to sensitive populations.

Because there would be no long-term, adverse impacts to minority or low income communities under this alternative, and because indirect, short-term, adverse impacts would be mitigated to the extent practicable and permitted by law, no environmental justice impacts are anticipated under this alternative.

LANDOVER RECREATION & OTHER COMMUNITY FACILITIES ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: Insufficient information available to determine impacts.

LANDOVER ENVIRONMENTAL JUSTICE ENVIRONMENTAL AND PROTECTION OF CHILDREN CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: No short- or long-term adverse impacts to minority or low-income communities. No mitigation of disproportionate and adverse impacts to children is required under EO 13045.

6.2.7.7 Protection of Children

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to children because there are no approved plans for future redevelopment that would impact children living near the site or children attending childcare centers or schools near the site.

Landover Alternative

As described in section 6.1.7, six childcare centers reside in proximity to the Landover project site. Aunt Tia's Daycare, Kayla's Daycare, Rising Generations, and Park View Child Development Center reside along major roads within 1 mile of the project site. These roads could be used for construction traffic and would see an increase in commuter traffic as a result of this project. As Nana's Day Care is located in a residential community southwest of the project site and as Future Leaders Day Care is also located in a residential community northwest of the project site, no measurable impacts to these daycares are expected. As The Foundation Schools of Prince George's County, Kenmoor Elementary School, Excel Academy Public Charter School, and Jericho Christian Academy are not located off of any main road that would be impacted by the project, no measurable impacts to these schools would occur. Excel Academy Public Charter School and Kenmoor Middle School are located on major roads that could be used for construction traffic and may see an increase in commuter traffic as a result of this project.

Neighborhoods are located to the west and northwest of the project site. Children in these neighborhoods could be impacted by construction noise and air quality issues in the short term. However, any impacts to these neighborhoods would not disproportionately impact children; therefore, no measurable impacts to children would occur from noise and air quality impacts in the short term.

Under this alternative, some impacts to children, such as releases of odor and dust during the construction of the Landover site, may occur as a result of children living in the neighborhoods in proximity to the proposed location for this alternative. Additionally, an increase in traffic to and from the project site would impact children that are commuting or walking to school. However, these impacts would not have a disproportionately high and adverse impact to children. Therefore, no measurable impacts to children are expected to occur as a result of this alternative.

6.2.8 Public Health and Safety/ Hazardous Materials

The following sections describe the environmental consequences for public health and safety and hazardous materials under both the No-action Alternative at Landover and the Landover Alternative.

PUBLIC HEALTH AND SAFETY/ HAZARDOUS MATERIALS ASSESSMENT OF SIGNIFICANCE

Impacts to public health and safety would not result in significant impacts, as defined in section 3.9.3.

6.2.8.1 Public Health and Safety

No-action Alternative

Under the No-action Alternative at the Landover site, there would no measurable impacts to emergency services and life safety, because there are no approved plans for future redevelopment that would impact the demand or capacity for emergency services or increase the risk of harm to the public.

Landover Alternative

The Landover Alternative would involve the implementation of similar construction-phase life safety procedures to those described in section 5.2.9 for the Greenbelt site. As a result, there would be direct, short-term, adverse impacts to emergency services and life safety at the Landover site associated with on-site construction activities.

As a high profile Federal building, the presence of the FBI HQ at the Landover site could increase the potential for intentional destructive acts; however, the FBI would maintain a site-specific emergency response plan to minimize any potential risks to FBI employees or the public. Likewise, the response time and capacity of existing law enforcement, fire, and emergency response agencies is expected to be adequate at the Landover site.

Lastly, the operation of a firing range for employee use within the campus could pose safety concerns to employees using the facility. Public access would be restricted and employee use would to be consistent with Occupational Safety and Health Administration (OSHA) regulations (29 CFR Parts 1900–1999); however, a slight risk of injury would remain. Consequently, there could be direct, long-term, adverse impacts to emergency services and life safety at the Landover site.

Transportation Mitigations

The recommended traffic mitigation measures within the transportation study area would be beneficial to emergency services and life safety. Construction along approximately 1,890 linear feet of roadways requiring substantial widening, including along Landover Road, Brightseat Road, and the construction of a new connector road connecting the site south access to Brightseat Road, as shown in figure 6-40, would improve the flow of traffic and reduce response times for emergency vehicles. Therefore, impacts to emergency services/life safety associated with traffic mitigation measures would be direct, long-term, and beneficial.

6.2.8.2 Hazardous Materials

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to hazardous materials because there are no approved plans for future redevelopment that would disturb existing hazardous materials on the site.

Landover Alternative

Spill prevention and response procedures would be implemented at the Landover site similar to those described under the No-action Alternative at the Greenbelt site to prevent hazardous material spills such as vehicle and equipment fuels and maintenance fluids during both construction and operation of the consolidated FBI HQ campus. Compliance with these procedures would result in no measurable impacts associated with hazardous materials spills and cleanup at the Landover site.


A Phase I Environmental Site Assessment conducted at the Landover site in November 2014 documented potential contamination associated with previous automotive-related uses (Louis Berger 2014b). It is therefore possible that soil and groundwater at the site have been impacted by these previous uses. Additional subsurface investigations and potential remediation activities would be required to assess the magnitude of any contamination. The assessment also documented several off-site sources of potential contamination within the surrounding vicinity, but concluded that these did not have potential to affect the Landover site.

During operation of the facility, materials handling and storage protocols for the delivery and on-site use of hazardous materials (e.g., ammunition for the shooting range) would be implemented, minimizing the potential for adverse impacts to the extent that they are not measurable.

Transportation Mitigations

Impacts to hazardous materials could occur if the potential contamination discovered during the Phase I Environmental Site Assessment existed along the roadways recommended for widening or other improvements, as shown in figure 6-40. Additional subsurface investigations and potential remediation activities would be required before construction would occur, reducing the potential to introduce contamination into the environment.

LANDOVER PUBLIC SAFETY ENVIRONMENTAL CONSEQUENCES SUMMARY

 **No-action Alternative:** No measurable impacts.

 **Landover Alternative:** Direct, short-term, adverse impacts; direct, long-term, beneficial impacts.

LANDOVER HAZARDOUS MATERIALS ENVIRONMENTAL CONSEQUENCES SUMMARY

 **No-action Alternative:** No measurable impacts.

 **Landover Alternative:** No measurable impacts.

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6.2.9 Transportation

The Transportation impact analysis considers two conditions:

- No-build Condition assumes the FBI remains at the FBI HQ building in Washington, D.C., and the Landover site remains undeveloped.
- Build Condition is the consolidation of the FBI HQ at the Landover site.

The analysis of the No-build Condition serves as the baseline against which the impacts of the Proposed Action would be compared.

TRANSPORTATION ASSESSMENT OF SIGNIFICANCE

Impacts to transportation under both the No-action and Landover Alternatives would result in significant impacts to public transit and traffic as defined in section 3.10. Other resources considered under transportation would not result in significant impacts.

6.2.9.1 No-build Condition

This section introduces the No-build Condition for the Landover site, and provides a summary of each mode of travel and the potential impact caused if the Landover Alternative does not occur. This includes descriptions of the pedestrian network, bicycle network, public transit system, parking conditions, truck access, and traffic operations.

Planned Developments

According to the Landover Site Transportation Agreement (Appendix A), 12 planned developments are included as part of the No-build Condition. Table 6-12 provides the list of planned developments by name, type of construction, size and location as well as access and connection points. These developments range from small (7,000 SF of retail or 30,500 SF of office use) to large, mixed-use projects (up to 975,000 SF of office use or 560 residential units).

The developments would be located primarily east of the Capital Beltway, both north and south of Landover Road (MD 202), and all are shown in figure 6-30. All of the following information on these planned developments was gathered through a December 2014 meeting with Tom Masog, transportation supervisor at M-NCPPC.

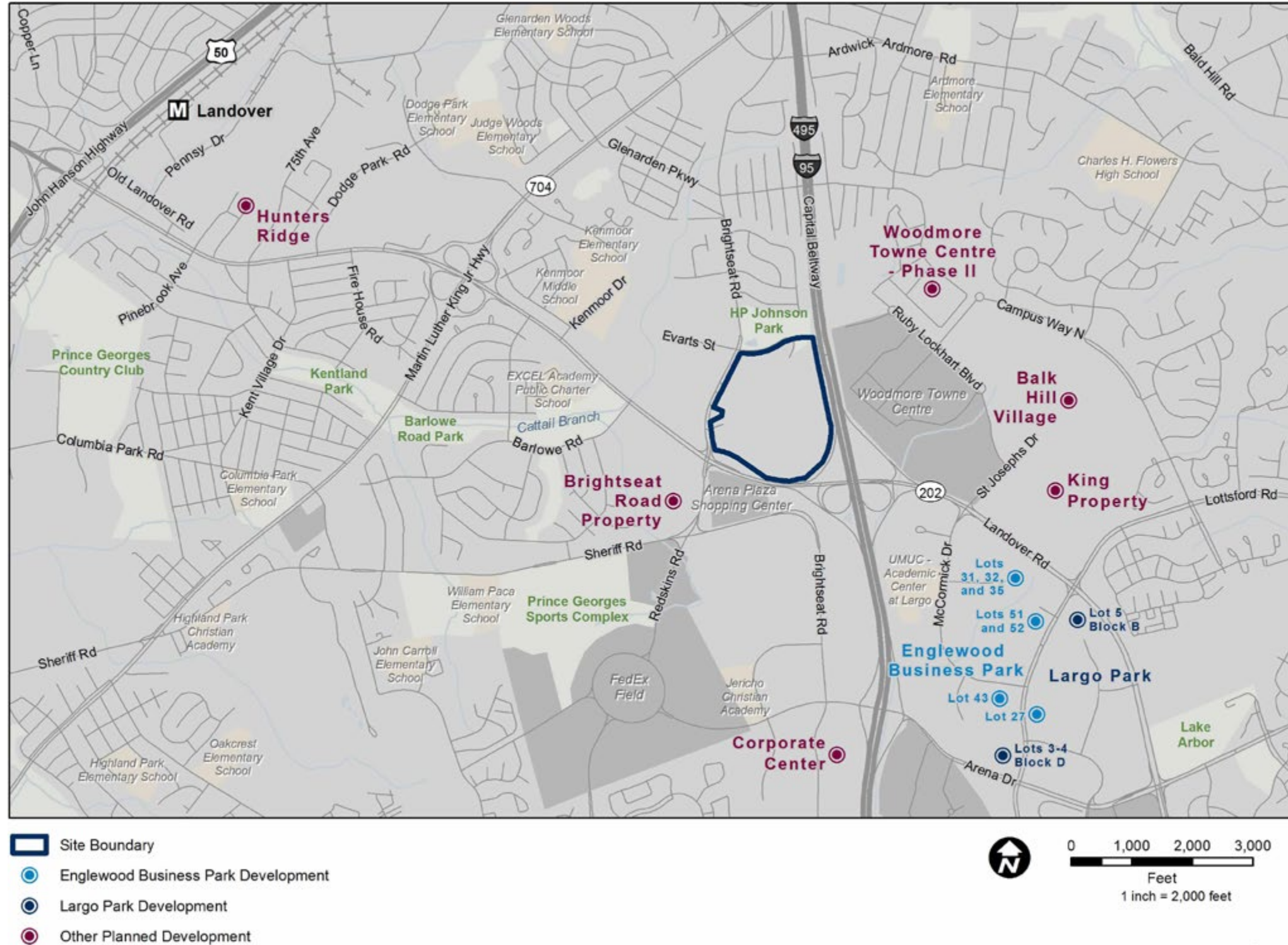
Planned Roadway Improvements

According to the Landover Site Transportation Agreement (Appendix A), there are no planned roadway improvements; however, a new signalized intersection under construction was identified through field visits. The intersection is located along Brightseat Road between Landover Road and Sheriff Road and is assumed to serve the new planned residential development called Brightseat Road Property on the western side of Brightseat Road. The traffic signal for this intersection was added to the modeled network to provide the most accurate simulation possible, but the operations are not reported in this report.

Table 6-12: Landover Planned Developments

Name	Type of Construction/Size	Location/Primary Access
Woodmore Towne Centre	975,000 SF of office, 50,000 SF of retail, 1,423 residential units, and a 360-room hotel	Due east of the Landover site but separated by the Capital Beltway near the northeast corner of the I-495 and Landover Road interchange accessed by St. Joseph's Drive from Landover Road.
Largo Park (Lots 3 and 4 Block D)	80,000 SF of office, 9,000 SF of retail, 318 residential units, and 10,000 SF of restaurant space	Northwest corner of the Arena Drive and Lottsford Road intersection. It is assumed that the property would be accessible from both roadways.
King Property	202,000 SF of office, 202,000 SF of retail, and 210 apartment units	Between Lottsford Road and St. Joseph's Drive east of Landover Road and would be accessible through Ruby Lockheart Boulevard from either Lottsford Road or St. Joseph's Drive
Balk Hill Village	238 residential units	between the proposed King Property development and Campus Way east of the existing Woodmore Towne Centre accessible from St. Joseph's Drive or from Campus Way North.
Hunters Ridge	323 residential units	Near the northwest corner of Landover Road and 75th Avenue intersection accessible through 75th Avenue.
Largo Park (Lot 5 Block B)	144,000 SF of office	Near the southwest corner of the Lottsford Road and Landover Road intersection. It is assumed the property would be accessible from Lottsford Road across from Lottsford Court.
Englewood Business Park (Lot 43)	60,100 SF of flex office (half office and half warehouse)	Southwest corner of the Lottsford Road and McCormick Drive intersection. It is assumed the property would be accessible from both roadways.
Englewood Business Park (Lot 27)	60,100 SF of flex office (half office and half warehouse)	Near the northeast corner of the Lottsford Road and Apollo Drove intersection, north of Arena Drive. It is assumed the property would be accessible from Lottsford Road.
Englewood Business Park (Lots 51 and 52)	7,000 SF of retail	Near the southwest corner of the Lottsford Road and Lottsford Court intersection. It is assumed the property would be accessible from Lottsford Road.
Englewood Business Park (Lots 31, 32, and 35)	144,800 SF of office	Along Peppercorn Place south of Landover Road and west of McCormick Drive. It is assumed the property would be accessible from Peppercorn Place.
Corporate Center (Lot 4)	123,000 SF of light industrial space	Brightseat Road south of Arena Drive.
Brightseat Road Property	380 residential units	Northwest corner of Brightseat Road and Sheriff Road. The proposed property would be accessible from Brightseat Road and Barlowe Road.

Figure 6-30: Landover No-build Condition Planned Development Locations



Sources: ESRI (2013), GSA (2013), Prince George's County (2013), M-NCPFC (2014)

No-build Condition Pedestrian Network

According to the Maryland Department of Transportation (MDOT)/ SHA 2015-2020 Transportation Improvement Program (MDOT with Maryland SHA 2014), several regional and Prince George's County funding categories include funds for sidewalk, signing, lighting, pedestrian crossing, safety improvements, ADA improvements or retrofits, and/or traffic management improvements to benefit pedestrians. Specific details are not available about what projects would receive these funds. Some improvements could also be made to the existing pedestrian network with the addition of proposed development projects in proximity to the alternative site, such as the Brightseat Road Property project, located at the northwest corner of Brightseat and Sheriff Roads.

Overall under the No-build Condition, impacts to pedestrians near the Landover site would have no measurable direct impacts because the majority of planned projects and associated trips from No-build Condition projects would be east of the Capital Beltway. The small increase in vehicular traffic in the study area would not affect pedestrians crossing at the intersections closest to the Landover site and would not affect pedestrians' access to the surrounding street network, due to pedestrian crossings and sidewalks still providing connections. Additionally, pedestrian conditions near the Landover site would remain primarily the same with the existing crossings and sidewalks providing connections.

No-build Condition Bicycle Network

The Prince George's County Bikeway Master Plan recommends several new bicycle lanes and multi-use paths (or sidepaths) within the Landover study area, including three roads with bicycle lanes, one road with a multi-use path, and a multi-use path along the Cattail Branch River (see table 6-13 and figure 6-31) (Prince George's County 2009). Because there is no dated implementation associated with this plan, it is unclear if any recommendations would be completed by 2022.

Therefore, the No-build Condition would have no measurable direct impacts to bicycle conditions in the study area unless planned bicycle improvements are implemented. If any of the bicycle facilities listed were implemented by 2022, they could have a direct, long-term, beneficial impact to the bicycle network.

LANDOVER PEDESTRIAN NETWORK ENVIRONMENTAL CONSEQUENCES SUMMARY

No-build Condition: No measurable impacts.

LANDOVER BICYCLE ENVIRONMENTAL CONSEQUENCES SUMMARY

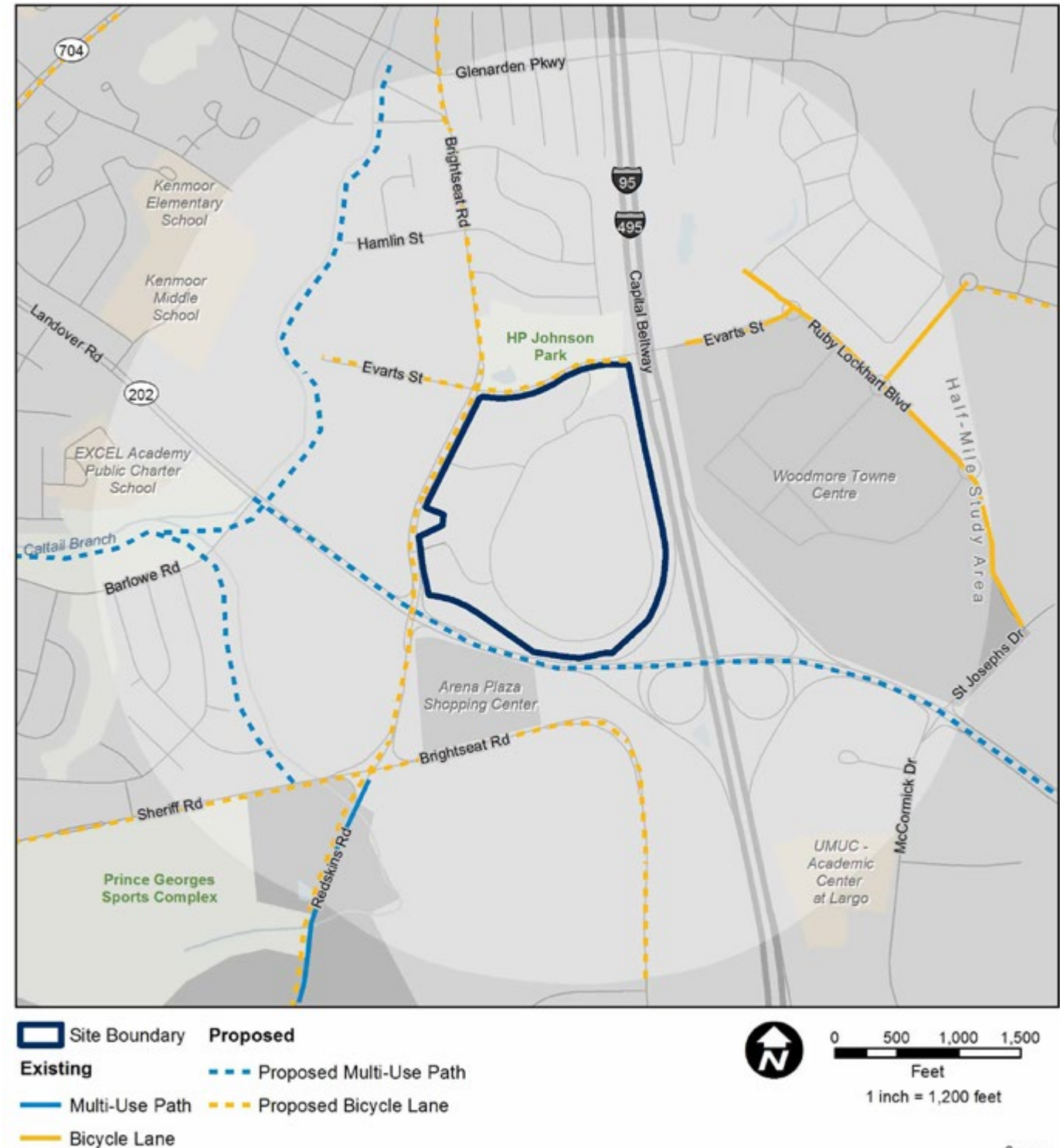
No-build Condition: No measurable impacts.

Table 6-13: Proposed Bicycle Facilities in the Landover Study Area

Roadway	From/To	Type	Future Status	Notes
Landover Road (MD 202)	Barlowe Road to Central Avenue (MD 332)	Multi-Use Path	Proposed	Portions adjacent to Landover site
Cattail Branch River	Martin Luther King Jr. Avenue (MD 704) to Glenarden Parkway; Sheriff Road to Barlowe Road	Multi-Use Path	Proposed	
Brightseat Road	Landover Road to Ardwick-Ardmore Road	Bicycle Lane	Proposed	Portions adjacent to Landover site
Redskins Road	Landover Road to Central Avenue (MD 332)	Bicycle Lane	Proposed	
Evarts Street/ Campus Way	Cattail Branch River to Campus Way North east of I-95/ I-495 ^a (extending to Harry Truman Drive)	Bicycle Lane	Proposed	Portions adjacent to Landover site

^aSmall segment currently exists between Capital Beltway and Ruby Lockhart Boulevard.
Source: Prince George's County 2009

Figure 6-31: Proposed Landover Area Bicycle Facilities



Sources: ESRI (2013), GSA (2013), Prince George's County (2013), Google Maps (2015), Louis Berger (2014), M-NCPPC (2014)

No-build Condition Public Transit

The following sections describe the No-build Condition for the Metrorail and bus modes within the Landover study area.

Projected Transit Growth

Growth in the transit mode was calculated for the year 2022 using regional transit growth rates and projected ridership associated with large planned projects in proximity to the site. Refer to section 3.10.4.3 for more detailed information about the Metrorail and bus growth calculations.

One proposed development, Largo Park, is the only planned development that has projected transit trips located in proximity to the Largo Town Center Metro Station. Transit trips associated with this project were calculated based on Institute of Transportation Engineers (ITE) trip generation rates and the transit mode split determined in the traffic analysis section of this document (section 6.2.8.2) and the Landover Site Transportation Agreement (Appendix A). Prince George’s County offers up to a 20 percent peak hour transit credit for development projects located near transit. The Largo Park mode split assigned 10 percent of AM peak hour and PM peak hour trips to transit, given its distance (1/3 mile) to Largo Town Center Metro Station. The transit mode split was further disaggregated (divided) into bus trips and Metrorail trips using bus and subway proportions from the 2009-2013 American Community Survey means of transportation data for the census tract containing the study area (U.S. Census Bureau 2009-2013).

Metrorail trips associated with Largo Park were added to projected growth at Largo Town Center Metro Station; however, bus trips were not added to ridership on routes serving the Landover study area because none of these routes serve Largo Park or the Largo Town Center Metro Station.

Metrorail Analysis

The Metrorail analysis was conducted using projected ridership growth in the system at the Largo Town Center Metro Station and ridership created by the one planned development project in the study area that would have transit trips.

Ridership Growth from Planned Projects

As previously mentioned, additional transit trips associated with the Largo Park development project were added to future projected ridership at Largo Town Center Metro Station. The peak hour non-Single Occupant Vehicle (SOV) trips associated with the development (see section 4.4.1, Projected Transit Growth, Landover TIA [Appendix D]) were disaggregated into peak hour Metrorail trips using subway proportions from the 2009-2013 American Community Survey (U.S. Census Bureau 2009-2013) transportation data for the census tract containing the development. The American Community Survey is an on-going annual sampling of demographic data across the United States conducted by the U.S. Census Bureau. The peak hour Metrorail passenger trips were then disaggregated into peak AM and PM 15-minute totals using the current AM and PM peak hour factors (PHF) at the station (WMATA 2014k).

A PHF is the proportion of peak hour ridership that occurs during the peak 15-minute period in that hour. The additional Metrorail trips associated with the Largo Park development project are summarized in table 6-14. The station platform capacity analysis and the fare vending analysis uses AM peak 15-minute ridership, and the station vertical element and faregate capacity analysis, the passenger load analysis, and the emergency evacuation (NFPA 130) analysis use the PM peak 15-minute ridership.

Regional Transit Growth Rate

Background ridership growth at the station for 2022 was calculated based on the 2.1 percent Metrorail growth rate from the MWCOC travel demand model. Table 6-15 summarizes projected 2022 weekday entries at Largo Town Center Metro Station, including background growth and growth from planned projects. Average weekday exits are assumed to be the same or comparable to average weekday entries.

Metrorail Passenger Loads

Refer to section 3.10.4.3 for a detailed explanation of how Metrorail passenger loads were calculated. At Largo Town Center Metro Station, PM peak period exits were the highest of AM peak entries, AM peak exits, PM peak entries, and PM peak exits, and therefore were used to calculate maximum passenger loads.

Table 6-14: Projected Trips Associated with Largo Park Project

Period	Largo Park Total Non-SOV Trips Per Hour			Metrorail Proportion of Non-SOV	Metrorail Passenger Trips Per Hour			Peak Hour Factor	Metrorail Passenger Trips Per 15-Minutes		
	IN	OUT	TOTAL		Exits	Entries	Total		Exits	Entries	Total
AM Peak	19	15	34	63.9%	12	10	22	27.1%	3	3	6
PM Peak	19	20	39	63.9%	12	13	25	29.9%	4	4	8

Source: WMATA (2014b); Masog (2014)

Projected passenger loads by 2022 at the station are below 120 passengers per car, or what WMATA considers to be capacity. Table 6-16 summarizes passenger loads per car in 2022 under the No-build Condition using PM peak 15-minute exits.

Metrorail Station Capacity Analysis

Refer to section 3.10.4.3 for a detailed description of how station capacity was analyzed. Table 6-17 summarizes ridership growth during the peak exiting periods at Largo Town Center Metro Station.

Table 6-18 summarizes ridership growth during the peak entering period at Largo Town Center Metro Station.

Overall, vertical elements, faregate aisles, and fare vending machines at the station are projected to operate within capacity, or below a v/c of 0.7, which is considered capacity. Additionally, platform peak pedestrian LOS (based on the available spacing between passengers) on the busiest platform sections is projected to be at the acceptable LOS B. Further details on the station capacity analysis and emergency evacuation analysis are found in the Landover TIA (Appendix D).

Table 6-15: Weekday 2022 Projected Metrorail Ridership at Largo Town Center Metro Station

Metro Station	Average Weekday Entries			
	2014	2022 with Background Growth	2022 Development Projects	2022 Total No-build
Largo Town Center	4,740	5,585	22	5,607

Source: Masog (2014), M-NCPPC (2014a); WMATA (2014k); MWCOG (2015)

Table 6-17: Weekday Peak 15-Minute Exiting Period Ridership Growth

Metro Station	Time	2014		2022 No-build	
		Entries	Exits	Entries	Exits
Largo Town Center	5:00 PM – 5:15 PM	37	356	48	423

Source: WMATA (2014k); MWCOG (2015)

Table 6-18: Weekday Peak 15-Minute Entering Period Ridership Growth

Metro Station	Time	2014		2022 No-build	
		Entries	Exits	Entries	Exits
Largo Town Center	7:30 AM - 7:45 AM	327	37	388	46

Source: WMATA (2014k); MWCOG (2015)

Table 6-16: Projected Maximum Metrorail Passenger Loads at Largo Town Center Metro Station

Measure (PM Peak 15-Minute Exits)	Unit
2014 Maximum 15-minute Passengers	356
2022 Passengers with Background Growth	419
2022 Passengers with Development Projects	4
2022 Total No-build Passengers	423
2022 Minimum Trains ^a	3
2022 Train Cars ^b	20
2022 No-build Maximum Passengers Per Car	21

^a A 4-minute headway equates to 3.75 trains every 15 minutes. This figure was rounded down to 3 minutes in order to provide the most conservative load estimate.

^b Assuming one eight-car train (Blue line) and two six-car trains (Silver line) at Largo Town Center. Source: Masog (2014), M-NCPPC (2014a), WMATA (2014k); MWCOG (2015)

LANDOVER PUBLIC TRANSIT ENVIRONMENTAL CONSEQUENCES SUMMARY

No-build Condition: Direct, long-term, adverse impacts to public transit capacity, and direct, long-term, major adverse impacts to bus operations.

Bus Analysis

For this analysis, it was assumed that there would be no major changes in bus service in the study area by 2022. The overall analysis was limited to Metrobus service because no ridership data were available for TheBus. It can be assumed, however, that TheBus would see some minimal increases in ridership on routes that serve the site.

To calculate peak hour bus volumes within the study area, the 2014 maximum weekday passenger loads for each route and direction at stops within the study area were averaged by stop, and then this figure was multiplied by the number of peak bus trips per hour to calculate ridership per peak hour by route and direction. These totals were then grown to the year 2022 using the 1.9 percent annual regional growth rate for the bus mode referred to in section 3.10.4.3. The 2022 totals were then summed to calculate a total ridership per peak hour for the study area. As noted previously, bus trips for the Largo Park development project were not added to ridership on routes serving the Landover study area because none of these routes serve Largo Park or the Largo Town Center Metro Station.

To calculate the peak hour capacity of bus services within the study area, the capacity per trip of each bus route during the peak hour was multiplied by the number of trips scheduled in the peak hour. Capacities per trip for each Metrobus route were based on the typical number of seats available on each trip and the WMATA load standard (WMATA 2013).

Total 2014 peak hour bus ridership (Existing Condition) and projected 2022 peak hour bus ridership (No-build Condition) are summarized in table 6-19. Both 2014 and No-build 2022 bus ridership are below the overall calculated capacity of bus services in the study area, meaning the additional passenger trips projected can be adequately handled by current service levels. At the individual route level, however, Route F14 in the northbound direction is projected to be slightly over capacity by 2022 within the study area. Further details on the bus capacity analysis are found in Appendix D.

The Landover TIA (Appendix D) contains the Largo Town Center Metro Station bus bay analysis and further details on the bus capacity analysis.

Summary of Transit Analysis

The increase in public transit trips in the No-build Condition would have the following impacts to transit:

- Metrobus Route F14 would have capacity issues that are not present in the Existing Condition. The overall capacity of bus services in the study area, however, would accommodate the projected ridership.
- Metrorail passenger loads through the study area are projected to remain at acceptable levels.
- Metrorail vertical elements are projected to continue to operate below capacity.
- Metrorail faregate aisles and fare vending machines would continue to operate below capacity.
- Metrorail platform peak pedestrian LOS (based on the available spacing between passengers) on the busiest platform sections are projected to continue to be at the acceptable LOS B.
- Platform and station evacuation times would remain the same as existing conditions, continuing to meet NFPA 130 standards. WMATA Metrorail stations, however, are not required to meet NFPA 130 standards.

Therefore, the No-build Condition would have a direct, long-term, adverse impacts to public transit capacity. In addition, public transit bus operations (more than three buses) would have direct, long-term, major adverse impacts caused by the potential traffic delays forecasted along Landover Road (see Appendix D, section 4.8, Traffic Analysis).

Table 6-19: Current and Projected Bus Ridership in the Landover Study Area

Measure	2014		2022 Background Growth		2022 Planned Development Projects		2022 Total No-build	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Total Volume	210	226	243	262	0	0	243	262
Total Capacity	411	418	411	418	-	-	411	418
Volume to Capacity Ratio (V/C)	0.51	0.54	0.59	0.63	-	-	0.59	0.63

Note: Bus trips associated with the Largo Park development were not added because the site is outside of the study area. Sources: Masog (2014); WMATA (2014k); MWCOG (2015)

No-build Condition Parking

The No-build Condition and improvement projects would not increase public surface parking in the area around the site, nor would the condition decrease existing on-street parking, which is primarily limited to residential neighborhood streets. The private parking lot on the west side of Brightseat Road between Landover Road and Sheriff Road, which is sometimes used for game-day parking, would be developed into residential properties with parking intended for the residents and their guests (Brightseat Road Property).

With no other changes in land use or development within the parking 0.5-mile study area anticipated by 2022 except for this Brightseat Road Property project, there would not be a substantial increase in parking demand that would impact the area’s parking facilities. Overall, the No-build Condition would have no measurable direct, long-term impacts to parking in the study area.

No-build Condition Truck Access

Truck access routes would not change under the No-build Condition. Therefore, there would be no measurable direct, long-term impacts to truck access under the No-build Condition.

No-build Condition Traffic Analysis

According to the Landover Site Transportation Agreement, two primary sources were relied on to develop the future No-build traffic volumes, an approved list of planned developments provided by M-NCPPC and background growth rates agreed between all parties (M-NCPPC, Maryland SHA, and EIS project team). The Landover Site Transportation Agreement can be referenced in Appendix A.

The following section describes the process for analyzing traffic for the No-build Condition and the results of the analysis.


Background Growth

Refer to section 3.10.4.3 for a detailed description of background growth and how it was calculated. Based on the agreed Landover Site Transportation Agreement, a 0.5 percent per year growth rate was applied for I-95 through trips, a 0.33 percent per year growth rate was applied for Landover Road and Brightseat Road, and a 1.0 percent per year growth rate was applied for Arena Drive (Appendix D). Since the traffic counts were obtained between November 2014 and February 2015, the background growth was forecasted out eight years (future horizon year is 2022) by using the compound formula. Table 6-20 summarizes the background growth rates applied to the study area network.

Table 6-20: Landover Background Roadway Growth Rates

Roadway	Annual Growth Rate	Eight-Year Growth
I-95/I-495	0.5%	4.07%
Landover Road/ Brightseat Road	0.33%	2.67%
Arena Drive	1.0%	8.29%

**LANDOVER PARKING
ENVIRONMENTAL CONSEQUENCES
SUMMARY**

 **No-build Condition:** No measurable impacts.

**LANDOVER TRUCK ACCESS
ENVIRONMENTAL CONSEQUENCES
SUMMARY**


 **No-build Condition:** No measurable impacts.

Table 6-21: Landover No-build Condition Planned Development Trips

PROJECT	AM Peak Hour Trips			PM Peak Hour Trips		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Woodmore Towne Centre						
TOTAL VEHICLE TRIPS	1,276	672	1,948	837	1,352	2,189
Largo Park (Lots 3 and 4 Block D)						
TOTAL VEHICLE TRIPS	163	134	297	168	182	350
King Property						
TOTAL VEHICLE TRIPS	383	88	471	309	503	812
Balk Hill Village						
TOTAL VEHICLE TRIPS	34	140	174	134	72	206
Hunters Ridge						
TOTAL VEHICLE TRIPS	44	175	219	163	88	251
Largo Park (Lot 5 Block B)						
TOTAL VEHICLE TRIPS	231	25	256	45	195	240
Englewood Business Park (Lot 43)						
TOTAL VEHICLE TRIPS	65	8	73	13	56	69
Englewood Business Park (Lot 27)						
TOTAL VEHICLE TRIPS	65	8	73	13	56	69
Englewood Business Park (Lots 51 and 52)						
TOTAL VEHICLE TRIPS	8	5	13	20	21	41
Englewood Business Park (Lots 31, 32, and 35)						
TOTAL VEHICLE TRIPS	231	26	257	46	195	241
Corporate Center (Lot 4)						
TOTAL VEHICLE TRIPS	85	21	106	21	85	106
Brightseat Road Property						
TOTAL VEHICLE TRIPS	38	160	198	148	80	228

Trip Generation and Modal Split

The process to add each development for the No-build Condition followed the M-NCPPC/Prince George's County guidelines by using the County's prescribed trip generation formulas (M-NCPPC 2012). Depending on the type of development and size, the trip generation either relied on the Prince George's County trip rates or ITE trip rates. Prince George's County supplies trip rates for a number of typical land uses such as office and residential. The Landover TIA (Appendix D) contains the trip generation rates used to cover the planned developments.

Table 6-21 presents the planned development trip generation summary.

Trip Distribution

Once the number of trips was forecasted through trip generation the destinations covering the trips were assigned. This process followed two sources, a previous study covering the Woodmore Towne Centre and the MWCOG travel demand model trip tables from the Version 2.3.52 Travel Demand Model for 2020 (M-NCPPC 2012; MWCOG 2014c). The Woodmore Towne Centre transportation study provided distributions for office, retail, hotel, and residential uses. Because this development is one of the planned developments included in this study and is in proximity to the other planned developments east of I-95, the distributions were relied on to distribute the trips for all the planned developments east of I-95 and along Arena Drive. Table 6-22 contains the trip distributions by land use prepared through the Woodmore Towne Centre transportation study.

The two remaining planned developments located west of Brightseat Road relied on the MWCOG travel demand model trip tables (MWCOG 2014c). Table 6-23 contains the MWCOG travel demand model-based residential trip distribution.

Appendix A contains the maps for the Woodmore Towne Centre-based and MWCOG model distributions.

Complete No-build Condition

The planned developments, background growth, and planned roadway improvements were summed together to create the total background trip change between the Existing Condition and the No-build Condition. The Landover TIA (Appendix D) contains these combined total background trip AM and PM turning movement volumes, while Appendix A contains the individual planned developments and background growth turning movement volumes. The complete No-build Condition peak turning movement vehicle volumes covering all study area intersections and expressway facilities are shown in figure 6-32. Section 3.10.4.3 contains a description of the PHF and how it was used to provide a conservative traffic operations analysis.

Table 6-22: Trip Distributions by Land Use from Woodmore Towne Centre Transportation Study

Destination	Road	Distribution
East MD (Local)	Landover Road	15.0%
Northeast MD (Local)	Lottsford Road	15.0%
Northeast MD (Local)	Campus Ways North	5.0%
Local points northeast of Woodmore Towne Centre	Varies	5.0%
North MD	I-95 / I-495	15.0%
West MD and Washington, D.C.	Landover Road	10.0%
Southeast (Local)	Lottsford Road	5.0%
Southeast (Local)	McCormick Drive	10.0%
South MD	I-95 / I-495	20.0%
TOTAL		100.0%

Retail Distribution

Destination	Road	Distribution
Northeast MD (Local)	Lottsford Road	20.0%
Northeast MD (Local)	Campus Ways North	10.0%
Local points northeast of Woodmore Towne Centre	Varies	10.0%
North MD	I-95 / I-495	15.0%
Northwest MD (Local)	Glenarden Parkway	3.0%
West MD and Washington, D.C.	Landover Road	17.0%
Southeast (Local)	Lottsford Road	15.0%
South MD	I-95 / I-495	10.0%
TOTAL		100.0%

Table 6-23: Landover Residential Trip Distributions from MWCOG Travel Model

Destination	Road	Distribution
West MD and Washington, D.C.	Landover Road	35.0%
East MD (Local)	Landover Road / Lottsford Road	2.0%
East MD (Local)	Landover Road	5.0%
Northeast MD (Local)	Brightseat Road	19.0%
South MD (Local)	Brightseat Road	3.0%
North MD	I-95 / I-495	17.0%
North MD	U.S. Route 50	3.0%
Site	N/A	1.0%
South MD and Virginia West	I-95 / I-495	15.0%
TOTAL		100.0%

Source: MWCOG (2014)

Residential Distribution

Destination	Road	Distribution
Northeast MD (Local)	Lottsford Road	5.0%
Northeast MD (Local)	Campus Ways North	5.0%
North MD	I-95 / I-495	25.0%
Northwest MD (Local)	Glenarden Parkway	5.0%
West MD and Washington, D.C.	Landover Road	10.0%
Southeast (Local)	McCormick Drive	20.0%
South MD	I-95 / I-495	30.0%
TOTAL		100.0%

Source: M-NCPPC (2012); Prince George's County PD 2012

Hotel Distribution

Destination	Road	Distribution
East MD (Local)	Landover Road	10.0%
North MD	I-95 / I-495	40.0%
West MD and Washington, D.C.	Landover Road	10.0%
South MD	I-95 / I-495	40.0%
TOTAL		100.0%

Figure 6-32: Landover No-build Condition AM and PM Weekday Turning Movement Volumes

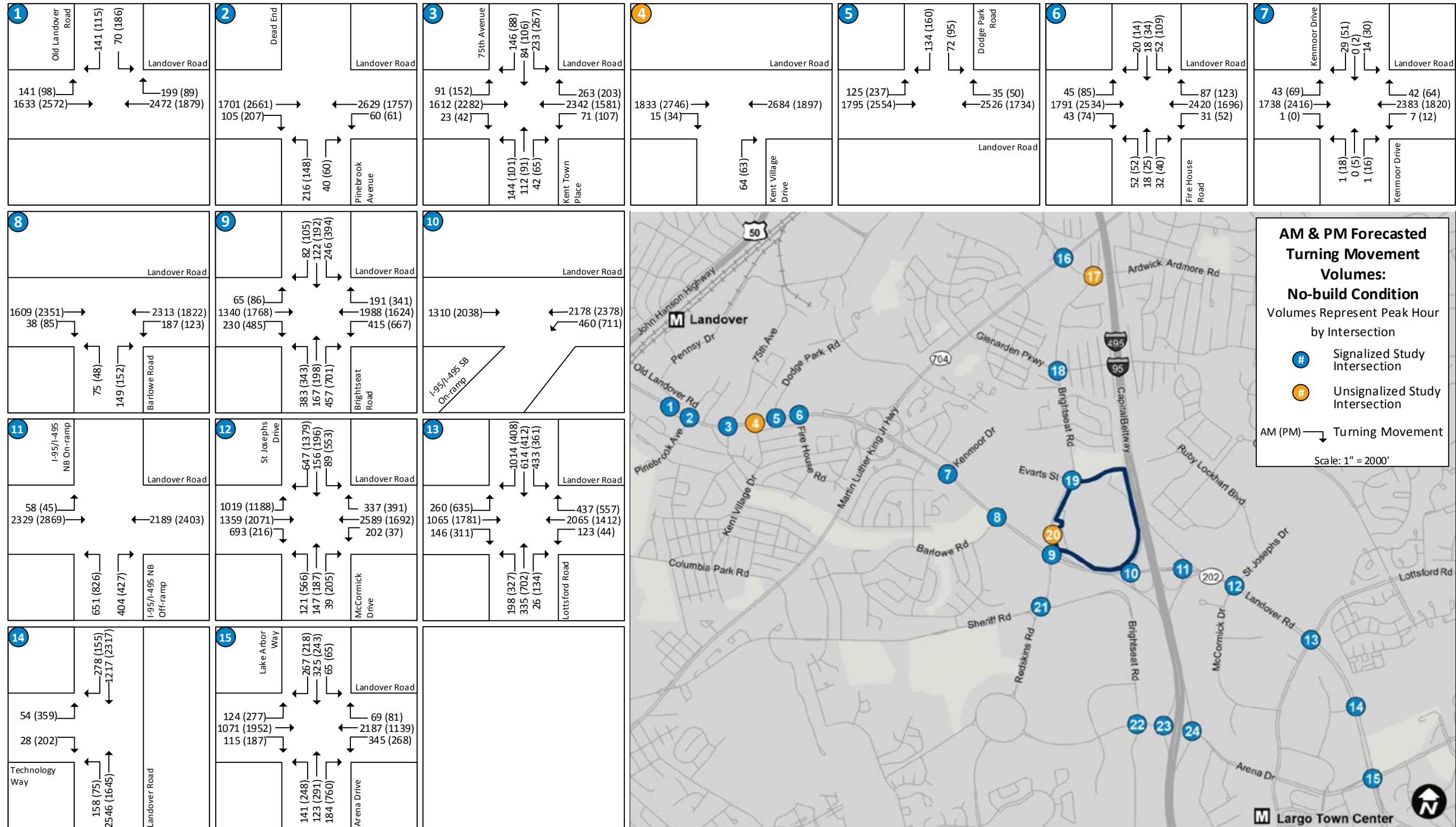


Figure 6-32: Landover No-build Condition AM and PM Weekday Turning Movement Volumes (continued)

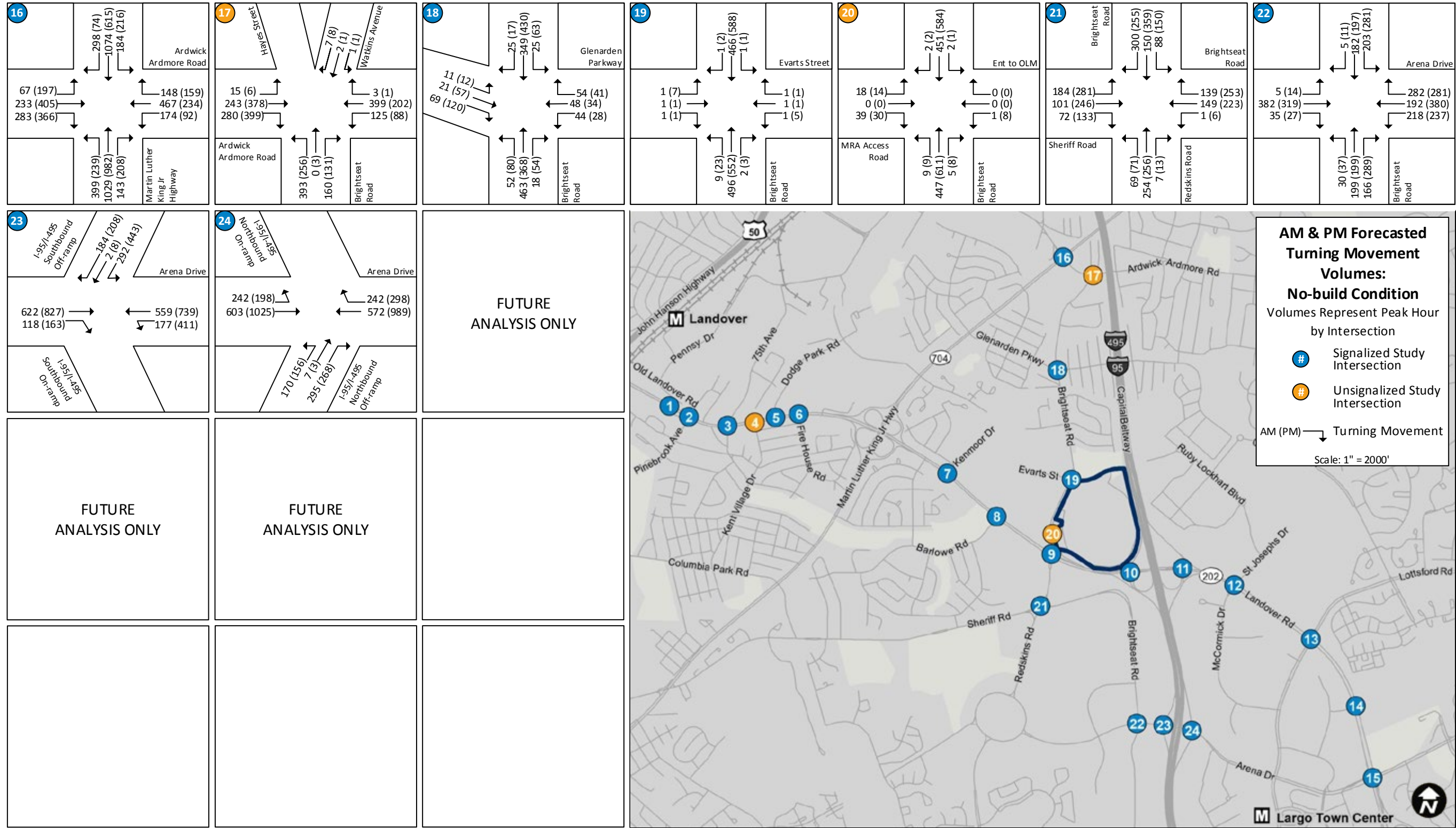
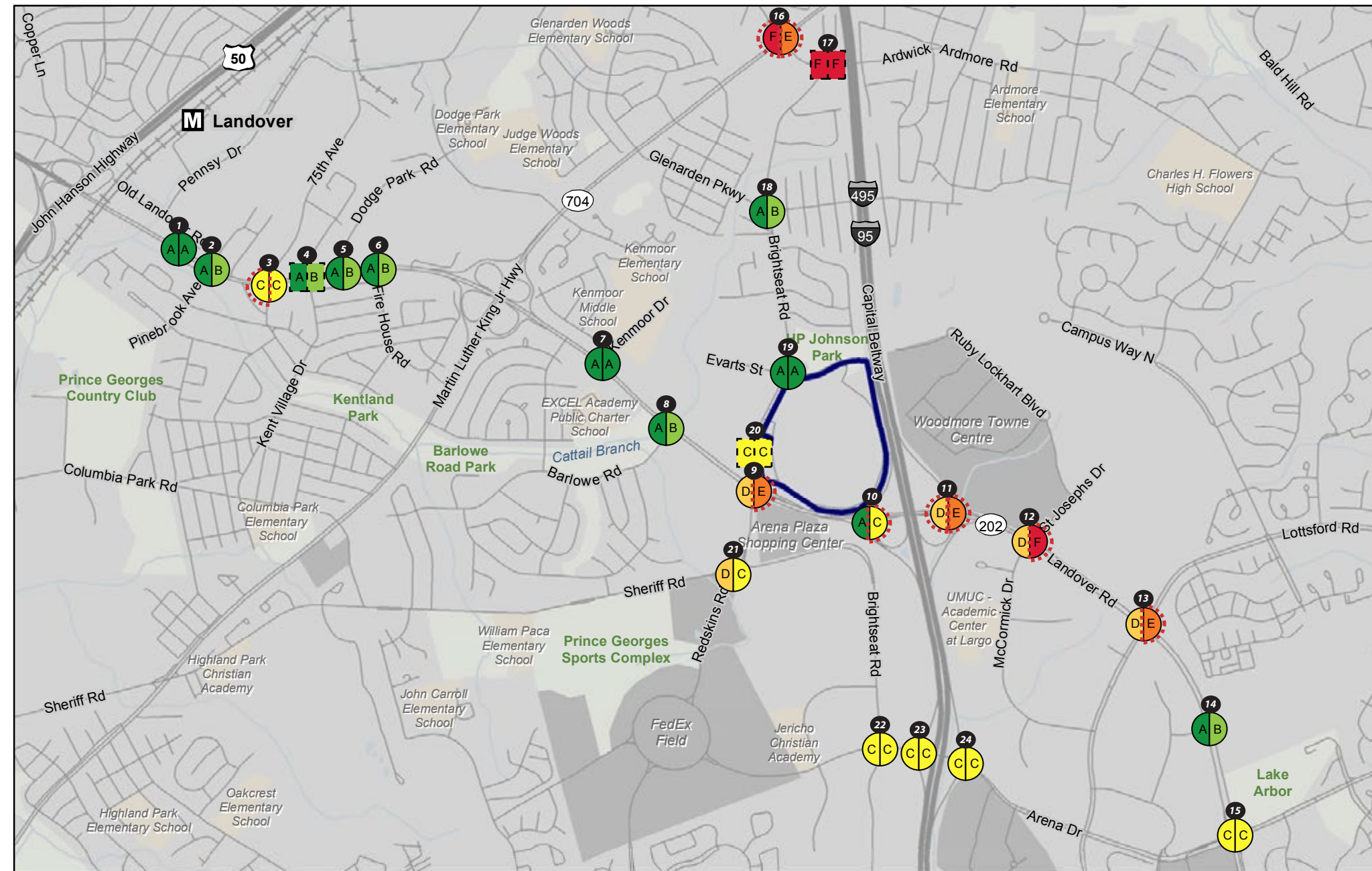


Figure 6-33: Landover No-build Condition Intersection LOS for AM and PM Peak Hours



No-build Condition Operations Analysis

Based on the Synchro™ and CLV-based Excel worksheet analysis, many of the signalized study area intersections operate at acceptable overall conditions during the morning and afternoon peak hours. However, the following intersections in the study area operate with overall unacceptable conditions:

- Landover Road and Kent Town Place/75th Avenue (Intersection #3) during the AM peak hour
- Landover Road and Brightseat Road (Intersection #9) during the PM peak hour
- Landover Road and the I-95/I-495 Southbound On-ramp (Intersection #10) during the PM peak hour
- Landover Road and the I-95/I-495 Northbound Off-ramp (Intersection #11) during the PM peak hour
- Landover Road and St. Joseph's Drive/McCormick Drive (Intersection #12) during the PM peak hour
- Landover Road and Lottsford Road (Intersection #13) during the PM peak hour
- Martin Luther King Jr. Highway and Ardwick-Ardmore Road (Intersection #16) during the AM and PM peak hours

A total of 18 signalized intersections and 1 unsignalized intersection would experience an unacceptable conditions for one or more turning movements. Compared to the Existing Condition, the No-build Condition would have two more intersections failing during the AM peak hour and there would be three more intersections failing during the PM peak hour. The Landover TIA (Appendix D) contains a more detailed No-build Condition traffic operations analysis.

The overall intersection LOS grades for the No-build Condition are depicted in figure 6-33 for the AM and PM peak hours. Table 6-24 shows the results of the LOS capacity analysis and the intersection projected delay under the No-build Condition during the AM and PM peak hours.

Table 6-24: Landover No-build Condition Intersection AM and PM Peak Hour Operations Analysis

#	Intersection	AM Peak Hour					PM Peak Hour				
		HCM 2000		CLV		Check	HCM 2000		CLV		Check
		Delay (sec/veh)	LOS	Critical Lane Volume	LOS		Delay (sec/veh)	LOS	Critical Lane Volume	LOS	
1	Landover Road & Old Landover Road (Signalized)	8.3	A	1,438	D	Pass	9.4	A	1,179	C	Pass
2	Landover Road & Pinebrook Avenue (Signalized)	9.5	A	1,189	C	Pass	10.8	B	1,401	D	Pass
3	Landover Road & Kent Town Place/75th Avenue (Signalized)	25.3	C	1,608	F	Fail	28.0	C	1,416	D	Pass
4	Landover Road & Kent Village Drive (TWSC)	0.1	-	N/A	N/A	Pass	0.2	-	N/A	N/A	Pass
5	Landover Road & Dodge Park Road (Signalized)	6.9	A	1,167	C	Pass	11.2	B	1,040	B	Pass
6	Landover Road & Fire House Road (Signalized)	8.2	A	1,186	C	Pass	15.3	B	1,295	C	Pass
7	Landover Road & Kenmoor Drive (Signalized)	8.5	A	956	A	Pass	5.1	A	977	A	Pass
8	Landover Road & Barlowe Road (Signalized)	7.1	A	931	A	Pass	10.1	B	1,072	B	Pass
9	Landover Road & Brightseat Road (Signalized)	38.2	D	1,220	C	Pass	55.1	E	1,686.0	F	Fail
10	Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)	6.5	A	1,181	C	Pass	27.7	C	1,832	F	Fail
11	Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)	45.6	D	1,666	F	Fail	72.4	E	1,863	F	Fail
12	Landover Road & St. Joseph's Drive/McCormick Drive (Signalized)	52.3	D	1,546	E	Pass	89.9	F	1,921	F	Fail
13	Landover Road & Lottsford Road (Signalized)	42.2	D	1,507	E	Pass	63.5	E	1,531	E	Fail

#	Intersection	AM Peak Hour					PM Peak Hour				
		HCM 2000		CLV		Check	HCM 2000		CLV		Check
		Delay (sec/veh)	LOS	Critical Lane Volume	LOS		Delay (sec/veh)	LOS	Critical Lane Volume	LOS	
14	Landover Road & Technology Way (Signalized)	2.8	A	1,154	C	Pass	17.0	B	1,291	C	Pass
15	Landover Road & Arena Drive/Lake Arbor Way (Signalized)	34.2	C	1,161	C	Pass	33.3	C	1,166	C	Pass
16	Martin Luther King Jr Highway & Ardwick-Ardmore Road (Signalized)	95.8	F	1,906.0	F	Fail	68.9	E	1,541	E	Fail
17	Brightseat Road & Ardwick-Ardmore Road (TWSC)	176.1	-	N/A	N/A	Fail	32.9	-	N/A	N/A	Pass
18	Brightseat Road & Glenarden Parkway (Signalized)	10.0	A	563	A	Pass	10.3	B	597	A	Pass
19	Brightseat Road & Evarts Street (Signalized)	1.7	A	281	A	Pass	2.1	A	322	A	Pass
20	Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd) (TWSC)	0.8	-	N/A	N/A	Pass	0.7	-	N/A	N/A	Pass
21	Brightseat Road/Redskins Road & Sheriff Road/Brightseat Road (Signalized)	36.4	D	413	A	Pass	33.0	C	596	A	Pass
22	Brightseat Road & Arena Drive (Signalized)	21.3	C	1,272	C	Pass	24.2	C	1,589	E	Pass
23	Arena Drive & I-95/I-495 Southbound Ramps (Signalized)	22.7	C	880	A	Pass	29.8	C	1,344	D	Pass
24	Arena Drive & I-95/I-495 Northbound Ramps (Signalized)	23.9	C	1,203	C	Pass	28.8	C	1,405	D	Pass

Notes:

LOS = Level of Service

TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is Measured in Seconds Per Vehicle.

Red cells denote intersections operating at unacceptable conditions.

LANDOVER TRAFFIC ENVIRONMENTAL CONSEQUENCES SUMMARY



No-build Condition: Direct, long-term, major adverse impacts to corridor-level traffic, and direct, long-term, adverse impacts to isolated intersections.

No-build Condition Queuing Analysis

Based on the Synchro™ and SimTraffic™ analysis, 14 signalized intersections and one unsignalized intersection would experience queuing lengths that would exceed the available storage capacity. The remaining intersections in the study area would provide sufficient storage for the anticipated demand. Compared to the Existing Condition, the No-build Condition would have no change in the number of intersections with failing queues during the AM peak hour and would have three more intersections with failing queues during the PM peak hour. The Landover TIA (Appendix D) contains a more detailed No-build Condition traffic queuing analysis.

Summary of Traffic Analysis: No-build Condition

Overall, the AM peak hour would experience corridor-based delays along Landover Road (MD 202) in the westbound direction beginning at McCormick Road/St. Joseph's Drive and extending past Lottsford Road approaching Arena Drive/Lake Arbor Road. A similar condition would occur during the PM peak hour beginning at I-95/I-495 southbound on-ramp and extending past Barlowe Road. Together these conditions would result in direct, long-term, major adverse corridor-level impacts. In addition, there would be isolated intersection impacts during the AM peak hour at the Martin Luther King Jr. Highway and Ardwick-Ardmore Road intersection and at the Brightseat Road and Ardwick-Ardmore Road intersection resulting in direct, long-term, adverse impacts.

6.2.9.2 Build Condition (FBI HQ Consolidation)

This section introduces the Landover Build Condition and summarizes the potential impact to the pedestrian network, bicycle network, public transit system, parking conditions, truck access, and traffic operations from the consolidation of the FBI HQ on the Landover site.

Build Condition Pedestrian Network

Under the Build Condition, Brightseat Road would undergo several improvements with the addition of a new access point to the Landover site and accommodation of the lane requirements for the entry control facility (ECF) improvements. Therefore, with construction already planned for this length of roadway, it is expected that sidewalk accommodations on Brightseat Road would be upgraded to meet Prince George's County standards and ADA compliance during the Build Condition. ADA accessibility and pedestrian access improvements would also be made as needed at remaining entry locations. Within the site, multiple pedestrian pathways would provide access to the Main Building and between site elements; the precise location of these pedestrian accommodations would be determined in the final site design process.

Not many pedestrians would access the Landover site via the surrounding pedestrian network because (1) the Landover site is not near Metrorail where riders could walk from the station and (2) the low-density suburban area means few employees are within a reasonable walking distance from the site or would travel there by foot. Pedestrians in the area would continue to use the sidewalk along Brightseat Road, and local area use of the sidewalk network may slightly increase with the improvements. Therefore, the Build Condition as planned would likely have direct, long-term, beneficial impacts to the pedestrian network, although the benefits would be minimal. There could also be direct, short-term, adverse impacts to the pedestrian network from construction vehicles crossing the sidewalk and intermittent sidewalk closures.

Build Condition Bicycle Network

The overall bicycle mode split to the Landover site is projected to be 1.0 percent, resulting in approximately 113 bicycle roundtrips daily. While no off-site bicycle improvements are planned as part of the Landover Build Condition, it is assumed that there would be bicycle facilities on-site to encourage the use of the bicycle mode of travel. The increase in bicycle trips from the Landover Build Condition would increase overall bicycle volumes in the study area.

Given the lack of bicycle facilities in the study area and no assured date of completion for planned improvements noted in the No-build Condition (see section 6.2.9.1), the increase in projected bicycle volumes would have a direct, long-term, adverse impact to the study area. There would be a negative impact because, without bicycle facilities, those who choose to bicycle would need to use sidewalks, conflicting with pedestrians, or use the roadways, creating conflicts with an increased number of vehicles on the road. There could be direct, short-term, adverse impacts to the bicycle network during construction caused by construction vehicles crossing the lanes and intermittent lane and sidewalk closures.

Build Condition Public Transit

The following sections describe the Build Condition for Metrorail and bus modes within the Landover study area. It is anticipated that there would be an increase in people commuting to the site via commuter bus or shuttle given the overall increase in total trips in the Build Condition. Also, the projected use of shuttles for future FBI employees is discussed.

Projected Trips

Section 3.10.4.2 details the basis of the Landover Build Condition trip generation calculation.

Metrorail Analysis

Overall, with a Metrorail mode split of 18.7 percent, a total of 616 additional AM peak hour passenger trips and 570 additional PM peak hour passenger trips are projected. Table 6-25 summarizes the additional Metrorail trips associated with the Landover Build Condition.

The additional peak hour Metrorail passenger trips were further disaggregated into AM and PM peak 15-minute periods using existing PHF at Largo Town Center Metro Station. Overall, this resulted in an additional 167 passenger trips during the AM peak 15-minute period and an additional 171 passenger trips during the PM peak 15-minute period, as summarized in table 6-26.

Overall, the Landover Build Condition would result in an additional 2,114 weekday entries at Largo Town Center Metro Station, bringing the weekday station entry total to 7,721 passengers (see table 6-27). Average weekday exits would theoretically be the same or similar to the average weekday entries.

Table 6-25: Landover Build Condition Additional Peak Hour Metrorail Passenger Trips

Employees	Time Period	IN	OUT	Proportion of Daily Total	Metrorail Mode Split	IN	OUT	TOTAL
11,055	AM Peak Hour	93%	7%	29.0%	18.7%	558	42	600
	PM Peak Hour	5%	95%	26.9%	18.7%	28	528	556
Briefing Center	Time Period	IN	OUT	Proportion of Daily Total	Metrorail Mode Split	IN	OUT	TOTAL
250	AM Peak Hour	100%	-	36.0%	18.7%	17	-	17
	PM Peak Hour	-	100%	29.2%	18.7%	-	14	14
Total People	Time Period					Exits	Entries	TOTAL
11,305	AM Peak Hour					574	42	616
	PM Peak Hour					28	542	570

Source: Landover Site Transportation Agreement (Appendix A)

Table 6-26: Landover Build Condition Additional Peak 15-Minute Metrorail Passenger Trips

Employees	Time Period	IN	OUT	TOTAL	Peak Hour Factor	Time Period	IN	OUT	TOTAL
11,055	AM Peak Hour	558	42	600	27%	AM Peak 15-Minute	151	11	162
	PM Peak Hour	28	528	556	30%	PM Peak 15-Minute	8	158	166
Briefing Center	Time Period	IN	OUT	TOTAL	Peak Hour Factor	Time Period	IN	OUT	TOTAL
250	AM Peak Hour	17	-	17	27%	AM Peak 15-Minute	5	-	5
	PM Peak Hour	-	14	14	30%	PM Peak 15-Minute	-	4	4
Total People	Time Period	Exits	Entries	TOTAL	Peak Hour Factor	Time Period	Exits	Entries	TOTAL
11,305	AM Peak Hour	574	42	616	27%	AM Peak 15-Minute	156	11	167
	PM Peak Hour	28	542	570	30%	PM Peak 15-Minute	8	162	171


Source: Landover Site Transportation Agreement (Appendix A); WMATA (2014k)

Table 6-27: Weekday 2022 Projected Metrorail Ridership at Largo Town Center

Metro Station	Average Weekday Entries					
	2014	2022 Background Growth	2022 Planned Development Projects	2022 Total No-build	2022 Additional Build Trips	2022 Total Build Trips
Largo Town Center	4,740	5,585	22	5,607	2,114	7,721

Source: Masog (2014); WMATA (2014k); MWCOC (2015); Landover Site Transportation Agreement (Appendix A)

LANDOVER PEDESTRIAN ENVIRONMENTAL CONSEQUENCES SUMMARY

 **Build Condition:** Direct, long-term, beneficial impacts.

LANDOVER BICYCLE ENVIRONMENTAL CONSEQUENCES SUMMARY

 **Build Condition:** Direct, long-term, adverse impacts.

Table 6-28: Landover Build Condition Weekday Peak 15-Minute Metrorail Passenger Loads

Measure (PM Peak 15-Minute Exits)	Unit
2014 Maximum Passengers	356
2022 Passengers with Background Growth	419
2022 Passengers with Development Projects	4
2022 Total No-build Passengers	423
2022 Minimum Trains ^a	3
2022 Train Cars ^b	20
2022 Total No-build Passengers Per Car	21
2022 Landover Build Additional Passengers	8
2022 Total Landover Build Passengers	431
2022 Total Landover Build Passengers Per Car	22

^a A 4-minute headway equates to 3.75 trains every 15 minutes. This figure was rounded down to 3 minutes in order to provide the most conservative load estimate.

^b Assumes two 6-car Silver line trains and one 8-car Blue line train. Source: Masog (2014); WMATA (2014k); MWCOC (2015); Landover Site Transportation Agreement (Appendix A)

Table 6-29: Landover Build Condition Weekday Peak 15-Minute Exiting Period Ridership

Metro Station	Time	2014		2022 No-build		2022 Build	
		Entries	Exits	Entries	Exits	Entries	Exits
Largo Town Center	5:00 PM – 5:15 PM	37	356	48	423	210	431

Source: WMATA (2014k); MWCOC (2015); Landover Site Transportation Agreement (Appendix A)

Table 6-30: Landover Build Condition Weekday Peak 15-Minute Entering Period Ridership

Metro Station	Time	2014		2022 No-build		2022 Build	
		Entries	Exits	Entries	Exits	Entries	Exits
Largo Town Center	7:30 AM – 7:45 AM	327	37	388	46	400	202

Source: WMATA (2014k); MWCOC (2015); Landover Site Transportation Agreement (Appendix A)

Metrorail Passenger Loads

Refer to section 3.10.4.3 for a detailed explanation of how Metrorail passenger loads were calculated. At Largo Town Center Metro Station, PM peak exits were the highest of AM peak entries, AM peak exits, PM peak entries, and PM peak exits, and therefore, were used to calculate maximum passenger loads. Projected passenger loads of 22 passengers under the Landover Build Condition at the station is well below 100 passengers per car, and therefore would be considered acceptable. Table 6-28 summarizes passenger loads per car under the Landover Build Conditions using PM peak 15-minute exits.

Station Capacity Analysis

Refer to section 3.10.4.3 for a detailed description of how station capacity was analyzed. Table 6-29 summarizes ridership during the peak exiting periods at Largo Town Center Metro Station.

Table 6-30 summarizes ridership during the peak entering period at Largo Town Center Metro Station.

Overall, vertical elements, faregate aisles, and fare vending machines at the station are projected to operate within capacity, or below a v/c of 0.7. Additionally, platform peak pedestrian LOS (based on the available spacing between passengers) on the busiest platform sections are projected to be at the acceptable LOS B. Further details on the station capacity analysis and emergency evacuation analysis are found in the Landover TIA (Appendix D).

Bus Analysis

Additional local bus trips associated with the Landover Build Condition are summarized in table 6-31. At a local bus mode split of 3.0 percent, approximately 99 additional AM peak hour bus passenger trips and 91 additional PM peak hour bus passenger trips are projected in the study area.

The additional peak hour bus passenger trips associated with the Landover Build Condition were added to the peak hour bus volumes calculated for the study area in the 2022 No-build Condition. The trips were added proportionally to each route within the study area based on No-build ridership. The overall analysis was limited to Metrobus service because no ridership data were available for TheBus. It can be assumed, however, that TheBus would see some minimal increases in ridership on routes that serve the site. For this analysis, it was assumed that there would be no major changes in bus service in the study area by 2022.

Overall, AM peak hour Landover Build Condition Metrobus volumes are projected to total 342 passengers, and PM peak hour volumes are projected to total 353 passengers. Both totals are below the overall capacity of services (see table 6-32) in the study area, meaning the additional passenger trips projected could be adequately handled by current service levels. At the individual route level, however, Route F14 in the northbound direction is projected to be over capacity by 2022 within the study area. Appendix D has further details on the bus capacity analysis.

Shuttles

To ensure the Metrorail modal split is obtainable, a connection between the Landover site and Largo Town Center Metro Station would be provided via shuttle bus. The shuttle route would likely use Brightseat Road, Landover Road, McCormick Drive, Lottsford Road, Harry S Truman Drive N, and Largo Drive W as illustrated in figure 6-34. The shuttle bus service would require the use of two bus bays at the Largo Town Center Metro Station. There are currently five unused bus bays of the ten bus bays at the station, and therefore no new bus bays would need to be constructed at the station to accommodate the shuttles. The Landover TIA (Appendix D) contains the detailed shuttle bus discussion and analysis in section 5.5.4.2.

Figure 6-34: Landover - Largo Town Center Metro Station Anticipated Shuttle Route

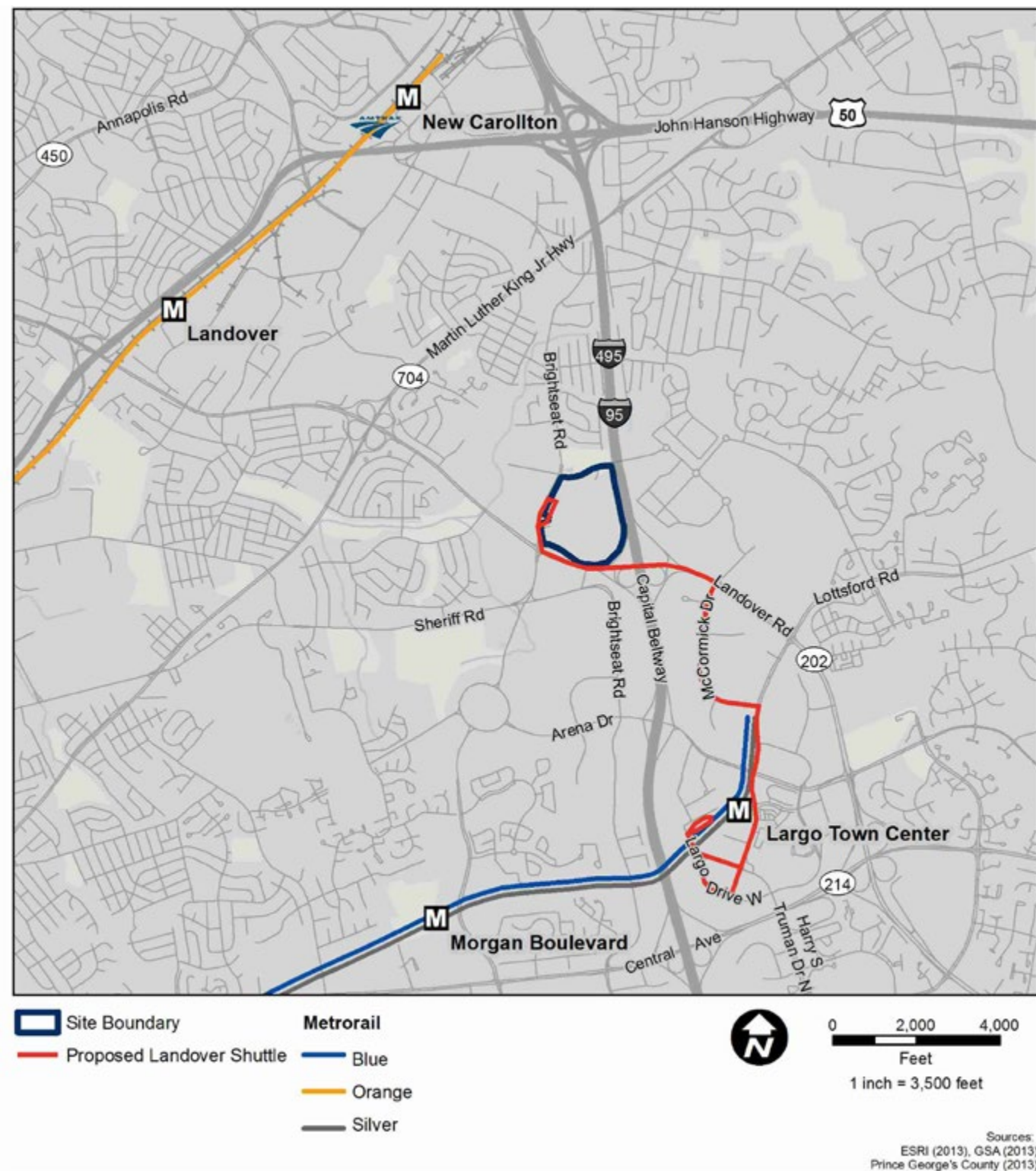


Table 6-31: Landover Build Condition Additional Peak Hour Local Bus Passenger Trips

Employees	Time Period	Proportion of Daily Total	Local Bus Mode Split	TOTAL LOCAL BUS TRIPS
11,055	AM Peak Hour	29.0%	3.0%	96
	PM Peak Hour	26.9%	3.0%	89
Briefing Center	Time Period	Proportion of Daily Total	Local Bus Mode Split	TOTAL LOCAL BUS TRIPS
250	AM Peak Hour	36.0%	3.0%	3
	PM Peak Hour	29.2%	3.0%	2
Total People	Time Period			TOTAL LOCAL BUS TRIPS
11,305	AM Peak Hour			99
	PM Peak Hour			91

Source: Landover Site Transportation Agreement (Appendix A)

Table 6-32: Landover Build Condition Bus Capacity Analysis

Measure	2014		2022 No-build		2022 Build	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Total Volume	210	226	243	262	342	353
Total Capacity	411	418	411	418	411	418
Volume to Capacity Ratio (V/C)	0.51	0.54	0.59	0.63	0.83	0.85

Source: Landover Site Transportation Agreement (Appendix A); Masog (2014); WMATA (2014j); MWCOG (2015)

LANDOVER PUBLIC TRANSIT ENVIRONMENTAL CONSEQUENCES SUMMARY



Build Condition: Direct, long-term, adverse impacts to public transit capacity. Direct, long-term, major adverse impacts to bus operations. Direct, short-term, adverse impacts to bus operations from traffic delays due to construction. Direct, long-term, beneficial impacts for FBI employees.

LANDOVER PARKING ENVIRONMENTAL CONSEQUENCES SUMMARY



Build Condition: No measurable impacts.

LANDOVER TRUCK ACCESS ENVIRONMENTAL CONSEQUENCES SUMMARY



Build Condition: No measurable impacts.

Summary of Transit Analysis

The increase in public transit trips from the Landover Build Condition would have the following impacts to transit:

- Metrobus Route F14 would continue to have capacity issues due to its capacity issues present in the No-build Condition, given that no overall projected transit service increase or changes in Metrobus service are assumed in the analysis. The overall capacity of bus services in the study area, however, would accommodate the projected ridership.
- Metrorail car passenger loads through the study area are projected to be at acceptable levels.
- Overall, Metrorail vertical elements, faregate aisles, and fare vending machines at Largo Town Center Metro Station are projected to operate below capacity.
- Metrorail platform peak pedestrian LOS (based on the available spacing between passengers) on the busiest platform sections are projected to be at the acceptable LOS B at Largo Town Center Metro Station.
- Platform and station evacuation times would not increase over the No-build Condition, and therefore would continue to meet NFPA 130 standards.
- Site patrons using Metrorail would require a shuttle bus to reach the site from the Largo Town Center Metro Station, and the shuttle bus service would require the use of two bus bays at the station. The station currently has five unused bus bays, and therefore no new bus bays would need to be constructed at the station. The shuttle bus would contribute additional peak hour trips to the roadway network; this analysis of additional shuttle bus trips is included in the Landover TIA (Appendix D).

Therefore, the Landover Build Condition would have direct, long-term, adverse impacts to public transit capacity. In addition, bus operations (more than three bus routes) would have direct, long-term, major adverse impacts caused by the potential traffic delays forecasted along Brightseat Road (see the Landover TIA, section 5.7, "Traffic Analysis").

Because buses regularly service Brightseat Road, there would be direct, short-term, adverse construction impacts to bus operations caused by construction vehicles blocking one or more lanes of the road and intermittent road closures.

The implementation of the shuttle between the Largo Town Center Metro Station and the Landover site would cause direct, long-term, beneficial impacts for FBI employees. Based on limiting the shuttle service to the use of FBI employees, there would be no impact to the overall public transit system. The actual shuttle service could operate along a different route and/or could be integrated into an existing or new route provided by a public or private provider.

Build Condition Parking

Under the Build Condition, employee parking garages would be located to the east of the Main Building Developable Area along the eastern site boundary, adjacent to the Capital Beltway. Given the distance to the nearest transit station, and in accordance with NCPC parking policy, a parking ratio of one parking space for every 1.5 employees would be maintained, equating to approximately 7,370 spots. It should be noted that this number does not reflect the non-seated workers and pool fleet, which would require additional parking spaces and would not be subject to NCPC parking policy. In the conceptual site layout analyzed in the EIS, these spaces would be accommodated in two, 10-story parking structures. The number and layout of the parking structures to accommodate the required employee and fleet vehicle parking would be finalized during the design process. Up to 323 visitor parking spaces would be provided near the Visitor Center.

While all employee and visitor parking is envisioned to be accommodated on-site, it is likely that there would be more employee demand for driving than there are parking spaces due to the less than 1:1 ratio of parking spaces to employees (not all employees would have a parking spot) as recommended by NCPC policies. Furthermore, transit options to the Landover site are minimal or may not be very convenient, and a shuttle would need to transport Metrorail riders from the Metrorail station to the Landover site potentially making the total trip time longer compared to driving. Therefore, there would be pressure on the local parking network to sustain those who drive to work but may not park on-site. Development and implementation of a Transportation Management Plan (TMP), which includes Transportation Demand Management (TDM) measures that would encourage employees to use transit and discourage employees from driving and parking off-site, would address these issues and reduce any adverse parking impacts anticipated at the Landover site. With implementation, monitoring, and enforcement of a TMP, and revisions as needed, the Build Condition would result in no measurable direct, long-term impacts to local area parking. Assuming all construction equipment and employee parking areas would be contained to the Landover site, there would be no measurable direct, short-term impacts during the construction period.

Build Condition Truck Access

Truck access for the Landover site would occur at the north entrance to the Landover site off of Evarts Street. Trucks would also only be permitted to enter and exit during non-peak hours. Truck entrance and exit locations and restricted hours would be noted at entrance locations and communicated to those services that would provide regular truck delivery to the site.

Therefore, under the Build Condition, there would be no measurable direct, long-term impacts to truck access given communication of truck access regulations. Assuming the Landover site would have access entrances and exits assigned for construction equipment and general trucks during the construction period, there would be no measurable direct, short-term impacts to truck access.

Build Condition Traffic Analysis

Refer to section 3.10.4.2 for a detailed description of the process the study followed to project future traffic volumes through three primary assumptions: trip generation, modal split, and trip distribution, followed by a discussion of the impacts of the proposed alternative.

Total Vehicle Trips

Based on the trip generation rates combined with the SOV and HOV modal split and persons per carpool, the total vehicle trips are forecasted to be 2,047 inbound and 149 outbound during the AM peak hour and 99 inbound and 1,931 outbound during the PM peak hour.

Tables 6-33 and 6-34 summarize the vehicle trips based on the trip generation and the mode split.

Table 6-33: Landover Build Condition AM Peak Hour Vehicle Trips

Calculated Steps	AM Peak Hour (7:30 AM - 8:30 AM)									
	FBI Employees				Briefing Center ^a				All People	
	Inbound		Outbound		Inbound		Outbound		TOTAL	
	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	Inbound	Outbound
Employees or Seats	11,055				250					
Trip Generation	29%				36%					
Inbound/Outbound Split	93%		7%		100%		0%			
Modal Split	63.3%	10.0%	63.3%	10.0%	63.3%	10.0%	63.3%	10.0%		
Total Trips w/o HOV adjustment	1,887	298	142	22	57	9	0	0		
HOV Vehicle Occupancy		3		3		3		3		
Total Trips	1,887	99	142	7	57	3	0	0	2,046	149

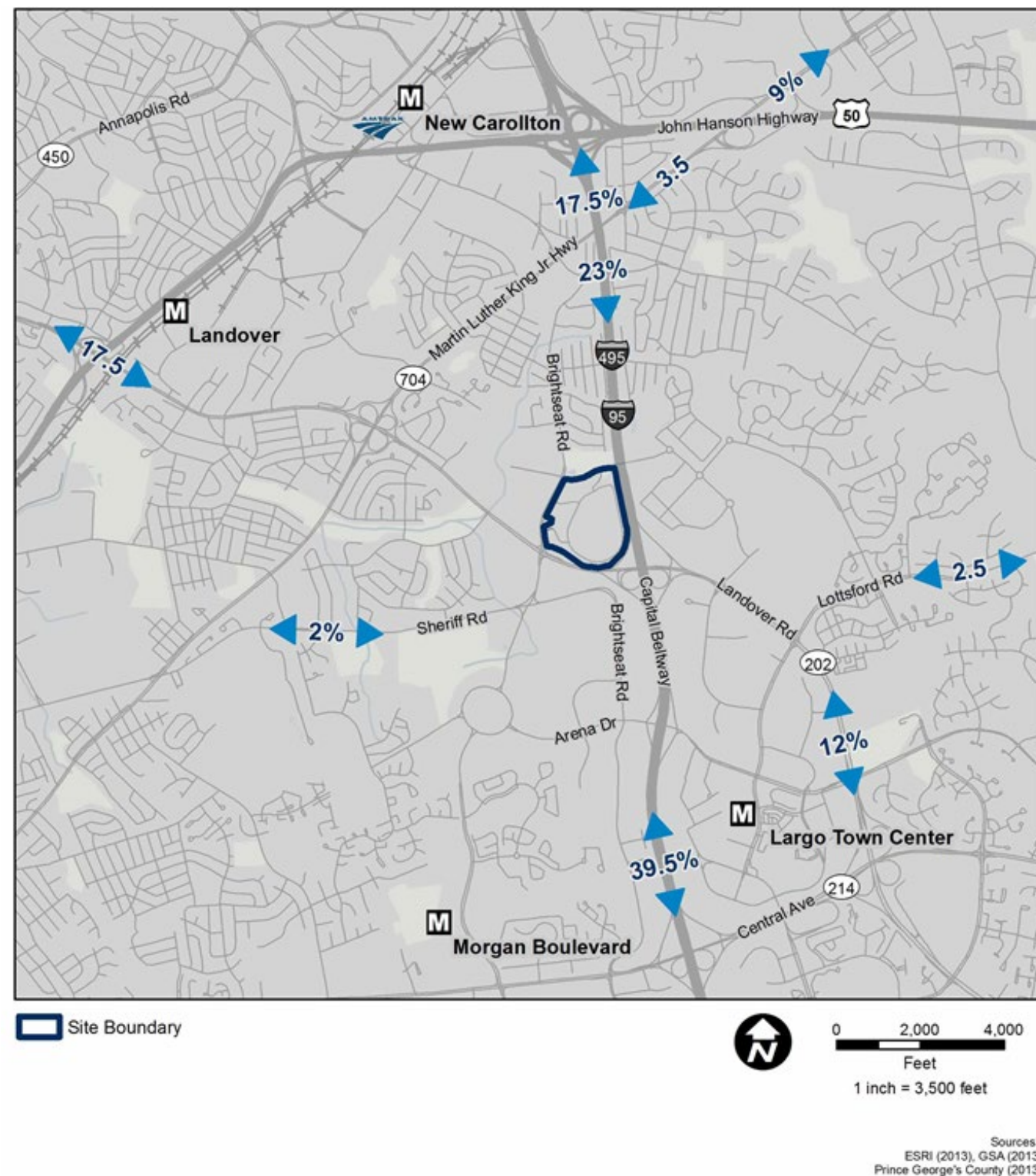
^a Assumes a 500-seat facility where external trips represent 50% of attendees.

Table 6-34: Landover Build Condition PM Peak Hour Vehicle Trips

Calculated Steps	PM Peak Hour (5:00 PM - 6:00 PM)									
	FBI Employees				Briefing Center ^a				All People	
	Inbound		Outbound		Inbound		Outbound		TOTAL	
	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	Inbound	Outbound
Employees or Seats	11,055				250					
Trip Generation	26.9%				29%					
Inbound/Outbound Split	5%		95%		0%		100%			
Modal Split	63.3%	10.0%	63.3%	10.0%	63.3%	10.0%	63.3%	10.0%		
Total Trips w/o HOV adjustment	94	15	1,788	283	0	0	46	7		
HOV Vehicle Occupancy		3		3		3		3		
Total Trips	94	5	1,788	94	0	0	46	2	99	1,931

^a Assumes a 500-seat facility where external trips represent 50% of attendees.

Figure 6-35: Landover Build Condition Trip Distribution



Trip Distribution

The process for determining trip distribution is detailed in section 3.10.4.2.

Table 6-35 shows the blended trip distribution percentages to/from each origin/destination. Note that the inbound versus outbound distribution patterns for vehicle trips destined to/from I-95 North and MD 704 are different, due to the expected travel pattern to reach U.S. Route 50 east of the site. It is assumed that inbound vehicles would use I-95/I-495 to U.S. Route 50 from the east and would use MD 704 NB north of the site to reach U.S. Route 50 East. Figure 6-35 depicts the Landover site trip distribution.

Development of Build Condition

Refer to section 3.10.4.3 for a description of how the Build Condition was developed for traffic analysis.

Figure 6-36 contains the Build Condition turning movement volumes. A diagram of Build Condition lane geometry can be found in the Landover TIA (Appendix D).

Table 6-35: Landover Site Trip Distribution Summary

Roadway and Direction	Percentages		AM Trips		PM Trips	
	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
I-95/I-495 NB North of Site	0.0%	17.5%	0	26	0	338
I-95/I-495 SB North of Site	23.0%	0.0%	471	0	23	0
I-95/I-495 South of Site	39.5%	39.5%	809	59	39	763
MD 704 NB North of Site	0.0%	9.0%	0	13	0	174
MD 704 SB North of Site	3.5%	0.0%	72	0	3	0
MD 202 WB	17.5%	17.5%	358	26	17	338
MD 202 EB	12.0%	12.0%	246	18	12	232
Lottsford Road EB	2.5%	2.5%	51	4	2	48
Sheriff Road WB	2.0%	2.0%	41	3	2	39
Total	100.0%	100.0%	2,047	149	99	1,931

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Figure 6-36: Landover Build Condition Turning Movement Volumes

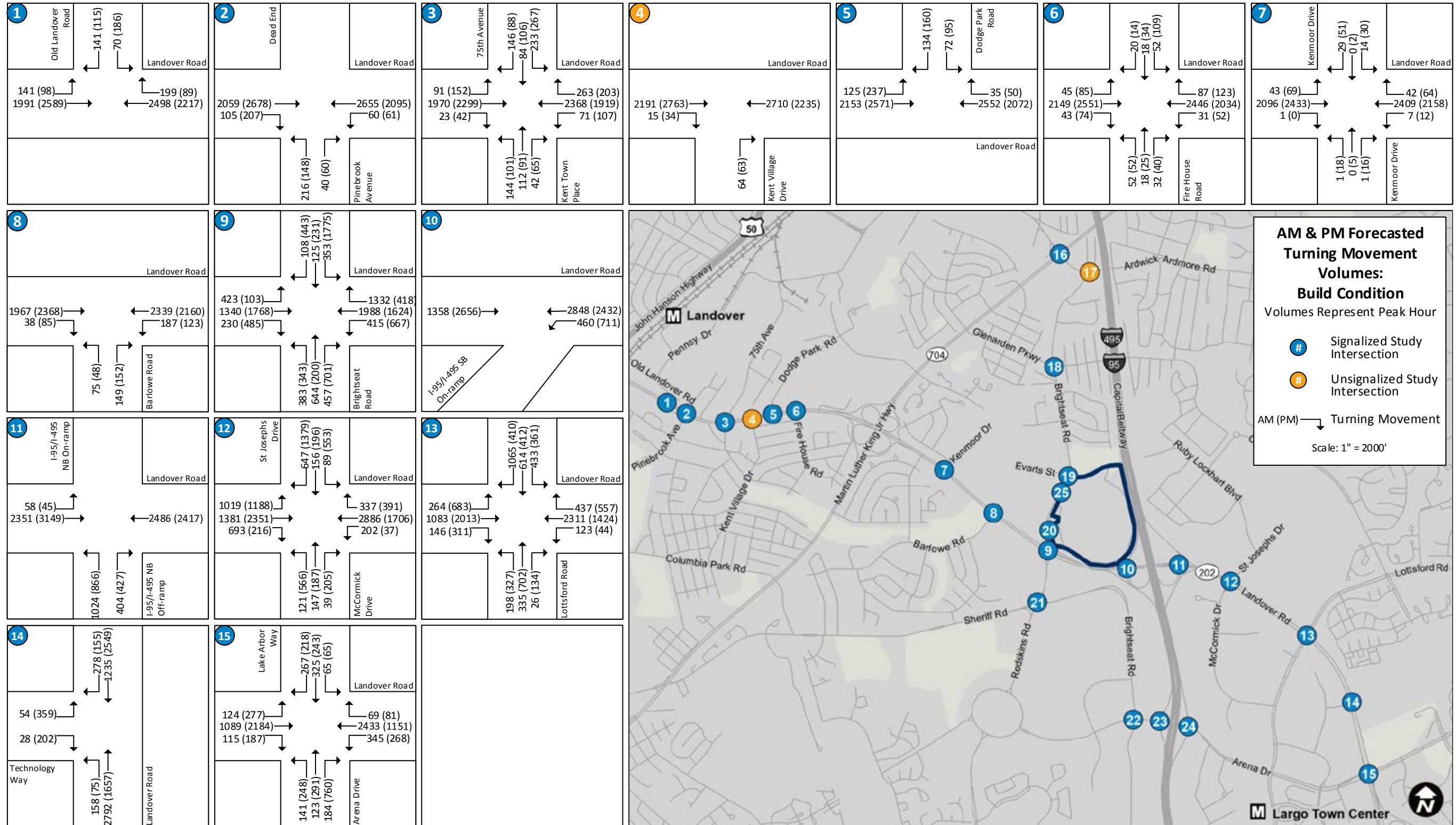


Figure 6-36: Landover Build Condition Turning Movement Volumes (continued)



LANDOVER TRAFFIC ENVIRONMENTAL CONSEQUENCES SUMMARY



Build Condition: Direct, long-term, major adverse impacts to corridors. Direct, long-term, adverse impacts to intersections. Direct, short-term, major adverse impacts during the construction period.

Build Condition Operations Analysis

Based on the Synchro™ and CLV-based Excel worksheet analysis, many of the signalized study area intersections would operate at acceptable overall conditions during the morning and afternoon peak hours. However, the following intersections in the study area would operate with overall unacceptable conditions:

- Landover Road and Kent Town Place/75th Avenue (Intersection #3) during the AM peak hour
- Landover Road and Brightseat Road (Intersection #9) during the AM and PM peak hour
- Landover Road and the I-95/I-495 Southbound On-ramp (Intersection #10) during the PM peak hour
- Landover Road and the I-95/I-495 Northbound Off-ramp (Intersection #11) during the PM peak hour
- Landover Road and St. Joseph's Drive/McCormick Drive (Intersection #12) during the PM peak hour
- Landover Road and Lottsford Road (Intersection #13) during the PM peak hour
- Martin Luther King Jr. Highway and Ardwick-Ardmore Road (Intersection #16) during the AM and PM peak hour
- Brightseat Road and Arena Drive (Intersection #22) during the AM peak hour

A total of 19 signalized intersections and 1 unsignalized intersection would experience unacceptable conditions for one or more turning movements. Compared to the No-build Condition, the Build Condition would have three more intersections failing during the AM peak hour and there would be one more intersection failing during the PM peak hour. The Landover TIA (Appendix D) contains a more detailed Build Condition traffic operations analysis.

The overall intersection LOS grades for the Build Condition are depicted in figure 6-37 for the AM and PM peak hours. Table 6-36 shows the results of the LOS capacity analysis and the intersection projected delay under the Build Condition during the AM and PM peak hours.

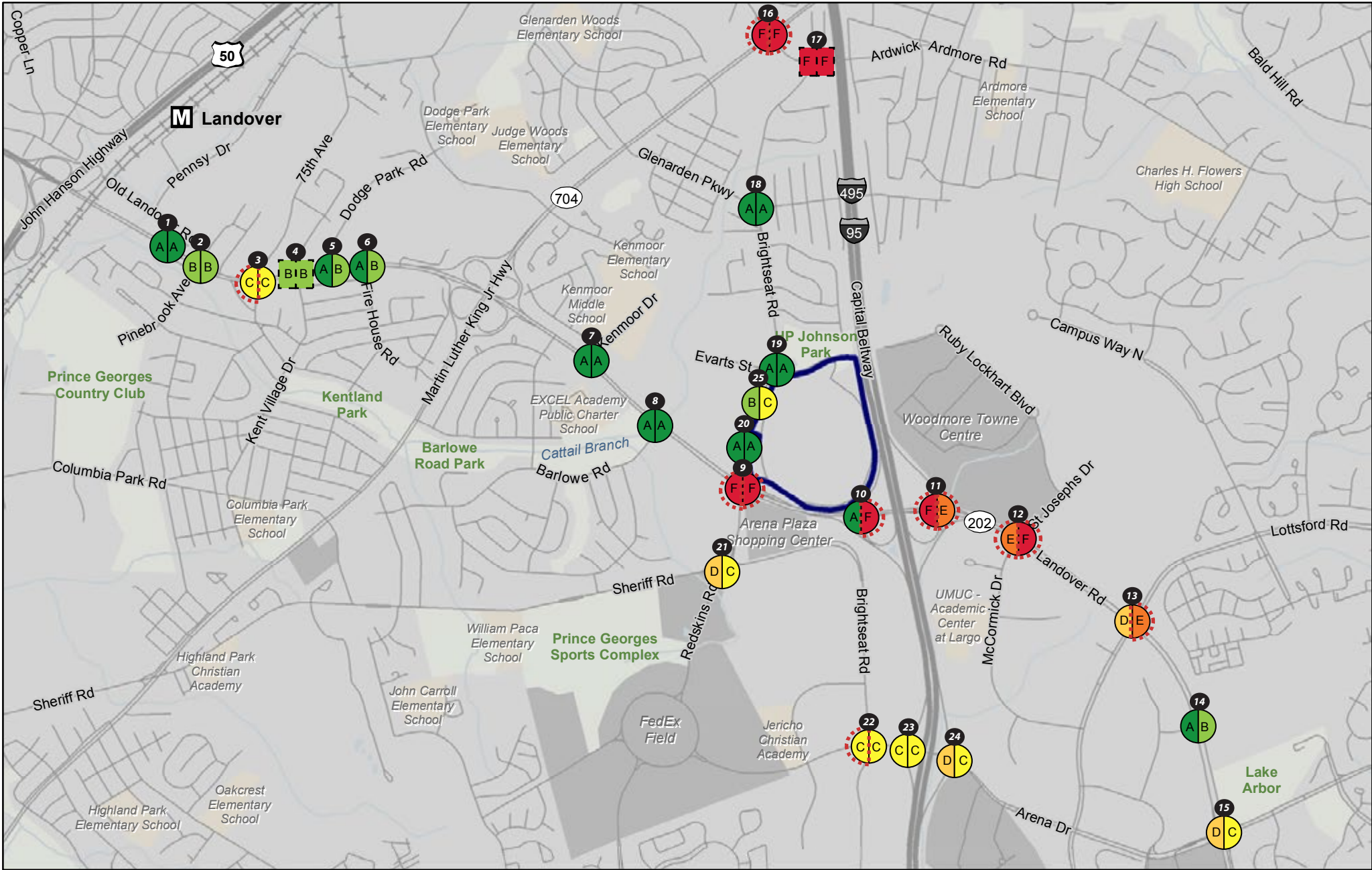
Build Condition Queuing Analysis

Based on the Synchro™ and SimTraffic™ analysis, 19 signalized intersections and 1 unsignalized intersection would experience queuing lengths that would exceed the available storage capacity. The remaining intersections in the study area would provide sufficient storage for the anticipated demand. Compared to the No-build Condition, the Build Condition, would have five more intersections with failing queues during the AM peak hour and would have three more intersections with failing queues during the PM peak hour. The Landover TIA (Appendix D) contains a more detailed Build Condition traffic queuing analysis.

Summary of Traffic Analysis: Build Condition

Overall, the AM peak hour would experience corridor-based delays along Landover Road (MD 202) in the westbound direction beginning at the I-95/I-495 northbound off-ramp intersection and extending past Brightseat Road. A similar condition would occur during the PM peak hour beginning at Brightseat Road and extending past McCormick Road/ St. Joseph's Drive. Together these conditions would result in direct, long-term, major adverse impacts to corridors in the study area. In addition, there would be isolated intersection impacts during the AM and PM peak periods at the Martin Luther King Jr. Highway and Ardwick-Ardmore Road intersection and during the PM at the Brightseat Road and Ardwick-Ardmore Road intersection, resulting in direct, long-term, adverse impacts to intersections. Because the intersections between the Landover site and access to I-95/I-495 are forecasted to fail during the No-build Condition, adding construction-related trips along this route from trucks, employees, and equipment would have corridor-based impacts. Other construction-related trips may add to other isolated study area intersections forecasted to fail during the No-build Condition. Together, these conditions would result in direct, short-term, major adverse impacts during the construction period.

Figure 6-37: Landover Build Condition Intersection LOS for AM and PM Peak Hours



Site Boundary

Intersection Level of Service (LOS)

- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F

Intersection Number

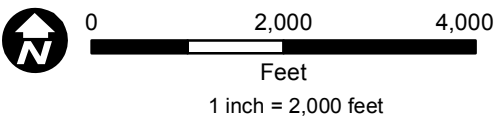
Signalized Intersections

Unsignalized Intersections

AM CLV / PM CLV Fails

LOS represents minor approaches only

Note: CLV = Critical Lane Volume Analysis Method



Sources: ESRI (2013), GSA (2013), Prince George's County (2013)

Table 6-36: Landover Build Condition Intersection AM and PM Peak Hour Operations Analysis

#	Intersection	No-build Condition										Build Condition									
		AM Peak Hour					PM Peak Hour					AM Peak Hour					PM Peak Hour				
		HCM 2000		CLV		Check	HCM 2000		CLV		Check	HCM 2000		CLV		Check	HCM 2000		CLV		Check
		Delay (sec/veh)	LOS	Critical Lane Vol	LOS		Delay (sec/veh)	LOS	Critical Lane Vol	LOS		Delay (sec/veh)	LOS	Critical Lane Vol	LOS		Delay (sec/veh)	LOS	Critical Lane Vol	LOS	
1	Landover Road & Old Landover Road (Signalized)	8.3	A	1438	D	Pass	9.4	A	1179	C	Pass	8.0	A	1,447	D	Pass	9.7	A	1234	C	Pass
2	Landover Road & Pinebrook Avenue (Signalized)	9.5	A	1189	C	Pass	10.8	B	1401	D	Pass	10.5	B	1198	C	Pass	10.2	B	1407	D	Pass
3	Landover Road & Kent Town Place/75th Avenue (Signalized)	25.3	C	1608	F	Fail	28.0	C	1416	D	Pass	25.5	C	1617	F	Fail	30.9	C	1488	E	Pass
4	Landover Road & Kent Village Drive (TWSC)	0.1	-	N/A	N/A	Pass	0.2	-	N/A	N/A	Pass	0.1	-	N/A	N/A	Pass	0.1	-	N/A	N/A	Pass
5	Landover Road & Dodge Park Road (Signalized)	6.9	A	1167	C	Pass	11.2	B	1040	B	Pass	6.6	A	1176	C	Pass	11.3	B	1149	B	Pass
6	Landover Road & Fire House Road (Signalized)	8.2	A	1186	C	Pass	15.3	B	1295	C	Pass	8.6	A	1196	C	Pass	17.0	B	1301	D	Pass
7	Landover Road & Kenmoor Drive (Signalized)	8.5	A	956	A	Pass	5.1	A	977	A	Pass	8.2	A	966	A	Pass	5.8	A	983	A	Pass
8	Landover Road & Barlowe Road (Signalized)	7.1	A	931	A	Pass	10.1	B	1072	B	Pass	8.1	A	1004	B	Pass	9.7	A	1079	B	Pass
9	Landover Road & Brightseat Road (Signalized)	38.2	D	1220	C	Pass	55.1	E	1686	F	Fail	94.6	F	1750	F	Fail	264.9	F	2537	F	Fail
10	Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)	6.5	A	1181	C	Pass	27.7	C	1832	F	Fail	5.5	A	1207	C	Pass	97.5	F	2172	F	Fail
11	Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)	45.6	D	1666	F	Fail	72.4	E	1863	F	Fail	106.6	F	2039	F	Fail	72.7	E	1894	F	Fail
12	Landover Road & St. Joseph's Drive/McCormick Drive (Signalized)	52.3	D	1546	E	Pass	89.9	F	1921	F	Fail	72.4	E	1632	F	Fail	89.1	F	1925	F	Fail
13	Landover Road & Lottsford Road (Signalized)	42.2	D	1507	E	Pass	63.5	E	1531	E	Fail	49.4	D	1581	E	Pass	68.8	E	1564	E	Fail

Table 6-36: Landover Build Condition Intersection AM and PM Peak Hour Operations Analysis (continued)

#	Intersection	No-build Condition										Build Condition									
		AM Peak Hour					PM Peak Hour					AM Peak Hour					PM Peak Hour				
		Delay (sec/veh)	LOS	Critical Lane Vol	LOS	Check	Delay (sec/veh)	LOS	Critical Lane Vol	LOS	Check	Delay (sec/veh)	LOS	Critical Lane Vol	LOS	Check	Delay (sec/veh)	LOS	Critical Lane Vol	LOS	Check
14	Landover Road & Technology Way (Signalized)	2.8	A	1154	C	Pass	17.0	B	1291	C	Pass	3.0	A	1245	C	Pass	17.7	B	1377	D	Pass
15	Landover Road & Arena Drive/Lake Arbor Way (Signalized)	34.2	C	1161	C	Pass	33.3	C	1166	C	Pass	35.8	D	1252	C	Pass	33.7	C	1252	C	Pass
16	Martin Luther King Jr Highway & Ardwick-Ardmore Road (Signalized)	95.8	F	1906	F	Fail	68.9	E	1541	E	Fail	105.3	F	1919	F	Fail	86.6	F	1718	F	Fail
17	Brightseat Road & Ardwick-Ardmore Road (TWSC)	176.1	-	N/A	N/A	Fail	32.9	-	N/A	N/A	Pass	183.7	-	N/A	N/A	Fail	162.6	-	N/A	N/A	Fail
18	Brightseat Road & Glenarden Parkway (Signalized)	10.0	A	563	A	Pass	10.3	B	597	A	Pass	9.6	A	570	A	Pass	9.6	A	693	A	Pass
19	Brightseat Road & Evarts Street (Signalized)	1.7	A	281	A	Pass	2.1	A	322	A	Pass	1.7	A	360	A	Pass	6.7	A	502	A	Pass
20	Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd) ^a	0.8	-	N/A	N/A	Pass	0.7	-	N/A	N/A	Pass	5.6	A	303	A	Pass	4.8	A	734	A	Pass
21	Brightseat Road/Redskins Road & Sheriff Road/Brightseat Road (Signalized)	36.4	D	413	A	Pass	33.0	C	596	A	Pass	48.3	D	811	A	Pass	32.9	C	597	A	Pass
22	Brightseat Road & Arena Drive (Signalized)	21.3	C	1272	C	Pass	24.2	C	1589	E	Pass	23.0	C	1708	F	Fail	24.2	C	1589	E	Pass
23	Arena Drive & I-95/I-495 Southbound Ramps (Signalized)	22.7	C	880	A	Pass	29.8	C	1344	D	Pass	23.8	C	1427	D	Pass	29.8	C	1346	D	Pass
24	Arena Drive & I-95/I-495 Northbound Ramps (Signalized)	23.9	C	1203	C	Pass	28.8	C	1405	D	Pass	45.8	D	1465	E	Pass	28.8	C	1405	D	Pass
25	Brightseat Road & Driveway/FBI Exit (Signalized)	-	-	-	-	-	-	-	-	-	-	10.8	B	242	A	Pass	20.7	C	1405	D	Pass

Notes:

LOS = Level of Service

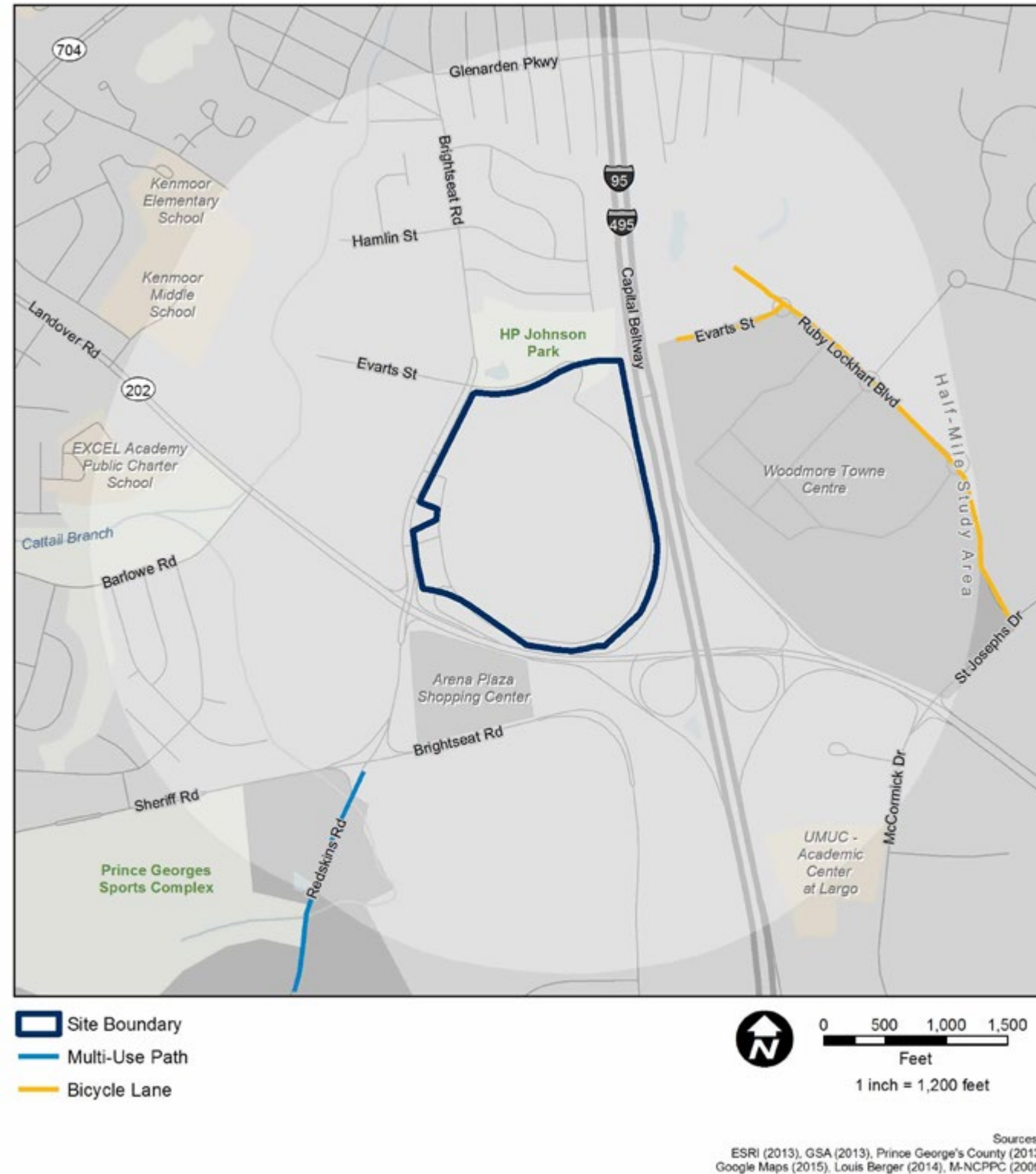
TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is Measured in Seconds Per Vehicle.

Red cells denote intersections operating at unacceptable conditions.

^a Intersection would operate as a TWSC intersection under the No-build Condition and signalized under the Build Condition.

Figure 6-38: Landover Recommended Bicycle Mitigation



6.2.9.3 Build with Mitigation Condition

To reduce impacts to the transportation system from the Landover Alternative, mitigation measures are recommended for each mode of transportation analyzed. Overall, the Landover site requires extensive mitigation to reduce direct impacts.

The following transportation resources do not require any mitigation under the Landover Alternative: pedestrian network and truck access.

Build with Mitigation Condition Bicycles

To maximize the number of patrons accessing the site via bicycle, the site should be connected to the existing and planned bicycle network. It is recommended that, as part of the overall site and surrounding study area construction improvements (including roadway mitigation discussed in section 6.6.2), the three facilities that are planned directly adjacent to the site be constructed as mitigation for the Landover Build Condition, as summarized in table 6-37 and pictured in figure 6-38. While not directly adjacent to the site, an extension of the Evarts Street bicycle lanes west of Brightseat Road and an extension of the Cattail Branch River Trail north to Evarts Street would complete the bicycle network in the area, and should be considered by Prince George's County. It is recommended that the construction of the recommend multi-use paths be coordinated with the construction of the roadway improvements, to avoid adverse impacts to the multi-use paths.

When compared to the Build Condition, the impacts under the Build with Mitigation Condition would decrease from direct, long-term, adverse to direct, long-term, beneficial impacts caused by the addition of new corridor-based bicycle lanes and paths. Construction impacts would remain the same as the Build Condition, resulting in direct, short-term, adverse impacts to the bicycle network during the construction period.

Table 6-37: Landover Recommended Bicycle Mitigation

Roadway	From/To	Type
Landover Road (MD 202)	Brightseat Road to St. Joseph's Drive	Multi-Use Path
Brightseat Road	Sheriff Road to Evarts Street	Bicycle Lane
Evarts Street	Brightseat Road to east side of Evarts Street Bridge	Bicycle Lane

Build with Mitigation Condition Public Transit

The following recommendations in table 6-38 are made to mitigate the proposed transit impacts of the Landover Alternative.

When compared to the Build Condition, there would be no difference in long-term public transit capacity impacts under the Build with Mitigation Condition. Transit capacity would continue to have direct, long-term, adverse impacts until WMATA implemented increased capacity on Metrobus Route F14. However, the bus operation delays of more than two bus routes along Brightseat Road and Landover Road would be improved resulting in direct, long-term, beneficial impacts. During construction, the impacts would increase from direct, short-term, adverse to direct, short-term, major adverse impacts to bus operations (two or more bus routes impacted) caused by construction vehicles blocking on or more lanes on the road and intermittent road closures along Landover Road due to construction of roadway mitigations.

Build with Mitigation Condition Parking

As mentioned in the Build Condition section, parking impacts would largely be addressed through development and implementation of a TMP, which would include preferred strategies for discouraging employees from parking on local streets. Because the TMP would be implemented as part of the Build Condition, there would be no changes in parking impacts between the Build and Build with Mitigation Conditions.

When compared to the Build Condition, there would be no change in long-term impacts; therefore there would continue to be no measurable direct, long-term impacts under the Build with Mitigation Condition. Similarly, short-term construction impacts would not change between the Build and Build with Mitigation Conditions; therefore, there would continue to be no measurable direct, short-term impacts under the Build with Mitigation Condition during construction.

Build with Mitigation Condition Traffic Analysis

Development of Mitigated Network

Based on the Build Condition traffic operations and queuing analysis (defined in section 3.10.4.3), a number of intersections would fail and require mitigation. The dynamic traffic assignment (DTA) process (see section 3.10.4.3) was followed to identify the route vehicle trips would use after implementing the following proposed major mitigation strategies:

- Follow the latest revised conceptual site plan by adding a third exit driveway between the southern part of the Landover site and Brightseat Road, passing under Landover Road and connecting to Brightseat Road approximately 1,450 feet east of the Brightseat Road intersection with Sheriff Road (part of Alternative based on the Traffic analysis).
- Upgrading the intersection of Landover Road and Brightseat Road.
- Adding an additional travel lane in both directions along Landover Road between Brightseat Road and the I-95/I-495 northbound off-ramps.
- Constructing a bridge over I-95/I-495 connecting Evarts Street between Brightseat Road and Woodmore Towne Centre.

Prior to running the DTA to model the mitigation condition for determining the traffic assignment, the No-build vehicle volumes needed to be adjusted to reflect the opening of a new public road (Evarts Street Bridge). The Landover TIA contains the details covering the shift in vehicle patterns resulting from opening the Evarts Street Bridge and process and results from running the DTA (Appendix D). Figure 6-39 contains the Build with Mitigation Condition turning movement volumes.

Recommend Mitigation Measures

Section 3.10.2.3 contains the process followed to develop the full list of mitigation. Table 6-39 contains the list of recommended mitigation measures. Figure 6-40 shows the locations of the mitigation measures.

Table 6-38: Landover Public Transit Mitigation

Impact	Mitigation
Metrobus Route F14 would continue to have capacity issues during peak hours.	WMATA should perform a study of Metrobus Route F14 and develop recommendations to improve capacity during peak hours.
FBI employees using the Metrorail system would require shuttle bus service to access the site from the Metrorail. See section 5.4.4 of the Landover TIA (Appendix D) for a map of the shuttle route.	Implement shuttle bus service between Largo Town Center Metro Station and the Landover site.

LANDOVER PEDESTRIAN ENVIRONMENTAL CONSEQUENCES SUMMARY



Build with Mitigation Condition:
Direct, long-term, beneficial impacts.

LANDOVER BICYCLE ENVIRONMENTAL CONSEQUENCES SUMMARY



Build with Mitigation Condition:
Direct, long-term, beneficial impacts.
Direct, short-term, adverse impacts.

LANDOVER PUBLIC TRANSIT ENVIRONMENTAL CONSEQUENCES SUMMARY



Build with Mitigation Condition:
Direct, long-term, adverse impacts to transit capacity, and direct, long-term, beneficial impacts to bus operations.

LANDOVER PARKING ENVIRONMENTAL CONSEQUENCES SUMMARY



Build with Mitigation Condition:
No measurable impacts.

LANDOVER TRUCK ACCESS ENVIRONMENTAL CONSEQUENCES SUMMARY



Build with Mitigation Condition:
No measurable impacts.

Figure 6-39: Landover Build with Mitigation Condition Turning Movement Volumes

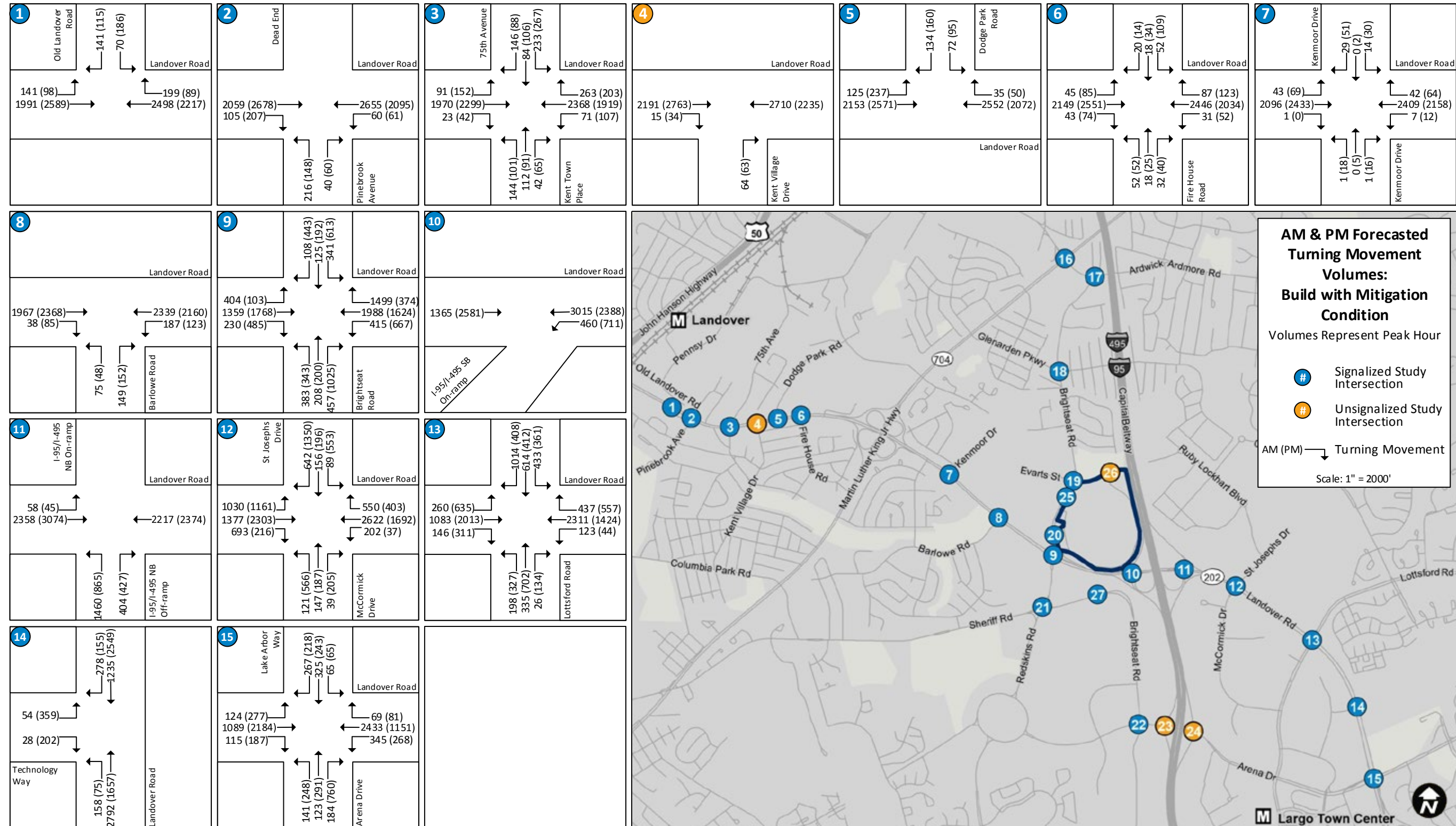


Figure 6-39: Landover Build with Mitigation Condition Turning Movement Volumes (continued)

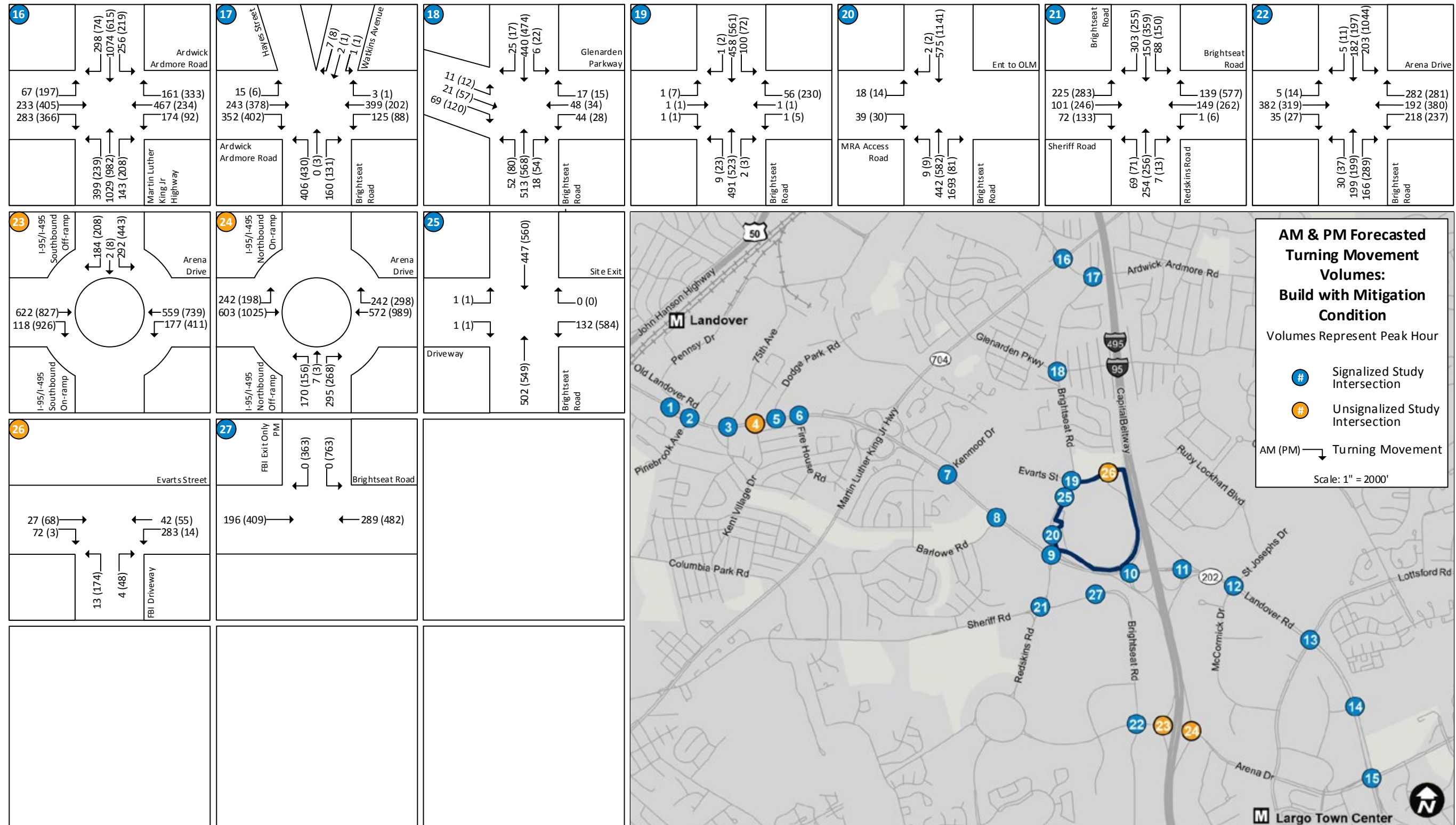


Table 6-39: Landover Alternative Recommended Mitigation Measures

Map ID	Location	Mitigation	Strip Land Taking (Approximate Linear Feet)
A	Landover Road (MD 202) and Old Landover Road	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for the PM peak period. 	None
B	Landover Road (MD 202) and Dodge Park Road	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for the PM peak period. 	None
C	Landover Road (MD 202) and Firehouse Road	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for the PM peak period. 	None
D	Landover Road (MD 202) and Kenmoor Road	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for AM and PM peak periods. 	None
E	Landover Road (MD 202) and Barlowe Road	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for AM and PM peak periods. 	None
F	Landover Road (MD 202) and Brightseat Road	<ul style="list-style-type: none"> For the Landover Road eastbound approach, extend both left-turn lanes by 260 feet resulting in two 600-foot left-turn lanes, convert the existing 1,000 foot right-turn lane into a through lane, and create a new 400-foot right-turn lane to provide an approach with two left-turn lanes, four through lanes, and one right-turn lane. For the Landover Road westbound approach, create a new 775-foot right-turn lane to provide an approach with two-left-turn lanes, three through lanes, and two right-turn lanes. The right turn lanes would no longer be free movements, but would be under signal control. A two-lane right turn lane requires signal control for safety to allow the other movements leading to Brightseat Road northbound full access to the all available lanes. For the Brightseat Road northbound approach, extend the right most left-turn lane 350 feet back to the previous intersection (driveway serving Brightseat Road Property development), separate the right turn lanes from the through lanes, and create a new 400-foot right-turn lane to provide an approach with two left-turn lanes, two through lanes, and two right-turn lanes. For the Brightseat Road southbound approach, create a new 350 foot left-turn lane and 350-foot right-turn lane to provide an approach with three left-turn lanes, one through lane, one shared through/right-turn lane, and one right-turn lane. The right-turn lanes would no longer be free movements, but would be under signal control. Revise the traffic signal pattern from a split phase timing for Brightseat Road (north and south movements occur separately) to a protected lead-lag phase timing (similar to Landover Road approaches). Adjust the signal to provide a lead turn phase (occurs at the same time as the through movement) for the southbound left-turns and lag phase (occurs at the end of the through movements) for the northbound left-turns to allow vehicles to share the existing turning intersection geometry in the middle of the intersection. 	760
G	Landover Road (MD 202) and I-95 Southbound on-ramp	<ul style="list-style-type: none"> For the Landover Road eastbound approach, add a third through lane extended back 1,750 feet to the Brightseat Road intersection, resulting in a four-lane MD 202 eastbound cross section between Brightseat Road and the I-95 southbound off-ramp. For the Landover Road westbound approach, add a third through lane extended 1,100 feet back to the previous intersection (I-95 northbound off-ramps), resulting in a four-lane MD 202 westbound cross section. Widen the Landover Road Bridge over I-95 by two lanes to the north to avoid impacting the existing loop ramps in the SE and SW corner of the interchange. Optimize the traffic signal and coordinate timings with nearby key intersections for AM and PM peak periods. 	530

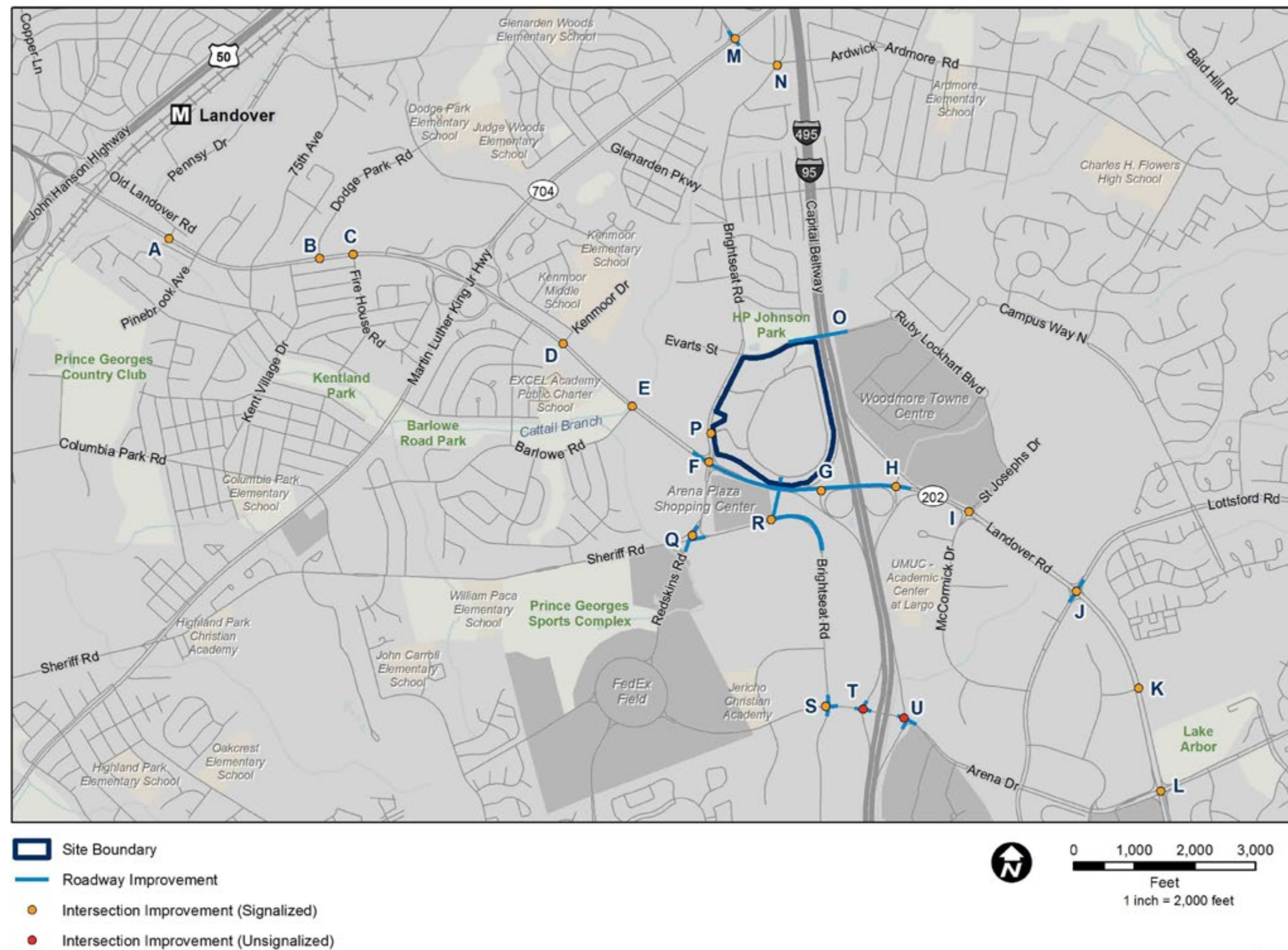
Table 6-39: Landover Alternative Recommended Mitigation Measures (continued)

Map ID	Location	Mitigation	Strip Land Taking (Approximate Linear Feet)
H	Landover Road (MD 202) and I-95 northbound off-ramp	<ul style="list-style-type: none"> For the Landover Road eastbound approach, add a fourth through lane extended 1,100 feet back to the previous intersection (I-95 southbound on-ramp), resulting in a four-lane Landover Road eastbound cross section spanning the bridge over I-95. Extend the left-turn lane 100 feet resulting in a 250-foot left-turn lane. For the Landover Road westbound approach, add a third through lane extended 300 feet back to the I-95 northbound on-ramp diverge from Landover Road. For the I-95 off-ramp approach, add a 400-foot third left-turn lane to provide an approach with three left-turn lanes and one right-turn lane. Optimize the traffic signal and coordinate timings with nearby key intersections for AM and PM peak periods. 	None
I	Landover Road (MD 202) and McCormick Drive/St. Joseph's Drive	<ul style="list-style-type: none"> Optimize the traffic signal for the PM peak period and coordinate timings with nearby key intersections for AM and PM peak periods. 	None
J	Landover Road (MD 202) and Lottsford Road	<ul style="list-style-type: none"> For the Lottsford Road southbound approach, create a new 350-foot left-turn lane to provide an approach with two left lanes, two through lanes, and one right-turn lane. For the Lottsford Road northbound approach, revise the existing lane geometry to provide an approach with two left-turn lanes, two through lanes, and one right-turn lane. Optimize the traffic signal and coordinate timings with nearby key intersections for the AM and PM peak periods. 	None
K	Landover Road (MD 202) and Technology Way	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for AM and PM peak periods. 	None
L	Landover Road (MD 202) and Arena Drive/Lake Arbor Way	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for AM and PM peak periods. 	None
M	Martin Luther King Jr. Highway (MD 704) and Ardwick-Ardmore Road	<ul style="list-style-type: none"> For the Ardwick-Ardmore Road eastbound approach, revise the lane geometry to provide an approach with one right-turn lane, one through lane, and one shared through/left-turn lane. For the Ardwick-Ardmore Road westbound approach, install dynamic lane controls depending on the time of the day. Use the existing lane geometry during all times except during the PM peak period. During the PM peak period assign the left lane for shared through/left-turns only and the right lane for right-turns only. Optimize the traffic signal for AM and PM peak periods. 	None
N	Ardwick-Ardmore Road and Brightseat Road	<ul style="list-style-type: none"> Install new traffic signal at Brightseat Road and Ardwick-Ardmore Road. For the Brightseat Road northbound approach, extend the right-turning lane along Brightseat Road northbound by 50 feet to a new length of 200 feet. 	None
O	Evarts Street Bridge	<ul style="list-style-type: none"> Construct a new four-lane bridge over I-95 to connect the east and west parts of Evarts Street. 	None
P	Brightseat Road and Site West Entrance/Maple Ridge Apartment south entrance	<ul style="list-style-type: none"> Upgrade the Build Condition traffic signal to serve exiting vehicles from the apartments only, allowing right or left-turns only. The traffic signal would not serve Brightseat Road northbound through or right-turn movements. Install a raised triangular curb in the middle of the intersection to allow left-turns from Brightseat Road northbound to the apartments and left-turns from the apartments to Brightseat Road northbound. Through moves from the apartments to the Site West Entrance would not be possible. The two Brightseat Road northbound through lanes would shift right after the intersection to allow the left-lane to only serve vehicles turning left from the apartments. For the Brightseat Road northbound approach, change the lane geometry to provide an approach with two right-turn lanes, a shared through/right-turn lane, one through lane, and one left-turn lane. 	None

Table 6-39: Landover Alternative Recommended Mitigation Measures (continued)

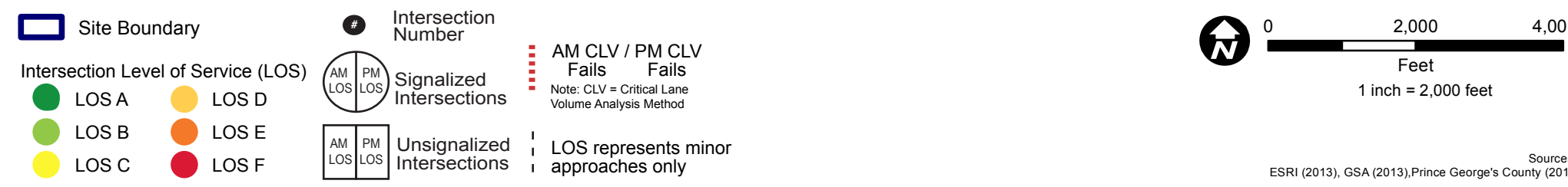
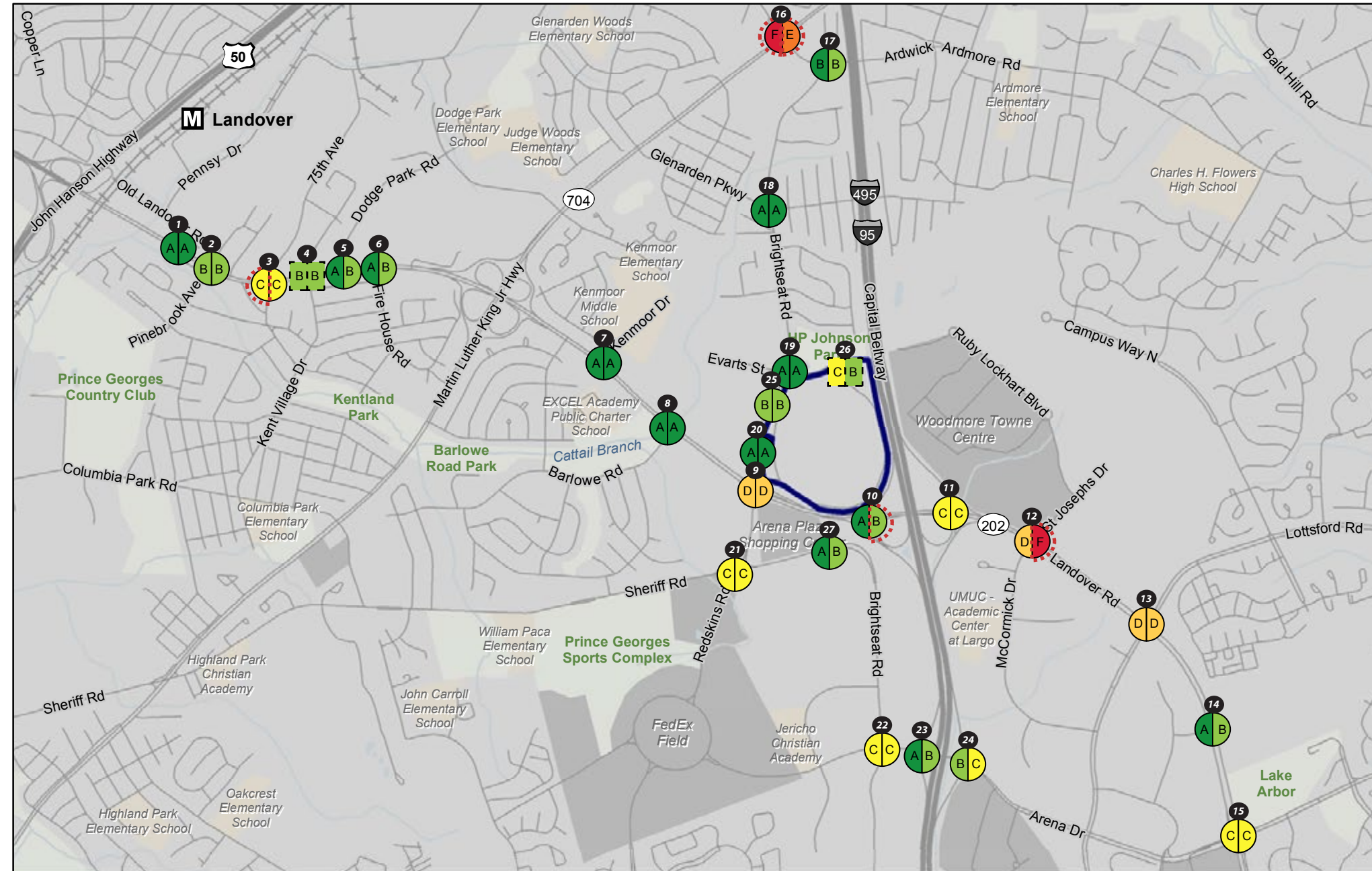
Map ID	Location	Mitigation	Strip Land Taking (Approximate Linear Feet)
Q	Brightseat Road/Redskins Road and Sheriff Road/ Brightseat Road	<ul style="list-style-type: none"> For the Redskins Road northbound approach, revise the lane geometry to provide an approach with one left-turn lane, two through lanes, and one right-turn lane. For the Brightseat Road westbound approach, revise the signing on the channelized right-turn to indicate a free merge. Revise the lane striping north of the intersection along Brightseat Road to clearly indicate that the right-most lane is closed to traffic to allow the westbound approach right-turn lane a free merge onto Brightseat Road northbound. One option is to replace the white lines with a 150-foot yellow stripe between the right and middle lanes from the intersection to the westbound right-turn lane merge. Optimize the traffic signal for AM and PM peak periods. 	None
R	Brightseat Road and Site South Exit	<ul style="list-style-type: none"> Install a new traffic signal to serve the intersection during the PM only. Widen Brightseat Road in the southbound direction by one lane to form two 1,000-foot southbound travel lanes between the new FBI south exit intersection and the existing four-lane cross section 	None
S	Brightseat Road and Arena Drive	<ul style="list-style-type: none"> For the Brightseat Road northbound approach, revise the lane geometry to provide one left-turn lane, one through lane, and one right-turn lane. For the Brightseat Road southbound approach, extend the left-turn lane by 290 feet to create a 500-foot left-turn lane and revise the lane geometry to provide two left-turn lanes and one shared through/right-turn lane. For the Arena Drive westbound approach, revise the lane geometry to provide one shared left-turn/ through lane, one through lane, and one right-turn lane. Optimize the traffic signal for the PM peak period. 	200
T	Arena Drive and I-95 southbound on/off ramps	<ul style="list-style-type: none"> Replace the intersection with a two-lane roundabout. For the Arena Drive eastbound approach, revise the lane geometry to stripe the two left lanes to enter the roundabout and the right lane to provide a bypass lane that feeds directly onto the I-95 southbound on-ramp. For the Arena Drive westbound approach, revise the lane geometry to provide two lanes to enter the roundabout. For the I-95 southbound off-ramp, stripe the existing lanes to enter the roundabout and create a 200-foot right-turn lane to provide a bypass lane that feeds directly onto Arena Drive westbound. 	None
U	Arena Drive and I-95 northbound on/off ramps	<ul style="list-style-type: none"> Replace the intersection with a two-lane roundabout. For the Arena Drive eastbound approach, revise the lane geometry to provide two lanes to enter the roundabout. For the Arena Drive westbound approach, revise the lane geometry to provide two lanes to enter the roundabout. For the I-95 northbound off-ramp, stripe the existing lanes to enter the roundabout and create a 150-foot right-turn lane to provide a yielding bypass lane that feeds directly onto Arena Drive westbound. 	None

Figure 6-40: Landover Build with Mitigation Condition Improvement Locations



Sources: ESRI (2013), GSA (2013), Prince George's County (2013)

Figure 6-41: Landover Build with Mitigation Condition Intersection LOS for AM and PM Peak Hour



Build with Mitigation Condition Intersection Operations Analysis

Based on the Synchro™ and CLV-based Excel worksheet analysis with the proposed mitigation, all but four signalized study area intersection would operate at acceptable overall conditions during the morning and afternoon peak hours. The following intersection in the study area would operate with overall unacceptable conditions:

- Landover Road and Kent Town Place/75th Avenue (Intersection #3) during the AM peak hour (same failure in No-build)
 - **Note that the Build with Mitigation Condition would result in less than a one percent difference in CLV when compared to the No-build Condition**
- Landover Road and the I-95/I-495 Southbound On-ramp (Intersection #10) during the PM peak hour
 - **Note that the Build with Mitigation Condition would result in a better operation than the No-build Condition**
- Landover Road and St. Joseph's Drive/McCormick Drive (Intersection #12) during the PM peak hour
 - **Note that the Build with Mitigation Condition would result in a better operation than the No-build Condition**
- Martin Luther King Jr. Highway and Ardwick-Ardmore Road (Intersection #16) during the PM peak hour
 - **Note that the Build with Mitigation Condition would result in a better operation than the No-build Condition**

Based on the Synchro™ analysis, five signalized intersections would continue to experience LOS degradation for turning movements or overall operations as compared to the No-build Condition during the morning or afternoon peak hours. Each of these intersections would result in one or more turning movements operating under a similar condition to the No-build Condition. The Landover TIA (Appendix D) contains a more detailed Build with Mitigation Condition traffic operations analysis.

The overall intersection LOS grades for the Build with Mitigation Condition are depicted in figure 6-41 for the AM and PM peak hours. Table 6-40 shows the results of the LOS capacity analysis and the intersection projected delay under the Build with Mitigation Conditions during the AM and PM peak hours.

Build with Mitigation Condition Queuing Analysis

Based on the Synchro™ and SimTraffic analysis, there would be one signalized intersection that would experience failing queue lengths in excess of 150 feet of the No-build Condition length. This intersection is as follows:

- Eastbound Landover Road approach to the I-95/I-495 Northbound Off-ramp (Intersection #11)
 - ***Note that this queue would occur on the Landover Road mainline and there is ample storage space between this facility and next upstream intersection***

The results of the Build with Mitigation Condition queuing analysis for both signalized and unsignalized intersections are contained in the Landover TIA (Appendix D).

Table 6-40: Landover Build with Mitigation Condition Intersection AM and PM Peak Hour Operations Analysis

#	Intersection	No-build Condition										Build with Mitigation Condition									
		AM Peak Hour					PM Peak Hour					AM Peak Hour					PM Peak Hour				
		HCM 2000	CLV	Check	HCM 2000	CLV	Check	HCM 2000	CLV	Check	HCM 2000	CLV	Check	HCM 2000	CLV	Check					
Delay (sec/veh)	LOS	Critical Lane Vol	LOS	Check	Delay (sec/veh)	LOS	Critical Lane Vol	LOS	Check	Delay (sec/veh)	LOS	Critical Lane Vol	LOS	Check	Delay (sec/veh)	LOS	Critical Lane Vol	LOS	Check		
1	Landover Road & Old Landover Road (Signalized)	8.3	A	1438	D	Pass	9.4	A	1179	C	Pass	8.0	A	1,447	D	Pass	9.4	A	1234	C	Pass
2	Landover Road & Pinebrook Avenue (Signalized)	9.5	A	1189	C	Pass	10.8	B	1401	D	Pass	10.5	B	1198	C	Pass	10.3	B	1407	D	Pass
3	Landover Road & Kent Town Place/75th Avenue (Signalized)	25.3	C	1608	F	Fail	28.0	C	1416	D	Pass	25.9	C	1617	F	Fail	29.9	C	1488	E	Pass
4	Landover Road & Kent Village Drive (TWSC)	0.1	-	N/A	N/A	Pass	0.2	-	N/A	N/A	Pass	0.1	-	N/A	N/A	Pass	0.1	-	N/A	N/A	Pass
5	Landover Road & Dodge Park Road (Signalized)	6.9	A	1167	C	Pass	11.2	B	1040	B	Pass	6.6	A	1176	C	Pass	11.4	B	1149	B	Pass
6	Landover Road & Fire House Road (Signalized)	8.2	A	1186	C	Pass	15.3	B	1295	C	Pass	7.9	A	1196	C	Pass	17.4	B	1301	D	Pass
7	Landover Road & Kenmoor Drive (Signalized)	8.5	A	956	A	Pass	5.1	A	977	A	Pass	9.4	A	966	A	Pass	5.6	A	983	A	Pass
8	Landover Road & Barlowe Road (Signalized)	7.1	A	931	A	Pass	10.1	B	1072	B	Pass	7.3	A	1004	B	Pass	9.8	A	1079	B	Pass
9	Landover Road & Brightseat Road (Signalized)	38.2	D	1,220	C	Pass	55.1	E	1,686	F	Fail	44.4	D	1426	D	Pass	54.3	D	1533	E	Pass
10	Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)	6.5	A	1181	C	Pass	27.7	C	1832	F	Fail	3.5	A	965	A	Pass	19.2	B	1666	F	Fail
11	Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)	45.6	D	1666	F	Fail	72.4	E	1863	F	Fail	27.9	C	1462	E	Pass	21.1	C	1350	D	Pass
12	Landover Road & St. Joseph's Drive/McCormick Drive (Signalized)	52.3	D	1,546	E	Pass	89.9	F	1,921	F	Fail	53.7	D	1,559	E	Pass	81.2	F	1,900	F	Fail
13	Landover Road & Lottsford Road (Signalized)	42.2	D	1507	E	Pass	63.5	E	1531	E	Fail	36.8	D	1348	D	Pass	52.1	D	1407	D	Pass
14	Landover Road & Technology Way (Signalized)	2.8	A	1154	C	Pass	17.0	B	1291	C	Pass	6.2	A	1245	C	Pass	19.5	B	1377	D	Pass

Table 6-40: Build with Mitigation Condition Intersection AM and PM Peak Hour Operations Analysis (continued)

#	Intersection	No-build Condition										Build with Mitigation Condition													
		AM Peak Hour					PM Peak Hour					AM Peak Hour					PM Peak Hour								
		HCM 2000		CLV			Check	HCM 2000		CLV			Check	HCM 2000		CLV			Check	HCM 2000		CLV			Check
		Delay (sec/veh)	LOS	Critical Lane Vol	LOS	Delay (sec/veh)		LOS	Critical Lane Vol	LOS	Delay (sec/veh)	LOS		Critical Lane Vol	LOS	Delay (sec/veh)	LOS	Critical Lane Vol		LOS	Delay (sec/veh)	LOS	Critical Lane Vol	LOS	
15	Landover Road & Arena Drive/Lake Arbor Way (Signalized)	34.2	C	1161	C	Pass	33.3	C	1166	C	Pass	33.9	C	1252	C	Pass	32.3	C	1252	C	Pass				
16	Martin Luther King Jr Highway & Ardwick-Ardmore Road (Signalized)	95.8	F	1,906	F	Fail	68.9	E	1,541	E	Fail	90.2	F	1,881	F	Fail	67.0	E	1,505	E	Fail				
17	Brightseat Road & Ardwick-Ardmore Road ^a	176.1	-	N/A	N/A	Fail	32.9	-	N/A	N/A	Pass	18.3	B	902	A	Pass	19.6	B	921	A	Pass				
18	Brightseat Road & Glenarden Parkway (Signalized)	10.0	A	563	A	Pass	10.3	B	597	A	Pass	8.5	A	534	A	Pass	8.8	A	646	A	Pass				
19	Brightseat Road & Evarts Street (Signalized)	1.7	A	281	A	Pass	2.1	A	322	A	Pass	3.9	A	432	A	Pass	7.5	A	677	A	Pass				
20	Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd) ^a	0.8	-	N/A	N/A	Pass	0.7	-	N/A	N/A	Pass	2.7	A	300	A	Pass	5.6	A	386	A	Pass				
21	Brightseat Road/Redskins Road & Sheriff Road/Brightseat Road (Signalized)	36.4	D	413	A	Pass	33.0	C	596	A	Pass	34.1	C	477	A	Pass	25.4	C	663	A	Pass				
22	Brightseat Road & Arena Drive (Signalized)	21.3	C	1,272	C	Pass	24.2	C	1,589	E	Pass	21.6	C	868	A	Pass	27.8	C	1,522	E	Pass				
23	Arena Drive & I-95/I-495 Southbound Ramps ^b	22.7	C	880	A	Pass	29.8	C	1,344	D	Pass	8.1	A	N/A	N/A	Pass	12.9	B	N/A	N/A	Pass				
24	Arena Drive & I-95/I-495 Northbound Ramps ^b	23.9	C	1,203	C	Pass	28.8	C	1,405	D	Pass	12.0	B	N/A	N/A	Pass	20.9	C	N/A	N/A	Pass				
25	Brightseat Road & Driveway/FBI Exit (Signalized)	-	-	-	-	-	-	-	-	-	-	10.6	B	239	A	Pass	15.6	B	441	A	Pass				
26	Evarts Street & FBI Driveway (TWSC)	-	-	-	-	-	-	-	-	-	-	5.8	-	N/A	N/A	Pass	6.5	-	N/A	N/A	Pass				
27	Brightseat Road & FBI Exit only PM (Signalized)	-	-	-	-	-	-	-	-	-	-	0.0	A	-	-	Pass	15.5	B	940	A	Pass				

Notes:

LOS = Level of Service

TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is Measured in Seconds Per Vehicle.

Red cells denote intersections operating at unacceptable conditions.

^a Intersection would operate as a TWSC intersection under the No-build Condition and signalized under the Build with Mitigation Condition.

^b Intersection would operate as signalized under the No-build Condition and a roundabout under the Build with Mitigation Condition.

LANDOVER TRAFFIC ENVIRONMENTAL CONSEQUENCES SUMMARY



Build with Mitigation Condition: Direct, long-term, beneficial corridor-level impacts; direct, long-term, beneficial intersection impacts; direct long-term, major adverse impacts to area-wide traffic; and direct, short-term, major adverse impacts during the construction period.

Summary of Traffic Analysis: Build with Mitigation Condition

Overall, corridor-based improvements would occur, specifically along Landover Road (MD 202) between the I-95/I-495 northbound off-ramp intersection and Brightseat Road. These improvements would result in changing the corridor-level impacts from direct, long-term, major adverse impacts to direct, long-term, beneficial impacts. There would also be isolated intersection improvements that result in changing the intersection impacts from direct, long-term, adverse impacts to direct, long-term, beneficial impacts.

In addition to these impacts, there would be two failing interstate facilities: one would be caused by the volume of vehicles added to the I-95/I-495 northbound off-ramp to Landover Road during the AM peak hour, and the second would be caused by the volume of vehicles added to the I-95/I-495 southbound on-ramp from Arena Drive during the PM peak hour. The two failing Interstate facilities would result in direct, long-term, major adverse area-wide impacts due to the regional nature of the interstate system (see Freeway Analysis Summary in this section).

The construction impacts would not change, remaining at direct, short-term, major adverse impacts under the Build with Mitigation Condition. This impact level continues to reflect the short-term impacts from adding construction related trips caused by trucks, employees, and equipment as well as intermittent lane or road closures at the Landover Road and Arena Drive intersections with the ramps serving I-95/I-495, a regional facility.

Recommended Traffic Mitigation

Table 6-41 contains the traffic results for all study area intersections covering each condition from No-build through Build with Mitigation. The results include a pass or fail rating for the traffic operations and queue length. Based on the worsening condition from the added vehicle trips from the Build Condition, the recommended mitigation is listed. Recommended traffic mitigation measures were developed to address the substantial traffic impacts caused by the addition of the Consolidated FBI HQ in Landover. These included traffic signal optimization, road widening, lane geometry improvements at intersections, installing new traffic signals, replacing signalized intersections with roundabouts, and constructing new bridges. If implemented, the recommended traffic mitigation measures would maintain acceptable traffic flow conditions based on the Landover Site Transportation Agreement.

Freeway Analysis Summary

Section 3.10.4.3 defines the interstate system and the software utilized to analyze interstate operations.

Based on the proposed FBI trip distribution, more than 62 percent of inbound forecasted FBI vehicle trips and 57 percent of outbound forecasted FBI vehicle trips would use I-95/I-495 to access the proposed site. Because the interstate system is vital to serving the Landover site, I-95/I-495 (Capital Beltway) was evaluated to determine whether or not the added vehicle trips would cause any failing interstate facilities. Based on the agreed Landover Site Transportation Agreement (Appendix A), the evaluated interstate facilities focused on the peak direction only and at the primary off-ramps serving the inbound forecasted FBI vehicle trips during the AM peak hour and the on-ramps serving the outbound forecasted FBI vehicle trips during the PM peak hour.

The analysis concluded that two interstate facilities would fail based on the forecasted volumes. This included I-95/I-495 Northbound between Arena Drive and Landover Road during the AM peak hour and I-95/I-495 Southbound between Arena Drive and Central Avenue during the PM peak hour. These facilities were not mitigated but will need to be studied to determine the best option to address the failures. The Landover TIA provides the detailed freeway analysis (Appendix D).

Entry Control Facility Summary

The ECF analysis was performed once the complete set of external roadway mitigations was established. All mitigation measures were coded into TransModeler™ and the several scenarios were tested to determine the minimum number of lanes capable of handling the AM peak hour forecasted FBI vehicle trips. It was determined that nine lanes were required to handle the forecasted demand.

The Landover TIA provides the detailed ECF analysis (Appendix D).

TRANSPORTATION EVALUATION SUMMARY AND CONCLUSIONS

A total of 3,296 AM peak hour and 3,047 PM peak hour person trips are projected to be added to all modes of transportation. Total Metro transit trips are projected at 715 AM peak hour and 661 PM peak hour trips. Total vehicle trips are projected at 2,195 AM peak hour and 2,030 PM peak hour trips. The remaining trips would be commuter bus, bicycle, or walking trips.

The pedestrian network would expand with the inclusion of the mitigation to construct the Everts Street Bridge providing a new connection across the Capital Beltway. The pedestrian network along Brightseat Road would allow for the same connections as the Existing Condition and would be expected to be reconstructed following the construction of the Landover site. It is assumed that all sidewalk curb ramps located adjacent to the site would be brought up to ADA compliance during the sidewalk reconstruction.

The bicycle network would expand with the inclusion of the mitigation to construct new bicycle lanes along Brightseat Road connecting Sheriff Road to Everts Street. The addition of the Everts Street Bridge would also add to the bicycle network. These new connections would provide for an interconnected bicycle network linking all proposed bicycle facilities in the study area and would encourage bicycle users to access the Landover site.

The transit network (Metrorail and Metrobus) would not be affected by the Landover Site. The Largo Town Center Metro Station and all bus bays would operate below capacity with the addition of the forecasted background growth and transit trips from the Landover site (including the addition of the shuttle buses operating between the Landover site and Metro station). Through the course of background growth along the bus network, the Metrobus Route F14 would operate at capacity. It is assumed that WMATA would implement increased capacity improvements for the Route F14 and follow their long-term plan to address growth-related capacity issues for both bus and rail operations.

Parking availability would remain the same because the Landover site would accommodate all parking needs on-site and implement a robust TMP to

discourage employees from seeking alternative parking options in the nearby neighborhoods.

Truck access would be designed to accommodate the Landover site from Everts Street during a majority of the day and from Brightseat Road during all other times. This plan is not the official plan, but a plan to evaluate as part of the EIS. The Everts Street access would have ample capacity to handle truck access based on the ECF analysis, although it is assumed that all truck deliveries would be scheduled during the off-peak hours.

The traffic operations at four intersections currently operate at an unacceptable levels of service under the Existing Condition. Once the background growth and planned developments are added (No-build Condition), eight intersections would degrade from a passing LOS to a failing LOS. There were no planned roadway improvements within the Landover site study area to compensate for the substantial number of vehicle trips added from the addition of the planned developments.

The addition of the Landover site to the traffic network would result in four intersections operating at an unacceptable LOS. These four failing intersections would experience equal or better operations than the No-build Condition as a result of recommended mitigation that include new turning lanes, extended turning lane lengths, new travel lanes, new traffic signals, and replacing signalized intersections with roundabouts. Overall, the roadway non-interstate network would operate much better and experience shorter queues with the addition of the recommended mitigation when compared to the No-build Condition.

There are forecasted to be two failing interstate facilities that directly serve access between the Capital Beltway and the Landover site. The Maryland SHA and GSA are working to determine the best course of action to address these issues. It is assumed, at a minimum, there would be a need to require changes to the interstate ramps along the Capital Beltway between the Landover Road and Central Avenue Interchanges.

Table 6-41: Landover Overall Traffic Impacts

#	Intersection	No-build Condition						Build Condition						Build with Mitigation Condition						Recommended Mitigation
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			
		HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	
1	Landover Road & Old Landover Road (Signalized)	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail	None Required
2	Landover Road & Pinebrook Avenue (Signalized)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	None Required
3	Landover Road & Kent Town Place/75th Avenue (Signalized)	Pass	Fail	Pass	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Fail	None Required
4	Landover Road & Kent Village Drive (TWSC)	Pass	N/A	Pass	Pass	N/A	Pass	Pass	N/A	Pass	Pass	N/A	Pass	Pass	N/A	Pass	Pass	N/A	Pass	None Required
5	Landover Road & Dodge Park Road (Signalized)	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail	None Required
6	Landover Road & Fire House Road (Signalized)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	None Required
7	Landover Road & Kenmoor Drive (Signalized)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	None Required
8	Landover Road & Barlowe Road (Signalized)	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Fail	None Required
9	Landover Road & Brightseat Road (Signalized)	Pass	Pass	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Add turning lanes along the westbound, northbound, and southbound approaches; change traffic signal operation; and add a new eastbound through lane along Landover Road
10	Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Fail	Fail	Fail	Pass	Pass	Pass	Pass	Fail	Pass	Add a new eastbound and westbound through lane along Landover Road and optimize traffic signal
11	Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Add an eastbound and westbound through lane along Landover Road and an additional left-turning lane along I-95/I-495 off-ramp approach and optimize traffic signal
12	Landover Road & St Josephs Drive/McCormick Drive (Signalized)	Pass	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Pass	Pass	Fail	Fail	Fail	Fail	Optimize traffic signal

Table 6-41: Landover Overall Traffic Impacts (continued)

#	Intersection	No-build Condition						Build Condition						Build with Mitigation Condition						Recommended Mitigation
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			
		HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	
13	Landover Road & Lottsford Road (Signalized)	Pass	Pass	Fail	Fail	Pass	Fail	Pass	Pass	Fail	Fail	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Pass	Add additional left-turn lane along Lottsford Road southbound approach and optimize traffic signal
14	Landover Road & Technology Way (Signalized)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	None Required
15	Landover Road & Arena Drive/Lake Arbor Way (Signalized)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	None Required
16	Martin Luther King Jr Highway (MLK Jr Hwy) & Ardwick-Ardmore Road (Signalized)	Fail	Fail	Fail	Fail	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Pass	Fail	Optimize traffic signal and revise lane geometry along both Ardwick-Ardmore Road approaches
17	Brightseat Road & Ardwick-Ardmore Road (TWSC)	Fail	N/A	Fail	Pass	Pass	Fail	Fail	N/A	Fail	Fail	N/A	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Install new traffic signal
18	Brightseat Road & Glenarden Parkway (Signalized)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	None Required
19	Brightseat Road & Evarts Street (Signalized)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	None Required
20	Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd) ^a	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Activate existing traffic signal
21	Brightseat Road/Redskins Road & Sheriff Road/Brightseat Road (Signalized)	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Revise pavement striping to remove the merge along Brightseat Road north of the intersection from the channelized right from Brightseat Road westbound approach (additional mitigation required from adding south exit from Landover site)
22	Brightseat Road & Arena Drive (Signalized)	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Lengthen existing Brightseat Road southbound approach left-turn lane and optimize traffic signal
23	Arena Drive & I-95/I-495 Southbound Ramps (Signalized)	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Replace the signalized intersection with a two-lane roundabout (additional mitigation required from adding south exit from Landover site to address queueing along Arena Drive from the east)

Table 6-41: Landover Overall Traffic Impacts (continued)

#	Intersection	No-build Condition						Build Condition						Build with Mitigation Condition						Recommended Mitigation
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			
		HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	HCM 2000	Critical Lane Volume	Queue	
24	Arena Drive & I-95/I-495 Northbound Ramps (Signalized)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Replace the signalized intersection with a two-lane roundabout (additional mitigation required from adding south exit from Landover site to address queueing along Arena Drive from the east)
25	Brightseat Road & Driveway/Site Exit (Signalized) ^b	N/A	N/A	N/A	N/A	N/A	N/A	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Install new traffic signal

Notes:

EB = Eastbound, WB = Westbound, NB= Northbound, SB = Southbound

TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Orange cells denote intersections operating at unacceptable HCM 2000 and/or Critical Lane Volume level of service; however, the operations is marginally worse than the No-build Condition.

Red cells denote intersections operating at unacceptable HCM 2000 and/or Critical Lane Volume level of service, or queueing exceeds lane storage.

Yellow cells denote intersections operating at unacceptable HCM 2000 and/or Critical Lane Volume level of service; however, the operations is equal to or better than the No-build Condition (or less than 150 feet greater in queue length than the No-build Condition).

^a Intersection would operate as a TWSC under the No-build Condition and signalized under the Build Condition.

^b Intersection would be added as part of the Build Condition.

6.2.10 Greenhouse Gas Emissions and Air Quality

This section provides a summary of the analysis results for air quality and GHG emissions. Additional technical supporting data and tables for this section are provided in Appendix F.

GREENHOUSE GAS EMISSIONS AND AIR QUALITY ASSESSMENT OF SIGNIFICANCE

Impacts to air quality would result in significant short-term impacts during the construction period, as defined in section 3.11.3. Other resources considered under this section would not result in significant impacts.

6.2.10.1 Global Climate Change and Greenhouse Gases

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to global climate change and GHG because there are no approved plans for future redevelopment that would alter the current level of GHG in the atmosphere or otherwise contribute to climate change.

Landover Alternative

Stationary source and building-related GHG emissions would be the same as those described for the Greenbelt Alternative in section 5.10.1, resulting in direct, long-term, adverse impacts.

Table 6-42 summarizes the development of mobile source vehicle miles traveled (VMT) estimates for employee and contractor commutes to the Landover site. The average one-way travel distance is based on existing FBI employee zip codes. If the Landover site is selected, it is expected that over time, new employees would locate in proximity to the Landover site, reducing the average distance traveled. However, data based on existing zip codes provide a realistic upper bound impact scenario.

Overall, driving would increase relative to the existing conditions based on the mode share assumptions developed for the transportation analyses and the increase in the average distance traveled relative to existing employee zip codes. The lack of transit accessibility at the Landover site results in a large increase in the number of employees driving alone, from 13.5 percent for the JEH parcel to 63.3 percent for the Landover site. These factors combined result in an estimated 170 percent increase in mobile source GHG emissions relative to the No-action Alternative.

6.2.10.2 Air Quality

No-action Alternative

Under the No-action Alternative at the Landover site, there are no approved plans for future redevelopment that would alter existing levels of air pollution.

Landover Alternative

Stationary Source Impacts


Annual stationary source emissions from the natural gas boilers would be the same as described for the Greenbelt site. The boiler emissions of criteria pollutants would be well below (less than 25 percent) the applicable General Conformity de minimis criteria, and therefore would be considered adverse, but would be less than significant based on the impact criteria presented in section 3.11.3.

Table 6-42: Landover Alternative Employee Vehicle Miles Traveled and Greenhouse Gas Emissions (2025)

	Landover
Annual VMT (250 days)	108,068,158
Annual CO ₂ e- Metric Tons	27,491.8
Change in VMT from FBI HQ Remaining at JEH/off-site locations	+68,007,345
Change in CO ₂ e from No-action FBI HQ Remaining at JEH/off-site locations (metric tons)	+17,300.6
Percent Change	169.76%

LANDOVER GLOBAL CLIMATE CHANGE & GREENHOUSE GASES ENVIRONMENTAL CONSEQUENCES SUMMARY

 **No-action Alternative:** No measurable impacts.

 **Landover Alternative:** Direct, long-term, adverse impacts.

LANDOVER AIR QUALITY ENVIRONMENTAL CONSEQUENCES SUMMARY

 **No-action Alternative:** No measurable impacts.


 **Landover Alternative:** Direct, long-term, adverse impacts, and direct, short-term, major adverse impacts during the construction period.

Figure 6-42: Landover 1-hr NO₂ Project Increment Results

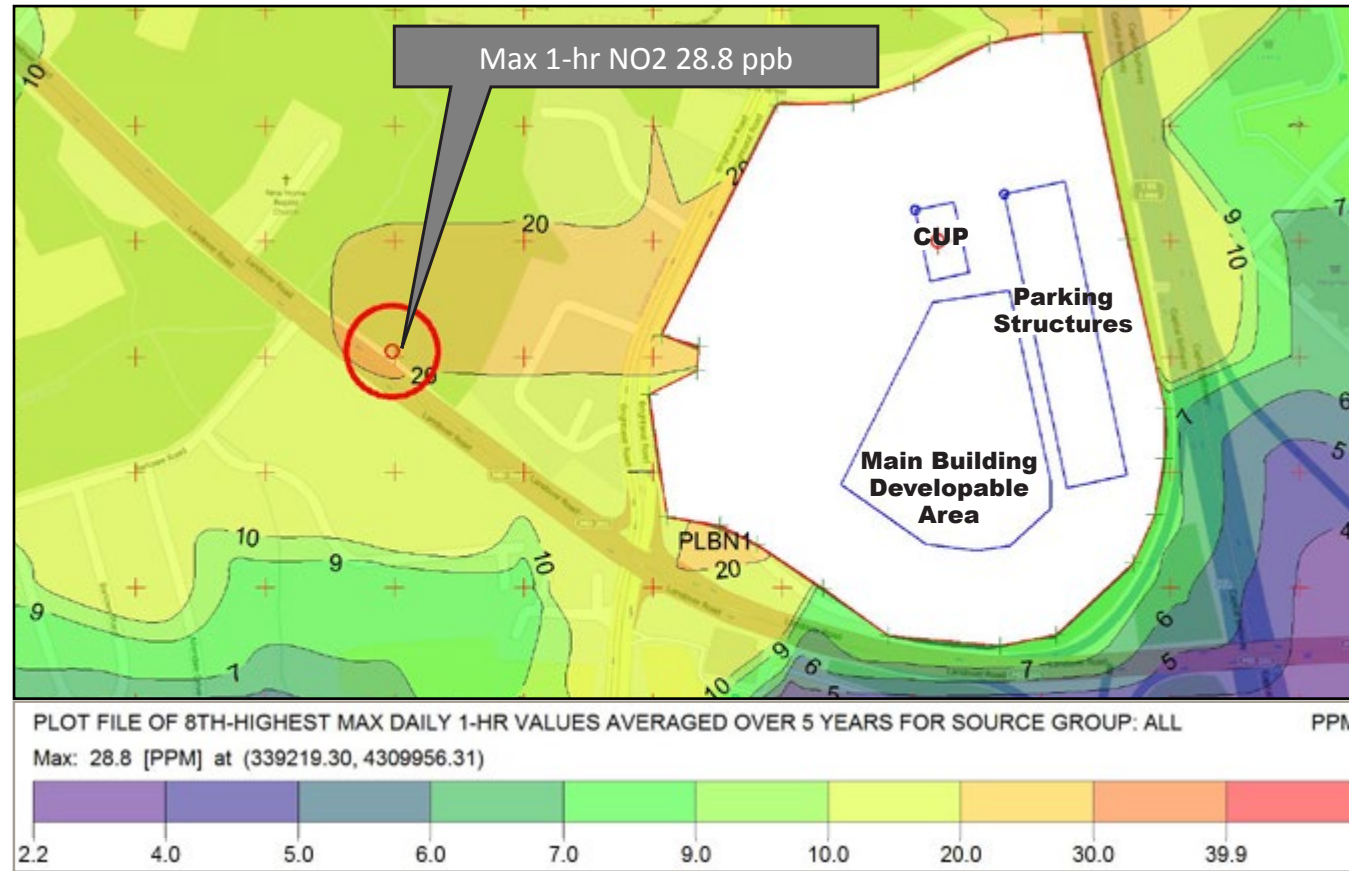


Table 6-43: Landover Preliminary NO₂ Analysis Results

NO ₂ 1-hr (PPB)				NO ₂ Annual Average (PPB)			
Background	Max Project Increment	Total	NAAQS	Background	Max Project Increment	Total	NAAQS
39.2	28.8	68.0	100	8.2	1.3	9.5	53

ppb = parts per billion

Table 6-43 summarizes the NO₂ dispersion modeling analysis results, including the background concentration, project impact at the receptor with the highest concentration, and the total concentration. Annual average and 1-hour average NO₂ concentrations would be below the NAAQS. The highest 1-hour NO₂ concentration at the Landover site would occur along Landover Road, as shown in figure 6-42. Impacts would be lower at other locations in the surrounding communities and well below the NAAQS.

Table 6-44 and figure 6-43 summarize the PM_{2.5} analysis results, including the background concentration, project impact at the receptor with the highest concentration, and the total concentration. Annual average and 24-hr average PM_{2.5} concentrations would be below the NAAQS. The maximum concentration occurs just north of the Landover site. As a result, there would be direct, long-term, adverse impacts to air quality from stationary sources as a result of the Greenbelt Alternative.

Mobile Source Impacts

Two intersections would be at LOS F in the Landover transportation study area with incorporation of traffic mitigation: Intersection #16, Martin Luther King Jr. Highway and Ardwick-Ardmore Road in the AM peak hour and Intersection #12, Landover Road and St. Joseph's Drive/McCormick Drive in the PM peak hour. These intersections would also be at LOS F under the No-action Alternative.

Based on consideration of approach volumes and background concentrations (described in Appendix F), no exceedance of the CO NAAQS is anticipated for these two congested intersections under the Landover Alternative, however, there would still be direct, long-term, adverse impacts to air quality from mobile source emissions.

Temporary Construction Impacts

Table 6-45 summarizes the construction equipment and fugitive dust emissions for the Landover site. The fugitive dust analysis was based on a construction site area of approximately 80 acres. Annual construction emissions would be below the General Conformity de minimis thresholds for all criteria pollutants, except for PM₁₀ for which emissions could be 118 tons/year (assuming the larger site area leads to greater land disturbance and soil exposure compared to the smaller Greenbelt and Springfield sites). Note that the Landover site is not located in a nonattainment or maintenance area for PM₁₀, therefore General Conformity requirements do not apply to emissions of PM₁₀ in this area. Overall direct, short-term, major adverse impacts would occur during the construction period. This conclusion is based on PM₁₀ emissions exceeding 100 tons per year, incorporation of aggressive dust control mitigation could potentially reduce this impact to less than significant.

Construction at the Landover site would incorporate the same construction air quality mitigation measures and BMPs discussed in section 3.11.3.2.

Figure 6-43: Landover 24-hr PM_{2.5} Project Increment Results

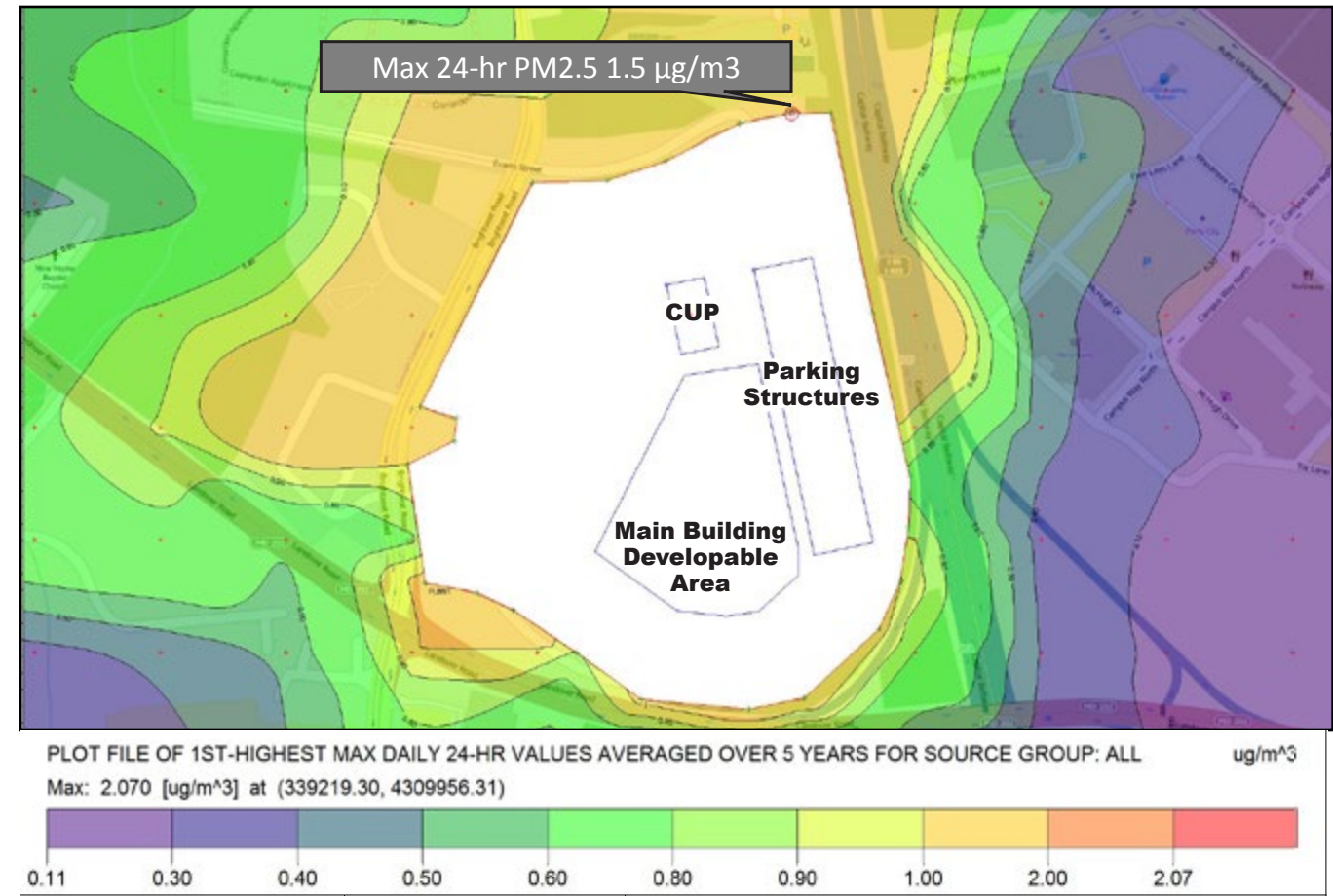


Table 6-44: Landover Preliminary PM_{2.5} Analysis Results

PM _{2.5} 24-hr (µg/m ³)				PM _{2.5} Annual Average (µg/m ³)			
Background	Max Project Increment	Total	NAAQS	Background	Max Project Increment	Total	NAAQS
23.0	1.5	24.5	35	10.2	0.4	10.6	12

µg/m³ = micrograms per cubic meter

Table 6-45: Landover Construction Emissions

	VOC (tons)	CO (tons)	NO _x (tons)	SO ₂ (tons)	PM ₁₀ (tons)	PM _{2.5} (tons)
Total Construction Emissions per year	4.0	65.2	53.4	1.2	118.1	14.3
General Conformity de minimis threshold (per year)	50	100	100	100	100	100

**LANDOVER NOISE
ENVIRONMENTAL CONSEQUENCES
SUMMARY**

No-action Alternative: No measurable impacts.

Landover Alternative: Direct, short-term, adverse impacts.

6.2.11 Noise

6.2.11.1 No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to noise because there are no approved plans for future redevelopment that would alter existing noise levels.

**NOISE
ASSESSMENT OF SIGNIFICANCE**

Impacts to noise would not result in significant impacts, as defined in section 3.12.3.

6.2.11.2 Landover Alternative

The Landover Alternative would result in similar construction-related equipment noise levels as well as operational noise levels as described for the Greenbelt site. Construction activities would create intermittent and temporary noise only when such activities are occurring. Construction-related noise impacts would be caused by the operation of construction equipment, including materials delivery and staff vehicle transportation, as well as site preparation, construction equipment operation on-site and the presence of construction workers.

The majority of the surrounding area has been previously developed. Primary noise generating sources in the area include the Capital Beltway, commercial and office complexes, and FedExField, all of which contribute to a considerable ambient noise level. Sensitive noise receptors adjacent to the site include residences to the west and north and H.P. Johnson Park to the north. Based on the extensive existing noise sources in the area, impacts are not anticipated to dominate the landscape, but would result in a noticeable alteration to the noise environment. All construction activities would adhere to noise control regulations as established in the City of Hyattsville ordinances, therefore noise impacts associated with construction at the Landover site would be direct, short-term, and adverse.

Noise impacts as a result of the Landover Alternative would be similar to those described for the Greenbelt site. These impacts would stem primarily from automobile traffic and parking related noise as well as from building operation and maintenance. There would also be generalized noise stemming from employee activities that would be expected to be similar to a large scale office complex. The expected noise level resulting from the operation of the Landover Alternative would be consistent with existing noise sources near the site, such as traffic on local roadways, the operation of commercial facilities, and events at FedExField. Therefore, although sensitive noise receptors are in proximity to the Landover site, impacts to noise at the Landover site would not be measurable, as noise levels would be consistent with the existing soundscape.

Transportation Mitigation

Construction of the recommended transportation mitigations, as shown in figure 6-40, would result in direct, short-term, adverse impacts to noise from the operation of construction equipment within the transportation study area.

6.2.12 Infrastructure and Utilities

The following sections describe the environmental consequences for infrastructure and utilities under both the No-action Alternative at Landover and the Landover Alternative.

**INFRASTRUCTURE AND UTILITIES
ASSESSMENT OF SIGNIFICANCE**

Impacts to infrastructure and utilities would not result in significant impacts, as defined in section 3.13.3.

6.2.12.1 Water Supply

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to water supply or service because there are no approved plans for future redevelopment that would alter the current demand or capacity for water service.

Landover Alternative

The Landover Alternative would result in an increased water demand for the site. WSSC confirmed that combined domestic and fire water service is available to the site, and that separate feeds would not be required for development of the site (WSSC 2015). WSSC also indicated that water pressure to the site is estimated to be between 45 and 55 pounds per square inch (psi). Given that there are currently two 12-inch water supply lines to the site, and a number of high capacity existing water mains adjacent to the site, it is not anticipated that off-site improvements would be required; however, final determination of potential off-site improvements (i.e., length, location) would be determined through the Hydraulic Planning Analysis process. Under this process, WSSC would review the demands associated with the project and model the system performance under the new hydraulic load to determine potential impacts to the existing water supply and storage systems.

6.2.12.2 Wastewater Collection and Treatment

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to wastewater collection and treatment because there are no approved plans for future redevelopment that would alter the current demand or capacity for wastewater collection and treatment.

Landover Alternative

The Landover Alternative would result in direct impacts to wastewater collection and treatment resulting from an increased wastewater flow from the site. WSSC reports that off-site improvements would likely be required to support consolidation of the FBI HQ at this site and avoid downstream overflows. The extent of the required off-site improvements, including length of new sewer lines and the location of upgrades would be determined through the Hydraulic Planning Analysis process where WSSC reviews the demands associated with the project and models the system performance under the new hydraulic load to determine potential impacts to the existing wastewater collection and conveyance systems. Although the extent of the capacity shortcomings could not be identified by WSSC at the time of this report, direct, short-term, adverse impacts to downstream facilities and users are anticipated in association with the Landover Alternative due to existing capacity limitations. However, once any required off-site improvements are implemented, any adverse impacts to the wastewater collection and conveyance systems would be reduced to the extent they are not measurable.

6.2.12.3 Electric Power

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to electric power because there are no approved plans for future redevelopment that would alter the current demand or capacity for electricity.

Landover Alternative

The Landover Alternative would result in direct impacts to electric power service. The anticipated load requirement for the consolidated FBI HQ campus is between 20 and 35 megavolt-amperes; PEPCO would make 13.2kV or 69kV available to meet the anticipated load and redundancy requirements. There are several possible configurations to provide adequate electric service to the site: multiple 13.2kV lines from different substations; two 69kV lines from different buses within the same substation; or two 69kV lines from different substations. Based on the desire for true redundancy and in consideration of the potential load associated with the consolidated FBI HQ and the ability for future expansion, it is likely that the consolidated FBI HQ would require that 69kV service be provided for the greatest flexibility.

Provision of a 69kV service would require construction of an on-site substation to step down voltage for distribution within the site. Additionally, the construction of several miles of new distribution lines would be necessary. Largo and Central Avenue are the two closest 69kV substations. The Largo Substation is approximately 2.5 miles from the Landover site and the Central Avenue Substation is approximately 4 miles away. PEPCO reports that the next closest 69kV substation is the Takoma Substation, located approximately 10 to 12 miles northwest of the site (PEPCO 2015c).

Although most of the work would likely occur within existing rights-of-way and/or easements, there would be direct, short-term, adverse impacts associated with the construction of several miles of transmission lines necessary to feed 69kV power to the site. However, no measurable long-term impacts would occur at the Landover site.

LANDOVER WATER SUPPLY ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: No measurable impacts.

LANDOVER WASTEWATER COLLECTION & TREATMENT ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: Direct, short-term, adverse impacts.

LANDOVER ELECTRIC POWER ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: Direct, short-term, adverse impacts.

LANDOVER NATURAL GAS ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: No measurable impacts.

LANDOVER TELECOMMUNICATIONS ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: Direct, short-term, adverse impacts.

LANDOVER STORMWATER MANAGEMENT ENVIRONMENTAL CONSEQUENCES SUMMARY

No-action Alternative: No measurable impacts.

Landover Alternative: Direct, long-term, beneficial impacts.

6.2.12.4 Natural Gas

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to natural gas because there are no approved plans for future redevelopment that would alter the current demand or capacity for natural gas service.

Landover Alternative

Washington Gas representatives stated that it would be necessary to provide natural gas service to the site directly from a transmission pressure line to support the anticipated load associated with the consolidated FBI HQ (Washington Gas 2015c). There is a transmission pressure line located adjacent to the site along Brightseat Road with a branch that extends to the property line. Because transmission pressure gas service is currently available to the site, there would be no measurable impacts associated with natural gas at the Landover site.

6.2.12.5 Telecommunications

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to telecommunications because there are no approved plans for future redevelopment that would alter the current demand or capacity for telecommunications.

Landover Alternative

The provision of telecommunications service to the Landover site would not adversely impact current or future customers of the region. However, it would be necessary to extend secure fiber service approximately 1.5 miles to the site. Although it may be possible to extend service to the site within the right-of-way of I-95 to minimize the impacts associated with construction, adverse impacts are anticipated due to the length of the extension. Coordinating the telecommunications needs of the consolidated FBI HQ with the appropriate providers would be required.

Therefore, under the Landover Alternative, there would be direct, short-term, adverse impacts associated with disruptions of surrounding uses during construction of the secure fiber extension. Over the long-term, there would be no measurable impacts.

6.2.12.6 Stormwater Management

No-action Alternative

Under the No-action Alternative at the Landover site, there would be no measurable impacts to stormwater because there are no approved plans for future redevelopment that would alter the current demand or capacity for stormwater management.

Landover Alternative

Development of the site would require compliance with the Prince George's County Department of the Environment's Clean Water Program and the Water Quality Resources and Grading Code, as well as the State of Maryland's Stormwater Management program. Permitting and design requirements associated with stormwater management can be found in the County's Stormwater Management Design Manual (September 2014). The majority of the site is covered with impervious surfaces (i.e., parking lots and roadways). Low-impact development measures and on-site stormwater BMPs would be incorporated into the design. This would curtail, and potentially reduce, stormwater runoff from the site so as to not adversely affect downstream properties or facilities. Therefore, direct, long-term, beneficial impacts are expected under the Landover Alternative as a result of the incorporation of on-site stormwater BMPs.

6.2.13 Summary of Impacts

Table 6-46 presents a summary of the impacts associated with the Landover Alternative to the resource topics analyzed in this EIS, including the No-action Alternative at Landover.

Table 6-46: Landover Summary of Impacts

Resource Area	Impact Description	
Earth Resources		
Geology and Topography	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, short- and long-term, adverse impacts.
Soils	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, short-term, adverse impacts.
Water Resources		
Surface Water	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.
Hydrology	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, short-term, adverse impacts.
	BEN	Under the Landover Alternative, there would be direct, long-term, beneficial impacts.
Groundwater	N	Under the No-action Alternative, there would be no measurable impacts.
	BEN	Under the Landover Alternative, there would be direct, long-term, beneficial impacts.
Wetlands and Floodplains	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.
Biological Resources		
Vegetation	N	Under the No-action Alternative, there would be no measurable impacts.
	BEN	Under the Landover Alternative, there would be direct, long-term, beneficial impacts.
	ADV	Under the Landover Alternative, there would be direct, long-term, adverse impacts.
Aquatic Species	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.

N	No Measurable Impact	ADV	Adverse Impact	ADV	Major Adverse (Significant) Impact	BEN	Beneficial Impact
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Table 6-46: Landover Alternative Summary of Impacts (continued)

Resource Area	Impact Description	
Terrestrial Species	N	Under the No-action Alternative, there would be no measurable impacts.
	BEN	Under the Landover Alternative, there would be direct, long-term, beneficial impacts.
	ADV	Under the Landover Alternative, there would be direct, short- and long-term, adverse impacts.
Special Status Species	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.
Regional Land Use, Planning Studies, and Zoning		
Regional Land Use, Planning Studies, and Zoning	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts to zoning.
	ADV	Under the Landover Alternative, there would be direct, long-term, adverse impacts to land use.
	BEN	Under the Landover Alternative, there would be direct, long-term, beneficial impacts to land use.
Visual Resources		
Visual Resources	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, long-term, adverse impacts.
	BEN	Under the Landover Alternative, there would be direct, long-term, beneficial impacts.
Cultural Resources		
Archaeological	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.
Historic Resources	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.
Socioeconomics		
Population and Housing	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts to population in Prince George's County or the Washington, D.C., MSA. There is insufficient information to assess impacts to housing in Prince George's County.

N	No Measurable Impact	ADV	Adverse Impact	ADV	Major Adverse (Significant) Impact	BEN	Beneficial Impact
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Resource Area	Impact Description	
Employment and Income	N	Under the No-action Alternative, there would be no measurable impacts.
	BEN	Under the Landover Alternative, there would be indirect, short- and long-term, beneficial impacts.
Taxes	N	Under the No-action Alternative, there would be measurable impacts.
	BEN	Under the Landover Alternative, there would be indirect, short- and long-term, beneficial impacts to sales and income tax revenues.
	ADV	Under the Landover Alternative, there would be indirect, long-term, adverse impacts to property tax revenues.
School and Community Services	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there is insufficient information available to determine impacts to community services. No measurable short-term impacts to schools. Insufficient information available to determine long-term impacts to schools.
Recreation and Other Community Facilities	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there is insufficient information available to determine impacts.
Environmental Justice	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no short- or long-term adverse impacts to minority or low-income communities.
Protection of Children	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, no mitigation of disproportionate and adverse impacts to children is required under EO 13045.
Public Health and Safety/Hazardous Materials		
Public Health and Safety	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, short-term, adverse impacts.
	BEN	Under the Landover Alternative, there would be direct, long-term, beneficial impacts.
Hazardous Materials	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.
Transportation		

Table 6-46: Landover Alternative Summary of Impacts (continued)

Resource Area	Impact Description	
Pedestrian Network	N	Under the No-action Alternative, there would be no measurable impacts.
	BEN	Under the Landover Alternative, there would be direct, long-term, beneficial impacts.
Bicycle Network	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, long-term, adverse impacts.
Public Transit	ADV	Under the No-action Alternative, there would be direct, long-term, adverse impacts to public transit capacity.
	MAJ ADV	Under the No-action Alternative, there would be direct, long-term, major adverse impacts to bus operations.
	ADV	Under the Landover Alternative, there would be direct, long-term, adverse impacts to public transit capacity and direct, short-term, adverse impacts to bus operations.
	MAJ ADV	Under the Landover Alternative, there would be direct, long-term, major adverse impacts to bus operations.
	BEN	Under the Landover Alternative, there would be direct, long-term, beneficial impacts for FBI employees due to shuttles.
Parking	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.
Truck Access	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.
Traffic Analysis	MAJ ADV	Under the No-action Alternative, there would be direct, long-term, major adverse impacts to corridors.
	ADV	Under the No-action Alternative, there would be direct, long-term, adverse impacts to intersections.
	MAJ ADV	Under the Landover Alternative, there would be direct, short-term, major adverse impacts, and direct, long-term, major adverse impacts to corridors.
	ADV	Under the Landover Alternative, there would be direct, long-term, adverse impacts to intersections.
Greenhouse Gas Emissions and Air Quality		

Resource Area	Impact Description	
Global Climate Change/ Greenhouse Gases	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, long-term, adverse impacts.
Air Quality	N	Under the No-action Alternative, there would be no measurable impacts.
	MAJ ADV	Under the Landover Alternative, there would be direct, short-term, major adverse impacts.
	ADV	Under the Landover Alternative, there would be direct, long-term, adverse impacts.
Noise		
Noise	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, short-term, adverse impacts.
Infrastructure and Utilities		
Water Supply	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.
Wastewater Collection and Treatment	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, short-term, adverse impacts.
Electric Power	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, short-term, adverse impacts.
Natural Gas	N	Under the No-action Alternative, there would be no measurable impacts.
	N	Under the Landover Alternative, there would be no measurable impacts.
Telecommunications	N	Under the No-action Alternative, there would be no measurable impacts.
	ADV	Under the Landover Alternative, there would be direct, short-term, adverse impacts.
Stormwater Management	N	Under the No-action Alternative, there would be no measurable impacts.
	BEN	Under the Landover Alternative, there would be direct, long-term, beneficial impacts.

N	No Measurable Impact	ADV	Adverse Impact	MAJ ADV	Major Adverse (Significant) Impact	BEN	Beneficial Impact
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