Transportation Impact Study

City Centre West

City of Fairfax, Virginia

September 30, 2022
Revised: June 2, 2023

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Executive Summary

The following report presents the findings of a Transportation Impact Study (TIS) conducted for the proposed redevelopment of the City Centre West site in the City of Fairfax, Virginia. This study was developed in accordance with guidelines and recommendations set forth by the City of Fairfax.

This study was prepared in accordance with the best professional practices and standards in order to assess the impact of the proposed redevelopment on the surrounding transportation systems and recommend improvements to lessen or negate those impacts. This study involves the evaluation of anticipated roadway conditions with and without the proposed redevelopment and recommends possible transportation improvements and strategies to offset both the impacts of the increase in future traffic demand and the changes in traffic operations and characteristics due to the redevelopment. This study serves to assist public officials and developers to balance interrelations between efficient traffic movements with necessary access.

2nd Submission Updates: As compared to the 1st submission plan and traffic study dated September 30, 2022, the program has since changed. The new proposed program is a mixed use development comprised of up to 79 multifamily units, 19,054 SF of general office, 18,032 SF of medical office, 5,012 SF of retail, an 1,801 SF bank, and a 5,012 SF restaurant. The total trip generation has reduced as compared to the previous submission.

Site Location and Study Area

The site is located south of Main Street, west of West Street, and east of Judicial Drive in the City of Fairfax, Virginia. The site is located in the Old Town Fairfax Activity Center within the Old Town Fairfax Transition Overlay District.

For the purposes of this study, the analysis presented herein includes 10 existing intersections and three (3) future intersections.

The study intersections are as follows:

1. Main Street and Judicial Drive
2. Main Street and Funeral Home Driveway West/Mosby Tower Driveway West
3. Main Street and Funeral Home Driveway East
4. Main Street and 10555 Main Street Driveway West
5. Main Street and 10555 Main Street Driveway East
6. Main Street and 10533 Main Street Driveway/Mosby Tower Driveway East
7. Main Street and 10515 Main Street Driveway
8. Main Street and 10501 Main Street Driveway West/Church Driveways
9. Main Street and 10501 Main Street Driveway East
10. Main Street and West Street
11. E/W Road and Site Entrance 1 (Future)
12. E/W Road and Site Entrance 2 (Future)
13. E/W Road and West Street (Future)

Description of Proposed Development

The site is currently occupied by a vacant 3,721 SF bank, a vacant 4,408 SF restaurant, and 11,340 SF of office that will be removed. The proposed program is a mixed-use development comprised of up to 79 multifamily units, 19,054 SF of general office, 18,032 SF of medical office, 5,012 SF of retail, an 1,801 SF bank, and a 5,012 SF restaurant. Total site build-out is planned for the year 2025.

Principal Findings and Conclusions

Discussions regarding the study assumptions and relevant background information were held with the City of Fairfax staff during a scoping meeting on May 2, 2022. A copy of the signed scoping document is included in Appendix A.

The analysis presented in this report supports the following major finding:

- After the addition of redevelopment traffic, and implementation of the proposed signal on Main Street, all study intersections operate at the same or better level of service as the Future Conditions without Development (2022).

Additional assumptions, findings, and conclusions are as follows:

TIA Components

- As determined based on discussions with the City, a growth rate of one (1) percent per year was applied to major movements at the study intersections to account for regional growth in background traffic volumes.
- A Mode Split/TDM reduction of five (5) percent was applied to residential and office uses, as agreed upon with the City.
- The site is expected to generate approximately 292 trips in the AM peak hour, 235 trips in the PM peak hour, and 2,482 daily trips at full build-out, after reductions.

Infrastructure

- Existing vehicular access is provided via three (3) full-access driveways and one (1) right-in/right-out (RIRO) on Main Street.
- Redevelopment of the property will remove the existing 10515 and 10501 Main Street driveways and convert the existing unsignalized four-legged Main Street and 10533/10523 Main Street intersection into a signalized five-legged intersection.
- Benefits of reducing curb cuts along Main Street include decreasing the number of conflict points along Main Street, increasing pedestrian safety, and increasing the available vehicle stacking distance along eastbound Main Street.

Non-SOV Elements

- Five (5) bus routes provide service in the vicinity of the site, providing regional access to the area.

Analysis Results

- Four (4) intersections within the study area operate below acceptable levels of service under Existing Conditions (2022), and the same intersections continue to operate below acceptable levels of service under Future Conditions without Development (2022).
- After the addition of redevelopment traffic, and implementation of the proposed signal on Main Street, all study intersections operate at the same or better level of service as the Future Conditions without Development (2022).

Proposed Mitigation

- A signal is proposed and recommended at the site entrance on Main Street to reduce delay and improve operation. This signal would also provide an operational benefit to the Mosby Tower Driveways and 10555 Main Street Driveway West by reducing delay. It is noted that this will be a five-legged signalized intersection, with the 10533 Main Street Driveway and Connector Road as separate northbound approaches.

- It is recommended that the existing two-way left turn lane on Main Street be converted into separate left turn lanes for the site and the church on the north side of Main Street.
- Introducing the East/West Road on the south side of the site increases porosity in the area by allowing vehicles to enter and exit the site via West Street and Main Street and provides a local road from which vehicles can access the parking garage.

Introduction

The following report presents the findings of a Transportation Impact Study (TIS) conducted for the proposed redevelopment of the City Centre West site in the City of Fairfax, Virginia. This study was developed in accordance with guidelines and recommendations set forth by the City of Fairfax.

The proposed program is a mixed-use development comprised of up to 79 multifamily units, 19,054 SF of general office, 18,032 SF of medical office, 5,012 SF of retail, an 1,801 SF bank, and a 5,012 SF restaurant. Total site build-out is planned for the year 2025.

The following tasks were completed as part of this study effort:

- A scoping meeting was held with City of Fairfax staff on May 2, 2022, which included discussions about the parameters of the study and relevant background information. A copy of the signed scoping document is included in Appendix A.
- Existing conditions were observed in the field to verify roadway geometry, pedestrian and bicycle infrastructure, and traffic flow characteristics.
- Turning movement counts were collected at the study area intersections on Thursday, May 5, 2022 during the morning and afternoon peak periods.
- Vehicular traffic analysis for the study intersections was performed using Synchro 11 based on Highway Capacity Manual (HCM) 2000 methodology.
- Intersection capacity analyses were performed for the existing year (2022) and build-out year (2025).
- Future traffic volumes were developed by accounting for regional growth in the area and background developments and roadway improvements. A growth rate of one (1) percent per year was applied to the existing volumes to account for a regional increase in background traffic.
- Proposed site traffic volumes were generated based on the methodology outlined in ITE *Trip Generation*, 10th Edition.
- An assessment of the previous crashes has been conducted at existing study intersections.

Sources of data for this study include Institute of Transportation Engineers (ITE), City of Fairfax, the Virginia Department of Transportation (VDOT), and the office files and field reconnaissance efforts by Gorove Slade.

Background Information: Proposed Development (Site and Nearby)

Description of the Existing Site

Site Location

The site is located south of Main Street, west of West Street, and east of Judicial Drive in the City of Fairfax, Virginia. The site is located in the Old Town Fairfax Activity Center within the Old Town Fairfax Transition Overlay District.

The geographic scope of the study area was developed in accordance with City of Fairfax guidance. Figure 1 shows the location of existing and future study intersections.

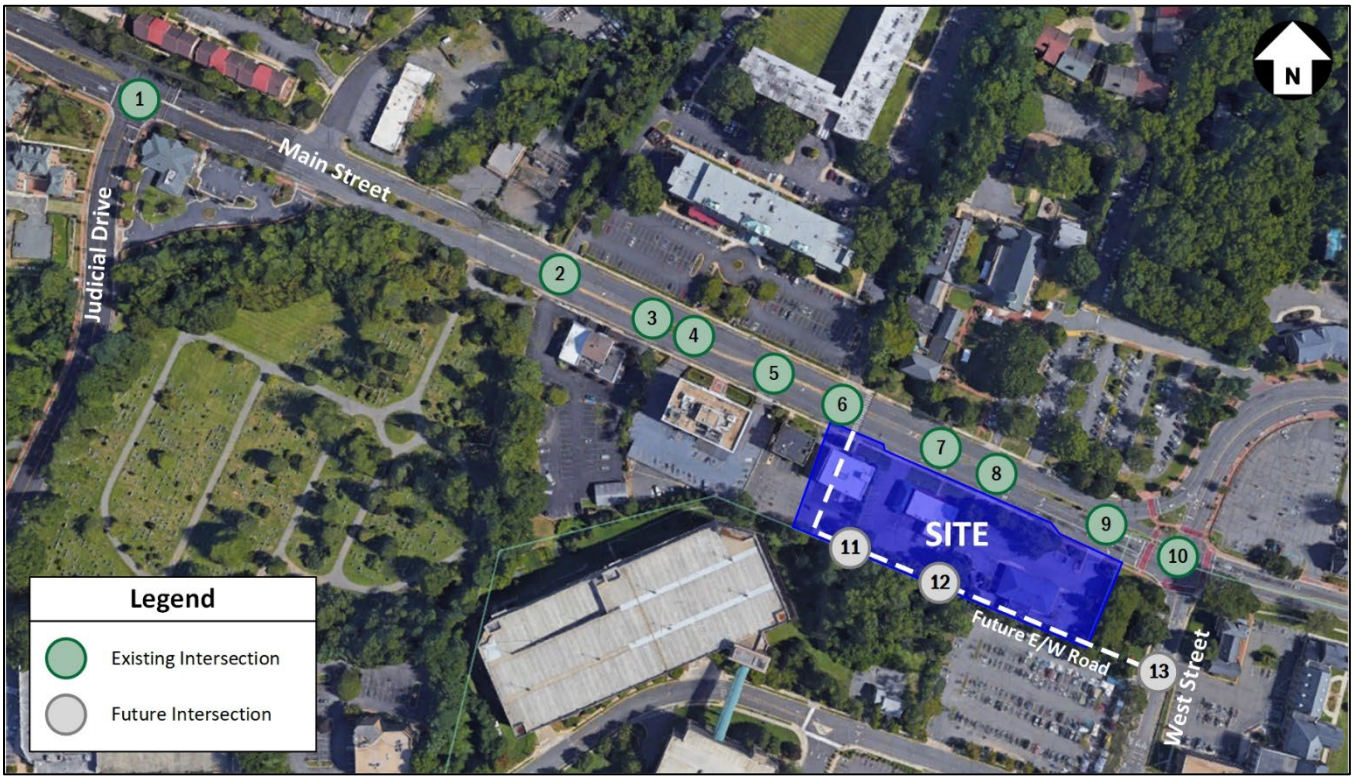

Figure 1: Study Intersections

Description of the Parcel

The City Centre West site is approximately 1.78 acres and is comprised three (3) parcels, which are identified on the City of Fairfax Tax Map as Tax Map #57-04-02-071, #57-04-02-072, and #57-04-02-076. The parcel map is shown in Figure 2.

A pocket park is proposed on County-owned property at the intersection of Main Street and West Street that will activate this corner and serve as a gateway into the west end of Old Town Fairfax.

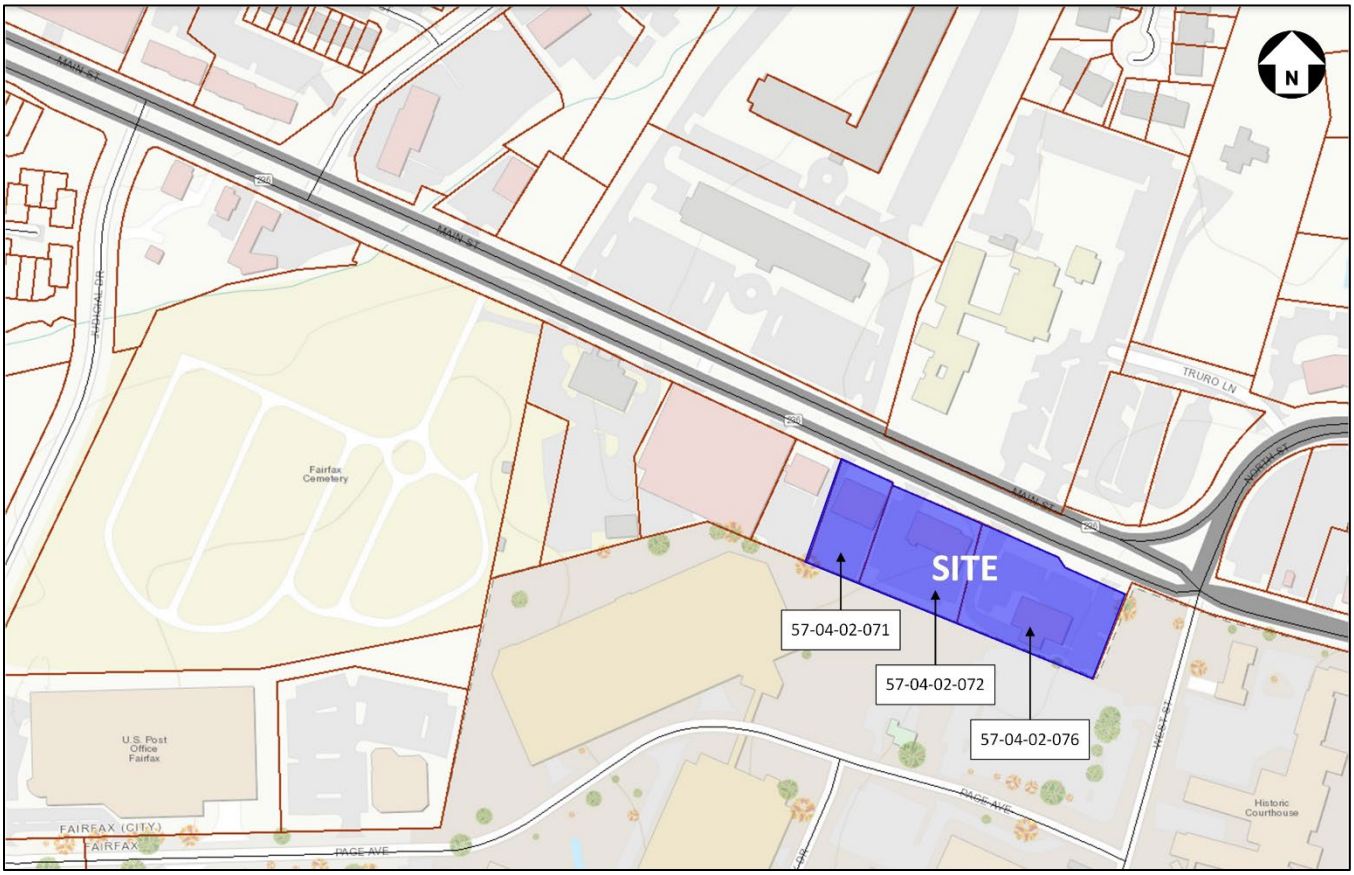

Figure 2: Parcel Map

General Terrain Features

The elevation of the site increases from west to east. Along Main Street, the existing elevation varies between 377 and 427 feet from Judicial Drive to West Street.

Location within Jurisdiction and Region

The site is located in the Old Town Fairfax Activity Center within the Old Town Fairfax Transition Overlay District in the City of Fairfax as shown in Figure 3.

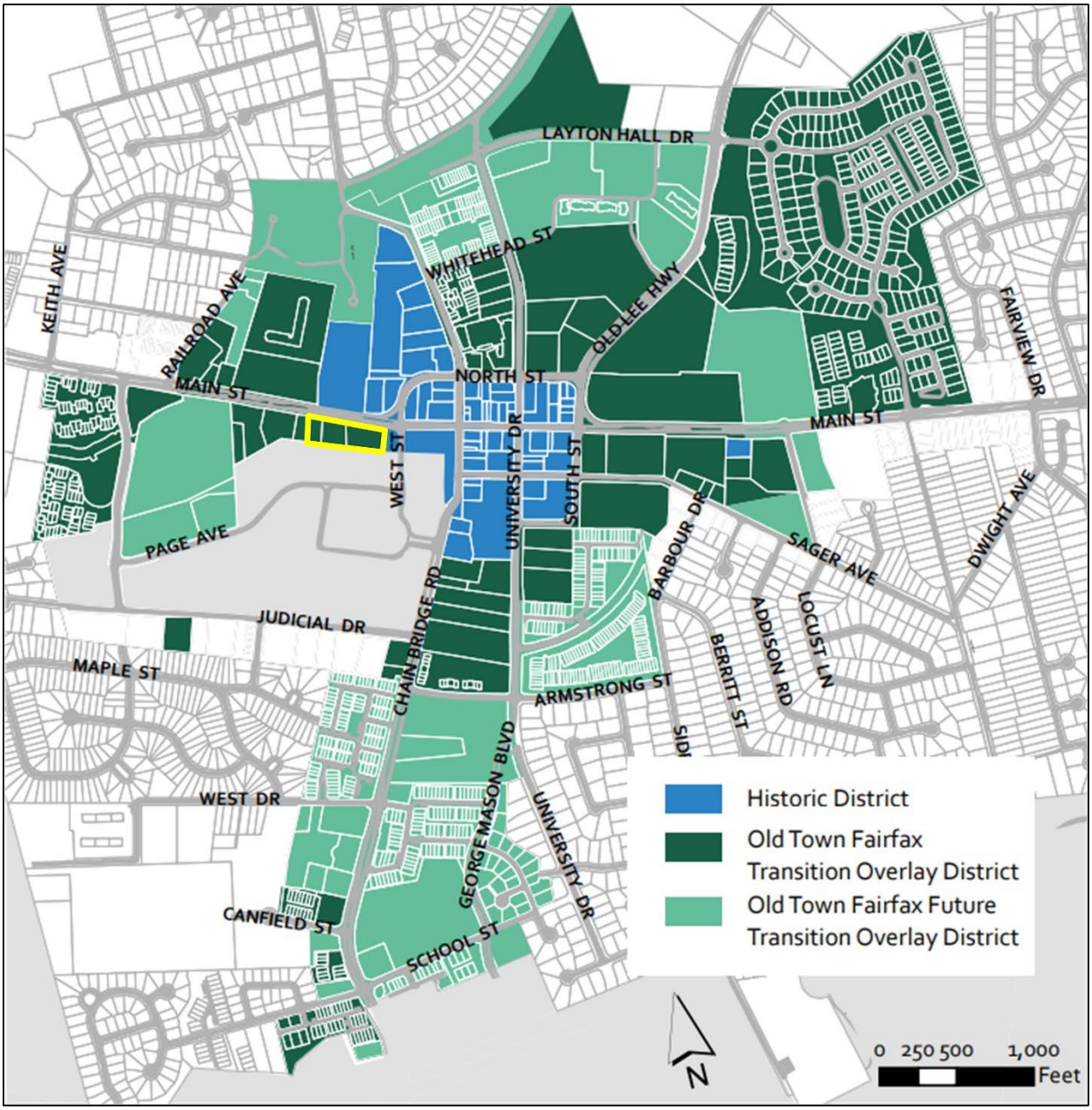

Figure 3: Jurisdiction Location (Source: City of Fairfax 2035 Comprehensive Plan)

Comprehensive Plan Recommendations

According to the City of Fairfax 2035 Comprehensive Plan, this site is planned for the Activity Center Place Type. The Activity Center Place Type applies to locations in the City where pedestrian-oriented, mixed-use development is strongly encouraged. The Old Town Fairfax Activity Center encompasses a cultural hub for the City, with a concentration of historic buildings, public services, active open space, and commercial buildings. Old Town Fairfax can also capitalize on its proximity to George Mason University to attract university supported businesses and arts and entertainment venues.

Zoning for the Site and Nearby Uses

The existing zoning for the site is CR (Commercial Retail) and CG (Commercial General) as shown in Figure 4. The existing zoning of the portion of the development in Fairfax County is PDC (Planned Development Commercial District).

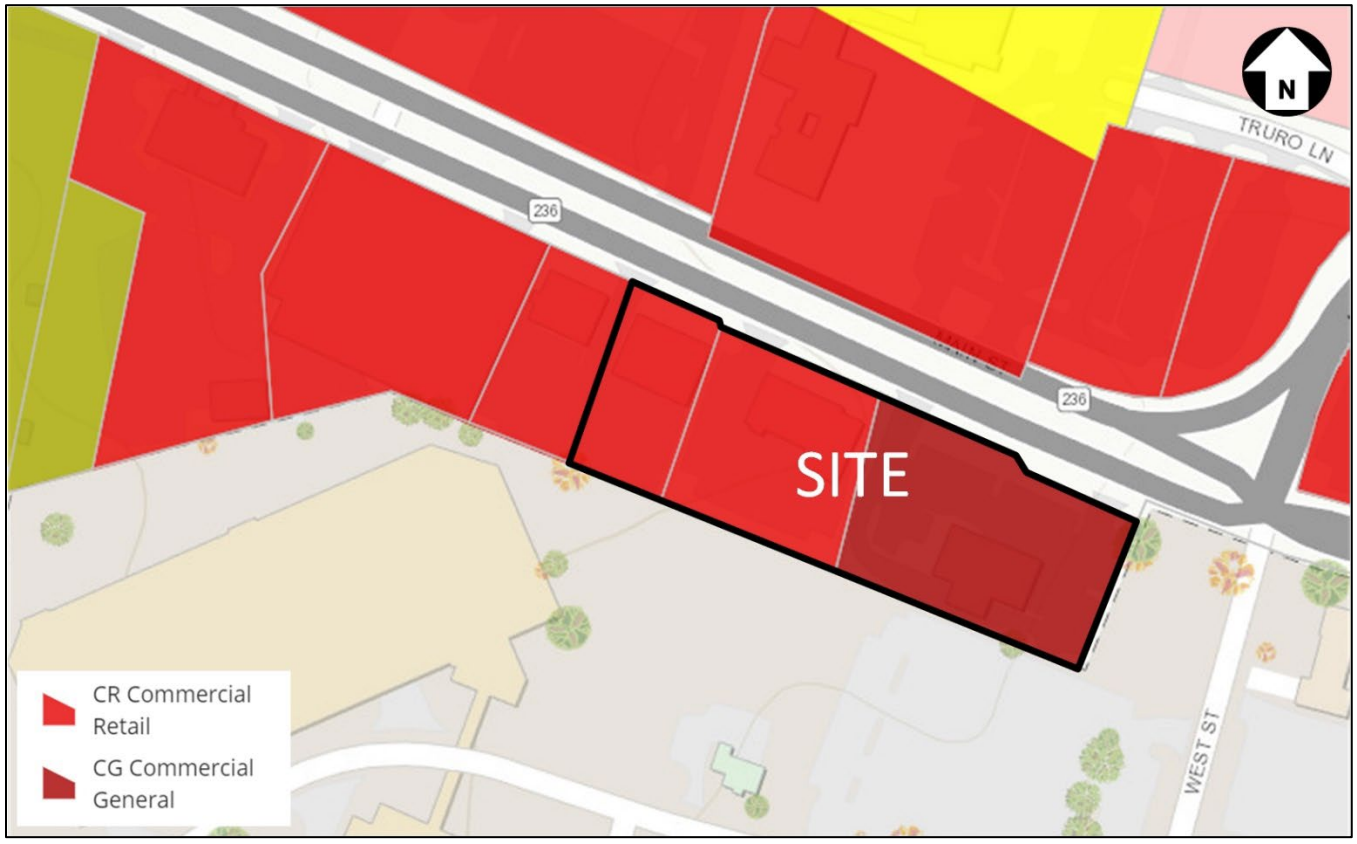

Figure 4: Zoning Map

Description of Geometric Scope and Limits of the Study Area

The geographic scope of the study area was developed in accordance with the City of Fairfax guidance.

Existing Roadways

The site is located south of Main Street, west of West Street, and east of Judicial Drive in the City of Fairfax, Virginia.

The existing study area includes ten (10) intersections along Main Street.

Detailed roadway descriptions are provided in the *Existing Conditions (2022)* section of this study.

The vehicular study area includes the following existing intersections:

1. Main Street and Judicial Drive
2. Main Street and Funeral Home Driveway West/Mosby Tower Driveway West
3. Main Street and Funeral Home Driveway East
4. Main Street and 10555 Main Street Driveway West
5. Main Street and 10555 Main Street Driveway East
6. Main Street and 10533 Main Street Driveway/Mosby Tower Driveway East
7. Main Street and 10515 Main Street Driveway
8. Main Street and 10501 Main Street Driveway West/Church Driveways
9. Main Street and 10501 Main Street Driveway East
10. Main Street and West Street

Planned Future Transportation Improvements

South Street Extension

The recommended extension of South Street to West Street between University Drive and Chain Bridge Road will reroute traffic and relieve congestion on Main Street through Old Town. The extension will also permit the continuation of a bicycle facility through Old Town. This project is to be constructed by others and is not expected to be completed by 2025, hence it was not included in future conditions analysis.

Old Town Streetscape Plan & Standards and Main Street Streetscape Design

The Main Street Streetscape Design is part of an overall effort to prepare an Old Town Streetscape Plan and Standards that would improve the appearance and experience of Old Town Fairfax as a destination. These improvements are to be completed by others.

Chain Bridge Road (Route 123) Sidewalk Improvements

This is a project to construct a new, continuous pedestrian facility on the west side of Chain Bridge Road between Old Town Fairfax and Rust Hill Place. The project will eliminate existing roadside hazards along the west side of Chain Bridge Road and provide a gateway to the Downtown area. This project was completed by others in 2020.

Transit Improvements

According to the City of Fairfax 2035 Comprehensive Plan, bus improvement and bus transfer improvements are proposed along and near Main Street in the vicinity of the site. Figure 5 shows the City's proposed transit network enhancements.

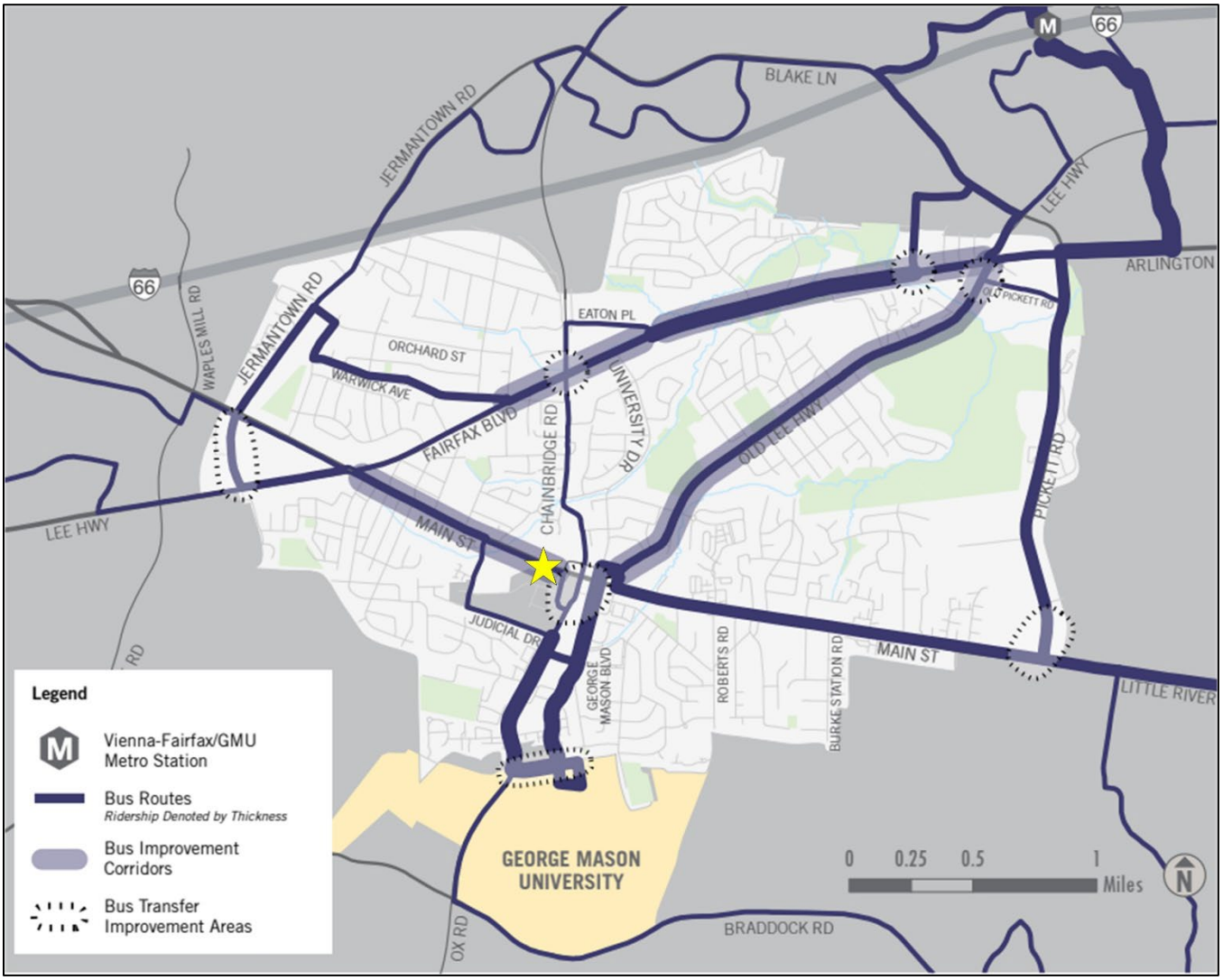

Figure 5: Proposed Transit Network Enhancements (Source: City of Fairfax 2035 Comprehensive Plan)

Bicycle and Pedestrian Improvements

According to the City of Fairfax 2035 Comprehensive Plan, on-street bike facilities and concentrated bicycle supportive infrastructure are proposed along and near Main Street in the vicinity of the site. Figure 6 shows the City's proposed network for bicycle travel.

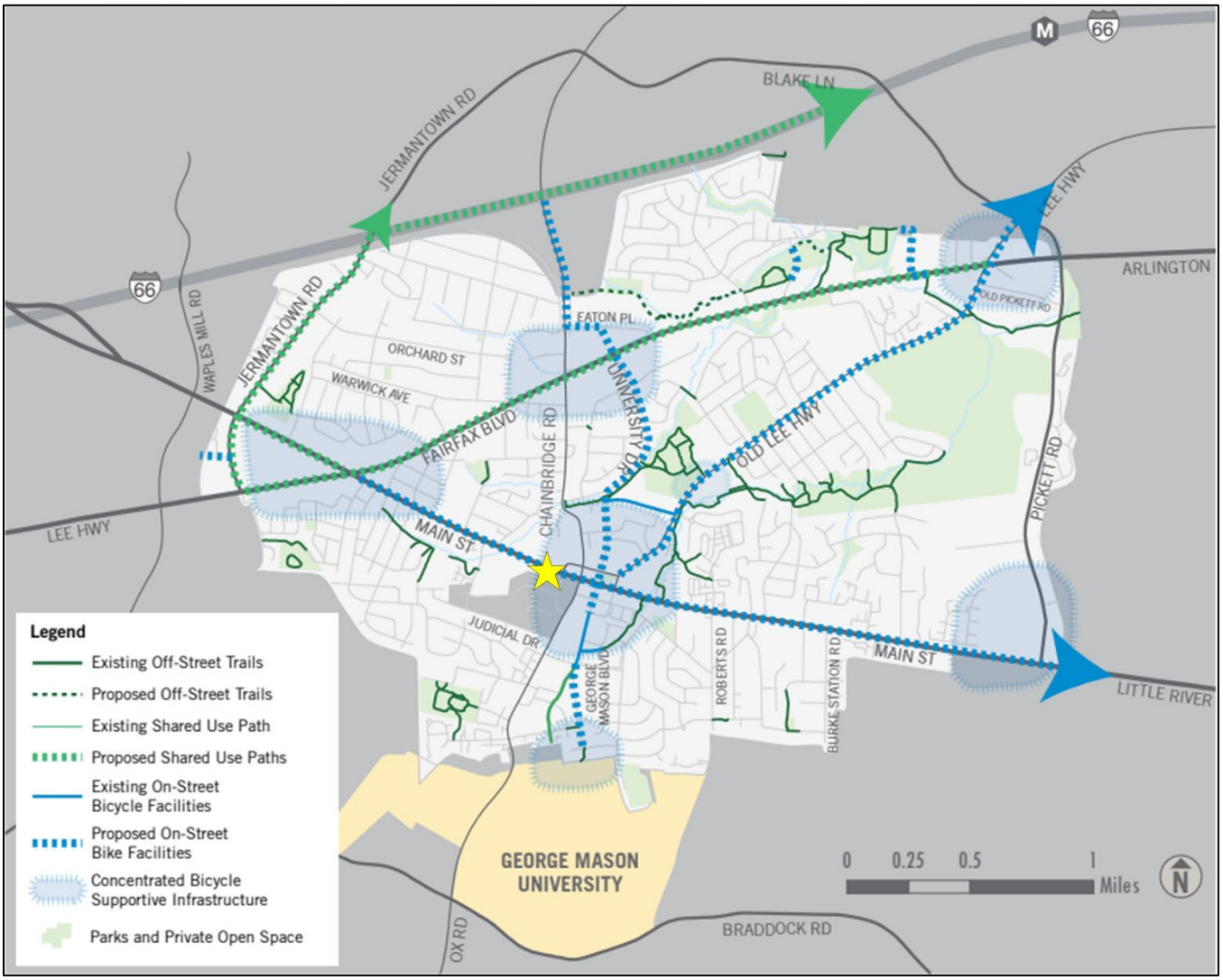

Figure 6: Proposed Network for Bicycle Travel (Source: City of Fairfax 2035 Comprehensive Plan)

Existing Conditions (2022)

Existing Transit Service

Five (5) bus routes currently serve the site area on Main Street and Chain Bridge Road (Route 123). Bus service is provided by City of Fairfax CUE Gold and Green Routes, Metrobus Routes 29K and 17G, and Fairfax Connector Route 306. The existing CUE bus routes are shown in Figure 7.

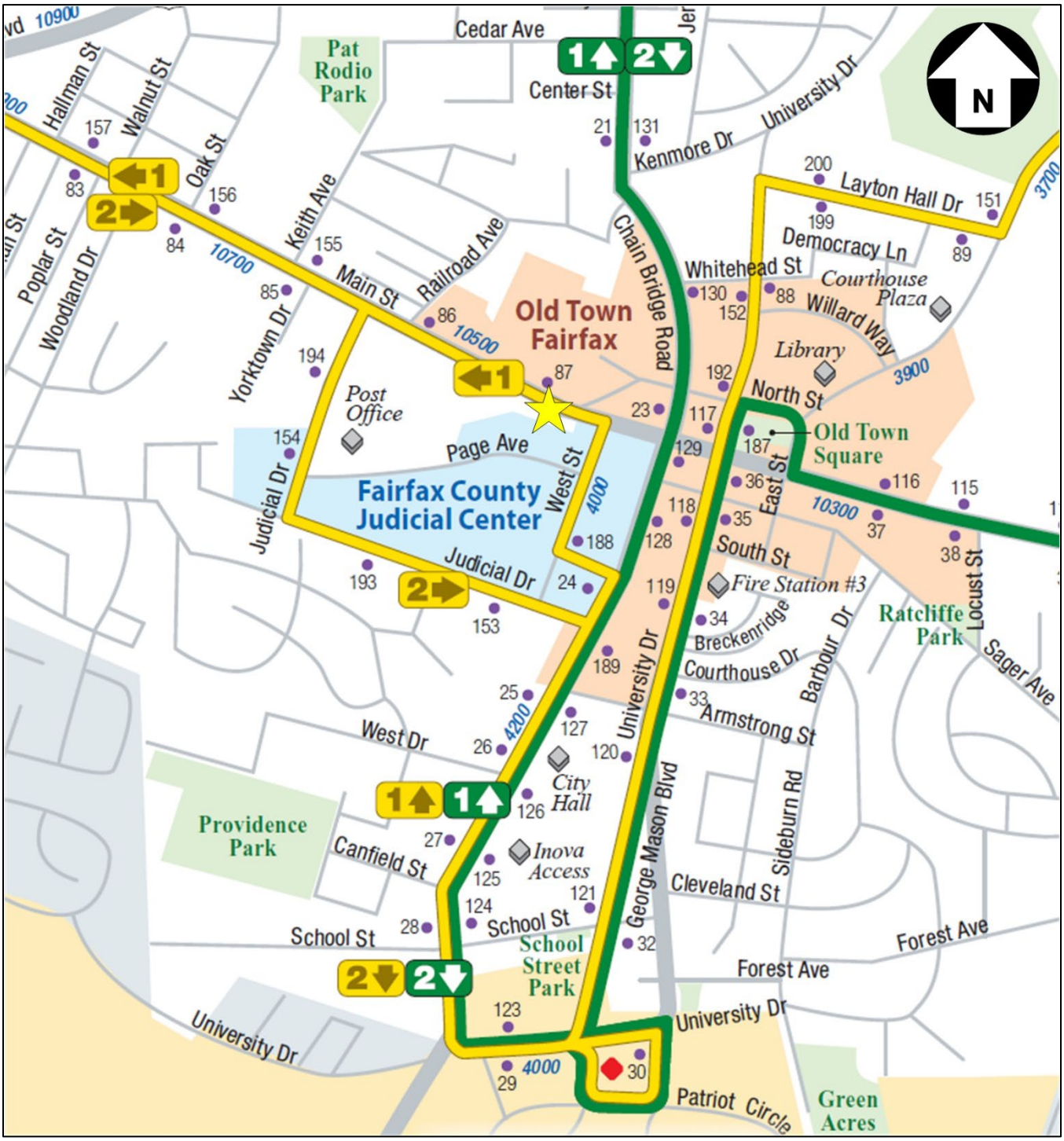

Figure 7: Existing CUE Bus Routes (Source: City of Fairfax)

Existing Bicycle and Pedestrian Facilities

Main Street is considered “Use Caution” for bicycling as shown in Figure 8. Sidewalks exist on the north and south sides of Main Street, but most intersections and driveways lack crosswalks. The intersections of Main Street & Judicial Drive and Main Street & West Street have crosswalks and pedestrian signal heads.

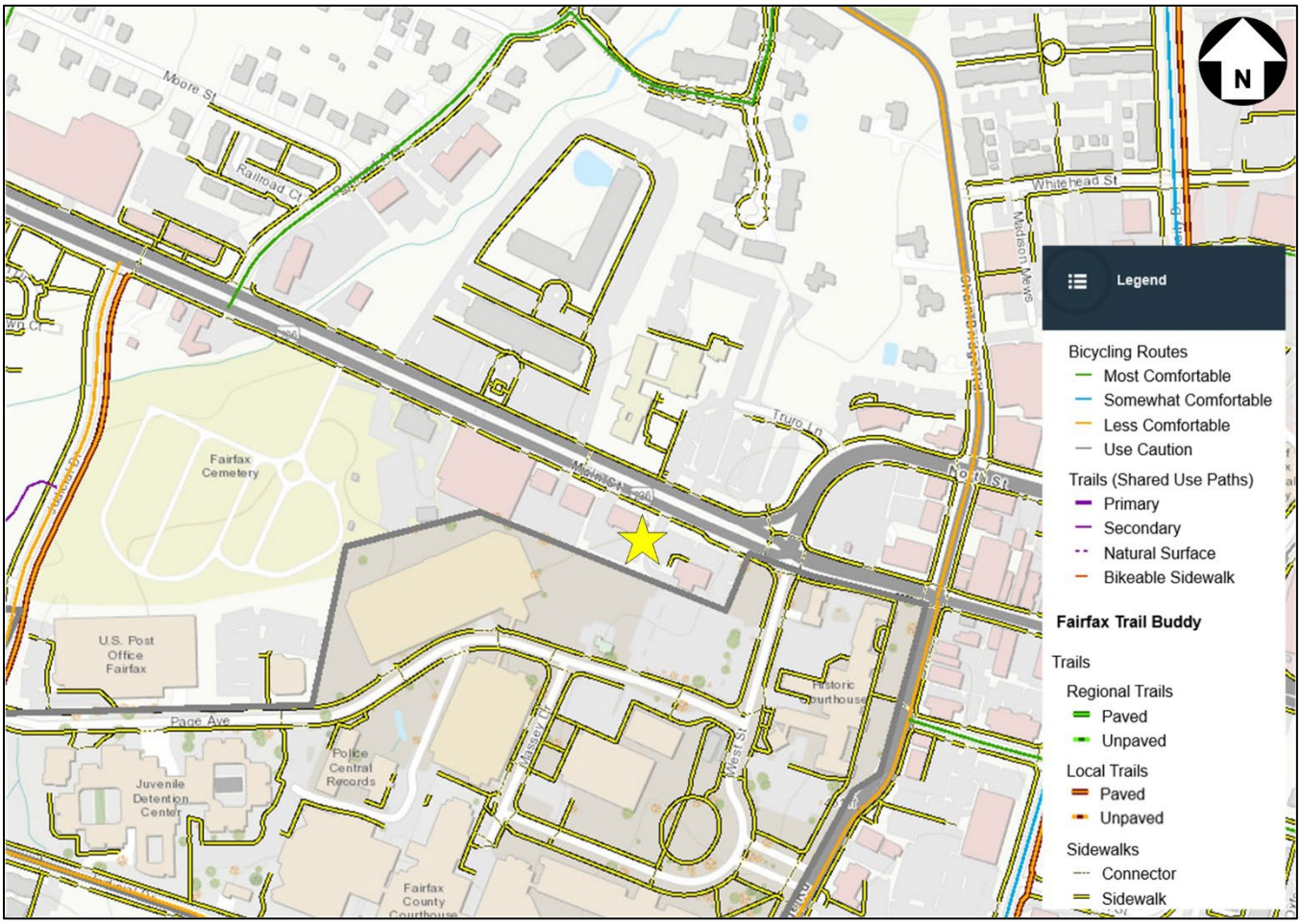

Figure 8: Existing Bicycle and Trail Network (Source: Bike Fairfax)

Existing Roadway Network

A description of the major roadways within the study area is presented in Table 1. The existing lane configurations and traffic control devices at the study intersections are shown in Figure 9.

Table 1: Existing Road Network

Roadway	VDOT Classification	Lanes	Speed	On-Street Parking	ADT
Main Street	Principal Arterial	4	25 mph	No	38,000*
Judicial Drive	Major Collector	4	25 mph	No	11,000*
West Street	Local Road	3	15 mph	No	2,310**

** VDOT 2019 ADT Traffic Data*

*** Estimate based on existing PM peak hour volume*

Historical Crash Data

Historic crash data at the study intersections was obtained from VDOT for the most recent three (3) pre-pandemic years (January 2017 to December 2019). The crash data is summarized in Table 2.

Table 2: Crash Data (January 2017 – December 2019)

Intersection	Number of Crashes	Number of Property Damage Crashes	Number of Crashes Resulting in Injury	Number of Fatal Crashes	Crash Rate (Crashes per MEV)
Main Street and Judicial Drive	14	11	3	0	0.32
Main Street and Funeral Home Driveway West/Mosby Tower Driveway West	1	0	1	0	0.03
Main Street and Funeral Home Driveway East	1	1	0	0	0.03
Main Street and 10555 Main Street Driveway West	1	1	0	0	0.03
Main Street and 10555 Main Street Driveway East	0	0	0	0	0.00
Main Street and 10533 Main Street Driveway/Mosby Tower Driveway East	4	2	2	0	0.12
Main Street and 10515 Main Street Driveway	0	0	0	0	0.00
Main Street and 10501 Main Street Driveway West/Church Driveways	2	2	0	0	0.06
Main Street and 10501 Main Street Driveway East	0	0	0	0	0.00
Main Street and West Street	17	13	4	0	0.52

As shown in Table 2, the intersection of Main Street and West Street had the highest number of reported crashes (17) during the three-year study period. The most common crash type was rear end. The redevelopment of the City Centre West site will remove three (3) existing driveways currently located within the functional area of the intersection of Main Street and West Street. This will reduce the number of conflicts with turning vehicles and is anticipated to improve the safety of the intersection.

The intersection of Main Street and Judicial Drive had the second highest number of reported crashes (14). The most common crash type was rear end.

All existing intersections have a crash rate less than 1.0 crashes per Million Entering Vehicles (MEV) and are not considered high crash intersections.

The crash rates shown for each intersection are calculated as crashes per one million entering vehicles (MEV), and were calculated based on the following formula:

$$Rate_{intersection} = \frac{1{,}000{,}000 * \ \#\ of\ Crashes}{\#\ of\ Years * 365\ \left(\frac{days}{year}\right) * ADT_{approach}}.$$

The crash data provided by VDOT is included in Appendix B.

Existing Traffic Volumes

Turning movement counts were collected at the study area intersections on Thursday, May 5, 2022. The weekday peak hours for the system were determined to be 7:30 AM to 8:30 AM and 4:15 PM to 5:15 PM.

The existing peak hour traffic volumes for the study area intersections are presented in Figure 10. All balanced volumes are within ten percent of the counted volume. The existing turning movement counts are included in Appendix C.

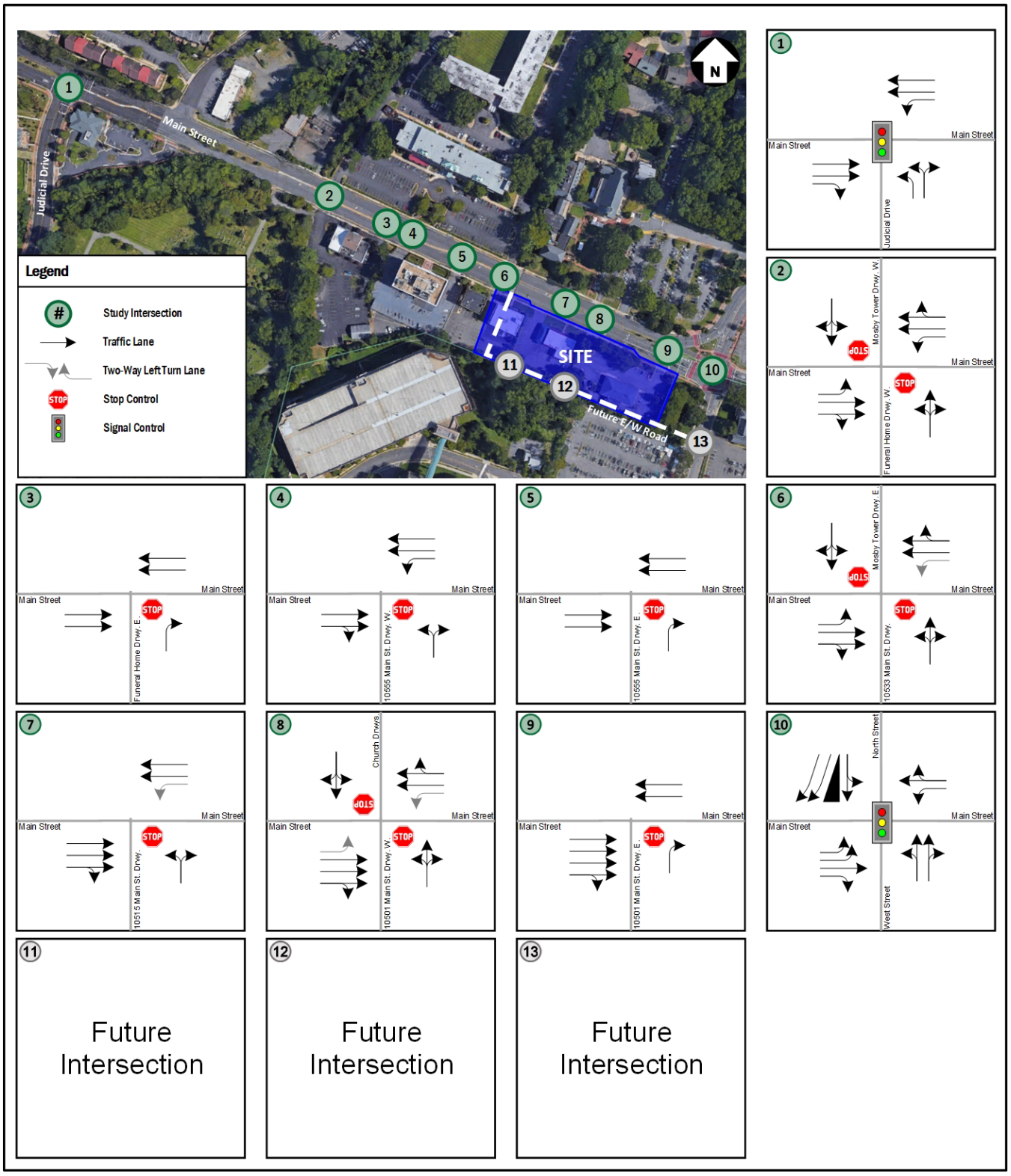

Figure 9: Existing (2022) – Lane Configuration

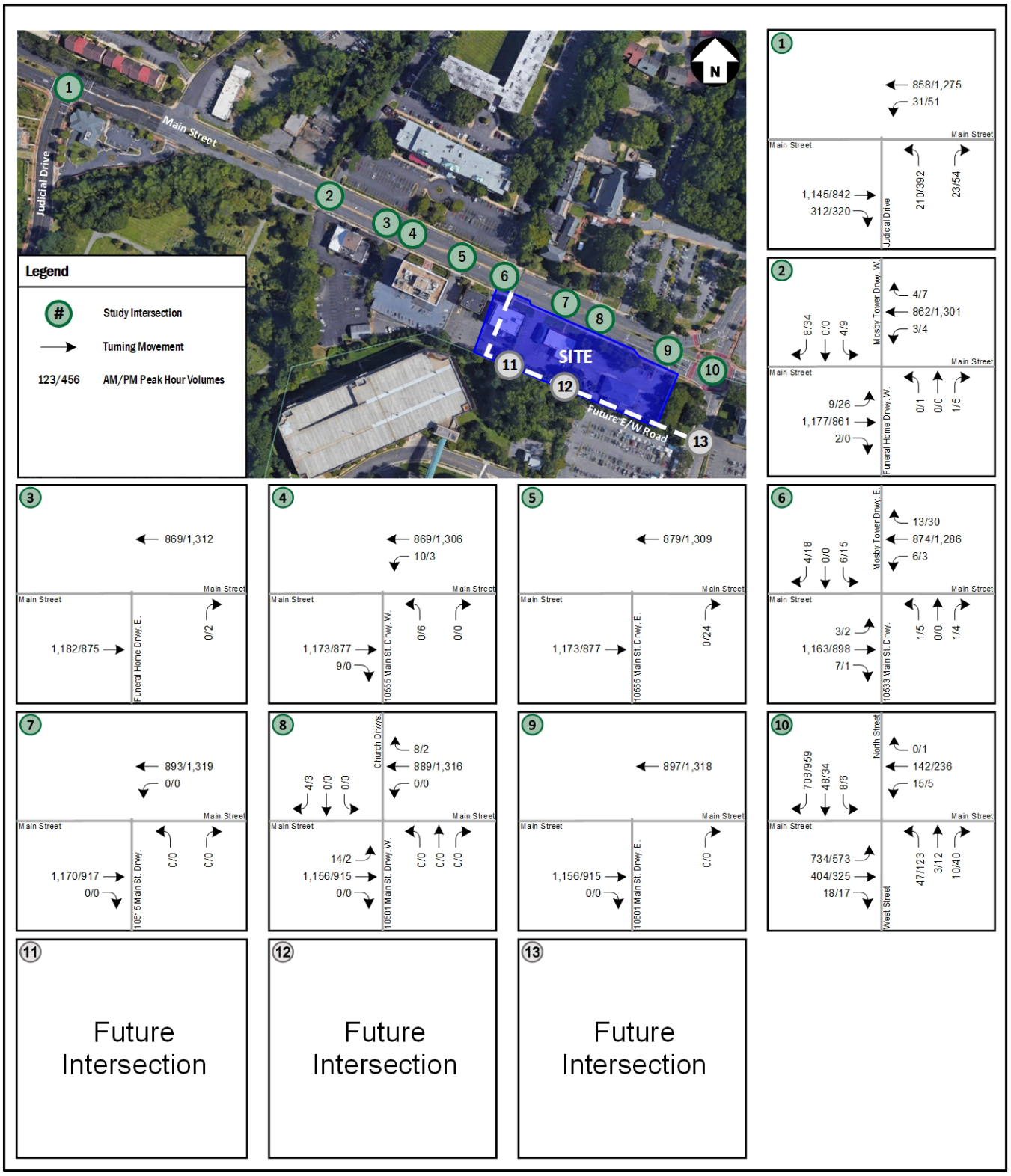

Figure 10: Existing (2022) – Peak Hour Traffic Volumes

Existing (2022) Intersection Analysis

Intersection capacity analysis was performed at the intersections within the study area during the weekday AM and PM peak hours under Existing Conditions (2022). *Synchro Version 11* was used to analyze the study intersections based on the *Highway Capacity Manual* (HCM) methodology and includes level of service (LOS), delay, and queue length for the turning movements analyzed.

Existing signal timings were provided by the City and used as a base for the existing analysis. Existing peak hour factors found in the field were used, except where the field peak hour factor was lower than 0.85 in which case a minimum value of 0.85 was used, consistent with VDOT analysis guidelines. Heavy vehicle percentages determined by existing traffic counts were used for analysis. Pedestrian volumes were also collected during the intersection traffic counts and included in the analysis.

SimTraffic was used to run the simulations for the analysis in order to determine the queue. The same network files that were used for the Synchro analysis were used as input for the SimTraffic analysis. Consistent with the guidelines set forth in VDOT's *Traffic Operations and Safety Analysis Manual* (TOSAM), Table 3 below shows the parameters that were used for the simulation. Per Section 7.6 of the TOSAM all other parameters not addressed in the table should not be modified from the default value.

Table 3: SimTraffic Analysis Input Parameters

SimTraffic (Version 11) Analysis Input Parameters	
Number of Intervals	One seeding interval and four 15 minute recording intervals
Seeding Interval Duration	15 minutes
PHF Adjust	• Selected "Yes" for one of the four, 15 minute recording intervals • Selected "No" for all other intervals
Anti-PHF Adjust	• Selected "Yes" for three, 15 minute recording intervals where PHF Adjust is set to "No" • Selected "No" for the recording interval where PHF Adjust is set to "Yes"
Number of Runs	10

A seeding period is necessary to ensure that the results obtained are not skewed because the network is void of any vehicles prior to seeding. Foregoing seeding would lead to lower travel times and delays for the traffic at the beginning of the simulation. The network reaches a normal state during the seeding period without affecting the results of the simulation.

The results of the intersection capacity analysis are presented in Table 4 and are expressed in LOS and delay (seconds per vehicle) per lane group. The 50th and 95th percentile queue results for each intersection are also presented in Table 4 and are expressed in feet. The average and maximum queue results from SimTraffic are presented in Table 5 and are expressed in feet. Level of service results are also presented in Figure 11. The detailed analysis worksheets are included in Appendix D.

Table 4: Existing (2022) – Intersection Analysis (Synchro)

No.	Intersection (Movement)	Effective Storage Length (ft) [1]	AM Peak Hour				PM Peak Hour			
			LOS	Delay (sec/veh)	50th % Queue (ft) [3] [4]	95th % Queue (ft) [2]	LOS	Delay (sec/veh)	50th % Queue (ft) [3] [4]	95th % Queue (ft) [2]
			Synchro				Synchro			
1	**Main Street (E/W) and Judicial Drive (N/S)**									
	Overall Intersection (Signalized)		**B**	**13.6**			**C**	**23.1**		
	Eastbound Thru		A	8.8	295	366	B	12.1	253	330
	Eastbound Right	125	A	2.3	0	9	A	2.3	0	9
	Westbound Left	95	A	4.9	6	15	A	6.7	17	33
	Westbound Thru		A	4.0	125	167	A	9.0	350	447
	Northbound Left/Right		F	89.3	162	208	F	101.1	358	415
2	**Main Street (E/W) and Funeral Home Drwy. West/Mosby Tower Drwy. West (N/S)**									
	Overall Intersection (Unsignalized)									
	Eastbound Left	125	B	10.4		1	B	13.4		5
	Westbound Left	130	B	14.2		1	B	10.1		0
	Northbound Left/Thru/Right		B	14.2		0	E	48.4		6
	Southbound Left/Thru/Right		D	31.2		8	F	55.8		44
3	**Main Street (E/W) and Funeral Home Drwy. East (N/S)**									
	Overall Intersection (Unsignalized)									
	Northbound Right		A	0.0		0	B	12.2		0
4	**Main Street (E/W) and 10555 Main Street Drwy. West (N/S)**									
	Overall Intersection (Unsignalized)									
	Westbound Left	80	B	11.0		1	B	10.2		0
	Northbound Left/Right		A	0.0		0	F	52.7		7
5	**Main Street (E/W) and 10555 Main Street Drwy. East (N/S)**									
	Overall Intersection (Unsignalized)									
	Northbound Right		A	0.0		0	B	12.7		4
6	**Main Street (E/W) and 10533 Main Street Drwy./Mosby Tower Drwy. East (N/S)**									
	Overall Intersection (Unsignalized)									
	Eastbound Left	120	B	10.1		0	B	12.1		0
	Westbound Left		A	0.4		1	A	0.1		0
	Northbound Left/Thru/Right		C	17.9		1	C	16.8		2
	Southbound Left/Thru/Right		C	17.4		3	C	23.2		12
7	**Main Street (E/W) and 10515 Main Street Drwy. (N/S)**									
	Overall Intersection (Unsignalized)									
	Westbound Left		A	0.0		0	A	0.0		0
	Northbound Left/Right		A	0.0		0	A	0.0		0
8	**Main Street (E/W) and 10501 Main Street Drwy. West/Church Drwys. (N/S)**									
	Overall Intersection (Unsignalized)									
	Eastbound Left		A	0.8		2	A	0.2		0
	Westbound Left		A	0.0		0	A	0.0		0
	Northbound Left/Thru/Right		A	0.0		0	A	0.0		0
	Southbound Left/Thru/Right		B	12.4		1	C	15.9		1
9	**Main Street (E/W) and 10501 Main Street Drwy. East (N/S)**									
	Overall Intersection (Unsignalized)									
	Northbound Right		A	0.0		0	A	0.0		0
10	**Main Street (E/W) and West Street (N/S)**									
	Overall Intersection (Signalized)		**C**	**33.2**			**D**	**41.5**		
	Eastbound Left		D	35.6	313	432	C	34.2	206	296
	Eastbound Thru		D	39.0	341	#559	D	41.1	244	388
	Eastbound Right	115	C	24.0	0	0	C	29.8	0	0
	Westbound Left	125	D	36.2	6	19	C	32.3	2	10
	Westbound Thru/Right		E	65.7	145	216	F	123.7	~235	#411
	Northbound Left/Thru Thru/Right		E	62.9	27	45	E	61.8	73	105
	Southbound Left/Thru	270	D	50.6	51	93	D	49.2	32	68
	Southbound Right		B	17.2	194	303	C	21.9	277	413

No.	Intersection (Movement)	Effective Storage Length (ft) [1]	AM Peak Hour				PM Peak Hour			
			LOS	Delay (sec/veh)	50th % Queue (ft) [3] [4]	95th % Queue (ft) [2]	LOS	Delay (sec/veh)	50th % Queue (ft) [3] [4]	95th % Queue (ft) [2]
			Synchro				Synchro			
11	E/W Road and Site Entrance 1 (N/S)		Future Intersection							
12	E/W Road and Site Entrance 2 (N/S)		Future Intersection							
13	E/W Road and West Street (N/S)		Future Intersection							

NOTES:

[1] Effective storage length is based on the storage length plus one-half of the taper length per TOSAM guidelines.

[2] #: 95th percentile queues (reported from Synchro) exceed capacity; actual queues may be longer. Queues shown are based on the maximum

[3] 50th Percentile Queues are not reported for TWSC intersections under HCM Methodology.

[4] ~: Volume exceeds capacity, queue is theoretically infinite.

For the purpose of this analysis, it is desirable to achieve a level of service (LOS) of D or better for each lane group at the study intersections.

The intersection capacity analysis results show that the following four (4) intersections have movements that operate below acceptable levels of service during one or more peak hours under Existing Conditions (2022):

- Intersection 1: Main Street and Judicial Drive
    - Northbound Left/Right (AM and PM Peaks)
- Intersection 2: Main Street and Funeral Home Driveway West/Mosby Tower Driveway West
    - Northbound Left/Thru/Right (PM Peak)
    - Southbound Left/Thru/Right (PM Peak)
- Intersection 4: Main Street and 10555 Main Street Driveway West
    - Northbound Left/Right (PM Peak)
- Intersection 10: Main Street and West Street
    - Westbound Thru/Right (AM and PM Peaks)
    - Northbound Left/Thru, Thru/Right (AM and PM Peaks)

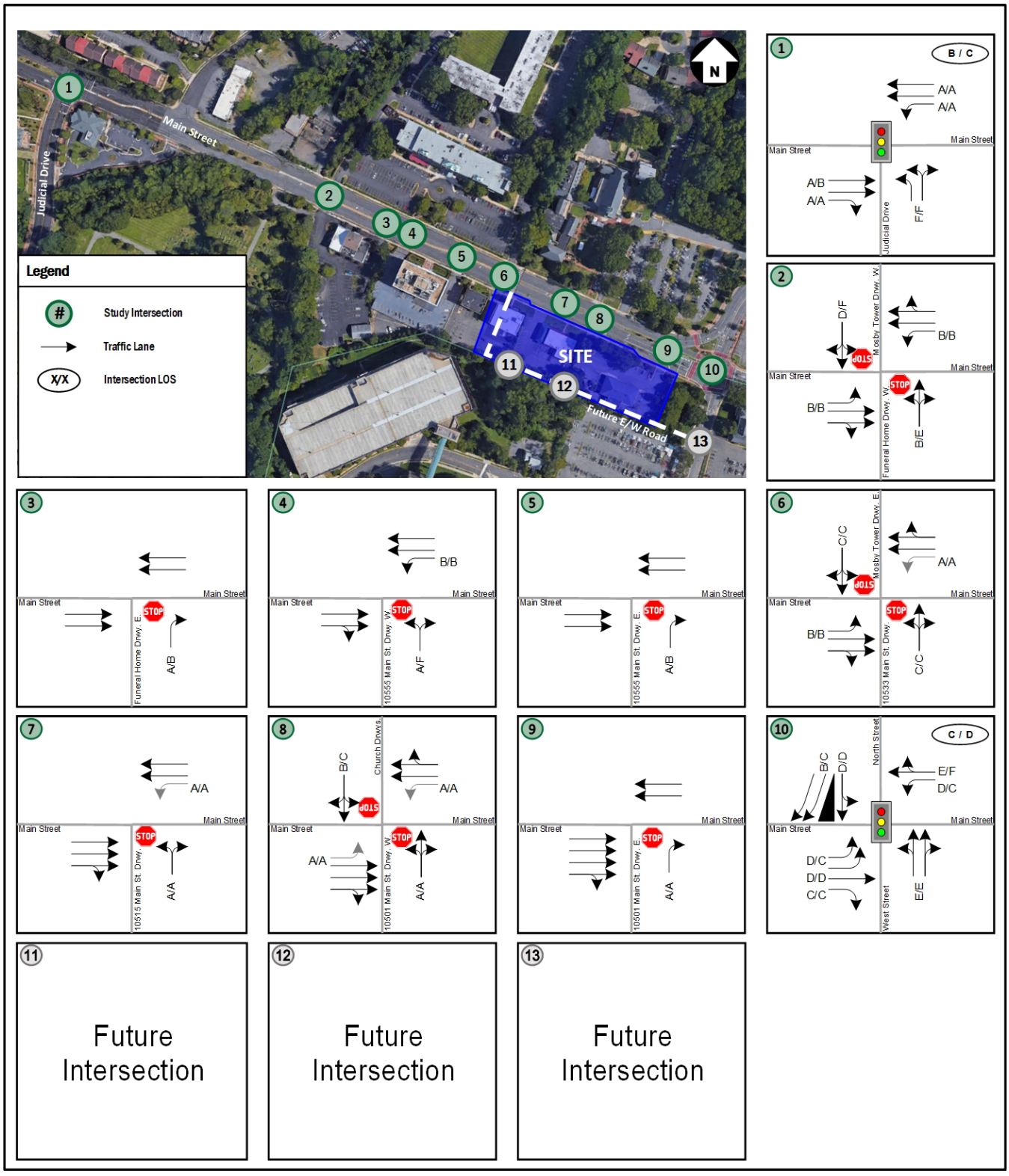

Figure 11: Existing (2022) – Levels of Service

Table 5: Existing (2022) – Intersection Analysis (SimTraffic) *For Informational Purposes Only*

No.	Intersection (Movement)	Effective Storage Length (ft.)	AM Peak		PM Peak	
			50th % Queue (ft.)	Max Queue (ft.)	50th % Queue (ft.)	Max Queue (ft.)
1	**Main Street (E/W) and Judicial Drive (N/S)**					
	Overall Intersection (Signalized)					
	Eastbound Thru		152	369	164	398
	Eastbound Right	125	33	125	37	125
	Westbound Left	95	25	81	35	91
	Westbound Thru		69	213	156	250
	Northbound Left		153	241	256	417
	Northbound Left/Right		112	200	220	366
2	**Main Street (E/W) and Funeral Home Drwy. West/Mosby Tower Drwy. West**					
	Overall Intersection (Unsignalized)					
	Eastbound Left	125	4	32	17	54
	Westbound Left	130	2	32	3	28
	Northbound Left/Thru/Right		2	38	7	43
	Southbound Left/Thru/Right		10	37	32	92
3	**Main Street (E/W) and Funeral Home Drwy. East (N/S)**					
	Overall Intersection (Unsignalized)					
	Northbound Right					
4	**Main Street (E/W) and 10555 Main Street Drwy. West (N/S)**					
	Overall Intersection (Unsignalized)					
	Westbound Left	80	7	34	2	23
	Northbound Left/Right				6	43
5	**Main Street (E/W) and 10555 Main Street Drwy. East (N/S)**					
	Overall Intersection (Unsignalized)					
	Northbound Right				19	53
6	**Main Street (E/W) and 10533 Main Street Drwy./Mosby Tower Drwy. East (N/S)**					
	Overall Intersection (Unsignalized)					
	Eastbound Left	120	2	32	1	20
	Westbound Left		10	69	4	54
	Northbound Left/Thru/Right		2	25	8	36
	Southbound Left/Thru/Right		10	42	26	81
7	**Main Street (E/W) and 10515 Main Street Drwy. (N/S)**					
	Overall Intersection (Unsignalized)					
	Westbound Left		4	58	2	36
	Northbound Left/Right					
8	**Main Street (E/W) and 10501 Main Street Drwy. West/Church Drwys. (N/S)**					
	Overall Intersection (Unsignalized)					
	Eastbound Left		40	102	21	94
	Westbound Left		1	30	1	14
	Northbound Left/Thru/Right					
	Southbound Left/Thru/Right		0	3	2	23
9	**Main Street (E/W) and 10501 Main Street Drwy. East (N/S)**					
	Overall Intersection (Unsignalized)					
	Northbound Right					

No.	Intersection (Movement)	Effective Storage Length (ft.)	AM Peak		PM Peak	
			50th % Queue (ft.)	Max Queue (ft.)	50th % Queue (ft.)	Max Queue (ft.)
10	**Main Street (E/W) and West Street (N/S)**					
	Overall Intersection (Signalized)					
	Eastbound Left		95	125	91	117
	Eastbound Thru		89	103	89	104
	Eastbound Right	115	6	32	6	30
	Westbound Left	125	15	93	9	105
	Westbound Thru/Right		113	224	262	373
	Northbound Left/Thru		41	127	103	190
	Northbound Thru/Right		7	49	18	96
	Southbound Left/Thru	270	48	140	43	221
	Southbound Right		116	290	225	378
11	**E/W Road and Site Entrance 1 (N/S)**		**Future Intersection**			
12	**E/W Road and Site Entrance 2 (N/S)**		**Future Intersection**			
13	**E/W Road and West Street (N/S)**		**Future Intersection**			

Future Conditions without Development (2025)

Future without Development (2025) Traffic Volumes

The proposed City Centre West redevelopment is anticipated to be complete in 2025. The future background traffic volumes were projected by increasing the existing volumes to 2025 using an inherent growth rate. Historical ADT data is shown in Table 6. As determined based on discussions with the City, a growth rate of one (1) percent per year was applied to existing traffic volumes on major movements as shown in Figure 12.

Table 6: Historical Growth Rate

			ADT					Annual % Change (2015-2019)
Route	From	To	2015	2016	2017	2018	2019	
Main Street	US 50	West St	35,000	35,000	36,000	38,000	38,000	2.1%

Source: VDOT Traffic Data (http://www.virginiadot.org/info/ct-trafficcounts.asp)

In addition to the regional background growth, one (1) planned yet currently unbuilt developments in the vicinity of the site was taken into consideration. As discussed at the scoping meeting, the following development were included in the 2025 analysis:

- **Fairfax County Judicial Complex** – The Judicial Complex is a 47.8-acre portion of Fairfax County surrounded by the City of Fairfax. A new Master Plan for the complex was completed in January 2021. Building One of the redevelopment project was assumed to be in place by 2025. For the purposes of this analysis, Building One was anticipated to included 43,605 SF of storage uses and 80,892 SF of office uses.

The lane configuration for Future Conditions without Development (2025) remains unchanged from the Existing Conditions (2022). The background growth is shown in Figure 12 and the background development volumes are show in Figure 13.

The trips generated by background growth and background development were added to the existing volumes in order to generate Future Conditions without Development (2025) traffic volumes presented in Figure 14.

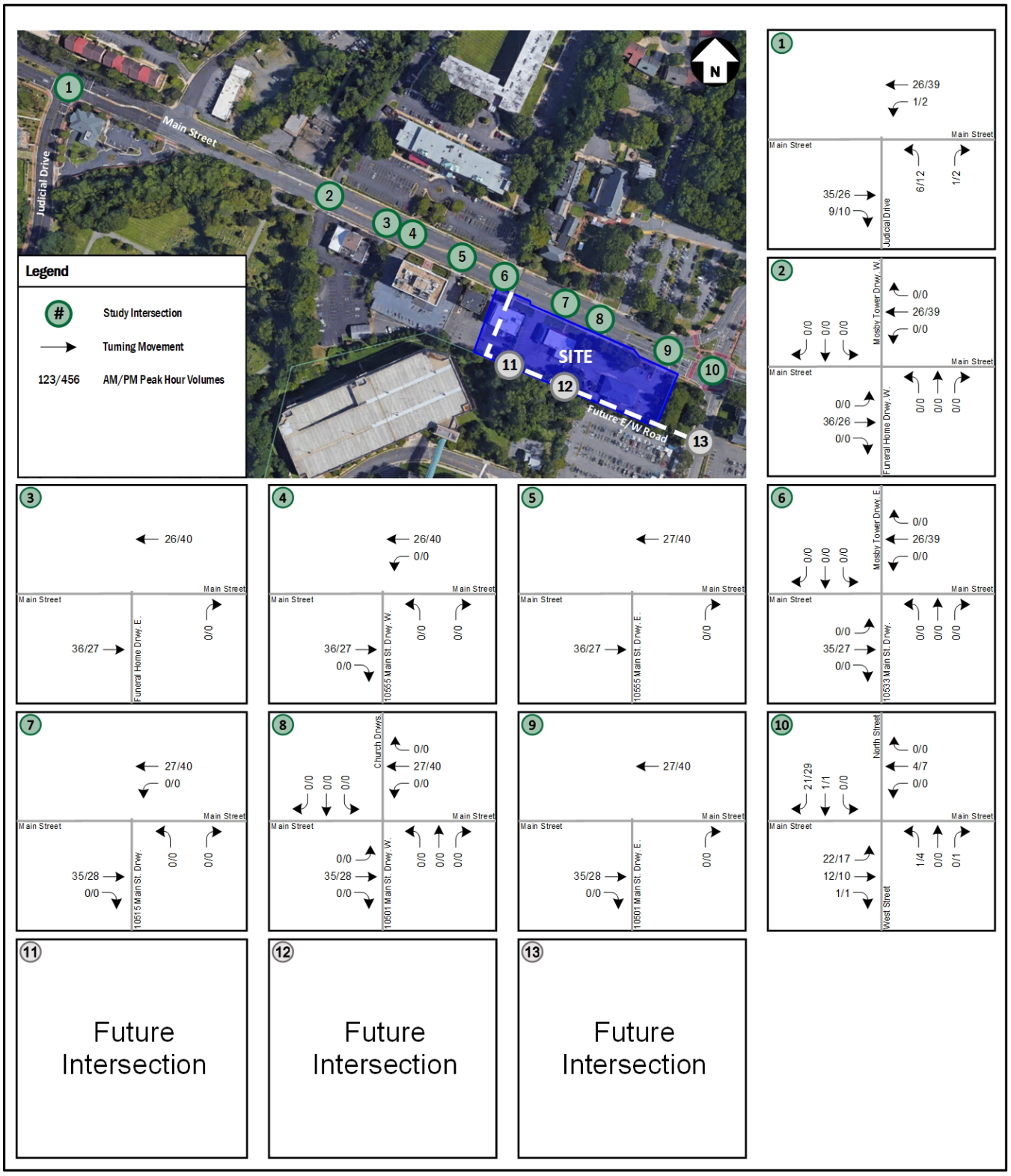

Figure 12: Background Growth (2025)

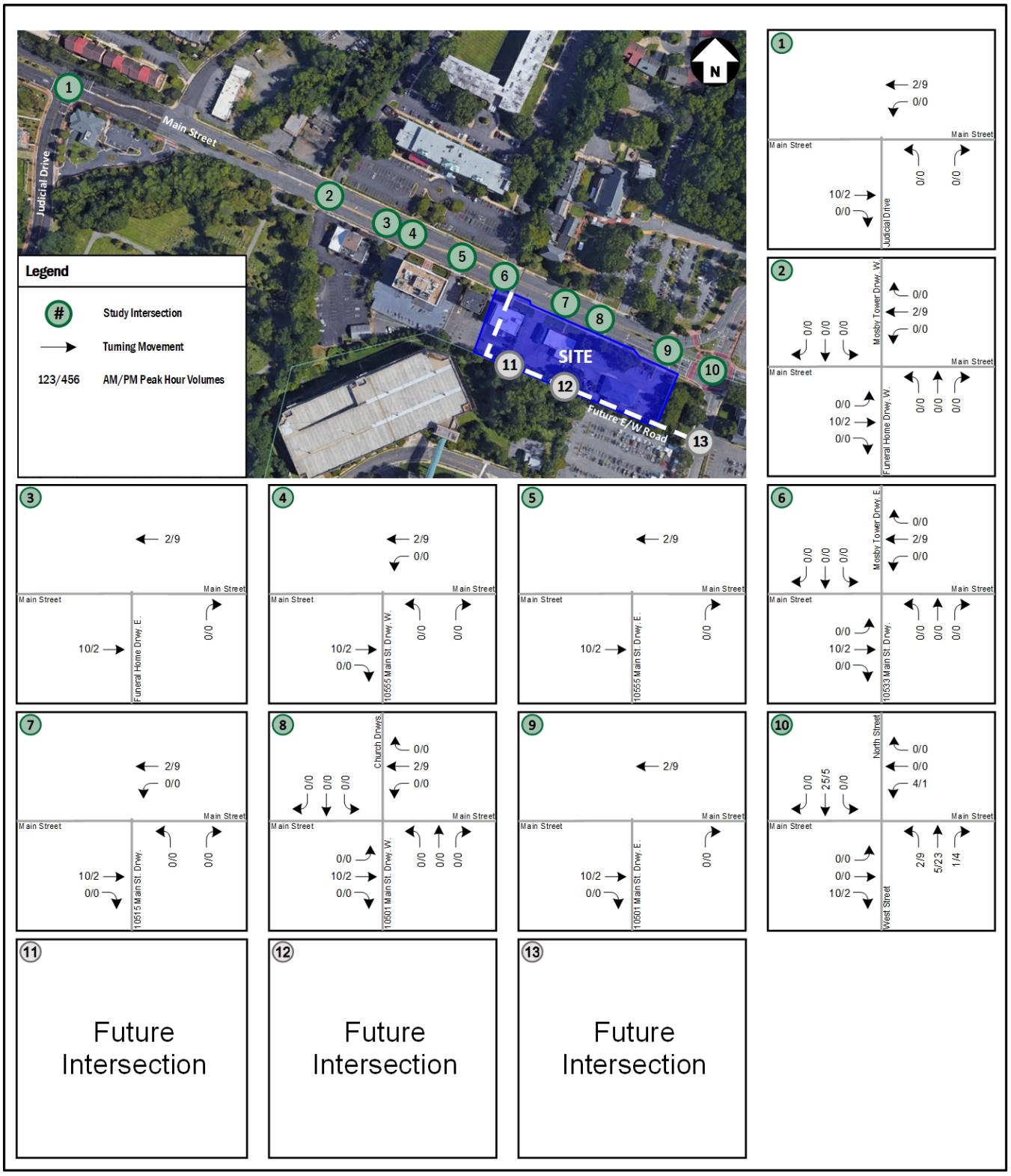

Figure 13: Background Development (2025) – Peak Hour Traffic Volumes

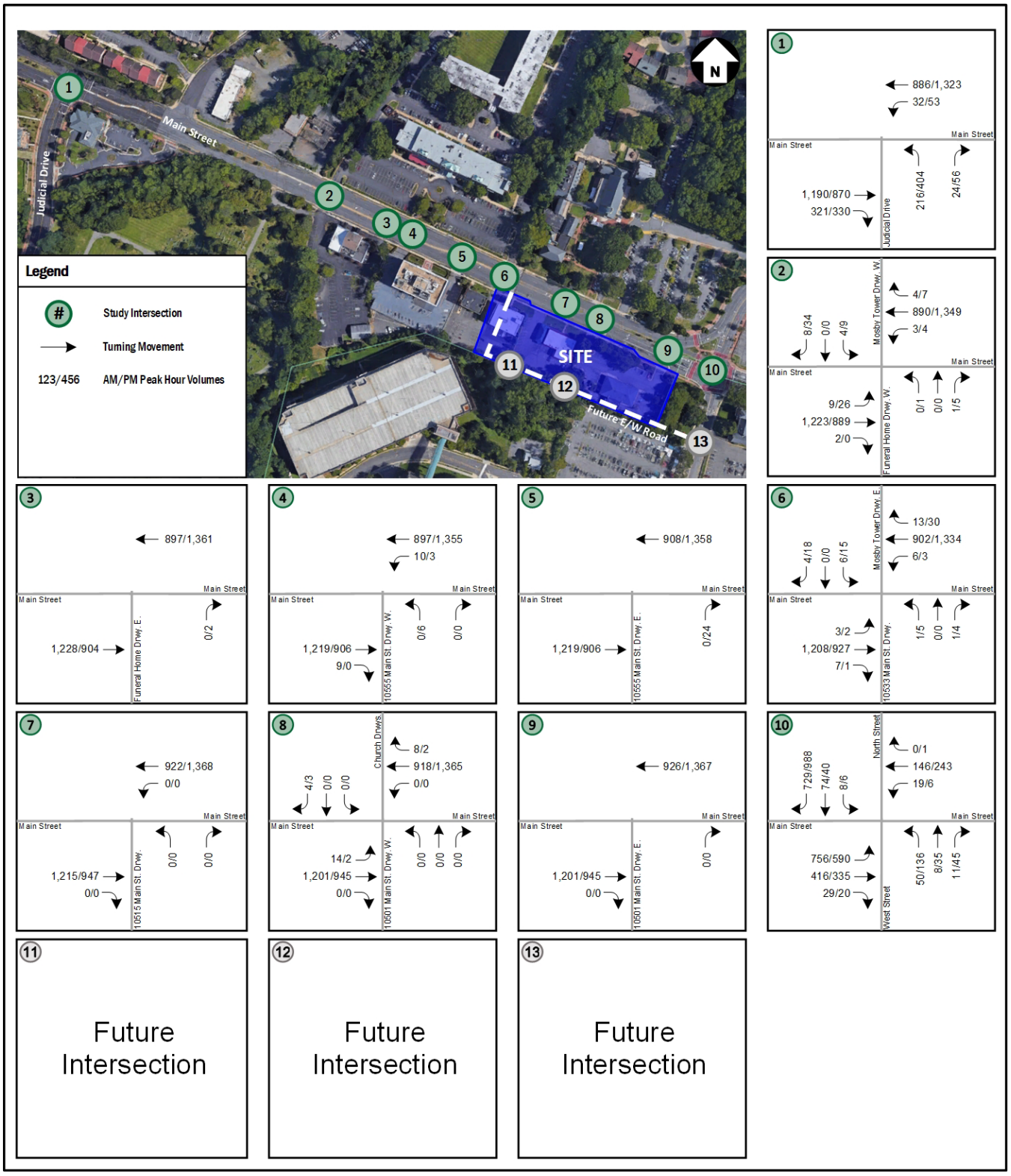

Figure 14: Future without Development (2025) – Peak Hour Traffic Volumes

Future without Development (2025) Intersection Analysis

Intersection capacity analysis was performed at the intersections within the study area during the weekday AM and PM peak hours under Future Conditions without Development (2025). *Synchro Version 11* was used to analyze the study intersections based on the *Highway Capacity Manual* (HCM) methodology and includes level of service (LOS), delay, and queue length for the turning movements analyzed.

Signal phasing and timings were not changed from the existing conditions. A peak hour factor of 0.92 was used, unless the peak hour collected in the field was higher.

The results of the intersection capacity analysis are presented in Table 7 and are expressed in LOS and delay (seconds per vehicle) per lane group. The 50th and 95th percentile queue results for each intersection are also presented in Table 7 and are expressed in feet. The average and maximum queue results from SimTraffic are presented in Table 8 and are expressed in feet. Level of service results are also presented in Figure 15. The detailed analysis worksheets are included in Appendix E.

Table 7: Future without Development (2025) – Intersection Analysis (Synchro)

No.	Intersection (Movement)	Effective Storage Length (ft) [1]	AM Peak Hour				PM Peak Hour			
			LOS	Delay (sec/veh)	50th % Queue (ft) [3] [4]	95th % Queue (ft) [2]	LOS	Delay (sec/veh)	50th % Queue (ft) [3] [4]	95th % Queue (ft) [2]
			Synchro				Synchro			
1	**Main Street (E/W) and Judicial Drive (N/S)**									
	Overall Intersection (Signalized)		**B**	**13.6**			**C**	**23.3**		
	Eastbound Thru		A	8.8	297	374	B	12.5	264	348
	Eastbound Right	125	A	2.3	0	9	A	2.3	0	9
	Westbound Left	95	A	5.0	6	15	A	7.0	17	36
	Westbound Thru		A	4.0	125	170	A	9.5	370	480
	Northbound Left/Right		F	89.2	162	210	F	100.5	365	420
2	**Main Street (E/W) and Funeral Home Drwy. West/Mosby Tower Drwy. West (N/S)**									
	Overall Intersection (Unsignalized)									
	Eastbound Left	125	B	10.2		1	B	13.5		5
	Westbound Left	130	B	13.5		1	B	10.1		0
	Northbound Left/Thru/Right		B	13.6		0	F	55.9		6
	Southbound Left/Thru/Right		D	25.1		5	F	58.8		45
3	**Main Street (E/W) and Funeral Home Drwy. East (N/S)**									
	Overall Intersection (Unsignalized)									
	Northbound Right		A	0.0		0	B	12.0		0
4	**Main Street (E/W) and 10555 Main Street Drwy. West (N/S)**									
	Overall Intersection (Unsignalized)									
	Westbound Left	80	B	11.2		1	B	10.3		0
	Northbound Left/Right		A	0.0		0	F	56.1		7
5	**Main Street (E/W) and 10555 Main Street Drwy. East (N/S)**									
	Overall Intersection (Unsignalized)									
	Northbound Right		A	0.0		0	B	12.4		4
6	**Main Street (E/W) and 10533 Main Street Drwy./Mosby Tower Drwy. East (N/S)**									
	Overall Intersection (Unsignalized)									
	Eastbound Left	120	B	10.2		0	B	12.4		0
	Westbound Left		A	0.4		1	A	0.1		0
	Northbound Left/Thru/Right		C	17.9		1	C	17.3		2
	Southbound Left/Thru/Right		C	17.7		3	C	24.5		13
7	**Main Street (E/W) and 10515 Main Street Drwy. (N/S)**									
	Overall Intersection (Unsignalized)									
	Westbound Left		A	0.0		0	A	0.0		0
	Northbound Left/Right		A	0.0		0	A	0.0		0

No.	Intersection (Movement)	Effective Storage Length (ft) [1]	AM Peak Hour				PM Peak Hour			
			LOS	Delay (sec/veh)	50th % Queue (ft) [3] [4]	95th % Queue (ft) [2]	LOS	Delay (sec/veh)	50th % Queue (ft) [3] [4]	95th % Queue (ft) [2]
			Synchro				Synchro			
8	**Main Street (E/W) and 10501 Main Street Drwy. West/Church Drwys. (N/S)**									
	Overall Intersection (Unsignalized)									
	Eastbound Left		A	0.8		2	A	0.2		0
	Westbound Left		A	0.0		0	A	0.0		0
	Northbound Left/Thru/Right		A	0.0		0	A	0.0		0
	Southbound Left/Thru/Right		B	12.1		1	C	15.4		1
9	**Main Street (E/W) and 10501 Main Street Drwy. East (N/S)**									
	Overall Intersection (Unsignalized)									
	Northbound Right		A	0.0		0	A	0.0		0
10	**Main Street (E/W) and West Street (N/S)**									
	Overall Intersection (Signalized)		**C**	**33.8**			**D**	**44.3**		
	Eastbound Left		D	36.2	299	440	D	35.9	219	306
	Eastbound Thru		D	39.3	324	#570	D	43.5	260	402
	Eastbound Right	115	C	24.9	0	0	C	30.9	0	0
	Westbound Left	125	D	36.3	7	24	C	32.4	2	10
	Westbound Thru/Right		E	64.1	139	#221	F	133.3	~250	#428
	Northbound Left/Thru Thru/Right		E	61.6	29	51	E	62.7	94	131
	Southbound Left/Thru	270	D	52.2	71	126	D	49.6	37	75
	Southbound Right		B	17.7	185	309	C	23.6	303	432
11	**E/W Road and Site Entrance 1 (N/S)**		**Future Intersection**							
12	**E/W Road and Site Entrance 2 (N/S)**		**Future Intersection**							
13	**E/W Road and West Street (N/S)**		**Future Intersection**							

NOTES:

[1] Effective storage length is based on the storage length plus one-half of the taper length per TOSAM guidelines.

[2] #: 95th percentile queues (reported from Synchro) exceed capacity; actual queues may be longer. Queues shown are based on the maximum

[3] 50th Percentile Queues are not reported for TWSC intersections under HCM Methodology.

[4] ~: Volume exceeds capacity, queue is theoretically infinite.

For the purpose of this analysis, it is desirable to achieve a level of service (LOS) of D or better for each lane group at the study intersections.

The intersection capacity analysis results show that the following four (4) intersections have lane movements that operate below acceptable levels of service during one or more peak hours under Future Conditions without Development (2025). Intersections in **bold** have one or more lane groups that operate below acceptable levels of service under Existing Conditions (2022):

- **Intersection 1: Main Street and Judicial Drive**
    - Northbound Left/Right (AM and PM Peaks)
- **Intersection 2: Main Street and Funeral Home Driveway West/Mosby Tower Driveway West**
    - Northbound Left/Thru/Right (PM Peak)
    - Southbound Left/Thru/Right (PM Peak)
- **Intersection 4: Main Street and 10555 Main Street Driveway West**
    - Northbound Left/Right (PM Peak)
- **Intersection 10: Main Street and West Street**
    - Westbound Thru/Right (AM and PM Peaks)
    - Northbound Left/Thru, Thru/Right (AM and PM Peaks)

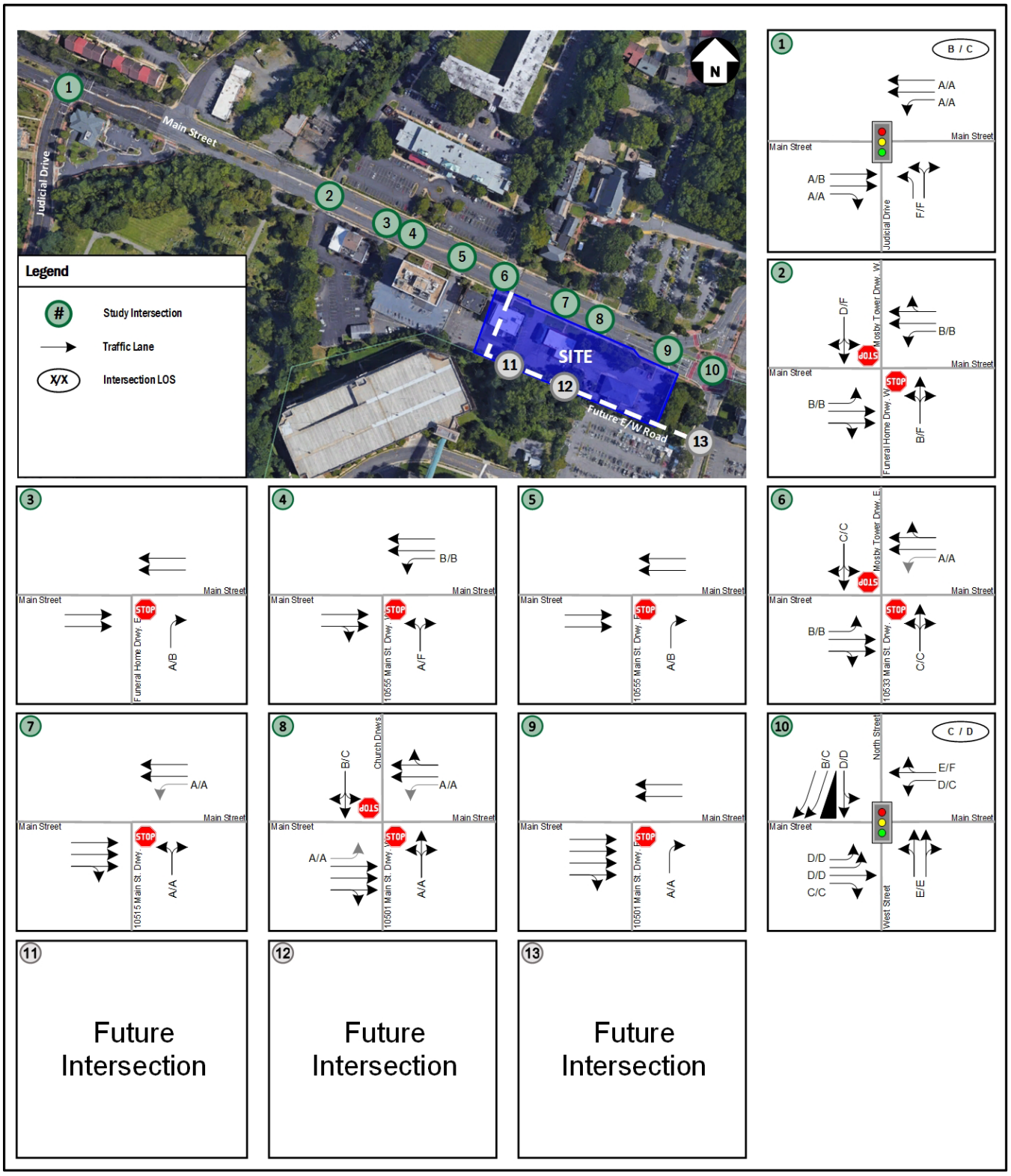

Figure 15: Future without Development (2025) – Levels of Service

Table 8: Future without Development (2025) – Intersection Analysis (SimTraffic) *For Informational Purposes Only*

No.	Intersection (Movement)	Effective Storage Length (ft.)	AM Peak		PM Peak	
			50th % Queue (ft.)	Max Queue (ft.)	50th % Queue (ft.)	Max Queue (ft.)
1	**Main Street (E/W) and Judicial Drive (N/S)**					
	Overall Intersection (Signalized)					
	Eastbound Thru		155	370	168	371
	Eastbound Right	125	36	125	41	125
	Westbound Left	95	26	81	35	90
	Westbound Thru		72	209	159	252
	Northbound Left		148	250	264	436
	Northbound Left/Right		109	221	225	397
2	**Main Street (E/W) and Funeral Home Drwy. West/Mosby Tower Drwy. West**					
	Overall Intersection (Unsignalized)					
	Eastbound Left	125	4	36	18	62
	Westbound Left	130	1	24	0	7
	Northbound Left/Thru/Right		3	46	0	8
	Southbound Left/Thru/Right		10	37	8	48
3	**Main Street (E/W) and Funeral Home Drwy. East (N/S)**					
	Overall Intersection (Unsignalized)					
	Northbound Right				2	20
4	**Main Street (E/W) and 10555 Main Street Drwy. West (N/S)**					
	Overall Intersection (Unsignalized)					
	Westbound Left	80	5	34	2	28
	Northbound Left/Right				7	42
5	**Main Street (E/W) and 10555 Main Street Drwy. East (N/S)**					
	Overall Intersection (Unsignalized)					
	Northbound Right				17	44
6	**Main Street (E/W) and 10533 Main Street Drwy./Mosby Tower Drwy. East (N/S)**					
	Overall Intersection (Unsignalized)					
	Eastbound Left	120	2	31	2	29
	Westbound Left		9	64	4	60
	Northbound Left/Thru/Right		2	25	32	93
	Southbound Left/Thru/Right		12	47		
7	**Main Street (E/W) and 10515 Main Street Drwy. (N/S)**					
	Overall Intersection (Unsignalized)					
	Westbound Left		4	46	2	40
	Northbound Left/Right					
8	**Main Street (E/W) and 10501 Main Street Drwy. West/Church Drwys. (N/S)**					
	Overall Intersection (Unsignalized)					
	Eastbound Left		42	100	19	95
	Westbound Left		1	18	1	29
	Northbound Left/Thru/Right					
	Southbound Left/Thru/Right		4	29	1	18
9	**Main Street (E/W) and 10501 Main Street Drwy. East (N/S)**					
	Overall Intersection (Unsignalized)					
	Northbound Right					

No.	Intersection (Movement)	Effective Storage Length (ft.)	AM Peak		PM Peak	
			50th % Queue (ft.)	Max Queue (ft.)	50th % Queue (ft.)	Max Queue (ft.)
10	**Main Street (E/W) and West Street (N/S)**					
	Overall Intersection (Signalized)					
	Eastbound Left		95	116	94	120
	Eastbound Thru		89	100	90	104
	Eastbound Right	115	9	47	7	30
	Westbound Left	125	19	110	10	106
	Westbound Thru/Right		121	245	275	368
	Northbound Left/Thru		48	125	130	241
	Northbound Left/Thru		7	52	32	160
	Southbound Left/Thru	270	63	165	48	201
	Southbound Right		111	267	233	389
11	**E/W Road and Site Entrance 1 (N/S)**		**Future Intersection**			
12	**E/W Road and Site Entrance 2 (N/S)**		**Future Intersection**			
13	**E/W Road and West Street (N/S)**		**Future Intersection**			

Future Conditions with Development (2025)

Site Description

The proposed program is a mixed-use development comprised of up to 79 multifamily units, 19,054 SF of general office, 18,032 SF of medical office, 5,012 SF of retail, an 1,801 SF bank, and a 5,012 SF restaurant. Total site build-out is planned for the year 2025.

Site Access

Existing vehicular access is provided via three (3) full-access driveways and one (1) right-in/right-out (RIRO) on Main Street.

Redevelopment of the property will remove the existing 10515 and 10501 Main Street driveways and convert the existing unsignalized four-legged Main Street and 10533/10523 Main Street intersection into a signalized five-legged intersection. The Connector Road will provide access from Main Street to the parking garage entrance on the south side of the property. A future East/West Road along the south side of the property will provide access from West Street and also provide access to the parking garage.

Transportation Demand Management

The redevelopment of the City Centre West site provides an opportunity to create a high-density, mixed-use environment that increases pedestrian accessibility and promotes recreational and educational use in the Old Town Fairfax Activity Center. Encouragement of non-singular occupancy vehicle (SOV) use, non-peak hour SOV trips, and non-automobile modes of transportation will result in less vehicular impacts on the surrounding roadway network.

Transportation Demand Management involves many components that are tailored to accommodate a given facility with a goal of reducing peak hour automobile trips by encouraging alternative forms of transportation. The following strategies are anticipated to be considered:

- Provide incentives to use transit, potentially including:
    - Providing information on the City of Fairfax CUE Bus, Fairfax Connector, and Metrobus routes, schedules, and fares
    - Providing safe pedestrian connections on and off site
    - Providing bicycle parking
- Parking Management, potentially including:
    - On-site parking spaces for carshare agencies

Site Generated Traffic

The Institute of Transportation Engineers (ITE) *Trip Generation*, 10th Edition was used to determine the future trips generated by the proposed development as shown in Table 9. A Mode Split/TDM reduction of 5 percent was applied to residential and office uses, consistent with other studies in the area.

Table 9: Trip Generation (2025)

ITE Land Use Code				------ Weekday ------						
				AM Peak Hour			PM Peak Hour			Daily
Trip Generation, 10th Ed.			Quantity	*In*	*Out*	*Total*	*In*	*Out*	*Total*	*Total*
Proposed Development										
Residential	221	Multifamily (Mid-Rise) (Urban/Suburban)	79 DU	7	20	27	21	14	35	429
		Internal Capture Residential - Office [2]	*(1)*	*0*	*-1*	*-1*	*-1*	*0*	*-1*	*-11*
		Internal Capture Residential - Retail [2]	*(2)*	*0*	*-1*	*-1*	*-2*	*-1*	*-3*	*-64*
		Residential With Internal Reductions		*7*	*18*	*25*	*18*	*13*	*31*	*354*
		Mode Split/TDM Reduction	*5%*	*0*	*-1*	*-1*	*-1*	*-1*	*-2*	*-18*
		Residential Subtotal		*7*	*17*	*24*	*17*	*12*	*29*	*336*
Office	710	General Office Building	19,054 SF	38	6	44	4	20	24	212
		Internal Capture Office - Residential [2]	*(1)*	*-1*	*0*	*-1*	*0*	*-1*	*-1*	*-11*
		Internal Capture Office - Retail [2]	*(3)*	*-2*	*0*	*-2*	*0*	*-1*	*-1*	*-11*
		Office With Internal Reductions		*35*	*6*	*41*	*4*	*18*	*22*	*190*
		Mode Split/TDM Reduction	*5%*	*-2*	*0*	*-2*	*0*	*-1*	*-1*	*-10*
		Office Subtotal		*33*	*6*	*39*	*4*	*17*	*21*	*180*
Office	720	Medical-Dental Offices	18,032 SF	38	11	49	18	45	63	605
Retail	820	Shopping Center	5,012 SF	95	59	154	28	31	59	785
		Internal Capture Retail - Residential [2]	*(2)*	*-1*	*0*	*-1*	*-1*	*-2*	*-3*	*-64*
		Internal Capture Retail - Office [2]	*(3)*	*0*	*-2*	*-2*	*-1*	*0*	*-1*	*-11*
		Retail With Internal Reductions		*94*	*57*	*151*	*26*	*29*	*55*	*710*
		Pass-By Reduction [1]	*25%/34%/25%*	*-24*	*-14*	*-38*	*-9*	*-10*	*-19*	*-178*
		Retail Subtotal		*71*	*43*	*113*	*17*	*19*	*36*	*533*
Services	912	Drive-in Bank	1,801 SF	10	7	17	19	18	37	266
Services	932	High Turnover (Sit-Down) Restaurant	5,012 SF	28	22	50	30	19	49	562
		Proposed Development Site Trips		**187**	**106**	**292**	**105**	**130**	**235**	**2,482**

Note: Bank includes 1,801 SF of drive-in bank space (LUC 912) and 13,261 SF of office space (LUC 710).

[1] *The pass by reduction for Shopping Center is based on the ITE Trip Generation methodology, as provided in the Trip Generation Handbook, 3rd Edition. The average rate for Shopping Centers is 34% for the PM Peak. For all other time periods, the default pass by rate is 25%.*

[2] *The internal reduction is based on the VDOT Updated Administrative Guidelines for the Traffic Impact Analysis Regulations:*

(1) residential / office - smaller of 5% of residential trips or 5% of office trips

(2) residential / retail - smaller of X% of residential trips or X% of retail trips; AM: X = 5%, PM: X = 10%, Daily: X = 15%

(3) office / retail - smaller of 5% of office trips or 5% of retail trips

Site Trip Distribution

The distribution of site trips was based on existing and anticipated traffic patterns with guidance and input from the City staff. The directional distribution percentages are shown in Figure 16.

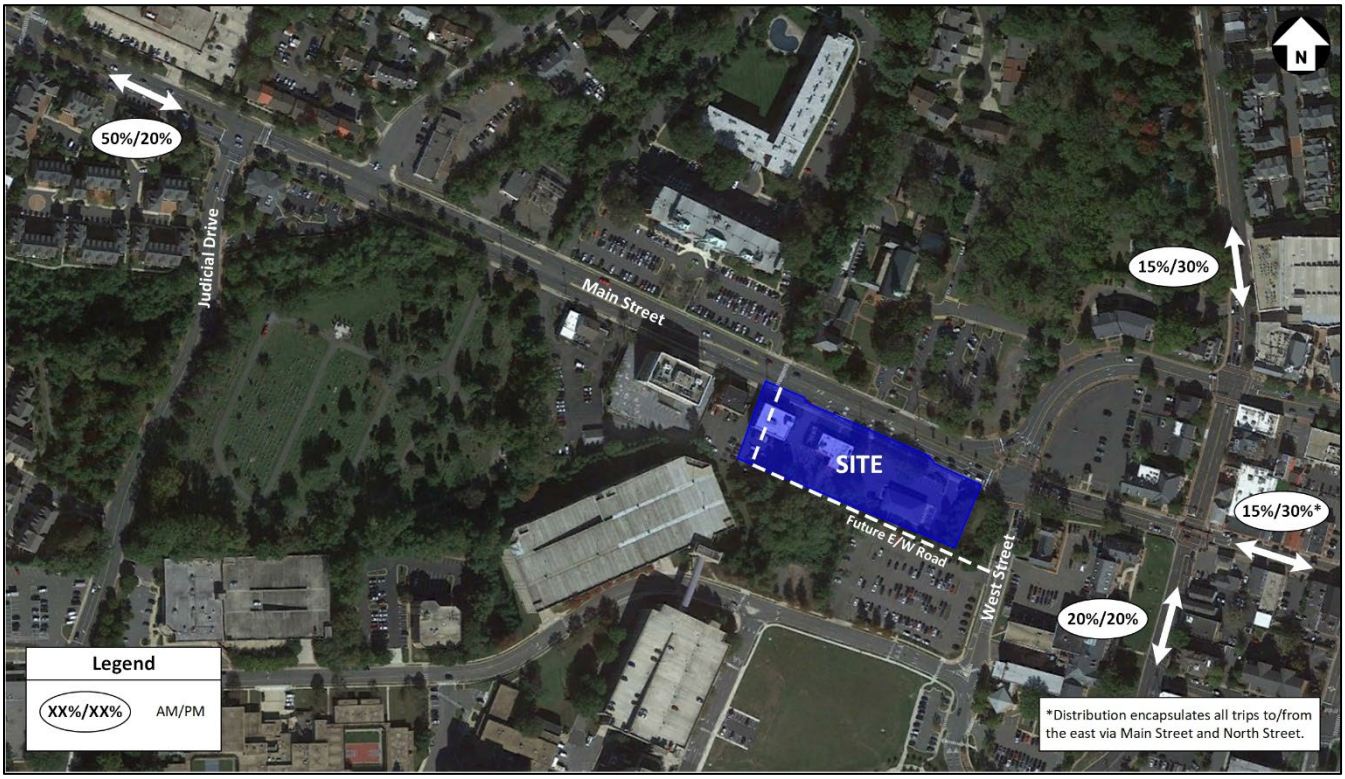

Figure 16: Directional Distribution

Future with Development (2025) Traffic Volumes

The site is currently occupied by a vacant 3,721 SF bank, a vacant 4,408 SF restaurant, and 11,340 SF of office that will be removed.

The Future Conditions with Development (2025) lane configurations are shown in Figure 17. Please note that the intersection of Main Street and 10533 Main Street Driveway/Connector Road/Mosby Tower Driveway East is planned to operate as a five-legged intersection under Future Conditions with Development (2025). This intersection is denoted as 6A and 6B in Figure 17 through Figure 21.

In order to determine the Future Conditions with Development (2025) traffic volumes, the site generated traffic volumes and pass-by trips were added to the Future Conditions without Development (2025) traffic volumes. The site generated traffic volumes at the study intersections are shown in Figure 18 and the pass-by trips are shown in Figure 19. The Future Conditions with Development (2025) peak hour traffic volumes are presented in Figure 20.

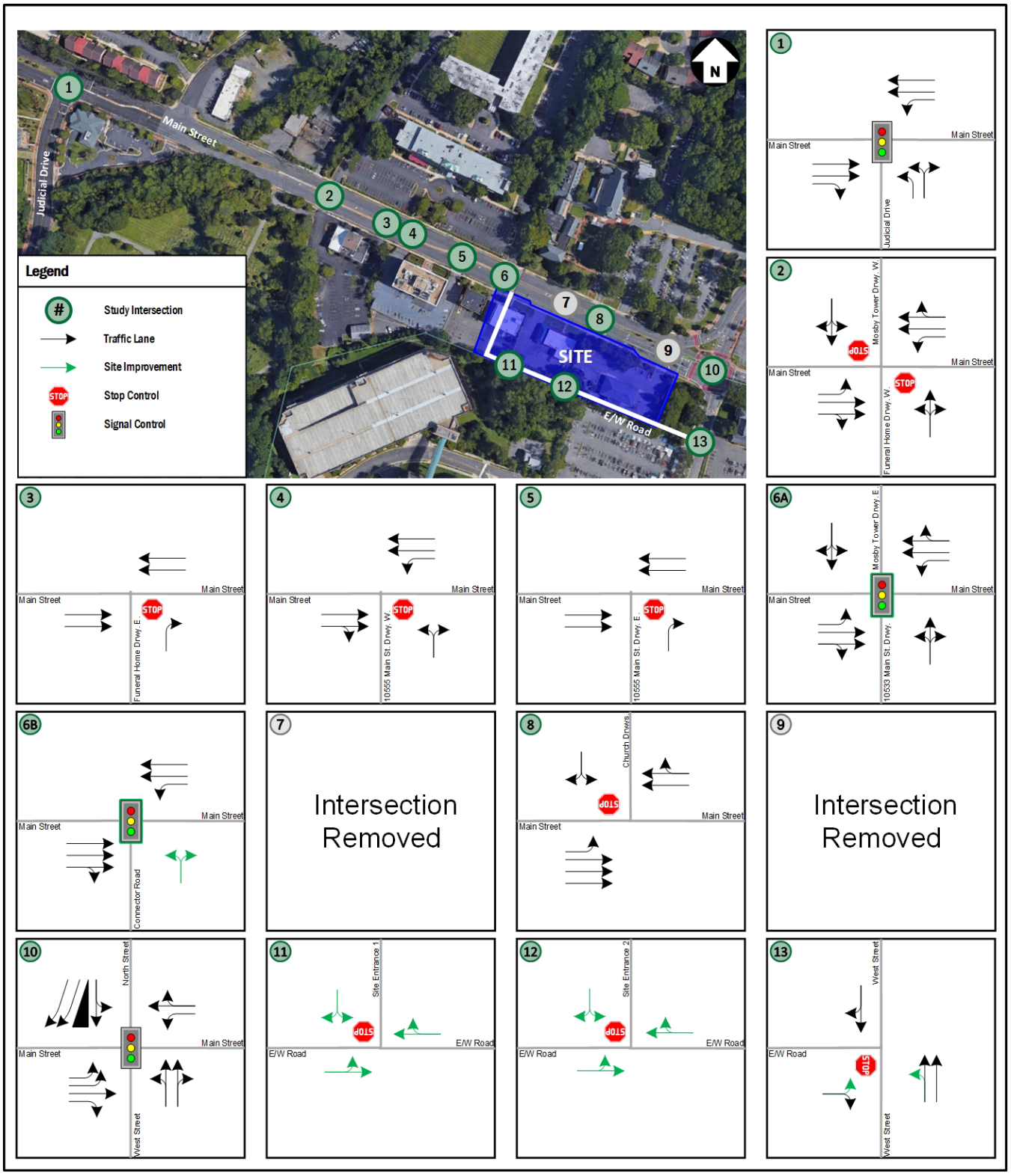

Figure 17: Future with Development (2025) – Lane Configuration

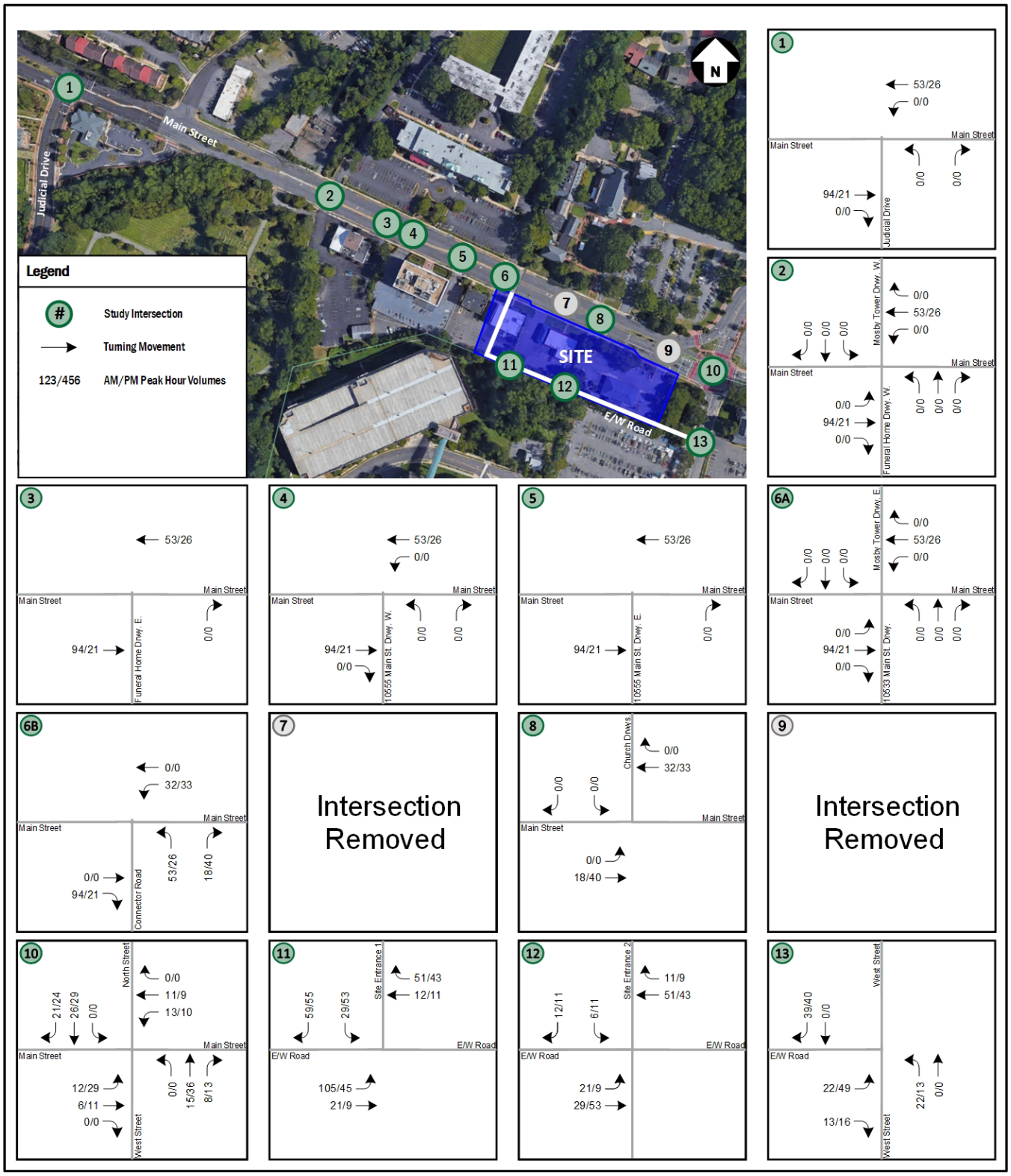

Figure 18: Site Trips (2025)

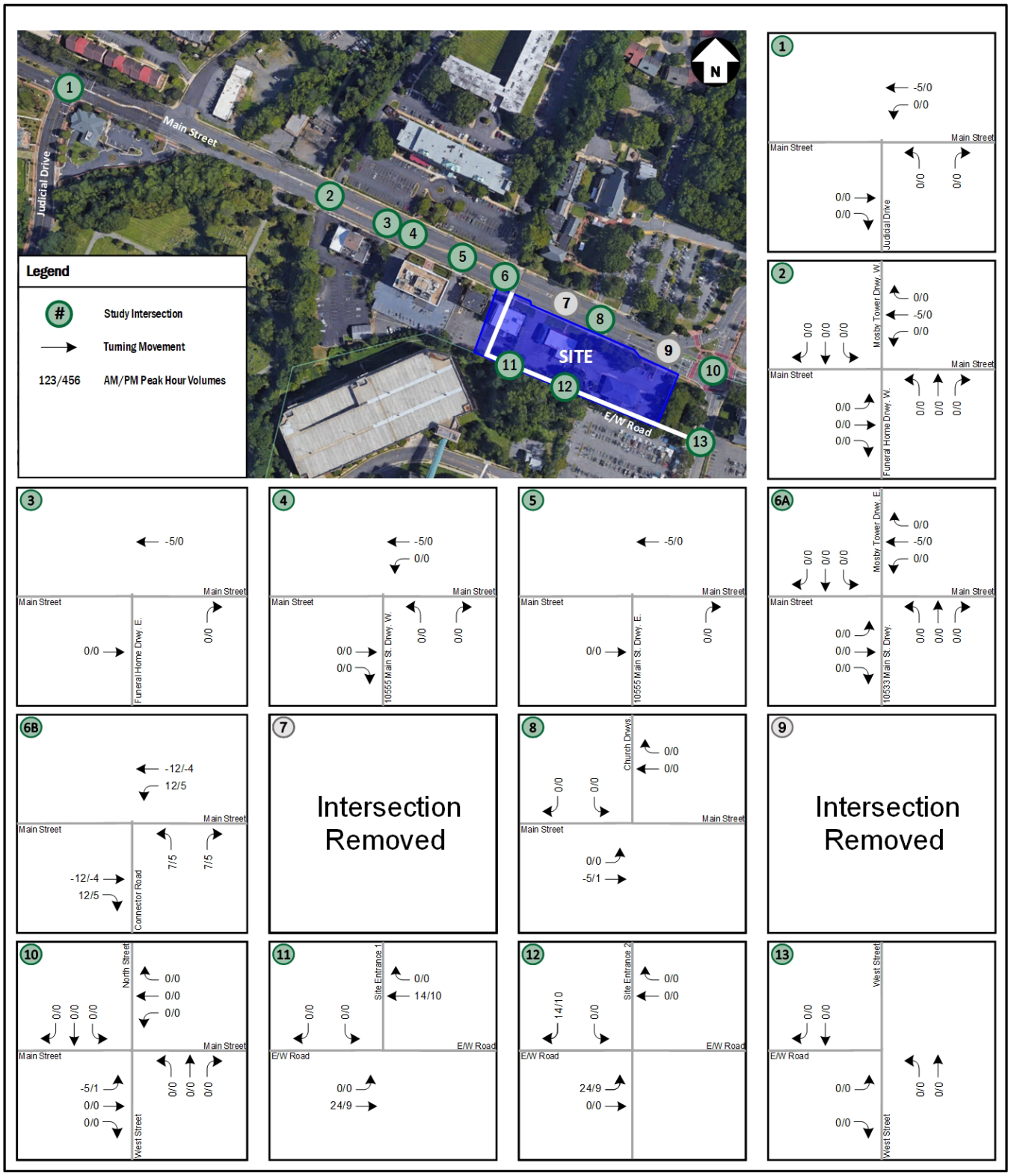

Figure 19: Pass-By Trips (2025)

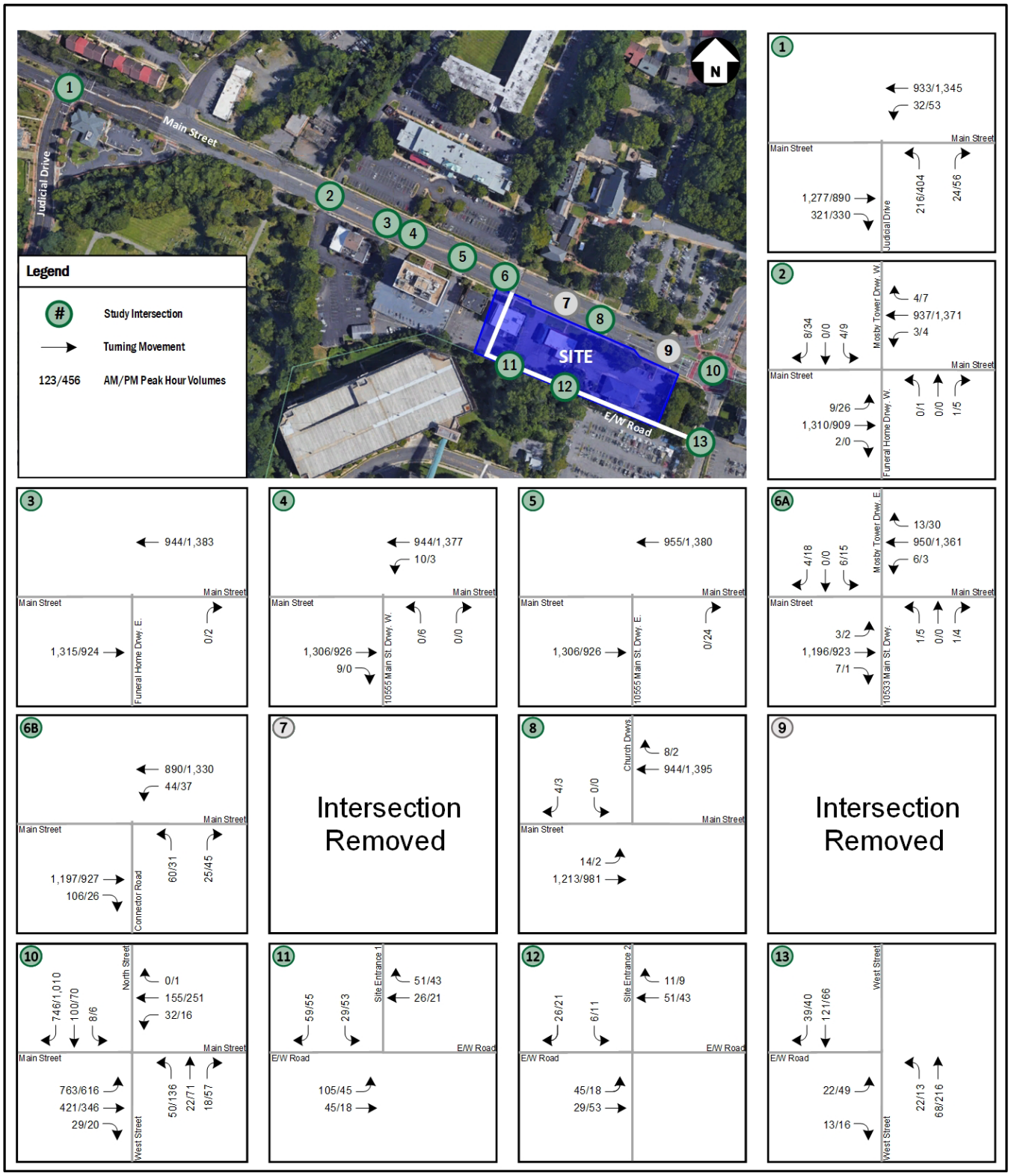

Figure 20: Future with Development (2025) – Peak Hour Traffic Volumes

Future with Development (2025) Intersection Analysis

Intersection capacity analysis was performed in a manner consistent with the methodology used for the Future Conditions without Development (2025) analysis.

The results of the intersection analysis are presented in Table 10, and are expressed in LOS and delay (seconds per vehicle) per lane group. The 50th and 95th percentile queue results for each intersection are also presented in Table 10 and are expressed in feet. The average and maximum queue results from SimTraffic are presented in Table 11 and are expressed in feet. Level of service results are also presented in Figure 21. The detailed analysis worksheets are included in Appendix F.

Table 10: Future with Development (2025) – Intersection Analysis (Synchro)

No.	Intersection (Movement)	Effective Storage Length (ft) [1]	AM Peak Hour				PM Peak Hour			
			LOS	Delay (sec/veh)	50th % Queue (ft) [4] [5]	95th % Queue (ft) [2] [3]	LOS	Delay (sec/veh)	50th % Queue (ft) [4] [5]	95th % Queue (ft) [2] [3]
			Synchro				Synchro			
1	**Main Street (E/W) and Judicial Drive (N/S)**									
	Overall Intersection (Signalized)		**B**	**13.5**			**C**	**23.2**		
	Eastbound Thru		A	9.3	333	418	B	12.7	272	358
	Eastbound Right	125	A	2.3	0	9	A	2.3	0	9
	Westbound Left	95	A	5.6	6	15	A	7.1	17	36
	Westbound Thru		A	4.1	134	182	A	9.6	380	493
	Northbound Left/Right		F	89.2	162	210	F	100.5	365	420
2	**Main Street (E/W) and Funeral Home Drwy. West/Mosby Tower Drwy. West (N/S)**									
	Overall Intersection (Unsignalized)									
	(Mitigation: Operational benefit from upstream signal)									
	Eastbound Left	125	A	9.4		1	B	11.6		4
	Westbound Left	130	B	14.4		1	A	9.8		0
	Northbound Left/Thru/Right		B	13.8		0	B	14.4		1
	Southbound Left/Thru/Right		B	12.5		2	C	16.4		11
3	**Main Street (E/W) and Funeral Home Drwy. East (N/S)**									
	Overall Intersection (Unsignalized)									
	Northbound Right		A	0.0		0	B	10.1		0
4	**Main Street (E/W) and 10555 Main Street Drwy. West (N/S)**									
	Overall Intersection (Unsignalized)									
	(Mitigation: Operational benefit from upstream signal)									
	Westbound Left	80	B	11.7		1	A	9.9		0
	Northbound Left/Right		A	0.0		0	C	17.6		2
5	**Main Street (E/W) and 10555 Main Street Drwy. East (N/S)**									
	Overall Intersection (Unsignalized)									
	Northbound Right		A	0.0		0	B	10.4		3
6	**Main Street (E/W) and 10533 Main Street Drwy./Mosby Tower Drwy. East/Connector Road (N/S)**									
	Overall Intersection (Signalized)									
	(Mitigation: Install traffic signal)		**C**	**34.1**			**C**	**31.6**		
	Eastbound Left	120	B	18.7	1	6	C	23.4	1	5
	Eastbound Thru/Right		D	40.2	601	711	C	27.6	323	389
	Westbound Left	100	D	45.5	16	m57	B	15.5	18	m19
	Westbound Thru/Right		C	22.4	231	348	C	33.2	575	m632
	Northbound Left/Thru/Right (10533 Main St.		D	53.3	2	11	D	53.9	7	26
	Southbound Left/Thru/Right		D	53.3	0	0	D	53.5	0	0
	Northbound Left/Thru/Right (Connector Rd.)		D	54.0	1	32	D	51.8	0	10
7	**Main Street (E/W) and 10515 Main Street Drwy. (N/S)**		**Intersection Removed**							
8	**Main Street (E/W) and 10501 Main Street Drwy. West/Church Drwys. (N/S)**									
	Overall Intersection (Unsignalized)									
	Eastbound Left	100	B	10.8		2	B	13.4		0
	Southbound Left/Thru/Right		B	12.3		1	C	15.6		1

No.	Intersection (Movement)	Effective Storage Length (ft) [1]	AM Peak Hour				PM Peak Hour			
			LOS	Delay (sec/veh)	50th % Queue (ft) [4] [5]	95th % Queue (ft) [2] [3]	LOS	Delay (sec/veh)	50th % Queue (ft) [4] [5]	95th % Queue (ft) [2] [3]
			Synchro				Synchro			
9	**Main Street (E/W) and 10501 Main Street Drwy. East (N/S)**		**Intersection Removed**							
10	**Main Street (E/W) and West Street (N/S)**									
	Overall Intersection (Signalized)		**C**	**33.1**			**D**	**47.0**		
	Eastbound Left		C	24.4	400	m474	D	48.6	200	266
	Eastbound Thru		D	51.7	443	m510	C	24.7	85	317
	Eastbound Right	115	C	25.2	0	m0	C	32.0	0	m0
	Westbound Left	125	D	36.6	12	34	C	32.6	6	19
	Westbound Thru/Right		E	66.5	148	#245	F	143.6	~265	#447
	Northbound Left/Thru Thru/Right		E	61.6	36	61	E	63.9	116	160
	Southbound Left/Thru	270	D	54.5	96	160	D	51.5	62	113
	Southbound Right		B	18.3	195	319	C	25.4	327	446
11	**E/W Road and Site Entrance 1 (N/S)**									
	Overall Intersection (Unsignalized)									
	Eastbound Left		A	5.5		6	A	5.3		2
	Southbound Left/Right		A	9.9		10	A	9.6		11
12	**E/W Road and Site Entrance 2 (N/S)**									
	Overall Intersection (Unsignalized)									
	Eastbound Left		A	4.6		2	A	2.0		1
	Southbound Left/Right		A	8.9		3	A	9.0		3
13	**E/W Road and West Street (N/S)**									
	Overall Intersection (Unsignalized)									
	Eastbound Left/Right		A	9.6		4	B	10.0		7
	Northbound Left		A	3.8		1	A	1.2		1

NOTES:

[1] Effective storage length is based on the storage length plus one-half of the taper length per TOSAM guidelines.

[2] #: 95th percentile queues (reported from Synchro) exceed capacity; actual queues may be longer. Queues shown are based on the maximum after two

[3] m: 95th percentile volume and queues (reported from Synchro) are metered by upstream signal.

[4] 50th Percentile Queues are not reported for TWSC intersections under HCM Methodology.

[5] ~: Volume exceeds capacity, queue is theoretically infinite.

For the purpose of this analysis, it is desirable to achieve a level of service (LOS) of D or better for each lane group at the study intersections.

The intersection capacity analysis results show that the following two (2) intersections have movements that operate below acceptable levels of service during one or more peak hours under Future Conditions with Development (2025), after mitigations. Intersections in **bold** have one or more lane groups that operate below acceptable levels of service under Future Conditions without Development.

- **Intersection 1: Main Street and Judicial Drive**
    - Northbound Left/Right (AM and PM Peaks)
- **Intersection 10: Main Street and West Street**
    - Westbound Thru/Right (AM and PM Peaks)
    - Northbound Left/Thru, Thru/Right (AM and PM Peaks)

The proposed East/West Road is located approximately 140 feet south of Main Street. The 50th and 95th percentile northbound queues at Main Street and West Street are anticipated to be contained during the AM peak hour. During the PM peak hour, the 50th percentile queue will be contained and the 95th percentile queue will exceed the 140-foot storage capacity by less than one (1) vehicle length.

Mitigation measures are proposed at the following intersection:

- Intersection 6: Main Street and 10533 Main Street Driveway/Connector Road/Mosby Tower Driveway East

- Install a traffic signal at the site entrance on Main Street to reduce delay and improve intersection operation. This signal would also provide an operational benefit to the Mosby Tower Driveways and 10555 Main Street Driveway West by reducing delay.
- Convert existing two-way left turn lane into separate left turn lanes for the site and the church on the north side of Main Street.
- It is noted that this will be a five-legged signalized intersection, with the 10533 Main Street Driveway and Connector Road as separate northbound approaches.

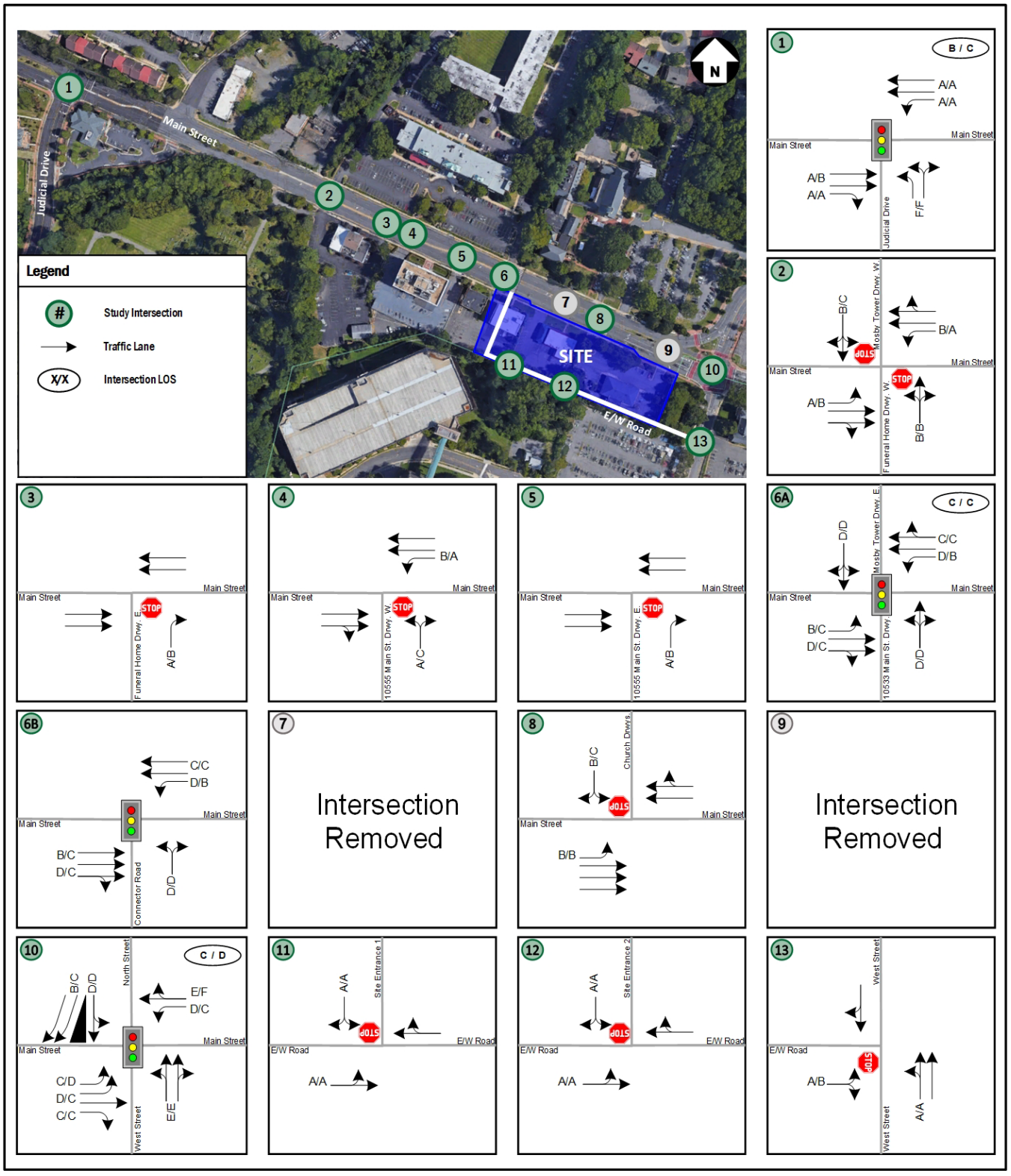

Figure 21: Future with Development (2025) – Levels of Service

Table 11: Future with Development (2025) – Intersection Analysis (SimTraffic) *For Informational Purposes Only*

No.	Intersection (Movement)	Effective Storage Length (ft.)	AM Peak		PM Peak	
			50th % Queue (ft.)	Max Queue (ft.)	50th % Queue (ft.)	Max Queue (ft.)
1	**Main Street (E/W) and Judicial Drive (N/S)**					
	Overall Intersection (Signalized)					
	Eastbound Thru		196	465	155	445
	Eastbound Right	125	60	125	60	125
	Westbound Left	95	30	88	33	91
	Westbound Thru		79	251	135	256
	Northbound Left		158	250	260	435
	Northbound Left/Right		118	230	224	394
2	**Main Street (E/W) and Funeral Home Drwy. West/Mosby Tower Drwy. West (N/S)**					
	Overall Intersection (Unsignalized)					
	Eastbound Left	125	6	60	15	70
	Westbound Left	130	3	30	3	28
	Northbound Left/Thru/Right		7	46	8	49
	Southbound Left/Thru/Right		21	75	32	88
3	**Main Street (E/W) and Funeral Home Drwy. East (N/S)**					
	Overall Intersection (Unsignalized)					
	Northbound Right				0	3
4	**Main Street (E/W) and 10555 Main Street Drwy. West (N/S)**					
	Overall Intersection (Unsignalized)					
	Westbound Left	80	11	44	2	18
	Northbound Left/Right				2	29
5	**Main Street (E/W) and 10555 Main Street Drwy. East (N/S)**					
	Overall Intersection (Unsignalized)					
	Northbound Right				23	63
6	**Main Street (E/W) and 10533 Main Street Drwy./Mosby Tower Drwy. East/Connector Road (N/S)**					
	Overall Intersection (Signalized)					
	(Mitigation: Install traffic signal)					
	Eastbound Left	120	2	20	1	19
	Eastbound Thru/Right		44	92	35	63
	Westbound Left	100	46	99	30	100
	Westbound Thru/Right		178	242	223	249
	Northbound Left/Thru/Right (10533 Main St.		1	16	8	37
	Southbound Left/Thru/Right		8	44	25	74
	Northbound Left/Thru/Right (Connector Rd.)		48	119	33	95
7	**Main Street (E/W) and 10515 Main Street Drwy. (N/S)**		**Intersection Removed**			
8	**Main Street (E/W) and 10501 Main Street Drwy. West/Church Drwys. (N/S)**					
	Overall Intersection (Unsignalized)					
	Eastbound Left	100	11	54	2	28
	Southbound Left/Thru/Right		5	29	3	29
9	**Main Street (E/W) and 10501 Main Street Drwy. East (N/S)**		**Intersection Removed**			

No.	Intersection (Movement)	Effective Storage Length (ft.)	AM Peak		PM Peak	
			50th % Queue (ft.)	Max Queue (ft.)	50th % Queue (ft.)	Max Queue (ft.)
10	**Main Street (E/W) and West Street (N/S)**					
	Overall Intersection (Signalized)					
	Eastbound Left		187	258	184	247
	Eastbound Thru		223	243	122	222
	Eastbound Right	115	20	115	9	100
	Westbound Left	125	31	124	30	124
	Westbound Thru/Right		125	250	321	375
	Northbound Left/Thru		51	90	81	91
	Northbound Thru/Right		15	68	33	81
	Southbound Left/Thru	270	81	204	92	270
	Southbound Right		131	301	291	480
11	**E/W Road and Site Entrance 1 (N/S)**					
	Overall Intersection (Unsignalized)					
	Eastbound Left					
	Southbound Left/Right		32	61		
12	**E/W Road and Site Entrance 2 (N/S)**					
	Overall Intersection (Unsignalized)					
	Eastbound Left					
	Southbound Left/Right		21	57	20	45
13	**E/W Road and West Street (N/S)**					
	Overall Intersection (Unsignalized)					
	Eastbound Left/Right		21	47	42	110
	Northbound Left		10	62	59	101

2025 Intersection Analysis

As described in previous sections, vehicular capacity analysis was performed for the following three (3) scenarios:

- **Existing (2022)** – based on existing 2022 turning movement counts.
- **Future without Development (2025)** – assumes existing traffic plus additional traffic due to a one (1) percent annual growth rate plus traffic due to planned yet unbuilt background developments.
- **Future with Development (2025)** – assumes existing traffic plus additional traffic due to a one (1) percent annual growth rate plus traffic due to planned yet unbuilt background developments plus traffic generated by the City Centre West site.

A comparison of the Measures of Effectiveness (MOE) results for all three (3) scenarios is presented in Table 12.

Table 12: MOE Comparison Table

No.	Intersection (Movement)	Level of Service (LOS) (Sec./Veh.)						95th Percentile Queues (ft.)					
		AM Peak Hour			PM Peak Hour			Storage Length (ft.)	AM Peak Hour			PM Peak Hour	
		EX 2022	FB 2025	TF 2025	EX 2022	FB 2025	TF 2025		EX 2022	FB 2025	TF 2025	EX 2022	FB 2025	TF 2025
1	**Main Street (E/W) and Judicial Drive (N/S)**													
	Overall Intersection (Signalized)	**B (13.6)**	**B (13.6)**	**B (13.5)**	**C (23.1)**	**C (23.3)**	**C (23.2)**							
	Eastbound Thru	A (8.8)	A (8.8)	A (9.3)	B (12.1)	B (12.5)	B (12.7)		366	374	418	330	348	358
	Eastbound Right	A (2.3)	A (2.3)	A (2.3)	A (2.3)	A (2.3)	A (2.3)	125	9	9	9	9	9	9
	Westbound Left	A (4.9)	A (5)	A (5.6)	A (6.7)	A (7)	A (7.1)	95	15	15	15	33	36	36
	Westbound Thru	A (4)	A (4)	A (4.1)	A (9)	A (9.5)	A (9.6)		167	170	182	447	480	493
	Northbound Left/Right	F (89.3)	F (89.2)	F (89.2)	F (101.1)	F (100.5)	F (100.5)		208	210	210	415	420	420
2	**Main Street (E/W) and Funeral Home Drwy. West/Mosby Tower Drwy. West (N/S)**													
	Overall Intersection (Unsignalized)													
	Eastbound Left	B (10.4)	B (10.2)	A (9.4)	B (13.4)	B (13.5)	B (11.6)	125	1	1	1	5	5	4
	Westbound Left	B (14.2)	B (13.5)	B (14.4)	B (10.1)	B (10.1)	A (9.8)	130	1	1	1	0	0	0
	Northbound Left/Thru/Right	B (14.2)	B (13.6)	B (13.8)	E (48.4)	F (55.9)	B (14.4)		0	0	0	6	6	1
	Southbound Left/Thru/Right	D (31.2)	D (25.1)	B (12.5)	F (55.8)	F (58.8)	C (16.4)		8	5	2	44	45	11
3	**Main Street (E/W) and Funeral Home Drwy. East**													
	Overall Intersection (Unsignalized)													
	Northbound Right	A (0)	A (0)	A (0)	B (12.2)	B (12)	B (10.1)		0	0	0	0	0	0
4	**Main Street (E/W) and 10555 Main Street Drwy. West (N/S)**													
	Overall Intersection (Unsignalized)													
	Westbound Left	B (11)	B (11.2)	B (11.7)	B (10.2)	B (10.3)	A (9.9)	80	1	1	1	0	0	0
	Northbound Left/Right	A (0)	A (0)	A (0)	F (52.7)	F (56.1)	C (17.6)		0	0	0	7	7	2
5	**Main Street (E/W) and 10555 Main Street Drwy. East (N/S)**													
	Overall Intersection (Unsignalized)													
	Northbound Right	A (0)	A (0)	A (0)	B (12.7)	B (12.4)	B (10.4)		0	0	0	4	4	3
6	**Main Street (E/W) and 10533 Main Street Drwy./Mosby Tower Drwy. East (N/S)**													
	Overall Intersection (Unsignalized)													
	Eastbound Left	B (10.1)	B (10.2)		B (12.1)	B (12.4)		120	0	0		0	0	
	Westbound Left	A (0.4)	A (0.4)		A (0.1)	A (0.1)			1	1		0	0	
	Northbound Left/Thru/Right	C (17.9)	C (17.9)		C (16.8)	C (17.3)			1	1		2	2	
	Southbound Left/Thru/Right	C (17.4)	C (17.7)		C (23.2)	C (24.5)			3	3		12	13	
6	**Main Street (E/W) and 10533 Main Street Drwy./Mosby Tower Drwy. East/Connector Road**													
	Overall Intersection (Signalized)													
	(Mitigation: Install traffic signal)			**C (34.1)**			**C (31.6)**							
	Eastbound Left			B (18.7)			C (23.4)	120			6			5
	Eastbound Thru/Right			D (40.2)			C (27.6)				711			389
	Westbound Left			D (45.5)			B (15.5)	100			m57			m19
	Westbound Thru/Right			C (22.4)			C (33.2)				348			m632
	Northbound Left/Thru/Right (10533 Main St. Drwy.)			D (53.3)			D (53.9)				11			26
	Southbound Left/Thru/Right			D (53.3)			D (53.5)				0			0
	Northbound Left/Thru/Right (Connector Road)			D (54)			D (51.8)				32			10

No.	Intersection (Movement)	Level of Service (LOS) (Sec./Veh.)						95th Percentile Queues (ft.)					
		AM Peak Hour			PM Peak Hour			Storage Length (ft.)	AM Peak Hour			PM Peak Hour	
		EX 2022	FB 2025	TF 2025	EX 2022	FB 2025	TF 2025		EX 2022	FB 2025	TF 2025	EX 2022	FB 2025	TF 2025
7	**Main Street (E/W) and 10515 Main Street Drwy. (N/S)**													
	Overall Intersection (Unsignalized)													
	Westbound Left	A (0)	A (0)		A (0)	A (0)			0	0		0	0	
	Northbound Left/Right	A (0)	A (0)		A (0)	A (0)			0	0		0	0	
8	**Main Street (E/W) and 10501 Main Street Drwy. West/Church Drwys. (N/S)**													
	Overall Intersection (Unsignalized)													
	Eastbound Left	A (0.8)	A (0.8)	B (10.8)	A (0.2)	A (0.2)	B (13.4)		2	2	2	0	0	0
	Westbound Left	A (0)	A (0)	- (-)	A (0)	A (0)	- (-)		0	0	-	0	0	-
	Northbound Left/Thru/Right	A (0)	A (0)	- (-)	A (0)	A (0)	- (-)		0	0	-	0	0	-
	Southbound Left/Thru/Right	B (12.4)	B (12.1)	B (12.3)	C (15.9)	C (15.4)	C (15.6)		1	1	1	1	1	1
9	**Main Street (E/W) and 10501 Main Street Drwy. East (N/S)**													
	Overall Intersection (Unsignalized)													
	Northbound Right	A (0)	A (0)		A (0)	A (0)			0	0		0	0	
10	**Main Street (E/W) and West Street (N/S)**													
	Overall Intersection (Signalized)	**C (33.2)**	**C (33.8)**	**C (33.1)**	**D (41.5)**	**D (44.3)**	**D (47)**							
	Eastbound Left	D (35.6)	D (36.2)	C (24.4)	C (34.2)	D (35.9)	D (48.6)		432	440	m474	296	306	266
	Eastbound Thru	D (39)	D (39.3)	D (51.7)	D (41.1)	D (43.5)	C (24.7)		#559	#570	m510	388	402	317
	Eastbound Right	C (24)	C (24.9)	C (25.2)	C (29.8)	C (30.9)	C (32)	115	0	0	m0	0	0	m0
	Westbound Left	D (36.2)	D (36.3)	D (36.6)	C (32.3)	C (32.4)	C (32.6)	125	19	24	34	10	10	19
	Westbound Thru/Right	E (65.7)	E (64.1)	E (66.5)	F (123.7)	F (133.3)	F (143.6)		216	#221	#245	#411	#428	#447
	Northbound Left/Thru/Right	E (62.9)	E (61.6)	E (61.6)	E (61.8)	E (62.7)	E (63.9)		45	51	61	105	131	160
	Southbound Left/Thru	D (50.6)	D (52.2)	D (54.5)	D (49.2)	D (49.6)	D (51.5)	270	93	126	160	68	75	113
	Southbound Right	B (17.2)	B (17.7)	B (18.3)	C (21.9)	C (23.6)	C (25.4)		303	309	319	413	432	446
11	**E/W Road and Site Entrance 1 (N/S)**													
	Overall Intersection (Unsignalized)													
	Eastbound Left			A (5.5)			A (5.3)				6			2
	Southbound Left/Right			A (9.9)			A (9.6)				10			11
12	**E/W Road and Site Entrance 2 (N/S)**													
	Overall Intersection (Unsignalized)													
	Eastbound Left			A (4.6)			A (2)				2			1
	Southbound Left/Right			A (8.9)			A (9)				3			3
13	**E/W Road and West Street (N/S)**													
	Overall Intersection (Unsignalized)													
	Eastbound Left/Right			A (9.6)			B (10)				4			7
	Northbound Left			A (3.8)			A (1.2)				1			1

Preliminary Signal Warrant Analysis

This section presents the results of a preliminary signal warrant analysis for the intersection of Main Street and 10533 Main Street Driveway/Connector Road/Mosby Tower Driveway East where a traffic signal is recommended as a mitigation measure in the Future with Development (2025) conditions. Main Street has a posted speed limit of 25 mph.

This warrant analysis was conducted using the ADT signal warrants per the VDOT Supplement of MUTCD. The signal warrant requirements for the ADT estimates are shown in Table 13. The ADTs were estimated based on the volumes in the Future with Development (2025) conditions. The results of the preliminary signal warrant analysis are shown in Table 14.

Table 13: ADT Signal Warrant Table (Source: VDOT Supplement of MUTCD)

Table 4C-V1. Traffic Signal Warrant Using Average Daily Traffic Estimate

(To be used only when traffic counts are not available, such as at a future intersection)

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per day on major street (total of both approaches)				Vehicles per day on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	8,000	6,400	5,600	4,480	2,400	1,920	1,680	1,344
2 or more	1	9,600	7,680	6,720	5,376	2,400	1,920	1,680	1,344
2 or more	2 or more	9,600	7,680	6,720	5,376	3,200	2,560	2,240	1,792
1	2 or more	8,000	6,400	5,600	4,480	3,200	2,560	2,240	1,792

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per day on major street (total of both approaches)				Vehicles per day on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	12,000	9,600	8,400	6,720	1,200	960	850	680
2 or more	1	14,400	11,520	10,080	8,064	1,200	960	850	680
2 or more	2 or more	14,400	11,520	10,080	8,064	1,600	1,280	1,120	896
1	2 or more	12,000	9,600	8,400	6,720	1,600	1,280	1,120	896

[a] Basic minimum hourly volume for urban areas
[b] Used for combination of Conditions A and B after adequate consideration of other remedial measures in urban areas
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and B after adequate consideration of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Table 14: ADT Signal Warrant Analysis Results (Future with Development – 2025)

		Either Condition A or B Must Be Satisfied		Both Conditions A and B Must Be Satisfied	
Vehicles per day on major street (total of both approaches)	Vehicles per day on higher-volume minor-street approach (one direction only)	100% Threshold Conditions A	100% Threshold Conditions B	80% Threshold Conditions A	80% Threshold Conditions B
VPD		9,600 / 2,400	14,400 / 1,200	7,680 / 1,920	11,520 / 960
31,781	/ 760	Y / N	Y / N	Y / N	Y / N

Y - Threshold is satisfied

N - Threshold is not satisfied

Per the MUTCD, the following are the requirements for a traffic signal to be warranted at an intersection:

- Either Condition A or Condition B for the 100% thresholds must be satisfied or;
- Both Condition A and Condition B for the 80% thresholds must be satisfied

As shown in Table 14, the preliminary signal warrants based on estimated ADTs for the intersection of Main Street and 10533 Main Street Driveway/Connector Road/Mosby Tower Driveway East are not satisfied under the Future with Development (2025) conditions.

Although the City Centre West development alone does not warrant a signal based on volumes, full build-out of the Fairfax County Judicial Complex redevelopment directly to the south of the site will warrant a signal as the proposed E/W Connector Road will provide a direct route to the Judicial Complex. Additionally, since the proposed signal is located at a 5-legged intersection, a signal is a safer option than leaving the intersection unsignalized. Compared to four-legged intersections, multi-legged intersections add additional conflict points. A signal at a multi-legged intersection can help drivers move efficiently and safely through an intersection by designating movements to proceed without conflict. A signal also provides gaps in vehicular traffic to allow time for pedestrians and bicyclists to safely cross the road. Without a signal in place, the proposed crosswalks across Main Street would not be safe, therefore forcing pedestrians to use the next nearest crosswalk which is over 500 feet away.

Conclusions

This report presented the findings of a Transportation Impact Study (TIS) conducted for the proposed redevelopment of the City Centre West site in the City of Fairfax, Virginia.

The analysis presented in this report supports the following major finding:

- After the addition of redevelopment traffic, and implementation of the proposed signal on Main Street, all study intersections operate at the same or better level of service as the Future Conditions without Development (2022).

Additional assumptions, findings, and conclusions are as follows:

TIA Components

- As determined based on discussions with the City, a growth rate of one (1) percent per year was applied to major movements at the study intersections to account for regional growth in background traffic volumes.
- A Mode Split/TDM reduction of five (5) percent was applied to residential and office uses, as agreed upon with the City.
- The site is expected to generate approximately 292 trips in the AM peak hour, 235 trips in the PM peak hour, and 2,482 daily trips at full build-out, after reductions.

Infrastructure

- Existing vehicular access is provided via three (3) full-access driveways and one (1) right-in/right-out (RIRO) on Main Street.
- Redevelopment of the property will remove the existing 10515 and 10501 Main Street driveways and convert the existing unsignalized four-legged Main Street and 10533/10523 Main Street intersection into a signalized five-legged intersection.
- Benefits of reducing curb cuts along Main Street include decreasing the number of conflict points along Main Street, increasing pedestrian safety, and increasing the available vehicle stacking distance along eastbound Main Street.

Non-SOV Elements

- Five (5) bus routes provide service in the vicinity of the site, providing regional access to the area.

Analysis Results

- Four (4) intersections within the study area operate below acceptable levels of service under Existing Conditions (2022), and the same intersections continue to operate below acceptable levels of service under Future Conditions without Development (2022).
- After the addition of redevelopment traffic, and implementation of the proposed signal on Main Street, all study intersections operate at the same or better level of service as the Future Conditions without Development (2022).

Proposed Mitigation

- A signal is proposed and recommended at the site entrance on Main Street to reduce delay and improve operation. This signal would also provide an operational benefit to the Mosby Tower Driveways and 10555 Main Street Driveway West by reducing delay. It is noted that this will be a five-legged signalized intersection, with the 10533 Main Street Driveway and Connector Road as separate northbound approaches.
- It is recommended that the existing two-way left turn lane on Main Street be converted into separate left turn lanes for the site and the church on the north side of Main Street.
- Introducing the East/West Road on the south side of the site increases porosity in the area by allowing vehicles to enter and exit the site via West Street and Main Street and provides a local road from which vehicles can access the parking garage.