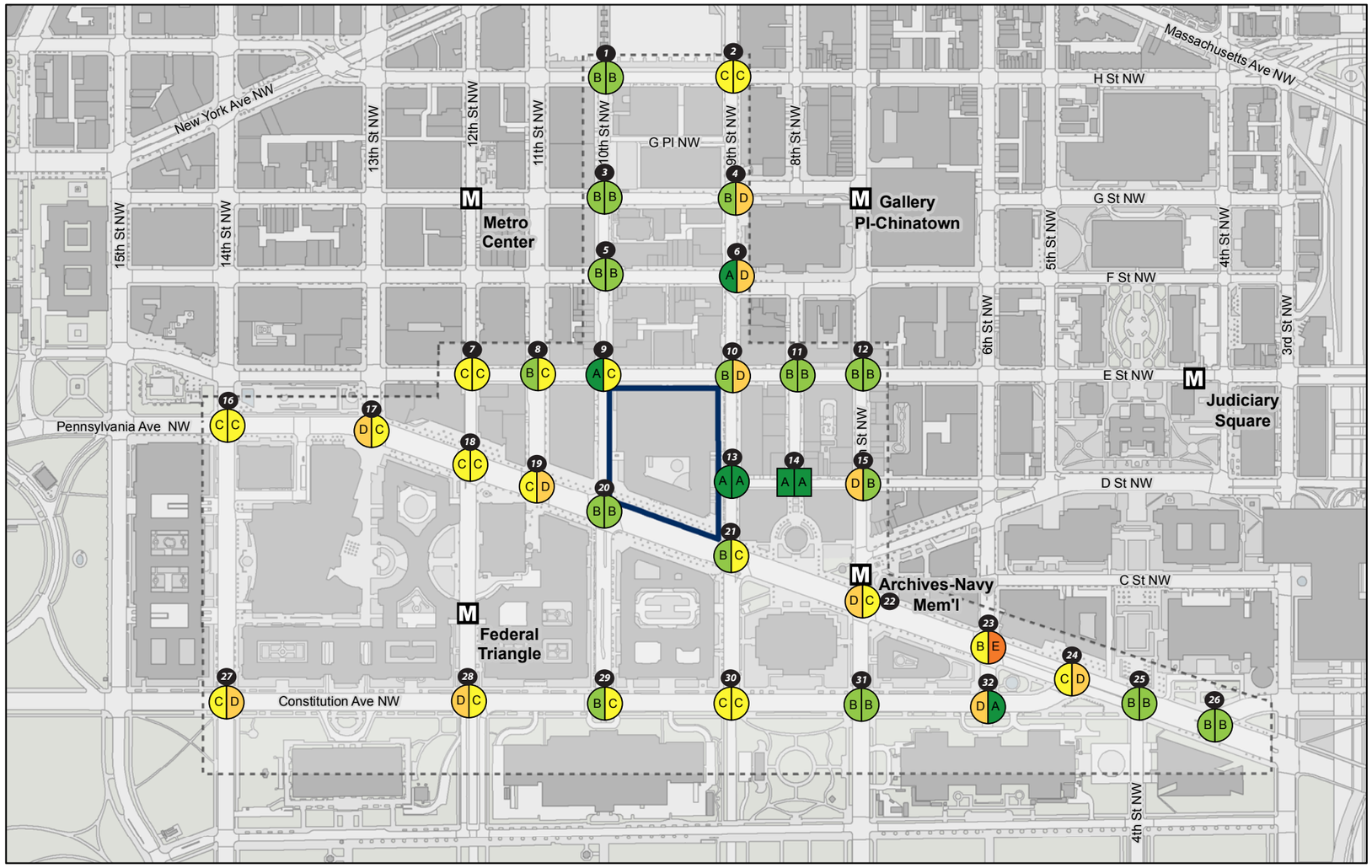
No-action Alternative Queuing Analysis

Based on the Synchro™ and SimTraffic™ analysis, 30 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-action Alternative would have failing queues for two more intersections during the AM peak hour and two more intersections during the PM peak hour. The JEH TIA (Appendix B) contains a more detailed No-action Alternative traffic queuing analysis.

Summary of Traffic Analysis: No-action Alternative

Overall, the AM peak hour would experience isolated through-movement delays caused by queuing at three intersections (Intersections #19, #22, and #28). During the PM peak hour, 11 intersections would experience through-movement delays caused by queueing (Intersections #1, #2, #4, #9, #10, #20, #21, #23, #27, #28, and #29). Together these conditions would result in indirect, long-term, adverse impacts. Table 4-44 contains the intersection names tied to the intersection numbers listed above.

Figure 4-34: No-action Alternative Intersection LOS for AM and PM Peak Hours



Sources:
ESRI (2013), GSA (2013),DC GIS (2013)

JEH PEDESTRIAN NETWORK RFDS 1 ENVIRONMENTAL CONSEQUENCES SUMMARY

No measurable impacts.

JEH BICYCLE NETWORK RFDS 1 ENVIRONMENTAL CONSEQUENCES SUMMARY

No measurable impacts.

4.2.9.2 RFDS 1

This section introduces the conditions under RFDS 1 for the JEH parcel and provides a summary of each mode of travel and the potential impact. This includes descriptions of the pedestrian network, bicycle network, public transit system, parking conditions, truck access, and traffic operations. Impacts under RFDS 1 are compared to the No-action Alternative.

Pedestrian Network

Under RFDS 1, pedestrian trips on the JEH parcel and between the JEH parcel and the nearest Metrorail stations, other transit options, and nearby land uses would remain generally consistent with the current levels of pedestrian trips because the parcel would continue to accommodate approximately 5,000 employees.

Figure 4-20 in section 4.1.9.5 depicts the existing state of ADA compliance at crosswalks in the study area. As figure 4-20 shows, most of the curbs in the immediate vicinity of the JEH parcel are at least partly ADA compliant. However, all of the curbs on the same block as the JEH parcel are only partly ADA compliant because they all lack rumble strips or detectable warnings (i.e., dome-shaped bumps) (USDOJ 2007). Although the anticipated modal split favors pedestrians and the use of alternative travel modes, it is assumed that without significant redevelopment or building upgrades that require reconstruction of substantial portions of the sidewalk, the exchange partner may not upgrade the sidewalk frontages and curb ramps to full ADA compliance outside the JEH building in the reuse of the parcel. According to DDOT's Design and Engineering Manual, for rehabilitation projects (not new construction or reconstruction projects), the "design of pedestrian and bicycle facilities should be considered where warranted and cost effective" (DDOT 2009c). If and when the exchange partner redevelops the parcel or substantial sidewalk rehabilitation is required, it is assumed that it would be asked to ensure that the sidewalks and ramps on this block are also ADA compliant at that time (District Department of Public Works 2000). Depending on the DDOT requirements, other sidewalk and public space upgrades or improvements may also be required to adhere to the DDOT Downtown Streetscape Regulations and the regulations noted in the Public Realm Design Manual, a joint publication of DCOP and DDOT (2011).

Bicycle Network

Under RFDS 1 there would be no measurable indirect impacts to bicycle facilities or the bicycle network in the study area, because there are no additional planned bicycle facilities directly adjacent to the JEH parcel in the MoveDC plan (DDOT 2014c), It is anticipated that a similar number or slight increase of people would commute to the parcel via bicycle given that it would continue to accommodate approximately 5,000 employees, and other bicycle improvements in the larger metropolitan area may make bicycling more attractive to additional users.

Public Transit

The following sections describe RFDS 1 for the Metrorail and Metrobus modes within the study area. The other transit modes, commuter bus, shuttles, and slugging, were not analyzed because these modes do not have existing or future ridership statistics, or comprehensive planning documents. It is anticipated that a similar number or slight increase of people would commute to the parcel via commuter bus, shuttle, or slugging, however the parcel would continue to accommodate approximately 5,000 employees.

Projected Transit Growth

Projected transit trips associated with the future development conditions were calculated for RFDS 1 and then added to the 2025 No-action Alternative ridership totals for the Metrobus and Metrorail modes. The site mode split was determined for each land use in the DDOT Scoping Form, and was based on a number of previous studies and the parking supply planned for the scenario (see DDOT Scoping Form, Appendix A, for further details). The transit mode was further split into Metrorail and Metrobus trips using average Metrobus/Metrorail mode splits from the 2005 WMATA Development Survey (WMATA 2006) and the MWCOG Round 8.3 Cooperative Forecasts (MWCOG 2014b). Table 4-45 summarizes these mode splits by land use.

The total number of trips by peak period associated with RFDS 1 was determined using the general office trip generation rates from the I*TE Trip Generation Manual* (ITE 2012). To calculate net trips for the scenario by peak period, existing trips to and from the parcel were subtracted from the total trips calculated for the scenario. Table 4-46 summarizes the net transit trips for RFDS 1. Overall, the scenario would result in approximately 525 additional AM peak transit trips and 537 additional PM peak transit trips (in and out columns combined).

Metrorail Analysis

To evaluate the impact under RFDS 1 to the Metrorail system within the study area, the net transit trips calculated for the AM peak hour and PM peak hour in table 4-46 were disaggregated into Metrorail and Metrobus trips, using the transit mode splits from table 4-45. Table 4-47 summarizes net Metrorail trips generated for RFDS 1.

The net Metrorail trips associated with RFDS 1 were added to the projected 2025 No-action Alternative ridership totals for each station entrance and line proportionally based on projected 2025 No-action Alternative ridership.

Table 4-45: RFDS 1 Mode Share by Land Use

Mode Share	FBI	Future Office	Future Residential/ Retail
Vehicle	13.5%	17%	10%
Carpool	8.5%	11%	11%
Bicycle	2%	3%	8%
Walk	1%	2%	12%
Transit	75%	67%	59%
Percent of Transit Mode	**FBI**	**Future Office**	**Future Residential/ Retail**
Metrorail	84%	84%	85%
Metrobus	16%	16%	15%

Source: DDOT Scoping Form (Appendix A); MWCOG (2014c); WMATA (2006)

JEH PUBLIC TRANSIT
RFDS 1
ENVIRONMENTAL CONSEQUENCES
SUMMARY

No measurable impacts, however the long-term, major adverse impacts described for the No-action Alternative would continue.

Table 4-46: RFDS 1 Net Transit Trips

Use	Independent Variable	Time Period	All Modes			Transit Mode			
			IN	OUT	TOTAL	Transit Mode Split	IN	OUT	TOTAL
Existing JEH Trips to Subtract									
JEH	5,045 employees	AM Peak	1,361	102	1,463	75%	1,020	77	1,097
		PM Peak	68	1,289	1,357	75%	51	967	1,018
RFDS 1 Trips									
General Office	5,045 employees	AM Peak	2,131	291	2,422	67%	1,428	195	1,622
		PM Peak	395	1,926	2,321	67%	264	1,291	1,555
Net Trips for RFDS 1 (RFDS 1 Trips Minus JEH trips)									
Total		**AM Peak**					**407**	**118**	**525**
		PM Peak					**213**	**324**	**537**

Source: DDOT Scoping Form (Appendix A); MWCOG (2014c); WMATA (2006)
Note: Calculations may not appear correct due to rounding.

Table 4-47: RFDS 1 Net Metrorail Trips

Use	Independent Variable	Time Period	All Modes			Transit Mode			
			IN	OUT	TOTAL	Transit Mode Split	IN	OUT	TOTAL
Existing JEH Trips to Subtract									
JEH	5,045 employees	AM Peak	1,020	77	1,097	83.6%	853	64	917
		PM Peak	51	967	1,018	83.6%	43	808	851
RFDS 1 Trips									
General Office	5,045 employees	AM Peak	1,428	195	1,622	83.6%	1,194	163	1,356
		PM Peak	264	1,291	1,555	83.6%	221	1,079	1,300
Net Trips for RFDS 1 (RFDS 1 Trips Minus JEH trips)									
Total		**AM Peak**					**341**	**99**	**439**
		PM Peak					**178**	**271**	**449**

Source: DDOT Scoping Form (Appendix A); MWCOG (2014c); WMATA (2006)

Table 4-48: RFDS 1 AM Peak Period Projected Maximum Metrorail Passenger Loads by Line

Line	Segment	2014			2025 No-action Alternative		2025 RFDS 1	
		Passengers	Train Cars	Load	Passengers	Load	Passengers	Load
Red	Gallery Place to Metro Center	9,125	136	67.1	11,651	85.7	11,823	86.9
Orange	Smithsonian to Federal Triangle	5,870	94	62.4	7,495	79.7	7,605	80.9
Green	Mt. Vernon Square to Gallery Place	3,542	68	52.1	4,522	66.5	4,589	67.5
Yellow	L'Enfant Plaza to Archives	3,058	78	39.2	3,904	50.1	3.962	50.8
Blue	Smithsonian to Federal Triangle	1,691	44	38.4	2,159	49.1	3,191	49.8

Source: WMATA (2015h); DDOT Scoping Form (Appendix A)

Table 4-49: RFDS 1 PM Peak Period Projected Maximum Metrorail Passenger Loads by Line

Line	Segment	2014			2025 No-action Alternative		2025 RFDS 1	
		Passengers	Train Cars	Load	Passengers	Load	Passengers	Load
Red	Gallery Place to Metro Center	10,614	142	74.7	13.605	95.8	13,781	97.0
Orange	Smithsonian to Federal Triangle	2,448	42	58.3	3,158	74.4	3,178	75.7
Green	Mt. Vernon Square to Gallery Place	4,034	70	57.6	5,171	73.9	5,237	74.8
Yellow	L'Enfant Plaza to Archives	6,417	114	56.3	8,225	72.1	8,331	73.1
Blue	Smithsonian to Federal Triangle	3,588	78	46.0	4,599	59.0	4,658	59.7

Source: WMATA (2015h); DDOT Scoping Form (Appendix A)

Metrorail Passenger Loads

Refer to section 3.10.4.3 for further details on how Metrorail passenger loads were calculated. Metrorail passenger loads by line within the study area were calculated for the busiest segment of each line within the study area using forecasted ridership for RFDS 1 during the AM and PM peak periods. The scenario trips were distributed to the busiest segment of each line within the study area according to each segment's proportion of ridership within the study area.

Loads are highest on the Red line between Gallery Place and Metro Center during the PM peak period. Tables 4-48 and 4-49 summarize the passenger loads per car for RFDS 1 during the AM peak and PM peak periods.

Station Capacity Analysis

Refer to section 3.10.4.3 for further details on how station capacity analysis was calculated. A capacity analysis was conducted for the vertical elements (escalators and stairs), faregate aisles, fare vending machines, and platforms at Archives-Navy Memorial and Federal Triangle Metro Stations, as well as the south and east entrances to Metro Center and the east and west entrances at Gallery Place-Chinatown (the closest entrances to the JEH parcel). The analysis used peak 15-minute periods of ridership (entries and exits) at each station according to projected ridership for RFDS 1 for the year 2025. This includes additional trips associated with planned development projects, predicted regional transit growth, and the net trips calculated for RFDS 1 (distributed to each station entrance proportionally based on existing ridership). To calculate 15-minute ridership from peak hour ridership, AM and PM peak hour ridership totals were disaggregated using the average PHF in the study area (0.282 during the AM peak hour, 0.268 during the PM peak hour).

The v/c ratios were calculated for the vertical elements and fare elements, and pedestrian LOS was calculated for platform areas. Analysis for vertical elements and faregate aisles used projected ridership from the peak exiting period at each station entrance – based on the time period when the highest concentration of passengers would be using each element. Table 4-50 summarizes projected ridership during the peak existing period at each station entrance under RFDS 1. Overall, there is not a significant change in ridership between the No-action Alternative and RFDS 1.

The platform area analysis and fare vending machine analysis used projected ridership from the peak entering period at each station–the time period when the most passengers would likely use fare vending machines and the highest number of passengers would be waiting on the platform. Table 4-51 summarizes projected ridership during the peak entering period at each station platform under RFDS 1 (for peak entering period ridership by station entrance, see "Fare Vending Machine" sections in Appendix B). Overall, there is not a substantial change in ridership between the No-action Alternative and RFDS 1.

Overall, vertical elements and faregate aisles at each station are projected to operate below a v/c of 0.7, which is considered capacity. Fare vending machines are projected to operate above capacity at Archives-Navy Memorial, the east and west entrances to Gallery Place-Chinatown, and the east and south entrances to Metro Center).

Platform peak pedestrian LOS (based on the available spacing between passengers) on the busiest platform sections are projected to be at the acceptable pedestrian LOS B at Archives-Navy Memorial and Federal Triangle. The Red line platforms at Gallery Place-Chinatown and Metro Center are all projected to operate at a pedestrian LOS D, while the lower platforms at each station are projected to operate at a pedestrian LOS C. At pedestrian LOS D, passengers would likely begin to spread out farther down the platform. Further details on the station capacity analysis are found in the JEH TIA (Appendix B).

Details on the emergency evacuation analysis are found in the JEH TIA (Appendix B).

Table 4-50: RFDS 1 Weekday Peak 15-Minute Exiting Period Ridership

Metro Station	Time	2014		2025 No-action Alternative		2025 RFDS 1	
		Entries	Exits	Entries	Exits	Entries	Exits
Archives	8:45 AM – 9:00 AM	25	524	46	670	51	690
Federal Triangle	8:45 AM – 9:00 AM	15	467	28	597	31	614
Gallery Place East	6:15 PM – 6:30 PM	212	355	266	445	277	470
Gallery Place West	8:45 AM – 9:00 AM	12	301	15	378	18	389
Metro Center East	8:45 AM – 9:00 AM	44	434	55	544	63	561
Metro Center South	8:45 AM – 9:00 AM	20	427	36	546	40	562

Source: WMATA (2014d); MWCOG (2015); DDOT Scoping Form (Appendix A)

Table 4-51: RFDS 1 Weekday Peak 15-Minute Entering Period Platform Ridership

Metro Station	Time	2014		2025 No-action Alternative		2025 RFDS 1	
		Entries	Exits	Entries	Exits	Entries	Exits
Archives	5:00 PM – 5:15 PM	524	56	665	77	682	83
Federal Triangle	5:00 PM – 5:15 PM	501	38	635	55	652	57
Gallery Place Glenmont	5:00 PM – 5:15 PM	641	975	807	1,220	812	1,231
Gallery Place Shady Grove	5:00 PM – 5:15 PM	1,016	534	1,302	667	1,311	671
Gallery Place Green/ Yellow	5:00 PM – 5:15 PM	1,629	1,128	2,051	1,436	2,056	1,443
Metro Center Glenmont	5:30 PM – 5:45 PM	1,171	548	1,472	680	1,479	685
Metro Center Shady Grove	5:30 PM – 5:45 PM	1,183	691	1,490	859	1,496	861
Metro Center Blue/ Orange/Silver	5:30 PM – 5:45 PM	1,618	1,651	2,044	2,078	2,056	2,090

Source: WMATA (2014d); MWCOG (2015); DDOT Scoping Form (Appendix A)

PEAK HOUR FACTOR (PHF)

PHF is the proportion of hourly ridership that occurs during the peak 15-minute period of that hour.

Table 4-52: RFDS 1 Net Metrobus Trips

Use	Independent Variable	Time Period	All Modes			Transit Mode			
			IN	OUT	TOTAL	Transit Mode Split	IN	OUT	TOTAL
Existing JEH Trips to Subtract									
JEH	5,045 employees	AM Peak	1,020	77	1,097	16.4%	167	13	180
		PM Peak	51	967	1,018	16.4%	8	159	167
RFDS 1 Trips									
General Office	5,045 employees	AM Peak	1,428	195	1,622	16.4%	234	32	266
		PM Peak	264	1,291	1,555	16.4%	43	212	255
Net Trips for RFDS 1 (RFDS 1 Trips Minus JEH trips)									
Total		**AM Peak**					**67**	**19**	**86**
		PM Peak					**95**	**53**	**88**

Source: DDOT Scoping Form (Appendix A); MWCOG (2014c); WMATA (2006)
Note: Calculations may not appear correct due to rounding.

Table 4-53: RFDS 1 Total Bus Capacity Analysis

	2014		2025 No-action Alternative		2025 RFDS 1	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Total Volume	4,315	3,952	5,383	4,978	5,470	5,066
Total Capacity	11,425	10,698	11,425	10,698	11,425	10,698
Volume to Capacity Ratio (V/C)	0.38	0.37	0.47	0.47	0.48	0.47

Including trips from planned development projects.
Source: WMATA (2014f); MWCOG (2015); DDOT Scoping Form (Appendix A)

Metrobus Analysis

To evaluate the impact of the RFDS 1 to the bus network within the study area, the net transit trips calculated for the AM peak hour and PM peak hour in table 4-46 were disaggregated into Metrorail and Metrobus trips, using the transit mode splits from table 4-45. Table 4-52 summarizes net Metrobus trips generated by the scenario.

The net Metrobus trips associated with RFDS 1 were added to the AM peak hour and PM peak hour bus volumes calculated for the study area in the 2025 No-action Alternative. Both the AM peak hour and the PM peak hour were analyzed due to the fact that the AM peak hour had the highest No-action Alternative bus volumes, but the PM peak hour had a higher number of additional RFDS 1 trips than the AM peak hour. The trips were distributed proportionally to each route and direction within the study area based on 2025 No-action Alternative ridership levels.

Overall under RFDS 1, bus volumes are projected to be approximately 5,470 passengers during the AM peak period, and 5,066 passengers during the PM peak period. Both of these totals are well below projected capacity, as summarized in table 4-53.

Despite the fact that the total bus volume within the study area does not exceed the total bus capacity, several individual routes would likely experience capacity issues during peak hours. Peak volumes per hour on Routes 11Y, 32, 36, 80, and G8 are all projected to be over capacity by 2025 within the study area. WMATA has completed studies of the 30s Line (Routes 32 and 36), Route 80, and Route G8. Certain recommendations from these studies have already been implemented by WMATA prior to this study, and are all intended to help alleviate overcrowding on these routes. Further analysis would be required to determine the extent to which the recommendations would impact capacity on these routes. Specific recommendations from WMATA's studies to improve bus capacity are found in Appendix B. Appendix B also has further details on the bus capacity analysis.

Parking

It is unlikely the new building occupants would need to maintain security setbacks from the building that restrict all on-street parking surrounding the JEH parcel. Therefore, the addition of street parking on the JEH parcel block would be left to the discretion of DDOT and the exchange partner. It is assumed that at least one or more sides of the JEH parcel would be opened to on-street time restricted parking, with time limits established based on the parking restrictions in the immediate area and the need of the traffic network to accommodate peak volumes.

Under the assumptions of RFDS 1, the total number of off-street garage parking spaces on the parcel would remain largely consistent with the current off-street parking supply with parking garage access being provided along 10th Street NW. With similar projections of building users for RFDS 1 as under the Existing Condition, it is assumed that parking demand would stay similar.

Under RFDS 1, there would be no measurable long-term impacts to off-street parking, as demand is not anticipated to increase. There could be indirect, long-term, beneficial impacts to off-street parking if public on-street parking along the streets surrounding the JEH parcel is instituted.

However, there would be indirect, short-term, adverse impacts during construction due to some existing parking spaces that would be unavailable due to construction staging or the presence of construction equipment.

Truck Access

It is anticipated that trucks accessing the JEH parcel under RFDS 1 would use one of the current truck access point on 10th Street NW, unless DDOT required access on an alternative street due to traffic or safety reasons, because no substantial changes would be made to site circulation, and there would be no exterior changes to the building. If trucks were to access the JEH parcel at a different location or at more than just the 10th Street NW vehicular entrance, there would likely be different, and possibly more, conflicts with pedestrians.

There would be no long-term measurable impacts to truck access, as conditions would remain similar to the Existing Condition. If DDOT would require truck access on an alternative street or location, truck and pedestrian conflicts would be diverted to a different sidewalk location, but the context and intensity would not change.

There could be indirect, short-term adverse impacts to truck access during construction. Because rehabilitation of the JEH building would require extensive interior demolition and new material, the one truck access point to the parcel may not be sufficient during construction. Without certainty of the needs of the future tenants, this study is unable to further evaluate the impacts of truck access to the parcel. It is anticipated the exchange partner may need to undertake truck access or site distance studies in coordination with DDOT in order to address any access issues not considered here.

Traffic Analysis

The next sections describe the process the study followed to project future traffic volumes; the modal split is covered within the trip generation section.

RFDS 1 Trip Generation and Modal Split

Trip generation for RFDS 1 is predicated on the use assumptions developed for RFDS 1, as described in section 2.3. The scenario assumes that the current building would continue as office space only, with the same number of employees as currently supported. The existing FBI-generated vehicle trips must be removed prior to adding new vehicle trips to account for the FBI relocating from the JEH parcel to one of the alternative sites.

FBI Employee Person Trips

Section 3.9.4.2 describes the special trip generation study. The proposed office use replacing the existing FBI use relied on the ITE general office (ITE land use code 710). It is assumed that the FBI is using the existing space to the fullest at the JEH building; therefore, replacing the FBI use with general office would fit the same number of people as present or 5,045. This value was used to develop the future office trip generation, resulting in a net positive growth in trips. FBI trip generation (0.29 during the AM peak hour and 0.269 during the PM peak hour) is far less than the ITE rate of 0.48 during the AM peak hour and 0.46 during the PM peak hour. It should be noted that following the FBI trip generation study process to calculate the existing person trips that need to be removed and following the ITE process to calculate the future office person trips that need to be added results in a very conservative net trip value and also maintains consistency between the JEH parcel analysis methods and consolidated FBI HQ sites. Table 4-54 summarizes the net generated trips for RFDS 1.

RFDS 1 Modal Split

Trip generation rates have been observed and developed primarily in single use facilities in suburban locations without pedestrian or transit access. The JEH parcel is located in a dense, urban area with extensive access to many transit options as well as bicycle and pedestrian options. For example, the JEH parcel is centered among four WMATA Metrorail stations: Metro Center to the Northwest, Gallery Place/ Chinatown to the Northeast, Federal Triangle to the Southwest, and Archives to the Southeast. Therefore, the study reduced the trip generation to reflect typical vehicle use in such an urban setting. Based on discussions with DDOT through the scoping process, it was agreed for the future office modal split to follow WMATA's 2005 Development-Related Ridership Survey (WMATA 2006) and the MWCOG 2025 Travel Demand Model (MWCOG 2014c) mode split projections, as shown in table 4-55. See Appendix A for the DDOT Scoping Form.

JEH PARKING
RFDS 1 ENVIRONMENTAL CONSEQUENCES SUMMARY

Indirect, short-term, adverse impacts

JEH TRUCK ACCESS
RFDS 1 ENVIRONMENTAL CONSEQUENCES SUMMARY

No measurable impacts.

Table 4-54: RFDS 1 Net Generated Trips

Total Generated Trips								
Land Use	**Independent Variable**	**Units**	**AM In**	**AM Out**	**Total AM**	**PM In**	**PM Out**	**Total PM**
Existing FBI	Employees	(5,045)	(1,361)	(102)	(1,463)	(68)	(1,289)	(1,357)
New Office	Employees	5,045	2,131	291	2,422	395	1,926	2,321
Net Trips			**770**	**188**	**959**	**327**	**637**	**964**

Note: Numbers in parenthesis are negative numbers.

Table 4-55: RFDS 1 Mode Split Assumptions

Mode Share	FBI	Future Office
Single-Occupant Vehicle	13.5%	17%
Carpool	8.5%	11%
Bicycle	2%	3%
Walk	1%	2%
Transit	75%	67%

JEH TRAFFIC ANALYSIS
RFDS 1 ENVIRONMENTAL CONSEQUENCES SUMMARY

Indirect, short- and long-term, adverse impacts to traffic.

Table 4-56: RFDS 1 Vehicle Trips Generated

Land Use	Travel Mode	Modal Split (Percent)	AM In	Am Out	Am Hour	PM In	PM Out	PM Hour
Existing FBI	SOV	13.5	(184)	(14)	(198)	(9)	(174)	(183)
	HOV	8.5	(23)	(2)	(25)	(1)	(22)	(23)
New Office	SOV	17.0	362	49	411	67	327	394
	HOV	11.0	47	6	53	9	42	51
Net Trips			202	39	241	66	170	239

Note: Negative numbers are shown in parenthesis (#).

Table 4-57: RFDS 1 Vehicle Trip Distribution

Destination	Road	Office Distribution
East DC/MD	Constitution Avenue East	4.0%
North DC	14th Street North	5.0%
Northeast DC/MD	7th Street North	26.0%
Northwest DC	H Street West	7.0%
Northwest MD, Western VA	Constitution Avenue West	29.0%
South DC, Southeast MD, Southwest VA	12th Street / 9th Street	29.0%
TOTAL		100.0%

After combining the trip generation with the modal split, the forecasted vehicle trips were calculated. The vehicle trips were then separated into SOV and high-occupancy vehicles (HOV). Because the study area is located in a downtown setting, the HOV were assumed to be an average of five persons per vehicle (includes vanpools). This resulted in 241 total AM peak hour vehicle trips and 239 total PM peak hour vehicle trips. Table 4-56 contains the vehicle trips generated under RFDS 1.

RFDS 1 Trip Distribution/Trip Assignment

Trip distribution represents the origin-destination pattern by percentage for trips generated or removed to/from points beyond the study area boundary (e.g., 26 percent destined to northeast DC and on to Maryland via 7th Street north, or 29 percent destined to southern DC, southeast Maryland and southwest Virginia via 12th Street and 9th Street).

Trips for current FBI employees were removed from the roadways. This was accomplished by identifying the zip codes of current employees, calculating the percentage of employees traveling to and from different sections of the region based on the number of employees in each of those zip codes, identifying the most logical routes to different sections of the region, and removing the peak FBI trips from those routes.

The MWCOG 2025 Travel Demand Model trip tables were used to determine the trip distribution for new employees at the parcel. The model is broken into 3,700 traffic analysis zones (TAZ) (a statistical boundary similar in size to census blocks) covering the Washington Metropolitan area. The JEH parcel is in Zone 21. The new employee trips were apportioned to origins and destinations outside the study area boundary based on the MWCOG trip tables. The trip distribution is summarized in table 4-57.

The subtraction of current FBI employee trips combined with the addition of new employee trips equals the net trip change between the No-action Alternative and RFDS 1. The total scenario net trip change AM and PM forecasted turning movement volumes are shown in figure 4-35.

Development of RFDS 1 Traffic Conditions

The planned developments, background growth, and RFDS 1 net trips, which subtract the new trips generated by RFDS 1 from existing FBI vehicle trips, were combined together to forecast conditions under RFDS 1. Figure 4-35 shows the AM and PM forecasted turning movement volumes under RFDS 1.