Seminary Road Safety Improvements

A FY25 Regional Roadway Safety Program (RRSP) Project

Prepared for:

National Capital Region
Transportation Planning Board

Preparerd by:

Kimley»Horn Rossi

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The National Capital Region TPB is the federally designated metropolitan planning organization (MPO) for metropolitan Washington. It is responsible for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process in the metropolitan area. Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia and the District of Columbia, 24 local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies. The TPB is staffed by the Department of Transportation Planning at the Metropolitan Washington Council of Governments (COG).

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Introduction

This report presents the findings of a safety analysis of the Seminary Road Corridor in the City of Alexandria. The Seminary Road Safety Improvements Project was funded by a grant from the Metropolitan Washington Council of Governments (MWCOG) Transportation Planning Board (TPB) FY25 Regional Roadway Safety Program (RRSP).

Project Purpose

The goal of the Seminary Road Safety Improvements Project is to identify needed safety improvements along a half mile segment of Seminary Road between North Beauregard Street and the City line, including the intersection of Seminary Road and South George Mason Drive. The study area excludes the intersection of Seminary Road and North Beauregard Street as an investigation of potential improvements at this intersection will be a separate, but related effort. Addressing safety is of critical importance along this corridor – it ranks among the City's highest-crash corridors and the combination of high traffic volumes (33,000 vehicles per day), the proximity of pedestrian generators (such as transit stops, strip malls, the Northern Virginia Community College Alexandria Campus, and Chambliss, Dowden Terrace and Skyline Park) and the many residential communities on each side Seminary Road heighten the exposure to crash risk for vulnerable road users. This report provides background on corridor conditions and discusses the development of three context-sensitive and data-driven alternative roadway configurations that could improve mobility, access, comfort, and safety for all roadway users.

Study Area

The study area consists of Seminary Road between N. Beauregard Street and S. George Mason Drive, as shown in **Figure 1**. Beauregard and S. George Mason are principal arterials that generate trips along Seminary Road, which acts as a connection between these roadways and surrounding residential areas.

Figure 1: Study Area and Surrounding Arterial Roads

Figure 2 depicts the different types of intersections within the study area. The study area for this project includes the following seven (7) intersections:

- Seminary Road and South George Mason Drive/Shopping Center Entrance
- Seminary Road and Colfax Avenue
- Seminary Road and Dawes Avenue
- Seminary Road and Fillmore Avenue/Dover Place
- Seminary Road and Fillmore Avenue
- Seminary Road and Echols Avenue
- Seminary Road and Heritage Lane/Fairbanks Avenue

Figure 2: Study Area

Methodology

The City of Alexandria compiled an existing conditions summary, crash analysis, preliminary community engagement report prior to the inception of the project to create a foundational understanding of corridor and community needs.

The project team reviewed this foundational material and conducted a multimodal road safety audit (RSA) along Seminary Road to identify any safety improvement needs or potential mitigation methods. The RSA consisted of data analysis, two field reviews and a post field review analysis. The first field review, conducted on Thursday, January 30, 2025, from 1:30 pm to 3:00 pm, was an in-depth road safety audit. The second field review was conducted on Tuesday, February 4, 2025, from 8:30 am to 10:30 pm to supplement prior observations.

Field observations taken in the field included, but were not limited to, road user behavior and traffic patterns, existing intersection geometry, ADA and pedestrian accommodations, presence of traffic control signage and infrastructures, and pavement markings throughout the corridor. The observations can be found in **Table 1.**

Following the RSA, the project team and City staff collaborated to identify safety countermeasures and to develop preliminary cross-sections that represented potential corridor improvements. The cross-sections were shared with the community to solicit feedback.

Existing Conditions Snapshot

This section of the report provides a snapshot of key existing conditions information about the corridor.

Site Characteristics

The existing characteristics of the study area are detailed in **Table 1**. Seminary Road is a four-lane road that runs along the low- and medium- residential land uses, as shown in **Figure 3.**

Figure 3: Existing Cross-Section of Seminary Road within the Study Area

Left turn lanes provided at Dawes Avenue and at South George Mason Drive. The lack of exclusive turn lanes at the other intersections contributes to unexpected slowdown, conflicts, and unpredictability, and sudden stops along the corridor as motorists traveling along Seminary Road must make adjustments to avoid vehicles turning left from a travel lane.

The study area is served by 3 bus routes, has 5 bus stops, and sidewalks are present along both sides of Seminary Road. No marked bike lanes are present with the study area, though marked bike lanes are present just east of the South George Mason Drive intersection and shared lane markings are present just east of the Dawes Avenue intersection.

Table 1: Site Characteristics

Characteristics	Description
Orientation	North-South
Functional Classification	Minor Arterial
Estimated Annual Average Daily Traffic (AADT) in 2022 (vehicles per day)	33,000 vpd
Speed Limit (miles per hour)	25 mph There are dynamic speed radar signs in several places throughout the study area.
Number of Lanes	It is a four-lane undivided roadway with dedicated left-hand turn lanes at major intersections
Road Geometry	The roadway is approximately 45' curb to curb. There is a presence of curb and gutter on both sides of the road.
Lane Widths (feet)	12' (Typical)
Roadway Features	Divided Roadway with raised median between Dawes Avenue and S. George Mason Drive. Left turn lanes at many intersections along the corridor
Land Uses	Low- and Medium-Density Residential, Commercial (shopping centers), Institutional (NVCC Alexandria Campus along Dawes Avenue and east of Seminary Road) There are driveways that front Seminary Road on both sides making it challenging for roadway users to back up into oncoming traffic and that conflict with pedestrians
Transit Presence	3 stops in the southbound direction, 3 stops in the northbound direction – 1 transit provider. Washington Metropolitan Area Transit Authority (WMATA): Route 28 A, Route 28F, Route 22F,
Pedestrian Facilities	Sidewalks along both sides of Seminary Road for the entire corridor. Marked crosswalks are provided at 5 intersections along the corridor – all at signalized intersections except Seminary Road and Fairbanks Avenue/Heritage Lane
Bicycle Facilities	None on Seminary Road. Access to bike lane along S. George Mason Drive Eastbound and a shared lane along Dawes Avenue.

Speed and Volume Data

The City provided 24-hour speed and lane data for three segments along Seminary Road:

- Segment 1: Colfax Avenue and Dawes Avenue
- Segment 2: Fillmore Avenue and Echols Avenue
- Segment 3: Echols Avenue and Heritage Lane/Fairbanks Avenue

Data collection was conducted from April 1, 2025, through April 3, 2025. The data from the 3 days of was reviewed and averaged to represent a typical day along the corridor.

The speed data has been summarized for this "typical day" and reported for a 24-hour time period, as well as for an AM morning peak period (6 to 9 AM) and PM afternoon peak period (4 to 7 PM). Speed data (average, 85th percentile, and maximum) is shown in graphical and tabular format in the subsequent sections.

Seminary Road Between Colfax Avenue and Dawes Avenue

In this section of Seminary Road, when considering all vehicles traffic over a typical 24-hour period, the average speeds are generally under the posted speed limit of 25 mph. The 85th percentile speeds range from 25 to 29 mph in almost all of the travel lanes in both the northbound and southbound directions. The exception is the middle lane in the southbound direction which has a 85th percentile speed in the range of 30 to 34 mph. Speed observations over a typical 24-hour period are shown in

Figure 4 and detailed in **Table 2**. Notably, in this section of Seminary Road, approximately 26% of all vehicles that travel the corridor exceed the posted speed limit and the maximum observed speed is in the 55 to 59 mph range, over twice as fast as the posted speed limit.

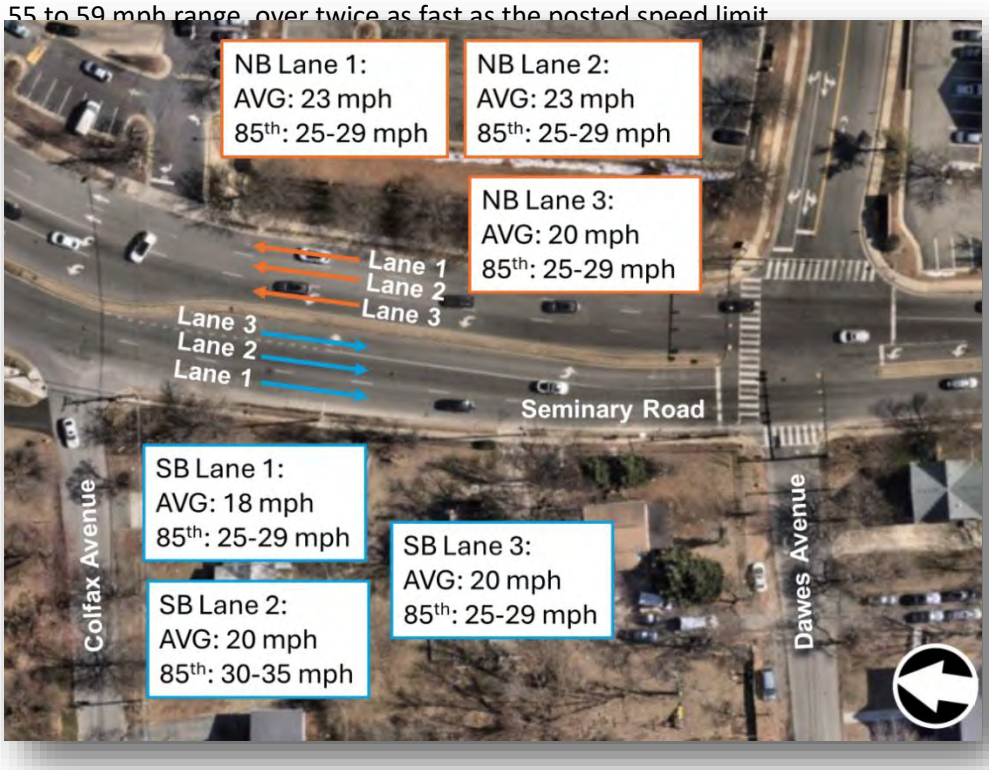


Figure 4: 24-Hour Speed Summary Diagram by Lane Between Colfax Avenue and Dawes Avenue

Table 2: 24-Hour Speed Data Summary along Seminary Road between Colfax Avenue and Dawes Avenue

	NB Lane 1	NB lane 2	NB Lane 3	SB Lane 1	SB lane 2	SB Lane 3
Total Observed vehicles	4,706	2,840	8,645	8,775	6,871	491
Total Vehicles exceeding 25 mph	1,716	1,025	1,478	2,041	2,190	67
Percent of Vehicles exceeding 25 mph	36%	36%	17%	23%	32%	14%
85th Percentile Speed (mph)	25 to 29	25 to 29	25 to 29	25 to 29	30 to 35	25 to 29
Average Speed (mph)	23	23	20	18	20	20
Maximum Observed Speed	45 to 49	40 to 44	35 to 39	50 to 54	55 to 59	25 to 29

Table 3 summarizes AM peak period speeds. In this section of Seminary Road, when considering the vehicle traffic occurring between 6:00am and 9:00am, the average speeds are generally at or below the posted speed limit of 25 mph for all lanes except the outside northbound lane which exceeds the posted speed limit by 1 mph. The 85th percentile speeds range from 25 to 29 mph in half of the lanes and from 30 to 34 mph in the remaining lanes. Notably, during the AM peak period in this section of Seminary Road, nearly half (48%) of all vehicles exceed the posted speed limit. Additionally, the maximum observed speed is in the 45 to 49 mph range, more than 20 mph above the posted speed limit.

Table 3: AM Peak Period Speed Data Summary along Seminary Road between Colfax Avenue and Dawes Avenue

	NB Lane 1	NB lane 2	NB Lane 3	SB Lane 1	SB lane 2	SB Lane 3
Total Observed vehicles	777	2,287	1,452	1,220	3,344	68
Total Vehicles exceeding 25 mph	490	1,091	361	552	1,877	21
Percent of Vehicles exceeding 25 mph	63%	48%	25%	45%	56%	30%
85th Percentile Speed (mph)	30 to 34	25 to 29	25 to 29	30 to 34	30 to 34	25 to 29
Average Speed (mph)	26	25	21	23	25	23
Maximum Observed Speed	40 to 44	40 to 44	35 to 39	45 to 49	45 to 49	35 to 39

Error! Not a valid bookmark self-reference. summarizes the PM peak period speed data. In this section of Seminary Road, when considering the vehicle traffic occurring between 4:00pm and 7:00pm, the average speeds vary greatly. The average speeds are below the posted speed limit of 25 mph for all lanes. The 85th percentile speeds exceed the posted speed limit by 5 mph in some of the lanes. Notably, during the PM peak period in this section of Seminary Road, only 10% of all vehicles exceed the posted

speed limit. PM commuter traffic and roadway congestion contribute to this. The maximum observed speed is in the 50 to 54 mph range, over twice as fast as the posted speed limit.

Table 4: PM Peak Period Speed Data Summary along Seminary Road between Colfax Avenue and Dawes Avenue

	NB Lane 1	NB lane 2	NB Lane 3	SB Lane 1	SB lane 2	SB Lane 3
Total Observed vehicles	4,706	922	1,590	1,741	2,914	87
Total Vehicles exceeding 25 mph	218	242	171	42	540	7
Percent of Vehicles exceeding 25 mph	5%	26%	11%	2%	19%	8%
85th Percentile Speed (mph)	25 to 29	25 to 29	20 to 24	15 to 19	25 to 29	20 to 24
Average Speed (mph)	20	21	18	13	18	19
Maximum Observed Speed	40 to 44	40 to 44	30 to 44	35 to 39	50 to 54	25 to 29

Seminary Road Between Fillmore Avenue and Echols Avenue

In this section of Seminary Road, when considering the vehicle traffic over a typical 24-hour period, the average speeds are generally under the posted speed limit of 25 mph. the 85th percentile speeds range from 25 to 29 mph in almost all the travel lanes in both the northbound and southbound directions. The exception is the inside lane in the southbound direction which has a 85th percentile speed in the range of 30 to 34 mph. Speed observations over a typical 24-hour period are shown in in **Figure 5** and detailed in **Table 5**. Notably, in this section of Seminary Road, approximately 34% of all vehicles that travel the corridor exceed the posted speed limit and the maximum observed speed is in the 60 to 64 mph range, more than 35 mph faster than the posted speed limit.

Figure 5: 24-Hour Speed Summary Diagram by Lane by Lane Between Filmore Avenue and Echols Avenue

Table 5: 24-Hour Speed Data Summary along Seminary Road between Filmore Avenue and Echols Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Total Observed vehicles	8,713	8,897	9,480	7,327
Total Vehicles exceeding 25 mph	3,465	3,562	1,461	3,218
Percent of Vehicles exceeding 25 mph	40%	40%	15%	44%
85th Percentile Speed (mph)	25 to 29	25 to 29	25 to 29	30 to 34
Average Speed (mph)	24	24	18	24
Maximum Observed Speed	45 to 49	55 to 59	45 to 49	60 to 64

Table 6 summarizes AM peak period speeds. In this section of Seminary Road, when considering the traffic occurring between 6:00am and 9:00am, the average speeds are at or below the posted speed limit of 25 mph for all lanes except the inside southbound lane which exceeds the posted speed limit by 5 mph. 85th percentile speeds range from 25 to 29 mph in all the lanes except the inside southbound lane which has an 85th percent speed range of 35 to 39 mph. Notably, during the AM peak period in this section of Seminary Road, nearly half (44%) of all vehicles exceed the posted speed limit. Additionally, the maximum observed speed is in the 60 to 64 mph range, more than 35 mph faster than the posted speed limit.

Table 6: AM Peak Period Speed Data Summary along Seminary Road between Filmore Avenue and Echols Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Total Observed vehicles	1,438	1,589	1,352	777
Total Vehicles exceeding 25 mph	561	684	477	567
Percent of Vehicles exceeding 25 mph	39%	43%	35%	73%
85th Percentile Speed (mph)	25 to 29	25 to 29	25 to 29	35 to 39
Average Speed (mph)	25	24	22	30
Maximum Observed Speed	45 to 49	40 to 44	45 to 49	60 to 64

Table 7 summarizes the PM peak period speed data. In this section of Seminary Road, when considering the vehicle traffic occurring between 4:00pm and 7:00pm, the average speeds vary greatly. The average speeds are below the posted speed limit of 25 mph for all lanes. The 85th percentile speeds exceed the posted speed limit by 5 mph in some lanes. Notably, during the PM peak period in this section of Seminary Road, only 28% of all vehicles exceeded the posted speed limit. PM commuter traffic and roadway congestion contribute to this alignment with the posted speed limit. Notably, however, the maximum observed speed is in the 60 to 64 mph range, over 30 mph faster than the posted speed limit.

Table 7: PM Peak Period Speed Data Summary along Seminary Road between Filmore Avenue and Echols Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Total Observed vehicles	1,752	1,568	1,766	1,831
Total Vehicles exceeding 25 mph	619	572	174	592
Percent of Vehicles exceeding 25 mph	35%	37%	10%	32%
85th Percentile Speed (mph)	25 to 29	25 to 29	20 to 24	25 to 29
Average Speed (mph)	23	23	17	21
Maximum Observed Speed	40 to 44	45 to 49	40 to 44	60 to 64

Seminary Road Between Echols Avenue and Heritage Lane/Fairbanks Avenue

In this section of Seminary Road, when considering all the vehicles traffic over a typical 24-hour period, the average speeds are generally under the posted speed limit of 25 mph and all under 30 mph. The 85th percentile speeds are generally in the range of 30 to 34 mph. Speed observations over a typical 24-hour period are shown in **Figure 6** and detailed in **Table 8.** Notably, in this section of Seminary Road, approximately 44% of all vehicles that travel the corridor exceed the posted speed limit and the maximum observed speed is in the 60 to 64 mph range, more than 35 mph faster than the posted speed limit.

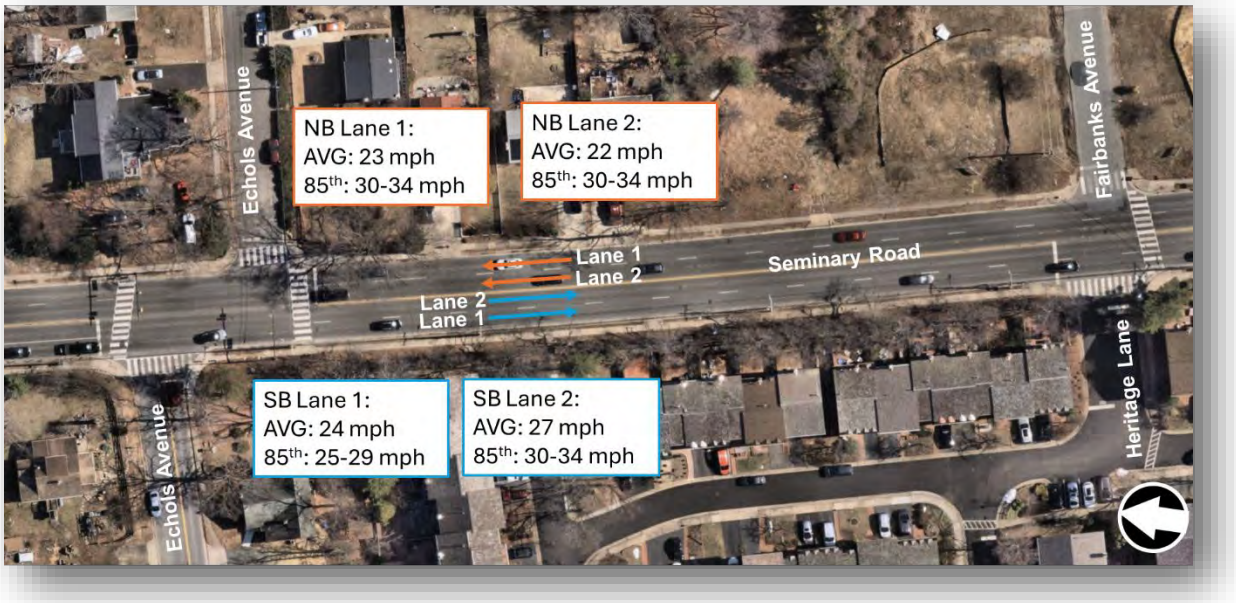


Figure 6: 24-Hour Speed Summary Diagram by Lane Between Filmore Avenue and Echols Avenue

Table 8: 24-Hour Speed Data Summary along Seminary Road between Echols Avenue and Heritage Lane/Fairbanks Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Total Observed vehicles	9897	8111	10397	7329
Total Vehicles exceeding 25 mph	4128	2883	4208	4550
Percent of Vehicles exceeding 25 mph	42%	36%	40%	62%
85th Percentile Speed (mph)	30 to 34	30 to 34	25 to 29	30 to 34
Average Speed (mph)	23	22	24	27
Maximum Observed Speed	60 to 64	55 to 59	50 to 54	55 to 59

Table 9 summarizes AM peak period speeds. In this section of Seminary Road, when considering the vehicle traffic occurring between 6:00am and 9:00am, the average speeds are at or below the posted speed limit of 25 mph for all lanes except the inside southbound lane which exceeds the posted speed limit by 5 mph. the 85th percentile speed ranges from 30 to 34 mph in all lanes. Notably, during the AM peak period in this section of Seminary Road, over half (56%) of all vehicles exceed the posted speed limit. Additionally, the maximum observed speed is in the 55 to 59 mph range, more than 30 mph faster than the posted speed limit.

Table 9: AM Peak Period Speed Data Summary along Seminary Road between Echols Avenue and Heritage Lane/Fairbanks Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Total Observed vehicles	1606	1468	1481	869
Total Vehicles exceeding 25 mph	849	610	862	715
Percent of Vehicles exceeding 25 mph	53%	42%	58%	82%
85th Percentile Speed (mph)	30 to 34	30 to 34	30 to 34	30 to 34
Average Speed (mph)	25	23	26	29
Maximum Observed Speed	55 to 59	55 to 59	45 to 49	45 to 49

Table 10 summarizes the PM peak period speed data. In this section of Seminary Road, when considering the vehicle traffic occurring between 4:00pm and 7:00pm, the average speeds are below the posted speed limit of 25 mph for all lanes. 85th percentile speeds exceed the posted speed limit by 5 mph in all lanes. Notably, during the PM peak period in this section of Seminary Road, only 27% of all vehicles exceed the posted speed limit. PM commuter traffic and roadway congestion likely contribute to this alignment with the posted speed limit for the majority of vehicles. Notably, however, the maximum observed speed is in the 55 to 59 mph range, over 30 mph faster than the posted speed limit.

Table 10: PM Peak Period Speed Data Summary along Seminary Road between Echols Avenue and Heritage Lane/Fairbanks Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Total Observed vehicles	2130	1293	2263	1802
Total Vehicles exceeding 25 mph	499	229	510	786
Percent of Vehicles exceeding 25 mph	23%	18%	23%	44%
85th Percentile Speed (mph)	25 to 29	25 to 29	25 to 29	25 to 29
Average Speed (mph)	20	18	21	24
Maximum Observed Speed	55 to 59	45 to 49	40 to 44	50 to 54

Pedestrian, Bicycle, and Transit Accessibility

There are continuous sidewalks along both sides of Seminary Road within the study area limits; however, ADA compliant ramps are not present at all intersection corners. Sidewalks are generally narrow and vary in width between 4 to 5 feet. The condition of the sidewalks is also variable; some areas need maintenance and there is noticeable debris, unkept and overgrown landscaping that contributes to potential challenges for pedestrians navigating the sidewalk. Trash cans near bus stops also reduce sidewalk areas. All these conditions serve to further minimize the accessible width of travel.

Crosswalks are present as identified in **Table 11**.

Table 11: Site Characteristics

Location	Crosswalk Across Seminary	Crosswalk across Minor Street
S. George Mason Drive	• N/A	• East leg of intersection • Westbound right lane
Dawes Avenue	• North leg of intersection	• Both legs of intersection
Fillmore Avenue and Dover Place	• N/A	• Both legs of intersection
Echols Avenue	• Both legs of intersection	• Both legs of intersection
Fairbanks Avenue	• South leg of intersection	• Both legs of intersection

Currently, there are no bikes lane on Seminary Road within the study area limits.

The corridor has several bus stops that serve multiple WMATA routes. None of the bus stops in the area have shelters, seating, or other amenities.

Below is a description of the bus services that utilize Seminary Road within the study area based on WMATA routes that went into service as of the June 29th Better Bus Network changes.

- Metrobus Line 22F only runs along Seminary Road on weekdays between 6:00 AM and 7:30 AM.
- Metrobus Line A66 runs along Seminary Road from 6:00 AM to 10:00 PM on weekdays and from 6:00 AM to 8:00 PM on weekends. Metrobus Line A71 runs from 6:30 AM to 9:30 PM on weekdays and 7:30 AM to 7:30 PM on weekends.
- Metrobus Line A76 operates along Seminary Road before turning onto Dawes Avenue. The bus line runs from 6:00 AM to 10:00 PM on weekdays and from 6:00 PM to 8:00 PM on weekends. The nearest bus stop for this route is along South George Mason Drive as it approaches Seminary Road.

Observations during the Road Safety Audit

A road safety audit was conducted on Thursday, January 30, 2025, from 1:30 pm to 3 pm. During the audit, the study team made the following general observations about the corridor:

- The lack of separation between the sidewalks and the outside travel lane. Combined with narrow sidewalks, this contributes to a feeling of discomfort walking along the corridor.
- Many vehicles appeared to travel faster than the posted speed limit.
- There were many observations of damaged flex post-traffic calming devices.
- The lack of left turn lanes created multiple instances of vehicles slowing or braking suddenly behind turning vehicles.
- Bus stopping in the travel lane created multiple instances of vehicles slowing or braking suddenly, and speeding around buses
- Some traffic signals do not appear to have leading pedestrian intervals.
- There is a general lack of streetlights in some areas of the corridor, contributing to reduced visibility of pedestrians during evening hours.
- There were instances where pedestrian traffic signal infrastructure did not appear to be in operation.
- Some intersection corners were missing ADA infrastructure.
- There were instances of congestion spillback affecting downstream intersections. This was caused by turning vehicles and poor progression between signalized intersections.
- The intersection of Seminary Road and Beauregard is busy and creates backup in the southbound direction (particular related to a significant number of vehicles queuing to use the southbound right turn lane).
- There are multiple driveways along the corridor with poor sightlines to and from the sidewalk.

Seminary Road at S. George Mason Drive

Observations:

- This intersection provides limited opportunities for pedestrians due to multiple turn lanes, and limited crosswalks, and large crossing distance.
- The strip mall serves as a pedestrian attraction but there is only one crosswalk providing access (along the east leg of the intersection). Pedestrians coming from the west side of the north leg

of Seminary Road do not have access to a nearby marked crosswalk. This may contribute to people crossing Seminary Road outside of expected areas.
- The lane markings on the northbound approach to the intersection appeared to confuse motorists and there were multiple instances of late lane changes.
- There were observations of near-misses between vehicles using the slip lane and vehicles traveling westbound from George Mason Drive to Seminary Road.

Considerations:

- Adjustment to pavement markings in the northbound approach could mitigate confusion and sudden lane changes.
- This intersection may be a candidate for a more significant improvement that improves access for pedestrians and reduces the intersection footprint. Such an improvement would need to be coordinated with Fairfax County, VDOT, and adjacent landowners.

Seminary Road at Colfax Avenue

Observations:

- Compliance with the yield sign for the southbound slip lane was observed to be low.
- There were instances of near misses between vehicles using the slip lane and vehicles in the general-purpose lane.
- The southbound lane from the slip lane to Colfax Avenue is wider than a typical lane, which adds confusion about which lane the vehicles exiting the slip lane should be in (some vehicles use the full length of the lane up to Colfax and some vehicles immediately attempt to merge).
- Vehicles were observed to have difficulty exiting Colfax Avenue due to the combination of vehicles from the slip lane and the general-purpose lane coming around a corner at high speeds.
- Pedestrians use an existing sidewalk on the southbound side of Seminary Road to cross Colfax Avenue; however, the crossing is unmarked, and existing ramps are not compliant with current PROWAG standards.
- A stop sign is present for the Colfax Avenue approach; however, a stop bar is missing.

Considerations:

- Adding pavement markings to channelize and separate the vehicles exiting the slip lane up to Colfax Avenue could reduce the likelihood of high-speed merge and sideswipes.
- Replacing outdated and/or weathered curb ramps could improve the pedestrian experience.
- A crosswalk across Colfax Avenue could improve the visibility and prominence of pedestrian movements at the intersection.

Seminary Road at Dawes Avenue

Observations:

- Dawes Avenue provides access to the Northern Virginia Community College campus and is designated as a shared bicycle route.
- The narrow lane widths and small intersection footprint make it difficult for vehicles to make concurrent left turns from the eastbound and westbound directions.
- There is no pedestrian signal for the crosswalk connecting the northwest and southwest corners of the intersection

- There is no crosswalk across the south leg of the intersection.
- The intersection is missing curb ramps compliant with current PROWAG standards.
- The bus stops along the northeastern corner and along the southbound movement does not have a bus pad or an accessible curb ramp.

Considerations:

- Improving the intersection to have a pedestrian signal facing all crosswalks could create a safer experience for pedestrians.
- The intersection should be evaluated to determine if the fourth crosswalk is feasible.
- Adjusting signal timings to balance eastbound and westbound movements (or to provide additional time for these movements to move less efficiently due to the lack of space for concurrent movements) could improve overall traffic flow.
- High visibility crosswalk markings could heighten the priority of pedestrian movements

Seminary Road at Fillmore Avenue

Observations:

- The WMATA Buses operating Routes 22F and 28A need to make a left-turn at the intersection, but the movement isn't protected. This affects on-time performance. The delay caused by the bus waiting for the opposing lanes to clear causes traffic to spillback to Dawes Avenue and motorist swerving to move around the buses.
- Overgrown vegetation reduces the visibility for vehicles making a left turn from Fillmore.
- The intersection is missing curb ramps compliant with current PROWAG standards, and a fire hydrant is located within the accessible path of the northeast curb ramp
- There is no marked crosswalk along Fillmore Avenue
- Existing traffic calming measures (flexpost) along the curb lines and the hardened center line were damaged.

Seminary Road and Echols Avenue

Observations:

- There appeared to be inconsistent timing between the offset intersections
- There are multiple driveways near or within the offset intersection
- The intersection is missing at least one ADA compliant curb ramp.
- The walk indication bulb was non-operational one of the pedestrian signal heads
- Conflicts between northbound left turning vehicles and southbound through vehicles create spillback and delay in the northbound direction

Seminary Road and Heritage Lane/Fairbanks Avenue

Observations:

- There is no crosswalk across the north leg of the intersection
- The "stop here for pedestrians" sign in the southbound direction appears to be in an undesirable location relative to where the crosswalk is located.

Crash Analysis

Historic crash data was obtained from the City. The 5-year crash history includes data from January 11, 2019 through December 1, 2023. The data was reviewed to determine potential safety improvements along the corridor. Of the 106 crashes that occurred in the study period, there was one fatal injury crash, four severe injury crashes, and 21 visible crashes. A summary of the crash severity can be found in **Figure 7**. Most of the crashes in the study are property damage only (PDO) related (71%). Additionally, most crashes that occurred during this 5-year time period were caused by rear end crashes (49), followed by angle crashes (27), and fixed object crashes (11) as shown in **Figure 8**.

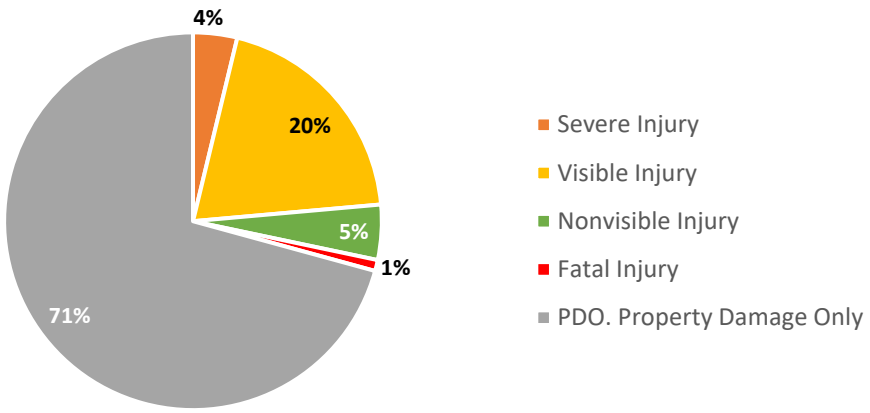


Figure 7: Crash severity for crashes on Seminary Road

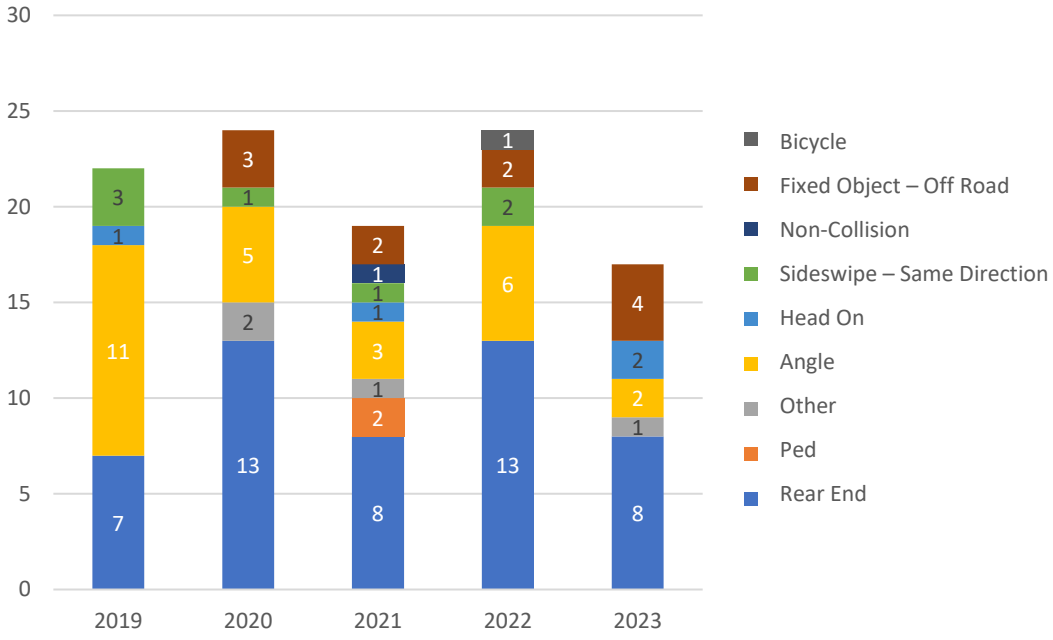


Figure 8: Crash type for crashes on Seminary Road

The one fatal crash involved a pedestrian at Seminary Road and Fairbanks Avenue on September 1, 2021. No adverse weather conditions were reported at the time of the crash and the crash occurred in the intersection at dawn. This crash involved a driver that was traveling east on Seminary Road in the right lane. The pedestrian was walking southbound in the crosswalk. The pedestrian crossed 3 lanes of travel before being struck entering the fourth lane.

The four serious injury crashes were of varying collision types, but all occurred within an intersection. One of the serious injury crashes involved a bicyclist at Seminary Road and South George Mason Drive.

Figure 9 depicts the crash density relative to crash severity. Crashes were concentrated between Fillmore Avenue/Dover Place and Fillmore Avenue (40 out of 106 crashes). This hotspot is further described in **Table 12.**

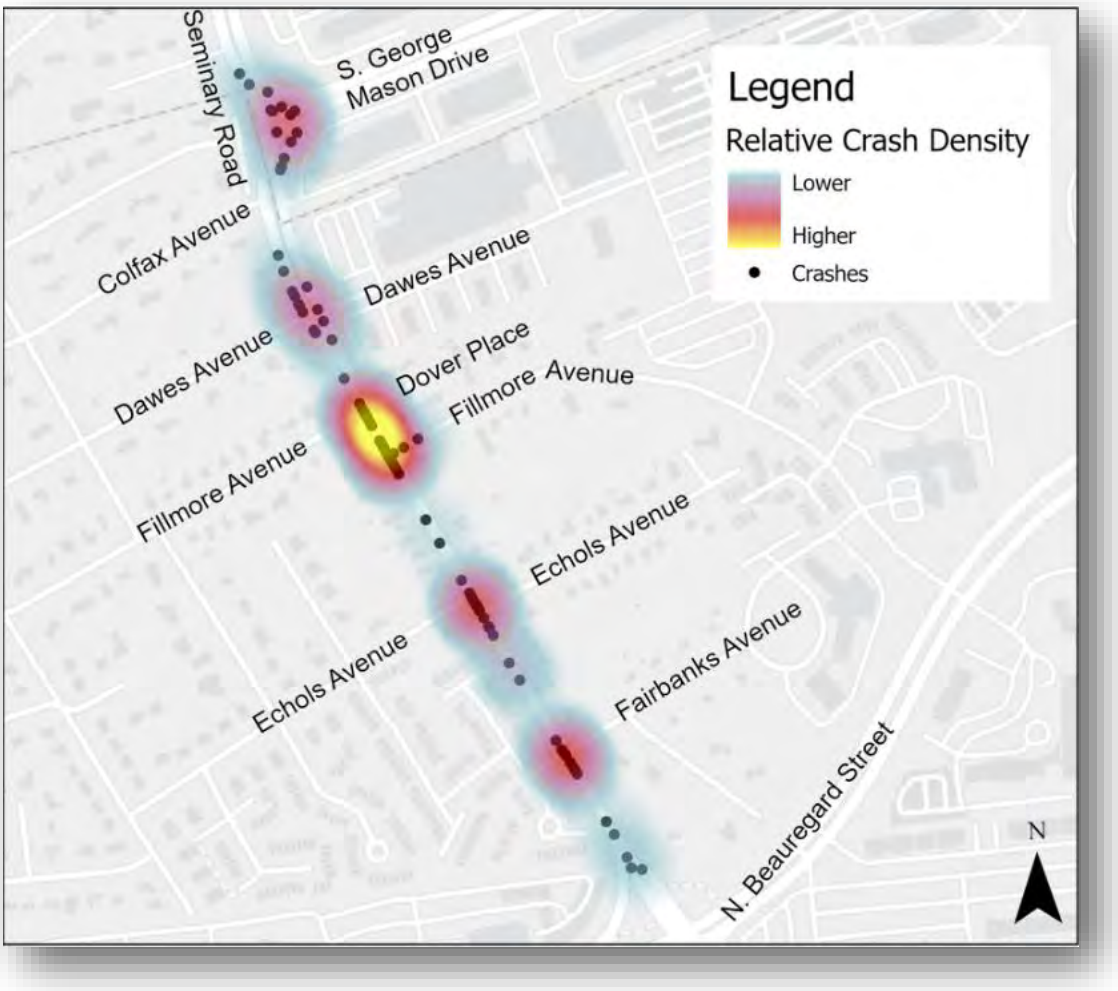


Figure 9: Relative Crash Density on Seminary Road, Weighted by Crash Severity

As shown in **Figure 10** and **Figure 11**, 62% of crashes occurred at dawn and 81% occurred while there were no adverse weather conditions in the study area. Reviewing the speed data, it appears that vehicles moving along the corridor in excess of the posted speed limit in the early hours of the day (before the corridor becomes congested with commuter traffic) is a contributing factor to this observed crash trend.

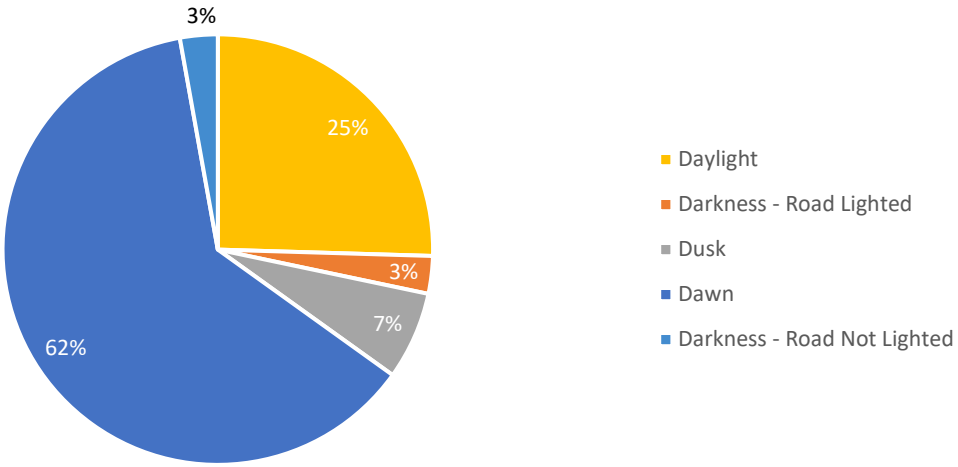


Figure 10: Lighting conditions for crashes on Seminary Road

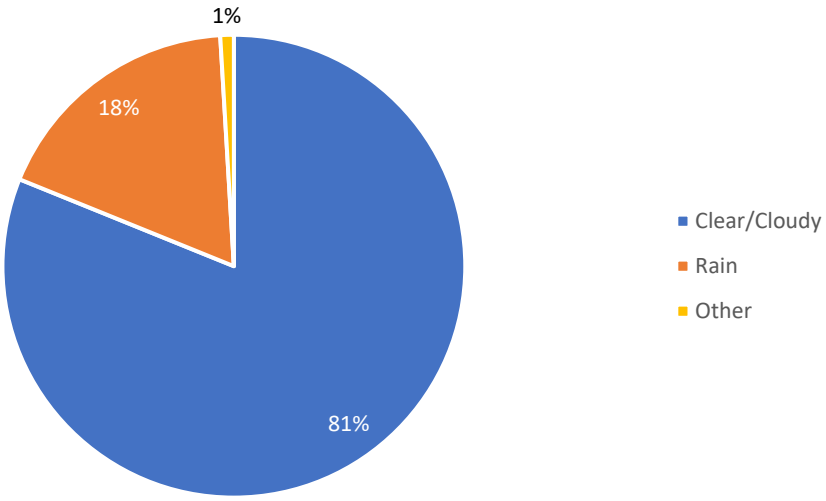


Figure 11: Weather conditions for crashes on Seminary Road

Corridor Hot Spots

Table 12 and **Figure 12** summarizes the two crash hot spots identified in **Figure 9.**

Table 12: Corridor Hot Spots

Hot Spot	Crashes
Seminary Road at Fillmore Avenue/Dover Place	• 18 total crashes • 5 injury crashes 6 out of the 13-property damage only crashes were attributable to rear-end collision. Head on, sideswipe, and rear end collisions caused the other injury crashes at this intersection.
Seminary Road at Fillmore Avenue	• 22 total crashes • 5 injury crashes • 1 severe injury crash Of the 22 crashes that occurred in the study period, a majority only resulted in property damage (16) with over have of these crashes attributable to rear end collisions. Four out of the five injury crashes were rear ends. The severe injury crash was an angle crash in the intersection involving a motorcycle and a vehicle driving 10 miles over the speed limit.

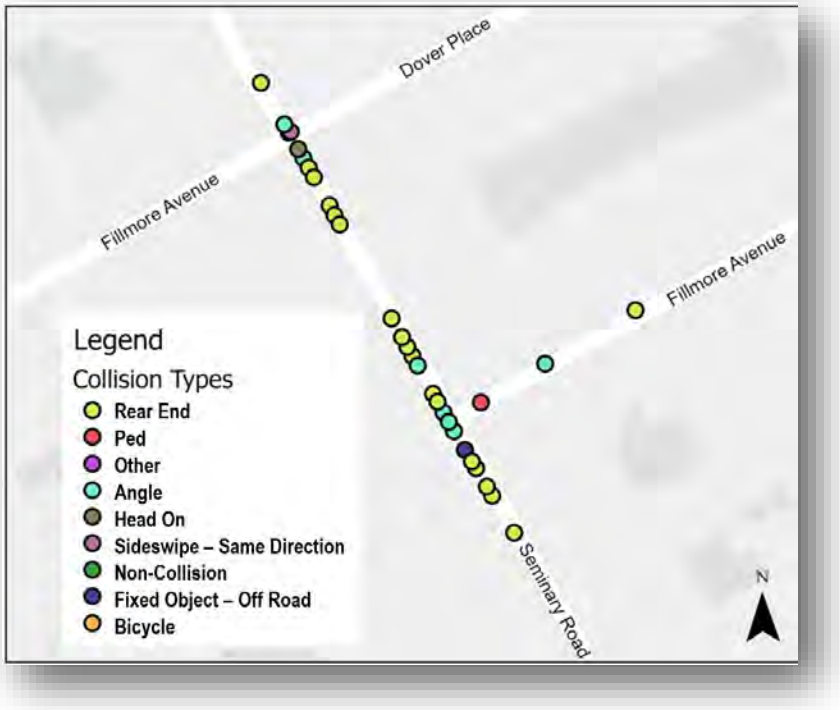


Figure 12: Crash collision Type for Hot Spot intersections

Summary of Identified Concerns

A summary of concerns and observations made along the corridor or at specified intersections can be found in **Table 13**.

Table 13: Summary of Identified Concerns and Observations

Corridor or Intersection?	Safety Concern/Observation	Potential Countermeasures
Corridor	Sidewalk widths along Seminary Road are one foot shorter than design standards (5 feet)	Sidewalk Widening
Corridor	No streetlights along Seminary Road	Installing new streetlights and enhanced reflective signage
Seminary Road at George Mason Drive	Lane change confusion at the intersection from the northbound approach	Adding lane configuration signage along the northbound movement
Seminary Road at Colfax Avenue	Curb ramps are weathered and out of date	Replace curb ramps
Seminary Road at Colfax Avenue	At Seminary Road and S. George Mason Drive, there is a channelized southbound right-turn lane that adds a travel lane to the southbound movement at Seminary Road and Colfax Avenue. This lane is not striped and causes confusion between vehicles in the rightmost through lane and right-turn lane.	Adding pavement markings to the southbound right-turn lane
Seminary Road at Colfax Avenue	No crosswalk markings connecting the ramps on the north-west and south-west corners to each other	Adding crosswalk markings
Seminary Road at Dawes Avenue	Vehicles are unable to make a concurrent left-turn from the east and westbound directions due to inadequate space within the intersection	Adjust signal timing to accommodate protected left-turns for the west and eastbound direction at separate times
Seminary Road at Dawes Avenue	The bus stop along the southbound movement does not have a stop pad or an ADA curb ramp.	Adding a stop pad and/or ADA curb ramp

Corridor or Intersection?	Safety Concern/Observation	Potential Countermeasures
Seminary Road at Dawes Avenue	There isn't a pedestrian signal for the east leg, but there is one for all other crosswalks in the intersection.	Installing a pedestrian signal for
Seminary Road at Dawes Avenue	There aren't any crosswalk markings connecting the northeast and southeast corners of the intersection.	Adding crosswalk markings
Seminary Road at Dawes Avenue	The northbound left-turning lane is missing striping at the beginning of the lane.	Adding pavement markings to the northbound left-turn lane
Seminary Road at Fairbanks Avenue and Heritage Lane	The "STOP HERE FOR PEDESTRIANS" sign was not placed in the correct location.	Moving sign and signpost to be more adjacent to the stop bar

Development of Corridor Safety Solutions

Corridor-Level Improvements

The following sections describe three corridor-level improvements and their impact on safety within the study area. All potential alternative scenarios include lane reconfiguration along Seminary Road between S. George Mason Drive and Fairbanks Avenue/Heritage Lane. Sidewalk and curb ramp improvements would be incorporated to the extent feasible with all alternatives, subject to funding availability.

Design Charette

Following the data collection and preliminary analysis, a design charrette was held during the Spring of 2025 with various stakeholders to identify three potential corridor-level improvements.

- Alternative 1: The innermost southbound travel lane is converted to a two-way left-turn lane. Additionally, two-foot-wide buffers would be placed between the outermost travel lanes and gutter. The two northbound travel lanes remain unchanged.
- Alternative 2: The corridor is reduced from a four-lane section to a three-lane section (one lane in each direction plus a two way left turn lane). The excess space in the roadway is restriped to be a separated two-way bike lane in the northbound direction. A four-foot-wide striped buffer with flexi-post or similar treatment would separate the outermost northbound lane from the bike lane. This treatment aligns with recommendations in the Alexandria West Small Area Plan.
- Alternative 3: The corridor is reduced from a four-lane section to a three-lane section (one lane in each direction plus a two-way left turn lane). The excess space in the roadway is restriped to be a separated bike lane on either side of the street separated from the travel lane by a 2-foot-wide buffer.

The three concepts are shown in **Figures 13, 14, and 15.**

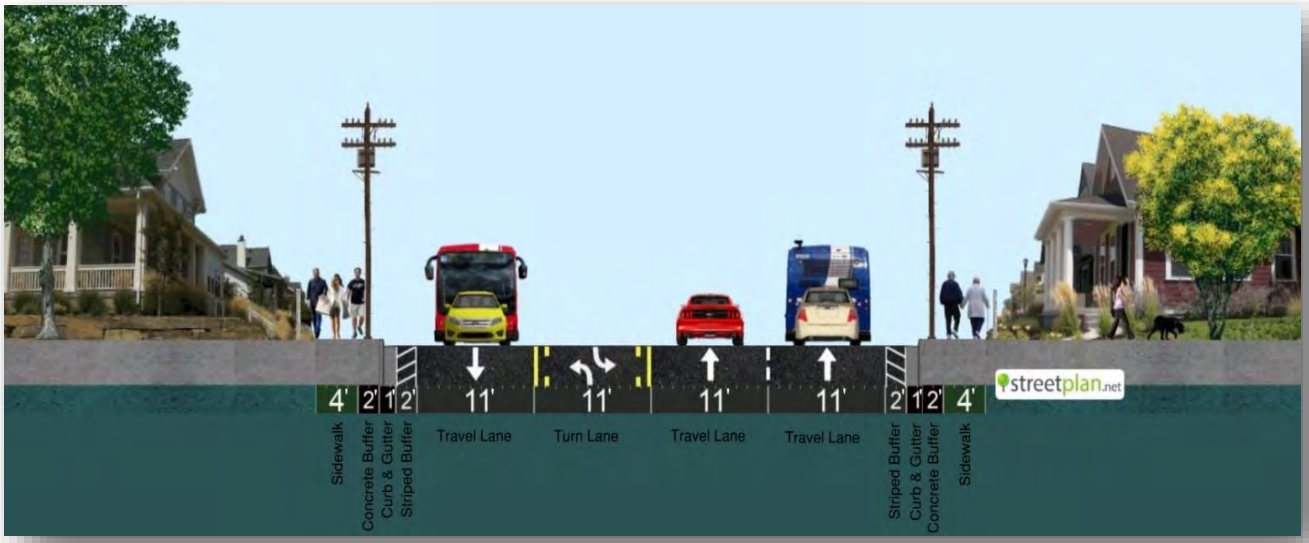


Figure 13: Alternative 1 Cross-Section

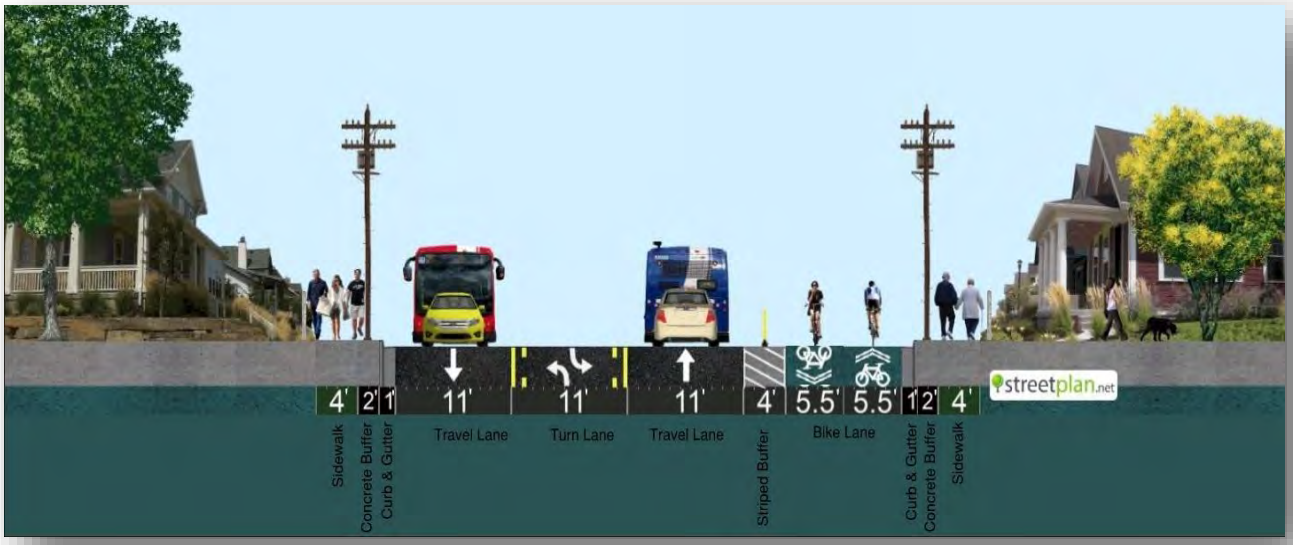


Figure 14: Alternative 2 Cross-Section

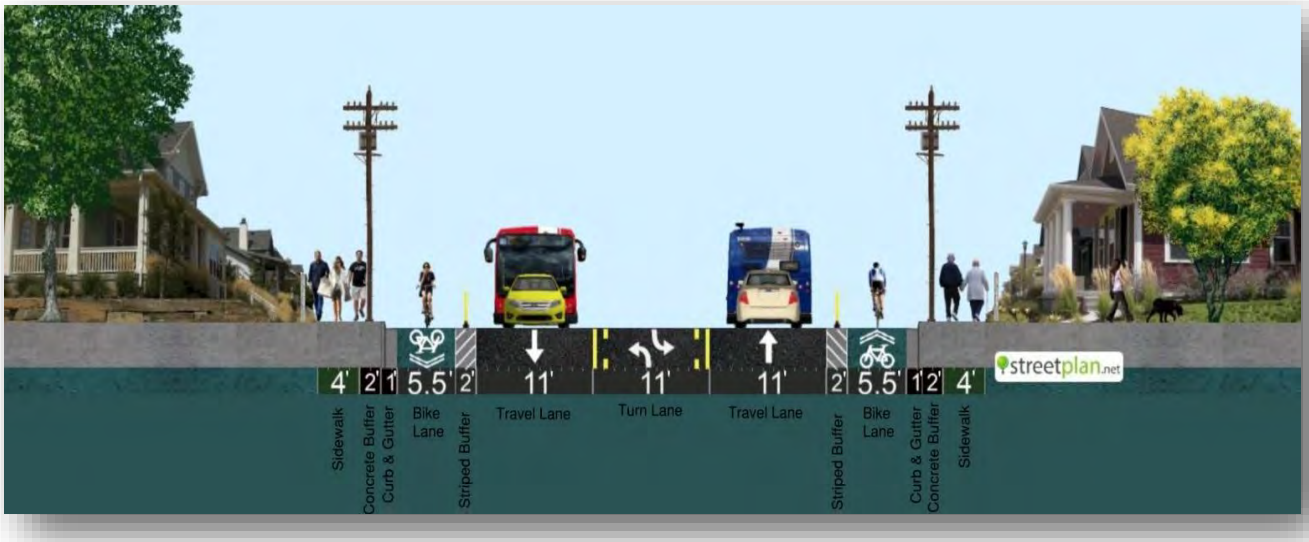


Figure 15: Alternative 3 Cross-Section

Qualitative and quantitative analyses were conducted to assess the potential feasibility and operational performance of each alternative as shown in **Table 14.**

Table 14: Comparison of Alternatives

Factor	Alternative 1	Alternative 2	Alternative 3
Implementation Complexity	Low	Low	Low
Implementation Time	Intermediate	Intermediate	Intermediate
Cost	Low to Moderate	Low to Moderate	Low to Moderate
Safety Impact	• Creates dedicated turning lanes, reducing the likelihood of sudden braking, stops, and rear end collisions • Crash modification factor of 0.71 (road diet) • Potential reduction of 30% of crashes	• Creates dedicated turning lanes, reducing the likelihood of sudden braking, stops, and rear end collisions • Crash modification factor of 0.71 (road diet) and of 0.552 (bike lane) • Potential reduction of 74% of crashes	• Creates dedicated turning lanes, reducing the likelihood of sudden braking, stops, and rear end collisions • Crash modification factor of 0.71 (road diet) and of 0.552 (bike lane) • Potential reduction of 74% of crashes
Impact to transit	• May improve transit on-time performance by reducing instances of sudden braking behind left turning vehicles.	• May improve transit on-time performance by reducing instances of sudden braking behind left turning vehicles. • Special consideration would be needed to create a safe and desirable experience for a pedestrian to move between the bus stop and the bus (while moving across the bike lanes)	• May improve transit on-time performance by reducing instances of sudden braking behind left turning vehicles. • Special consideration would be needed to create a safe and desirable experience for a pedestrian to move between the bus stop and the bus (while moving across the bike lanes)

Factor	Alternative 1	Alternative 2	Alternative 3
Impact to pedestrians	• Creates a small buffer between vehicles and pedestrians	• Creates a wide separation between vehicles and pedestrians on one side of the corridor • Reduces crossing distance in front of vehicle travel lanes • Creates dedicated space for pedestrians (instead of sharing with bicyclists)	• Creates a wide separation between vehicles and pedestrians on both sides of the corridor • Reduces crossing distance in front of vehicle travel lanes • Creates dedicated space for pedestrians (instead of sharing with bicyclists)
Impact to bicyclists	• N/A	• Creates dedicated and protected space for bicycles along one side of the corridor • Enhance multimodal choice along the corridor	• Creates dedicated and protected space for bicycles along both sides of the corridor • Enhance multimodal choice along the corridor
Impact to vehicular operations	• Reduces queue spillback along northbound and southbound through lanes	• Creates dedicated turning lanes, reducing the likelihood of sudden braking, stops, and rear end collisions	• Creates dedicated turning lanes, reducing the likelihood of sudden braking, stops, and rear end collisions

Factor	Alternative 1	Alternative 2	Alternative 3
Level of Service (LOS) and Dealy	• During the AM peak hour, improves the level of service (LOS) of the westbound approach from LOS D to LOS C at the Seminary Road and Filmore Avenue/Dover Place and at Seminary Road and Heritage Lane/Fairbanks Avenue	• During the AM peak hour, reduces the LOS of the westbound approach at Filmore Avenue/Dover Place, the westbound approach at Seminary Road and Fillmore Avenue, and the northbound approach at Seminary Road and Fillmore Avenue to LOS F • The reduction in LOS is due to losing a through lane along Seminary Road	• During the AM peak hour, reduces the LOS of the westbound approach at Filmore Avenue/Dover Place, the westbound approach at Seminary Road and Fillmore Avenue, and the northbound approach at Seminary Road and Fillmore Avenue to LOS F • The reduction in LOS is due to losing a through lane along Seminary Road
Queuing	• No additional instances where the maximum queue exceeds turn lane storage or block length during	• Reduce the number of peak direction through lanes • Movements where queuing increases include: the SB through movements at Colfax Avenue, Dawes Avenue, and Echols Avenue. In each case, queueing exceeds the available storage by 2 to 6 vehicles.	• Reduce the number of peak direction through lanes • Movements where queuing increases include: the SB through movements at Colfax Avenue, Dawes Avenue, and Echols Avenue. In each case, queueing exceeds the available storage by 2 to 6 vehicles.

Factor	Alternative 1	Alternative 2	Alternative 3
Volume to Capacity Ratio	• All intersections operate with volume to capacity ratios less than 0.9, which reflects undersaturated conditions.	• All intersections operate with volume to capacity ratios less than 0.9, which reflects undersaturated conditions. Compared to existing conditions, the average volume to capacity ratio for movements along the corridor increased by 0.08 and 0.13 under AM and PM peak hour conditions.	• All intersections operate with volume to capacity ratios less than 0.9, which reflects undersaturated conditions. Compared to existing conditions, the average volume to capacity ratio for movements along the corridor increased by 0.08 and 0.13 peak hour conditions.

Implementation time and potential cost is defined in **Table 15.**

Table 15: Implementation Time and Relative Cost for Potential Counter Measures

Implementation Time	
Short	Within 1 Year
Intermediate	1 to 5 Years
Long	Longer than 5 Years

Cost	
Low	Less than $150K
Moderate	$150K - $500K
High	Greater than $500K

Traffic analysis supporting the above findings were conducted using Synchro and SimTraffic. The study area intersections were coded in the Synchro and SimTraffic models under three scenarios: (1) existing conditions (2) Alternative 1, and (3) Alternative 2 and 3 (which despite having different cross sections, produce the same traffic analysis results).

The intersection of Seminary Road and North Beauregard Street was included in the analysis models to demonstrate the impact that this significant intersection has on corridor progression and queue spillback. For consistency, each traffic model used the same traffic volumes.

Signal timings (green time splits and offsets) were adjusted in models to reduce overall intersection delay across the corridor under each Alternative. Cycle length was not adjusted – this is typical procedure when conducting a traffic analysis as adjustment to cycle length has a broader impact than is appropriate for a small, focused study area.

The volume to capacity ratio results are based on the volume of the roadway, the number of lanes, and the intersection control type at each intersection. Volume to capacity ratio increase in Alternative 2 and 3 because of the reduction in the number of travel lanes.

The intersection of Seminary Road and Fairbanks Avenue is planned to become a signalized intersection as part of an approved development project. An alternate synchro analysis was conducted to evaluate corridor operations with a signalized Fairbanks Avenue intersection. The analysis results show that signalizing the intersection does not create negative delay or queuing impacts at downstream intersections. While not explicitly modeled it can be assumed that the intersection may improve progression to and from the intersection of Seminary Road and North Beauregard Street, may create a safe crossing opportunity for pedestrians, and may improve progression generally along the Seminary Corridor.

Traffic analysis results are included in the Appendix.

Safety analysis supporting the findings above was based on a review of crash modification factors (CMF) from the Virginia Department of Transportation (VDOT) and the Federal Highway Administration's (FHWA's) Crash Modification Clearinghouse.

Seminary Road and South George Mason Drive Improvement Considerations

Potential long-term intersection re-design options were also discussed for the Seminary Road and South George Mason Drive intersection:

- Convert to a T-Intersection
- Convert to a roundabout
- Remove slip lanes along westbound and southbound Seminary Road
- Restrict through movements leaving the 7-Eleven driveway at the intersection

It is noted that this intersection is within the jurisdiction of both the City of Alexandria and Fairfax County. Improvements to this intersection would require involvement from both jurisdictions and VDOT. It is recommended that this intersection be more thoroughly explored as part of a subsequent effort.

Signal Warrant Analyses

A signal warrant analysis was conducted for the intersection of Seminary Road and Fillmore Avenue. The purpose of the warrant analysis was to assess whether a traffic signal could be installed along Seminary Road to create a signalized and marked crossing opportunity for pedestrians and improve the vehicular flow and progress. The signal warrant analysis was based on the methodology suggested by the Manual on Uniform Traffic Control Devices (MUTCD). Based on the data available, six out of the nine warrants were assessed.

Warrant 1 – Eight-Hour Vehicular Volume

Warrant 1, is intended for application where either a large volume of intersecting traffic is the principal reason to consider installing a traffic signal (Condition A), or where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street (Condition B). The warrant may also be applied for a combination of Conditions A and B. It is intended that Warrant 1 be treated as a single warrant. If Condition A is satisfied, then Warrant 1 is satisfied and analyses of Condition B and the combination of Conditions A and B are not needed. Similarly, if Condition B is satisfied, then Warrant 1 is satisfied and an analysis of the combination of Conditions A and B is not needed.

Warrant 1 is satisfied when, for each of any eight hours of an average day, the vehicles per hour on both approaches of the major street and the corresponding vehicles per hour on the higher volume minor street approach exceed the thresholds provided in Table 4C-1 of the MUTCD for Condition A, Condition B, or a combination of Conditions A and B.

Warrant 2 – Four-Hour Vehicular Volume

Warrant 2 is intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic signal.

Warrant 2 is satisfied when, for each of any four hours of an average day, the plotted points representing the vehicles per hour on both approaches of the major street and the corresponding vehicles per hour on the higher volume minor street approach all fall above the curve provided in Figures 4C-1 or 4C-2 of the MUTCD.

Warrant 3 – Peak Hour

Warrant 3 is intended to be applied where minor street traffic suffers undue delay when entering or crossing the major street. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time Warrant 3 is met under two conditions:

Condition A
Condition A is met when all three of the following statements are true for the same one-hour period of an average day.

- The total stopped time delay experienced by the stop controlled minor street approach (one approach) exceeds 4 vehicle hours for a one-lane approach or 5 vehicle hours for a two-lane approach,
- The volume on the same minor street approach equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
- The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches

Condition B
Condition B is satisfied when, for any one hour of an average day, the plotted point representing the vehicles per hour on both approaches of the major street and the corresponding vehicles per hour on the higher volume minor street approach falls above the curve provided in Figures 4C-3 or 4C-4 of the 2009 MUTCD.

Warrant 4 – Pedestrian Volume

Warrant 4 is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street. This warrant is satisfied when one of the following criteria is met:

A. For each of any 4 hours on an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street all fall above the curve in Figure 4C-5 of the 2009 MUTCD; or
B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in Figure 4C-7 of the 2009 MUTCD.

Warrant 6 – Coordinated Signal System

Warrant 6 is intended for application in coordinated signal system where the installation of traffic control signals where they may not be needed but benefit corridor operations in order to maintain proper platooning of vehicles. A coordinated signal system does not exist in proximity to the study intersections.

Warrant 7 – Crash Experience

Warrant 7 is intended for applications, where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal. This warrant is satisfied when all of the following criteria are met:

- Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and
- Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and
- For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 of the 2009 MUTCD, or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Signal Warrant Analyses Results

Based on a review of the traffic volumes, pedestrian counts, and 5-year crash history, the following signal warrant results have been identified:

- The major street volumes are well in excess of the volume thresholds for most hours of the day. Due the residential nature of the corridor, the minor street volumes are well below the volume thresholds for most of the day. Accordingly, no vehicle volume warrants (Warrants 1, 2, and 3) are met. Additionally, the peak hour warrant, Warrant 3 is not directly applicable to this corridor because there is not a peak vehicle generator (like an office or school) along the corridor.
- The pedestrian volumes are well below the crossing volume threshold of 37 pedestrians per hour. Accordingly, Warrant 4 is not met.
- There is not enough data to suggest whether a signal at this location would improve progress. As such, the warrant results for Warrant 6 are inconclusive.

- The crash history reveals that only three crashes correctable by a traffic signal (i.e. angle and pedestrian crashes) occurred over a three-year period. As such, the Pedestrian Warrant does not meet the minimum threshold of 4 correctable crashes (of any severity). Accordingly, Warrant 7 is not met.

Overall, no signal warrants are met at this time.

Community Engagement

City Survey

The city released a survey to gather community perspectives on the Seminary Road corridor's challenges and potential solutions. The survey was launched on April 28, 2025, and remained open until May 26, 2025. The City's survey had 223 people participate. The following sections provide the results of the survey.

Mode and Reasons for Travel

Figure 16: What modes of transportation do you use when traveling on the Seminary Road corridor?

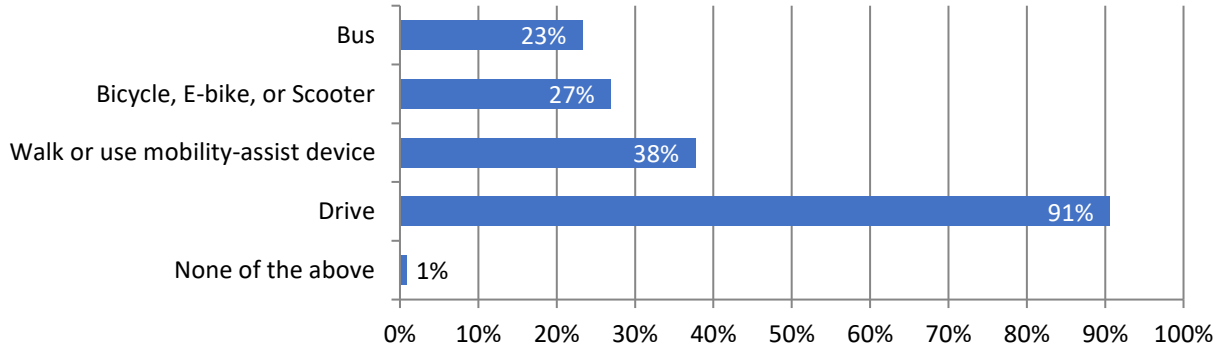
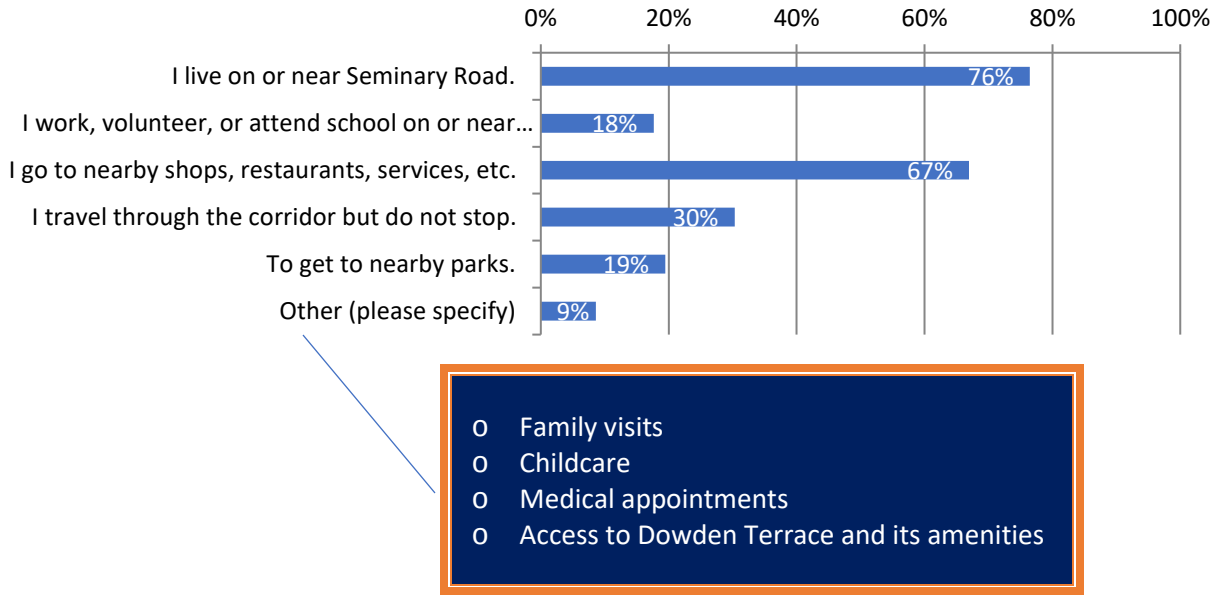


Figure 17: Why do you travel on the Seminary Road corridor?



Community Perspectives on Corridor Challenges

Figure 18: On a scale of 1 to 5, how safe do you feel when traveling on Seminary Road?

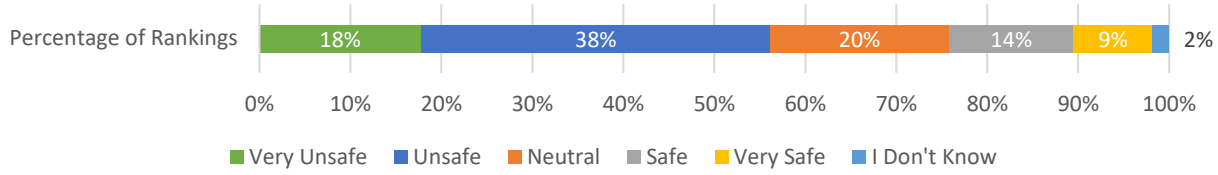


Figure 19: On a scale from 1 to 5, from strongly disagree to strongly agree, how much do you agree or disagree with each of the following objectives for this project?

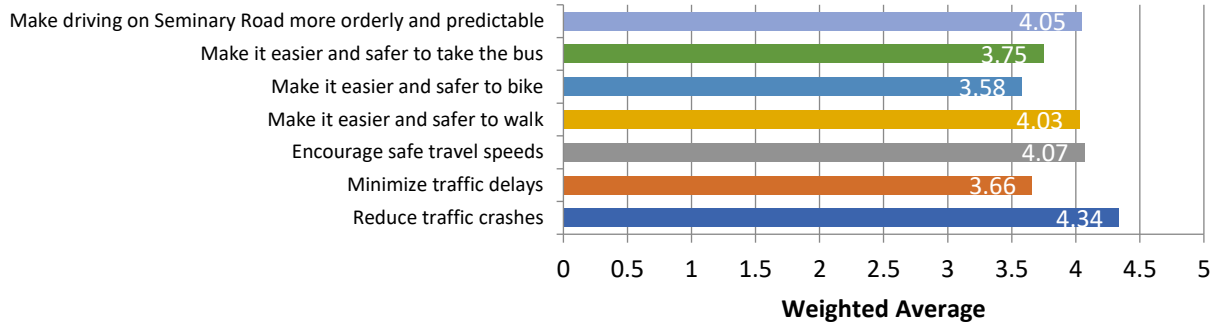
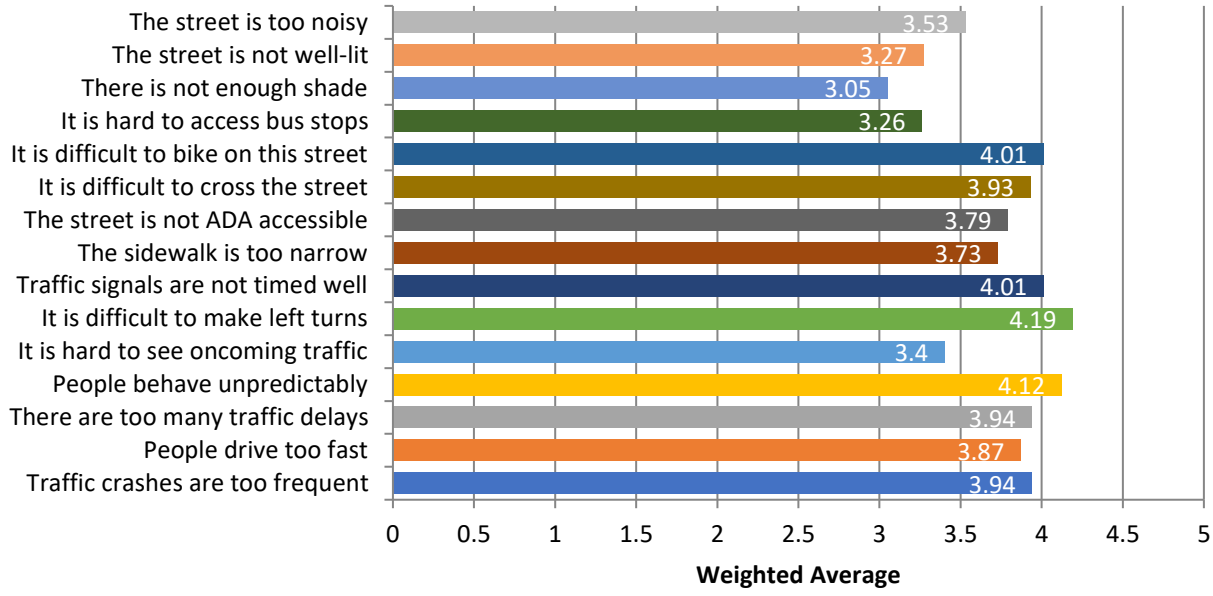


Figure 20: We've heard a range of concerns about Seminary Road. For each statement below, please let us know how much you agree or disagree (from 1- strongly disagree to 5 – strongly agree). [1]



[1] **Scale: 1-Strongly Disagree; 2-Disagree; 3-Neutral; 4-Agree; 5-Strongly Agree**

Community Perspectives on Potential Solutions

Figure 21: On a scale of 1 to 5[2], from strongly disagree to strongly agree, how do you feel about the existing conditions? A street cross-section with two travel lanes in each direction and sidewalks on both sides.

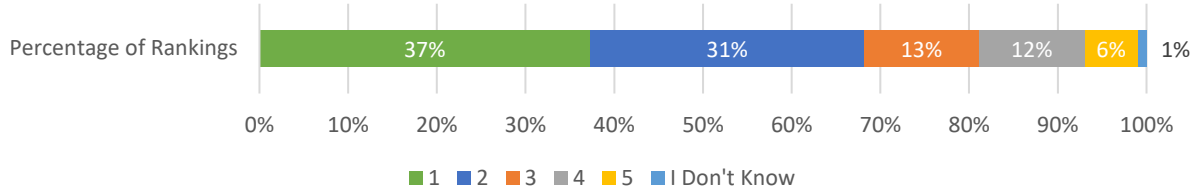


Figure 22: On a scale of 1 to 5, from strongly disagree to strongly agree, how do you feel about Option 1? A cross-section of Seminary Road with an eastbound travel lane, two westbound travel lanes, and a center-left-turn lane.

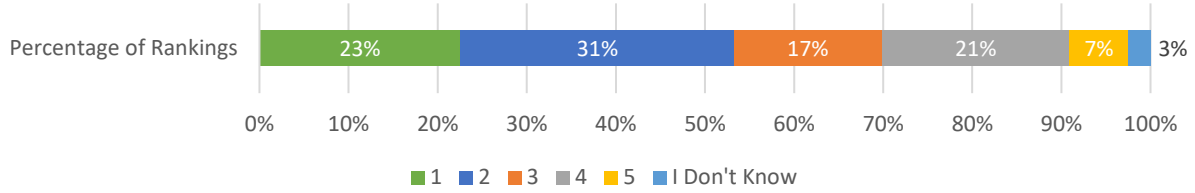


Figure 23: On a scale of 1 to 5, from strongly disagree to strongly agree, how do you feel about Option 2? A cross-section of Seminary Road with one travel lane in each direction, a center turn lane, and a protected two-way bike lane.

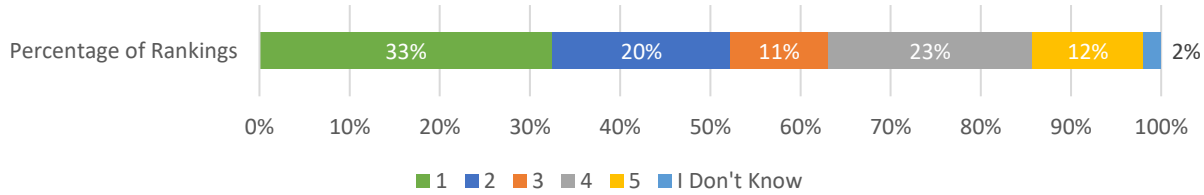
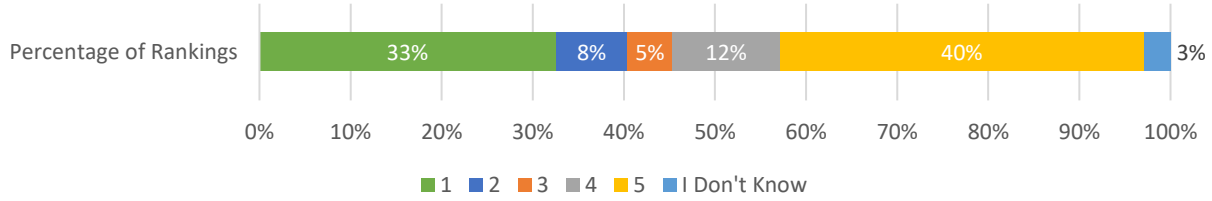
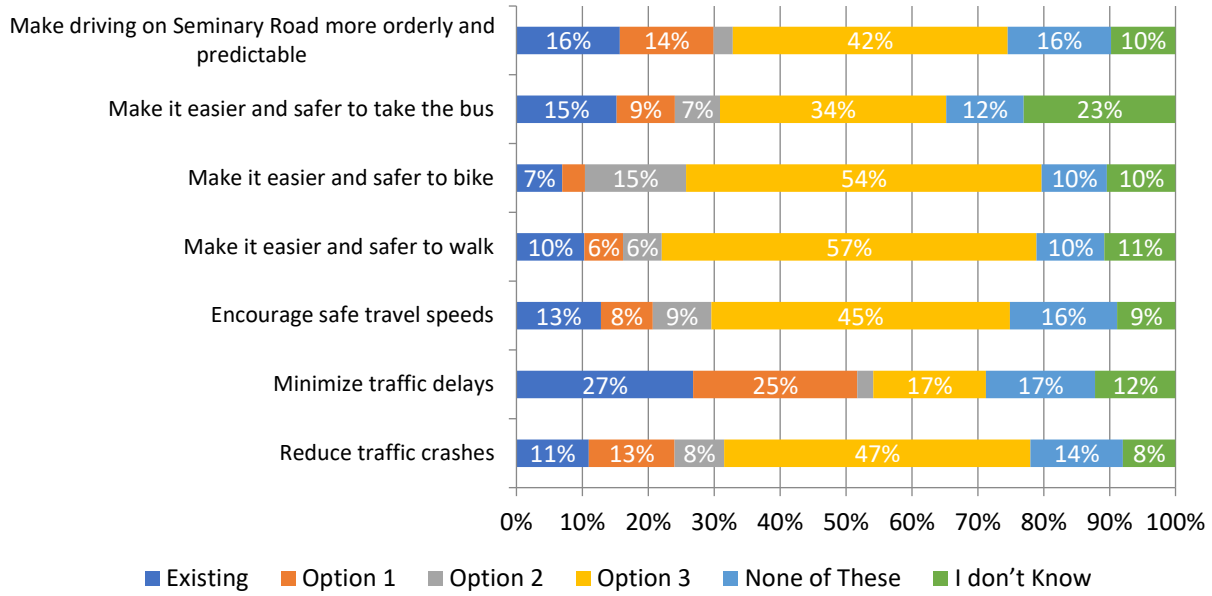


Figure 24: On a scale of 1 to 5, from strongly disagree to strongly agree, how do you feel about Option 3? A cross-section of Seminary Road with one travel lane in each direction, a center turn lane, and protected bicycle lanes



[2] **Scale: 1-Strongly Dislike; 2-Dislike; 3-Neutral; 4-Like; 5-Strongly Like**

Figure 25: Please indicate which corridor option[3] you feel best meets each project objective.

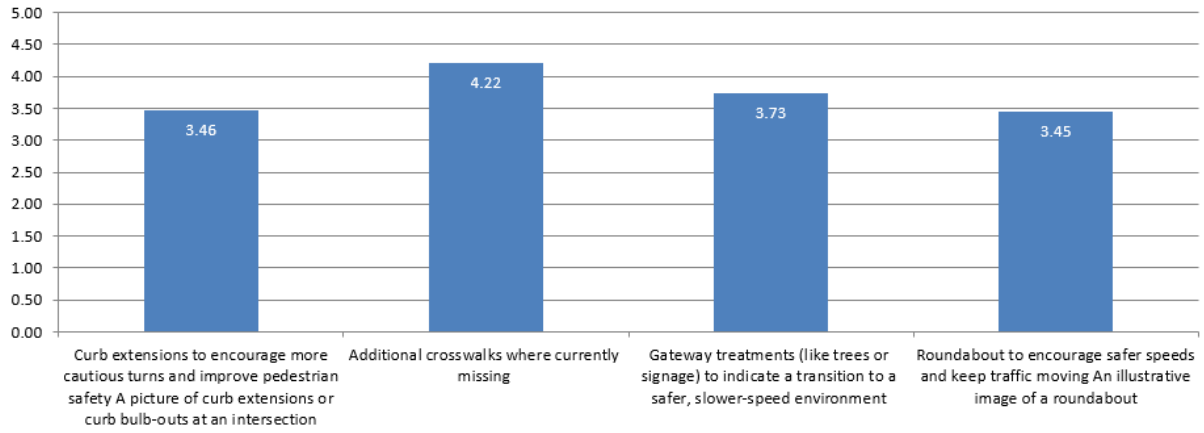


When asked if respondents had anything else to say about the project, they shared the following:

- Reducing lanes may worsen traffic congestion during peak hours
- Potential countermeasures to congestion could be center turn lanes or road expansion
- Demand for traffic calming measures like speed enforcement, speed bumps, cameras, or policy
- Some opposition towards implementing bike lanes along Seminary Road because of low bike traffic and high vehicle traffic
- Desire for pedestrian infrastructure improvements like crosswalk and visibility improvements
- Desire for signalization at intersections along the corridor
- Desire for intersection reconfiguration at Seminary Road and Beauregard Street, Echols Avenue, South George Mason Drive
- Desire for more community inclusion and consideration in the planning process

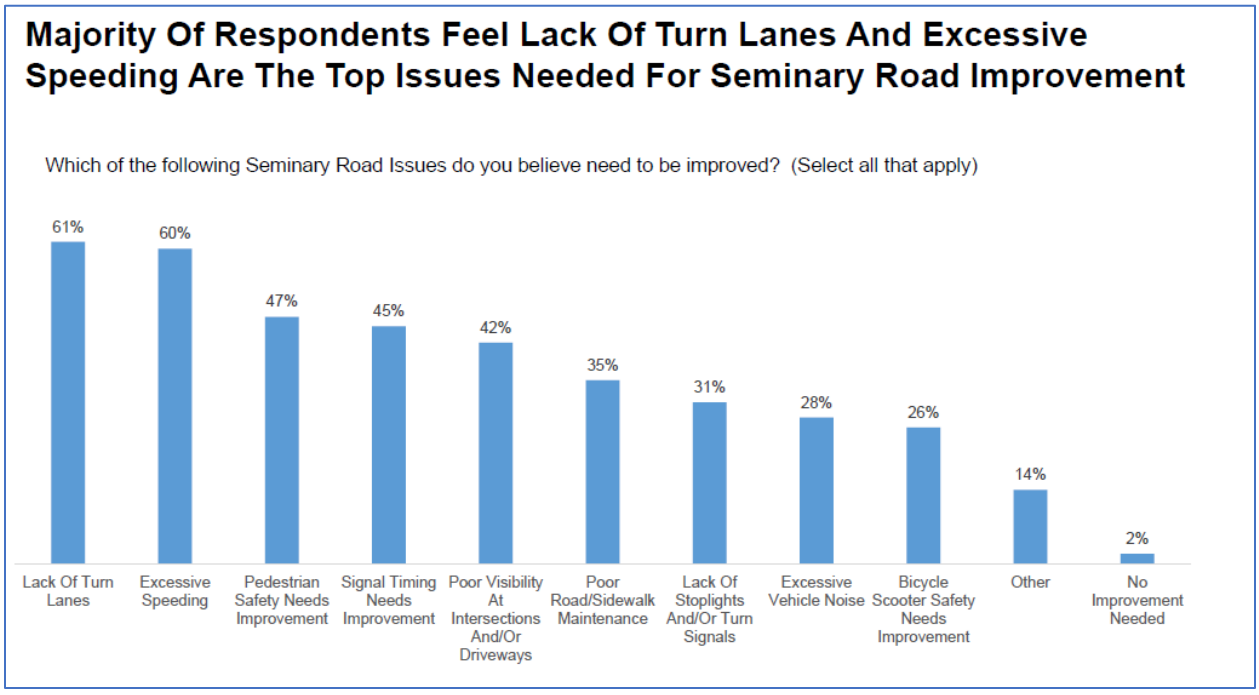
[3] **Option 1**: The innermost southbound travel lane is converted to a two-way left-turn lane. Additionally, two-foot-wide buffers would be placed between the outermost travel lanes and gutter. The two northbound travel lanes remain unchanged.
Option 2: The corridor is reduced from a four-lane section to a three-lane section (one lane in each direction plus a two way left turn lane). The excess space in the roadway is restriped to be a separated two-way bike lane in the northbound direction. A four-foot-wide striped buffer with flexi-post or similar treatment would separate the outermost northbound lane from the bike lane. This treatment aligns with recommendations in the Alexandria West Small Area Plan.
Option 3: The corridor is reduced from a four-lane section to a three-lane section (one lane in each direction plus a two way left turn lane). The excess space in the roadway is restriped to be a separated bike lane on either side of the street separated from the travel lane by a 2-foot-wide buffer.

Figure 26: Improvements at the intersection of Seminary Road and George Mason Drive could be coordinated with any of the above design concepts for the corridor. On a scale of 1 to 5, please indicate what you think about different ideas for the intersection of Seminary Road and George Mason Drive.



Seminary West Civic Association Community Feedback Form

In November 2023, the Seminary West Civic Association issued a community feedback form to gather input from neighbors. While this was not a city-sanctioned community survey, it provided useful insight into the safety concerns among the residents of the corridor. A total of 310 people completed the survey. A summary of key feedback is provided on subsequent pages.



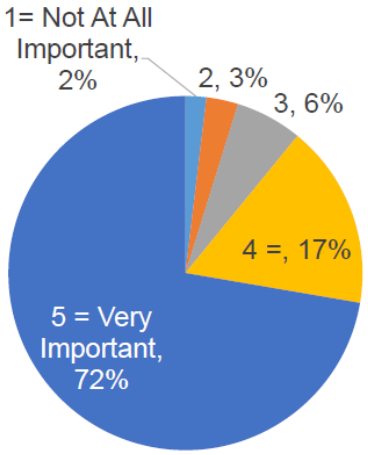
Nearly Three-Quarters Of Respondents Feel Improvements To Seminary Road Are Very Important

How important are improvements to Seminary Road as part of the ongoing Alexandria West planning? (1 = Not Important, 5 = Very Important)?

On A Scale Of 1 to 5 With 5 Being "Very Important" Responses Averaged:

4.5 / 5

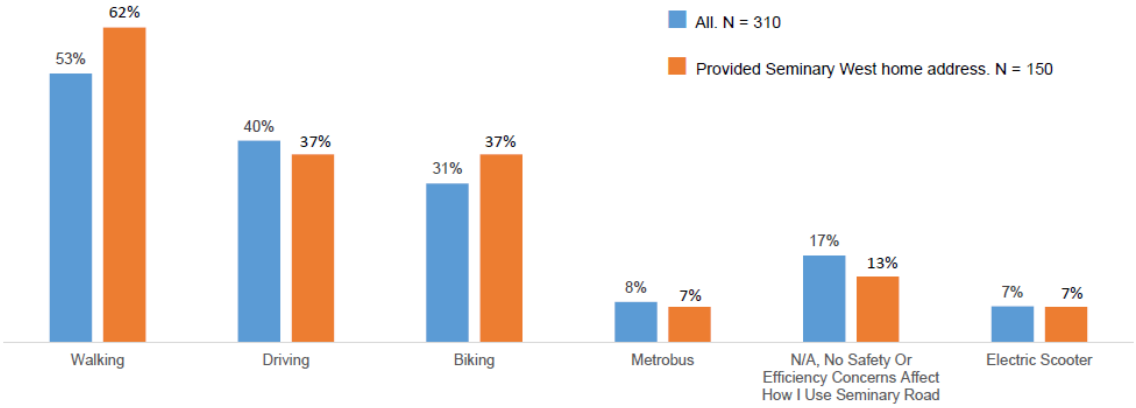
Those Who Provided A Seminary West Home Address Averaged **4.7 / 5**



N= 310

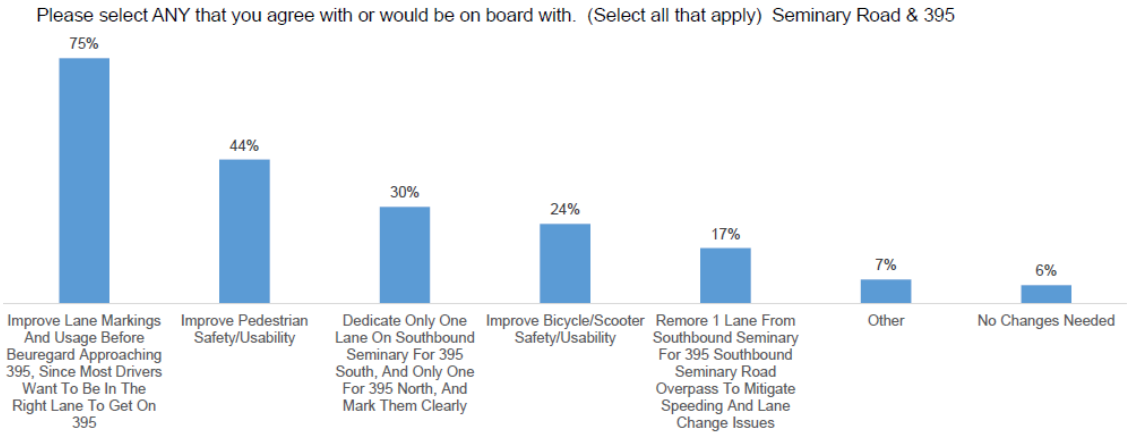
Over 50% Of Respondents Would Walk More Often If Seminary Road Were Safer / More Efficient

Are there any ways you (or your household) want to use Seminary Road, or use it more often, but don't because you find it unsafe and/or inefficient?

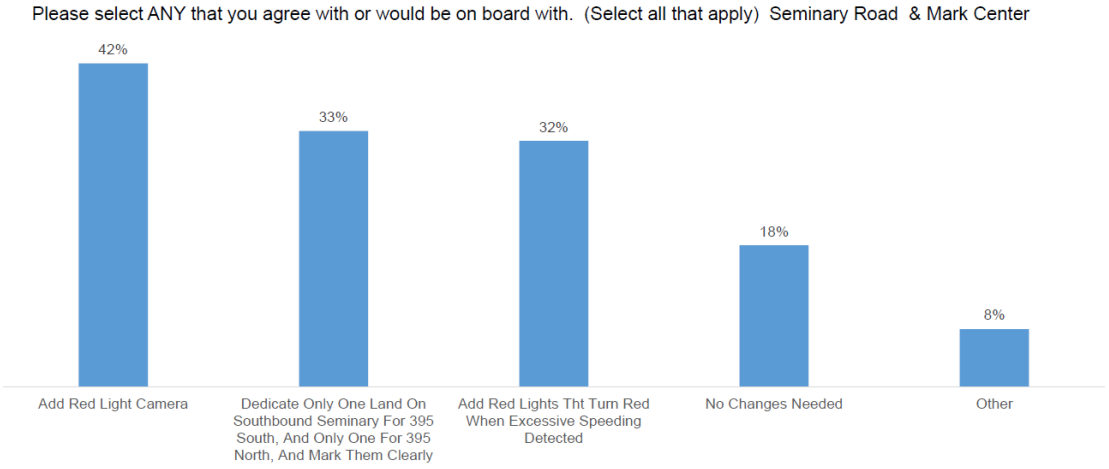


Majority Of Respondents Feel Visibility Is A Top Issue For Seminary Road Improvement

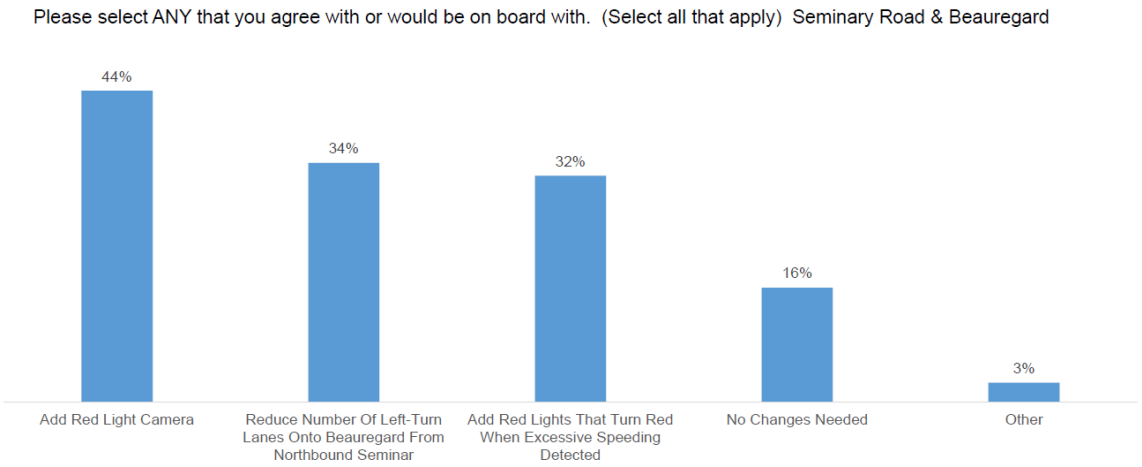
Majority Of Respondents Want Improved Lane Markings Before Beauregard Street Approaches 395



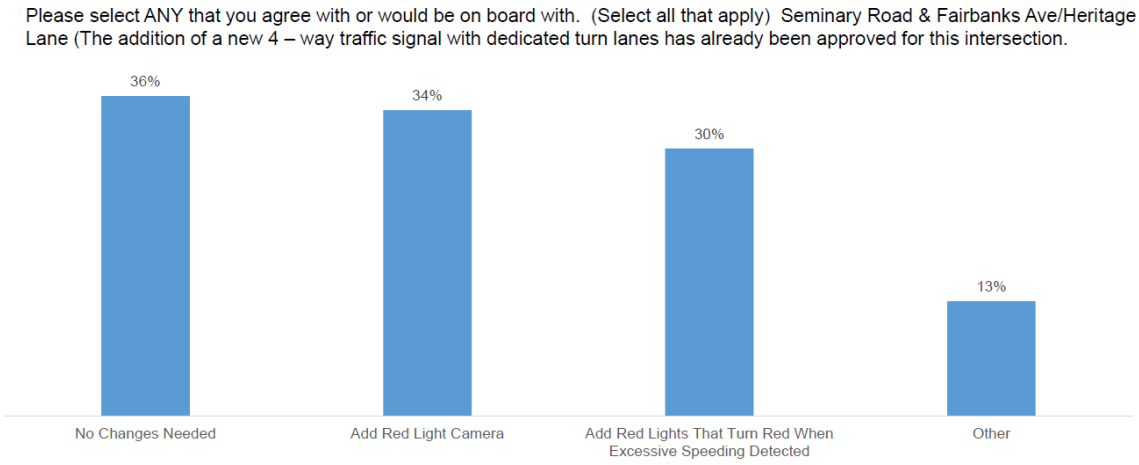
Over One-Third Of Respondents Want Red Light Camera Added To Seminary Road & Mark Center



Nearly Half Of Respondents Want A Red Light Camera Added To Seminary Road & Beauregard



Over One-Third Feel No Changes Are Needed At Seminary Road & Fairbanks Ave/Heritage Lane/Another Third Want Red Light Camera Added



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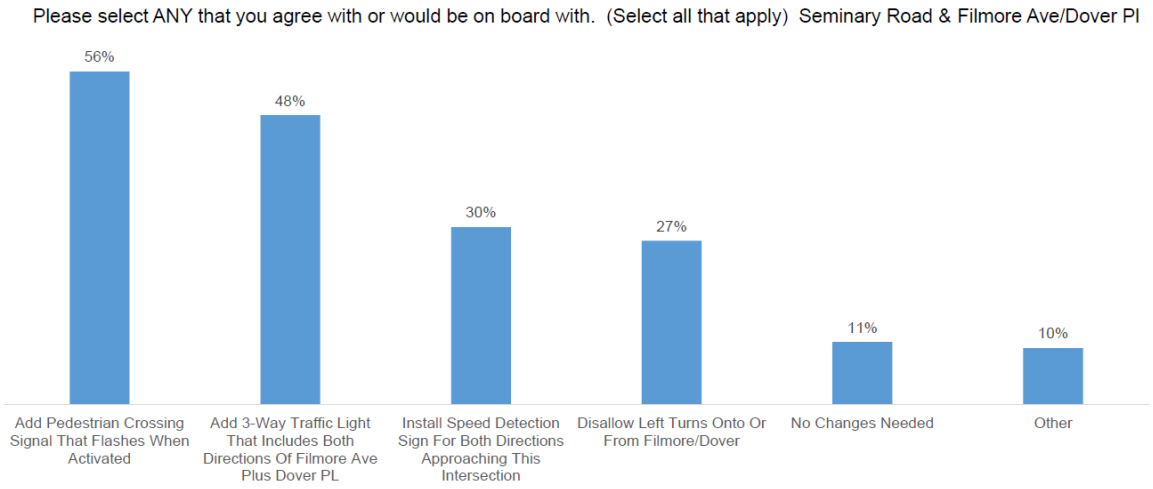
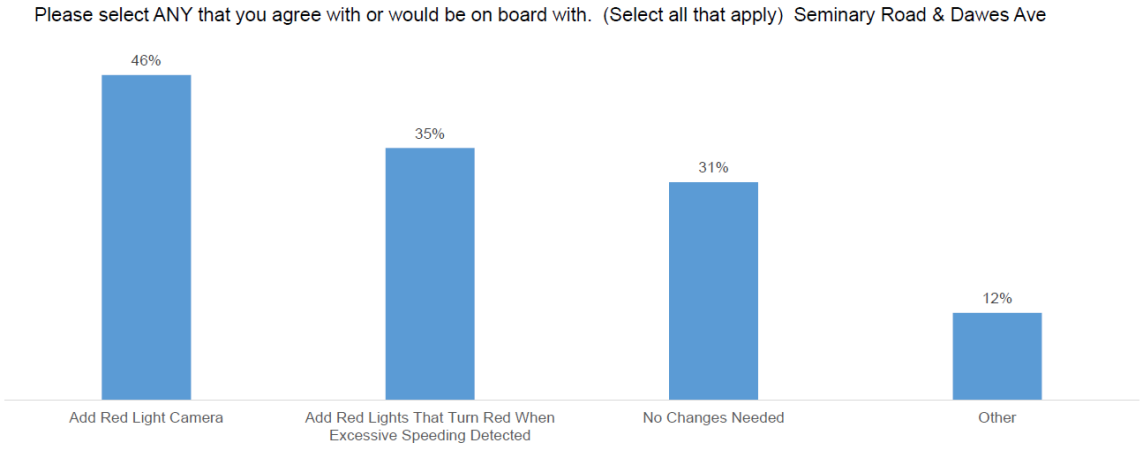
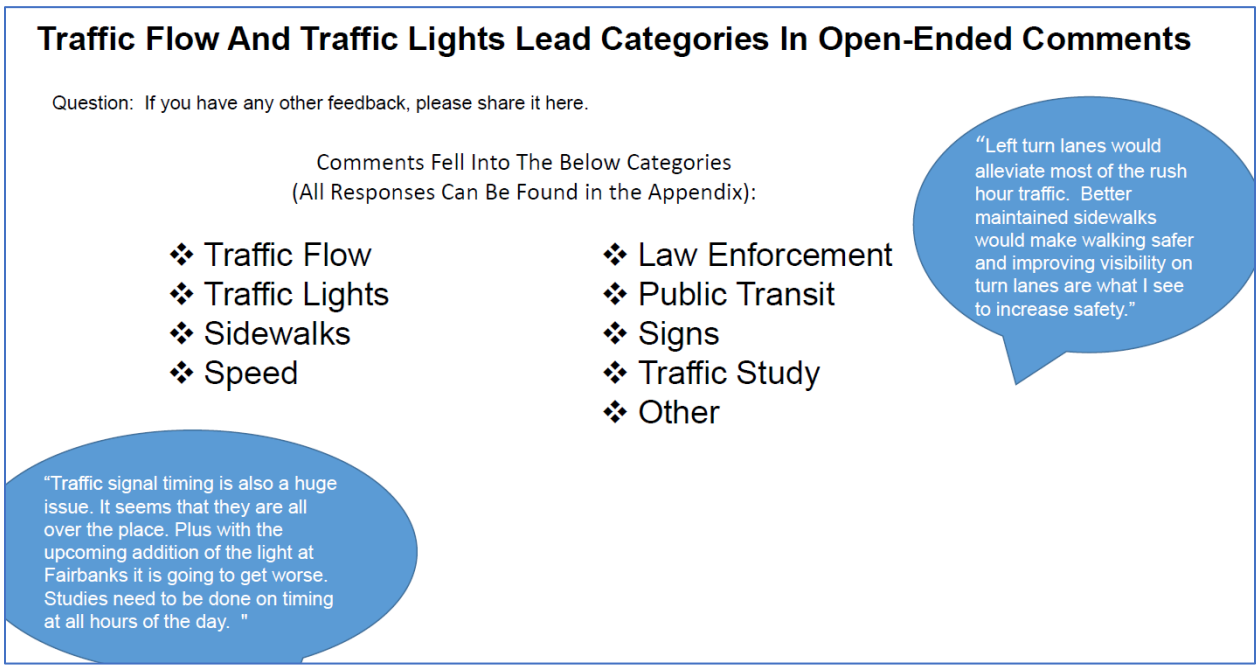
Majority Of Respondents Want Pedestrian Crossing Signal At Seminary Road & Filmore Ave/Dover PL



Nearly Half Of Respondents Want A Red Light Camera Added To Seminary Road & Dawes Ave





Community Engagement Summary

The results of both feedback tools demonstrate clear interest in transportation safety improvements along the corridor. Two key similarities included a focus on an improved pedestrian experience (through crosswalks and more managed vehicle speeds) and improving the predictability of the travel experience along the road (through improved traffic signal operations and measures to increase motorist compliance). Respondents for both feedback tools expressed the need for traffic calming and speed reduction.

A key difference is that the Civic Association feedback form identified red light cameras as a primary countermeasure of interest, while the City's survey feedback identified larger infrastructure changes as a key priority. This difference in perspectives may be the result of the border focus of the association's feedback form compared to the more targeted and data-informed city survey.

Regardless, both feedback tools provide a foundational understanding of how the corridor is used and viewed today and both tools demonstrate a significant desire for corridor improvements.

Next Steps

In the near term, the City may choose to explore and implement near-term transportation safety improvements to enhance safety for all users of the corridor:

- Installing high visibility crosswalks with ADA compliant ramps and tactile surfaces where missing
- Installing working pedestrian pushbuttons and signal heads where missing
- Trimming vegetation and general landscaping/upkeep to widen accessible sidewalk paths
- Installing new streetlights
- Installing enhanced reflective signage and signal backplates
- Installing a stop sign and pavement markings at the SB right turn slip lane for George Mason intersection

As a concurrent effort, the City may explore further analysis of intersection options at George Mason Drive, study and identify a preferred corridor alternative, conduct an updated signal warrant analysis at the Fillmore Avenue intersection using more recent traffic data, and continue to engage community members on their perspectives and needs.

Attachments

Attachment A: Traffic Data (Volume and Speeds)

AM Peak Period Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue

	NB Lane 1	NB lane 2	NB Lane 3	SB Lane 1	SB lane 2	SB Lane 3
Average Vehicles in Lane	777	2287	1452	1220	3344	68
Total Number of Vehicles exceeding 25 mph in Lane	490	1091	361	552	1877	21
Percentage of Vehicles exceeding 25 mph in Lane	63%	48%	25%	45%	56%	30%
85th Percentile Speed in Lane	30 to 34 MPH	25 to 29 MPH	25 to 29 MPH	30 to 34 MPH	30 to 34 MPH	25 to 29 MPH
Average Speed	26	25	21	23	25	23
Maximum Speed in Lane	40 to 44 MPH	40 to 44 MPH	35 to 39 MPH	45 to 49 MPH	45 to 49 MPH	35 to 39 MPH

Seminary Road btwn Filmore Avenue and Echols Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Average Vehicles in Lane	1438	1589	1352	777
Total Number of Vehicles exceeding 25 mph in Lane	561	684	477	567
Percentage of Vehicles exceeding 25 mph in Lane	39%	43%	35%	73%
85th Percentile Speed in Lane	25 to 29 MPH	25 to 29 MPH	25 to 29 MPH	35 to 39 MPH
Average Speed	25	24	22	30
Maximum Speed in Lane	45 to 49 MPH	40 to 44 MPH	45 to 49 MPH	60 to 64 MPH

Seminary Road btwn Echols Avenue and Heritage Lane/Fairbanks Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Average Vehicles in Lane	1606	1468	1481	869
Total Number of Vehicles exceeding 25 mph in Lane	849	610	862	715
Percentage of Vehicles exceeding 25 mph in Lane	53%	42%	58%	82%
85th Percentile Speed in Lane	30 to 34 MPH	30 to 34 MPH	30 to 34 MPH	30 to 34 MPH
Average Speed	25	23	26	29
Maximum Speed in Lane	55 to 59 MPH	55 to 59 MPH	45 to 49 MPH	45 to 49 MPH

AM Peak Period Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue														
	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	28	97	220	298	105	6	0	0	0	0	0	0	0	754
DAY 2	18	47	209	311	167	36	6	0	0	0	0	0	0	794
DAY 3	11	56	175	319	168	48	7	0	0	0	0	0	0	784
4706	19	67	201	309	147	30	4	0	0	0	0	0	0	777
TOTAL PERCENTAGE	2.4%	8.6%	25.9%	39.8%	18.9%	3.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	190	1167	4530	8507	4767	1125	184	0	0	0	0	0	0	26
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	225	161	246	364	181	47	13	0	0	0	0	0	0	1237
DAY 2	281	154	176	319	176	55	10	3	0	0	0	0	0	1174
DAY 3	245	172	344	359	118	9	2	0	0	0	0	0	0	1249
TOTAL	250	162	255	347	158	37	8	1	0	0	0	0	0	1220
TOTAL PERCENTAGE	20.5%	13.3%	20.9%	28.5%	13.0%	3.0%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	2503	2841	5745	9552	5146	1388	354	48	0	0	0	0	0	23
Seminary Road btwn Filmore Avenue and Echols Avenue														
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	16	114	472	588	168	21	2	0	0	0	0	0	0	1381
DAY 2	29	128	540	579	195	28	6	1	0	0	0	0	0	1506
DAY 3	11	143	632	516	112	13	1	0	0	0	0	0	0	1428
TOTAL	19	128	548	561	158	21	3	0	0	0	0	0	0	1438
TOTAL PERCENTAGE	1.3%	8.9%	38.1%	39.0%	11.0%	1.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	187	2246	12330	15428	5146	775	128	16	0	0	0	0	0	25
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	202	216	387	332	171	34	10	0	0	0	0	0	0	1352
DAY 2	264	285	361	289	119	41	7	1	0	0	0	0	0	1367
DAY 3	292	275	343	279	127	18	3	0	0	0	0	0	0	1337
TOTAL	253	259	364	300	139	31	7	0	0	0	0	0	0	1352
TOTAL PERCENTAGE	18.7%	19.1%	26.9%	22.2%	10.3%	2.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	2527	4527	8183	8250	4518	1163	283	16	0	0	0	0	0	22
Seminary Road btwn Echols Avenue and Heritage Lane/Fairbanks Avenue														
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	155	170	330	408	263	135	58	20	4	1	0	0	0	1544
DAY 2	188	244	396	406	260	121	49	12	0	1	0	0	0	1677
DAY 3	214	250	324	396	236	118	39	15	6	0	0	0	0	1598
TOTAL	186	221	350	403	253	125	49	16	3	1	0	0	0	1606
TOTAL PERCENTAGE	11.6%	13.8%	21.8%	25.1%	15.8%	7.8%	3.0%	1.0%	0.2%	0.0%	0.0%	0.0%	0.0%	100%
	1857	3873	7875	11092	8223	4675	2068	744	175	38	0	0	0	25
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	29	104	412	587	280	45	6	1	0	0	0	0	0	1464
DAY 2	14	113	482	610	253	37	6	2	0	0	0	0	0	1517
DAY 3	31	139	534	556	171	24	4	3	0	0	0	0	0	1462
TOTAL	25	119	476	584	235	35	5	2	0	0	0	0	0	1481
TOTAL PERCENTAGE	1.7%	8.0%	32.1%	39.5%	15.8%	2.4%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
average peak period speed helper row	15	20	25	30	35	40	45	50	55	60	65	70	75	
	247	2077	10710	16069	7627	1325	227	95	0	0	0	0	0	26
	10	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	70	

AM Peak Period Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue

	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	21	52	204	210	67	7	1	0	0	0	0	0	0	562
DAY 2	25	53	214	212	72	12	0	0	0	0	0	0	0	588
DAY 3	34	152	441	391	100	16	3	0	0	0	0	0	0	1137
4706	80	257	859	813	239	35	4	0	0	0	0	0	0	2287
TOTAL PERCENTAGE	3.5%	11.2%	37.6%	35.5%	10.5%	1.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	800	4498	19328	22358	7768	1313	170	0	0	0	0	0	0	25
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	132	90	97	158	178	73	29	6	1	0	0	0	0	764
DAY 2	190	82	95	105	157	134	77	12	5	0	0	0	0	857
DAY 3	261	238	282	438	351	117	28	4	4	0	0	0	0	1723
TOTAL	583	410	474	701	686	324	134	22	10	0	0	0	0	3344
TOTAL PERCENTAGE	17.4%	12.3%	14.2%	21.0%	20.5%	9.7%	4.0%	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%	100%
	5830	7175	10665	19278	22295	12150	5695	1045	525	0	0	0	0	25

Seminary Road btwn Filmore Avenue and Echols Avenue

Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	36	139	713	519	150	19	8	0	0	0	0	0	0	1584
DAY 2	38	187	702	507	119	27	1	0	0	0	0	0	0	1581
DAY 3	53	174	672	546	136	17	4	0	0	0	0	0	0	1602
TOTAL	42	167	696	524	135	21	4	0	0	0	0	0	0	1589
TOTAL PERCENTAGE	2.7%	10.5%	43.8%	33.0%	8.5%	1.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	423	2917	15653	14410	4388	788	184	0	0	0	0	0	0	24
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	30	42	86	163	194	134	75	20	7	3	0	0	0	754
DAY 2	55	77	111	163	197	140	62	6	6	1	2	0	0	820
DAY 3	38	77	114	176	169	109	55	14	5	1	0	0	0	758
TOTAL	41	65	104	167	187	128	64	13	6	2	1	0	0	777
TOTAL PERCENTAGE	5.3%	8.4%	13.3%	21.5%	24.0%	16.4%	8.2%	1.7%	0.8%	0.2%	0.1%	0.0%	0.0%	100%
	410	1143	2333	4602	6067	4788	2720	633	315	96	42	0	0	30

Seminary Road btwn Echols Avenue and Heritage Lane/Fairbanks Avenue

Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	226	173	319	323	221	133	41	14	3	1	0	0	0	1454
DAY 2	288	272	390	296	147	52	21	4	1	0	0	0	0	1471
DAY 3	308	248	352	291	166	84	24	7	0	0	0	0	0	1480
TOTAL	274	231	354	303	178	90	29	8	1	0	0	0	0	1468
TOTAL PERCENTAGE	18.7%	15.7%	24.1%	20.7%	12.1%	6.1%	2.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
	2740	4043	7958	8342	5785	3363	1218	396	70	19	0	0	0	23
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	15	19	109	346	255	82	27	3	3	0	0	0	0	859
DAY 2	8	17	136	337	302	74	20	6	1	0	0	0	0	901
DAY 3	6	12	138	354	244	74	10	5	3	0	0	0	0	846
TOTAL	10	16	128	346	267	77	19	5	2	0	0	0	0	869
TOTAL PERCENTAGE	1.1%	1.8%	14.7%	39.8%	30.7%	8.8%	2.2%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	100%
average peak period speed helper row	15	20	25	30	35	40	45	50	55	60	65	70	75	
	97	280	2873	9506	8678	2875	808	222	123	0	0	0	0	29
Lane 2 AM	10	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	70	

AM Peak Period Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue														
	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	161	308	608	325	42	3	0	0	0	0	0	0	0	1447
DAY 2	168	325	606	309	38	3	0	0	0	0	0	0	0	1449
DAY 3	153	325	619	327	34	3	0	0	0	0	0	0	0	1461
4706	161	319	611	320	38	3	0	0	0	0	0	0	0	1452
TOTAL PERCENTAGE	11.1%	22.0%	42.1%	22.1%	2.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	1607	5588	13748	8809	1235	113	0	0	0	0	0	0	0	21
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	4	15	31	14	4	1	0	0	0	0	0	0	0	69
DAY 2	0	3	28	28	10	3	0	0	0	0	0	0	0	72
DAY 3	10	30	21	1	1	0	0	0	0	0	0	0	0	63
TOTAL	5	16	27	14	5	1	0	0	0	0	0	0	0	68
TOTAL PERCENTAGE	6.9%	23.5%	39.2%	21.1%	7.4%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
average peak period speed helper row	15	20	25	30	35	40	45	50	55	60	65	70	75	
	47	280	600	394	163	50	0	0	0	0	0	0	0	23
	10	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	70	

PM Peak Period Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue

	NB Lane 1	NB lane 2	NB Lane 3	SB Lane 1	SB lane 2	SB Lane 3
Average Vehicles in Lane	4706	922	1590	1741	2914	87
Total Number of Vehicles exceeding 25 mph in Lane	218	242	171	42	540	7
Percentage of Vehicles exceeding 25 mph in Lane	5%	26%	11%	2%	19%	8%
85th Percentile Speed in Lane	25 to 29 MPH	25 to 29 MPH	20 to 24 MPH	15 to 19 MPH	25 to 29 MPH	20 to 24 MPH
Average Speed	20	21	18	13	18	19
Maximum Speed in Lane	40 to 44 MPH	40 to 44 MPH	30 to 44 MPH	35 to 39 MPH	50 to 54 MPH	25 to 29 MPH

Seminary Road btwn Filmore Avenue and Echols Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Average Vehicles in Lane	1752	1568	1766	1831
Total Number of Vehicles exceeding 25 mph in Lane	619	572	174	592
Percentage of Vehicles exceeding 25 mph in Lane	35%	37%	10%	32%
85th Percentile Speed in Lane	25 to 29 MPH	25 to 29 MPH	20 to 24 MPH	25 to 29 MPH
Average Speed	23	23	17	21
Maximum Speed in Lane	40 to 44 MPH	45 to 49 MPH	40 to 44 MPH	60 to 64 MPH

Seminary Road btwn Echols Avenue and Heritage Lane/Fairbanks Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Average Vehicles in Lane	2130	1293	2263	1802
Total Number of Vehicles exceeding 25 mph in Lane	499	229	510	786
Percentage of Vehicles exceeding 25 mph in Lane	23%	18%	23%	44%
85th Percentile Speed in Lane	25 to 29 MPH	25 to 29 MPH	25 to 29 MPH	25 to 29 MPH
Average Speed	20	18	21	24
Maximum Speed in Lane	55 to 59 MPH	45 to 49 MPH	40 to 44 MPH	50 to 54 MPH

PM Peak Period Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue

	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	121	323	276	116	28	2	0	0	0	0	0	0	0	866
DAY 2	119	273	325	185	30	3	0	0	0	0	0	0	0	935
DAY 3	76	222	396	226	56	7	1	0	0	0	0	0	0	984
4706	105	273	332	176	38	4	0	0	0	0	0	0	0	928
TOTAL PERCENTAGE	11.3%	29.4%	35.8%	18.9%	4.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	1053	4772	7478	4831	1235	150	14	0	0	0	0	0	0	21
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	1146	395	153	53	8	2	0	0	0	0	0	0	0	1757
DAY 2	1369	251	90	16	1	1	0	0	0	0	0	0	0	1728
DAY 3	1249	360	86	43	1	0	0	0	0	0	0	0	0	1739
TOTAL	1255	335	110	37	3	1	0	0	0	0	0	0	0	1741
TOTAL PERCENTAGE	72.1%	19.3%	6.3%	2.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	12547	5868	2468	1027	108	38	0	0	0	0	0	0	0	13

Seminary Road btwn Filmore Avenue and Echols Avenue

Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	50	357	771	479	97	10	2	0	0	0	0	0	0	1766
DAY 2	100	259	699	558	127	6	4	0	0	0	0	0	0	1753
DAY 3	73	259	832	494	75	5	0	0	0	0	0	0	0	1738
TOTAL	74	292	767	510	100	7	2	0	0	0	0	0	0	1752
TOTAL PERCENTAGE	4.2%	16.6%	43.8%	29.1%	5.7%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	743	5104	17265	14034	3239	263	85	0	0	0	0	0	0	23
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	713	871	342	41	3	0	0	0	0	0	0	0	0	1970
DAY 2	806	848	286	46	6	0	0	0	0	0	0	0	0	1992
DAY 3	292	275	343	279	127	18	3	0	0	0	0	0	0	1337
TOTAL	604	665	324	122	45	6	1	0	0	0	0	0	0	1766
TOTAL PERCENTAGE	34.2%	37.6%	18.3%	6.9%	2.6%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	6037	11632	7283	3355	1473	225	43	0	0	0	0	0	0	17

Seminary Road btwn Echols Avenue and Heritage Lane/Fairbanks Avenue

Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	396	491	646	388	103	24	9	2	0	1	0	0	0	2060
DAY 2	444	630	730	311	91	10	1	1	0	0	0	0	0	2218
DAY 3	385	503	670	402	101	40	10	2	0	0	0	0	0	2113
TOTAL	408	541	682	367	98	25	7	2	0	0	0	0	0	2130
TOTAL PERCENTAGE	19.2%	25.4%	32.0%	17.2%	4.6%	1.2%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	4083	9473	15345	10093	3196	925	283	79	0	19	0	0	0	20
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	199	592	938	363	61	9	0	0	0	0	0	0	0	2162
DAY 2	287	662	841	403	94	5	0	0	0	0	0	0	0	2292
DAY 3	274	611	854	475	107	12	2	0	0	0	0	0	0	2335
TOTAL	253	622	878	414	87	9	1	0	0	0	0	0	0	2263
TOTAL PERCENTAGE	11.2%	27.5%	38.8%	18.3%	3.9%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
average peak period speed helper row	15	20	25	30	35	40	45	50	55	60	65	70	75	
	2533	10879	19748	11376	2838	325	28	0	0	0	0	0	0	21
	10	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	70	

PM Peak Period Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue														
	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	80	134	186	90	34	3	3	0	0	0	0	0	0	530
DAY 2	101	114	180	105	13	2	0	0	0	0	0	0	0	515
DAY 3	169	371	707	388	75	11	1	0	0	0	0	0	0	1722
4706	117	206	358	194	41	5	1	0	0	0	0	0	0	922
TOTAL PERCENTAGE	12.6%	22.4%	38.8%	21.1%	4.4%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	1167	3611	8048	5344	1322	200	57	0	0	0	0	0	0	21
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	852	622	217	118	27	4	0	0	1	0	0	0	0	1841
DAY 2	962	539	233	127	18	5	1	0	0	0	0	0	0	1885
DAY 3	1597	1173	929	800	387	105	21	4	1	0	0	0	0	5017
TOTAL	1137	778	460	348	144	38	7	1	1	0	0	0	0	2914
TOTAL PERCENTAGE	39.0%	26.7%	15.8%	12.0%	4.9%	1.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	11370	13615	10343	9579	4680	1425	312	63	35	0	0	0	0	18
Seminary Road btwn Filmore Avenue and Echols Avenue														
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	103	315	596	344	99	17	0	0	0	0	0	0	0	1474
DAY 2	108	285	622	440	138	15	5	0	0	0	0	0	0	1613
DAY 3	75	270	612	478	160	18	2	1	0	0	0	0	0	1616
TOTAL	95	290	610	421	132	17	2	0	0	0	0	0	0	1568
TOTAL PERCENTAGE	6.1%	18.5%	38.9%	26.8%	8.4%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	953	5075	13725	11568	4301	625	99	16	0	0	0	0	0	23
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	346	331	532	407	151	37	7	0	1	0	0	0	0	1812
DAY 2	431	351	587	301	105	33	4	2	2	0	1	0	0	1817
DAY 3	352	294	491	505	162	46	11	2	0	0	0	0	0	1863
TOTAL	376	325	537	404	139	39	7	1	1	0	0	0	0	1831
TOTAL PERCENTAGE	20.6%	17.8%	29.3%	22.1%	7.6%	2.1%	0.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
	3763	5693	12075	11119	4528	1450	312	63	53	0	21	0	0	21
Seminary Road btwn Echols Avenue and Heritage Lane/Fairbanks Avenue														
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	487	223	308	177	70	14	6	2	0	0	0	0	0	1287
DAY 2	584	246	269	123	33	9	1	0	0	0	0	0	0	1265
DAY 3	503	263	309	161	58	23	8	2	0	0	0	0	0	1327
TOTAL	525	244	295	154	54	15	5	1	0	0	0	0	0	1293
TOTAL PERCENTAGE	40.6%	18.9%	22.8%	11.9%	4.2%	1.2%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	5247	4270	6645	4226	1744	575	213	63	0	0	0	0	0	18
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	49	173	779	634	166	32	3	0	0	0	0	0	0	1836
DAY 2	103	314	690	484	136	30	4	3	0	0	0	0	0	1764
DAY 3	89	214	639	608	210	40	4	2	1	0	0	0	0	1807
TOTAL	80	234	703	575	171	34	4	2	0	0	0	0	0	1802
TOTAL PERCENTAGE	4.5%	13.0%	39.0%	31.9%	9.5%	1.9%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
average peak period speed helper row	15	20	25	30	35	40	45	50	55	60	65	70	75	
	803	4089	15810	15822	5547	1275	156	79	18	0	0	0	0	24
	10	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	70	

PM Peak Period Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue														
	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	507	437	445	148	17	0	0	0	0	0	0	0	0	1554
DAY 2	518	452	468	157	17	0	0	0	0	0	0	0	0	1612
DAY 3	518	449	463	156	17	0	0	0	0	0	0	0	0	1603
4706	514	446	459	154	17	0	0	0	0	0	0	0	0	1590
TOTAL PERCENTAGE	32.4%	28.1%	28.9%	9.7%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	5143	7805	10320	4226	553	0	0	0	0	0	0	0	0	18
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	20	39	26	3	0	0	0	0	0	0	0	0	0	88
DAY 2	11	38	21	9	0	0	0	0	0	0	0	0	0	79
DAY 3	10	47	28	8	0	0	0	0	0	0	0	0	0	93
TOTAL	14	41	25	7	0	0	0	0	0	0	0	0	0	87
TOTAL PERCENTAGE	15.8%	47.7%	28.8%	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
average peak period speed helper row	15	20	25	30	35	40	45	50	55	60	65	70	75	
	137	723	563	183	0	0	0	0	0	0	0	0	0	19
	10	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	70	

24-Hour Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue

	NB Lane 1	NB lane 2	NB Lane 3	SB Lane 1	SB lane 2	SB Lane 3
Average Vehicles in Lane	4706	2840	8645	8775	6871	491
Total Number of Vehicles exceeding 25 mph in Lane	1716	1025	1478	2041	2190	67
Percentage of Vehicles exceeding 25 mph in Lane	36%	36%	17%	23%	32%	14%
85th Percentile Speed in Lane	25 to 29 MPH	25 to 29 MPH	25 to 29 MPH	25 to 29 MPH	30 to 35 MPH	25 to 29 MPH
Average Speed	23	23	20	18	20	20
Maximum Speed in Lane	45 to 49 MPH	40 to 44 MPH	35 to 39 MPH	50 to 54 MPH	55 to 59 MPH	25 to 29 MPH

Seminary Road btwn Filmore Avenue and Echols Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Average Vehicles in Lane	8713	8897	9480	7327
Total Number of Vehicles exceeding 25 mph in Lane	3465	3562	1461	3218
Percentage of Vehicles exceeding 25 mph in Lane	40%	40%	15%	44%
85th Percentile Speed in Lane	25 to 29 MPH	25 to 29 MPH	25 to 29 MPH	30 to 34 MPH
Average Speed	24	24	18	24
Maximum Speed in Lane	45 to 49 MPH	55 to 59 MPH	45 to 49 MPH	60 to 64 MPH

Seminary Road btwn Echols Avenue and Heritage Lane/Fairbanks Avenue

	NB Lane 1	NB lane 2	SB Lane 1	SB lane 2
Total Vehicles in Lane	9897	8111	10397	7329
Total Number of Vehicles exceeding 25 mph in Lane	4128	2883	4208	4550
Percentage of Vehicles exceeding 25 mph in Lane	42%	36%	40%	62%
85th Percentile Speed in Lane	30 to 34 MPH	30 to 34 MPH	25 to 29 MPH	30 to 34 MPH
Average Speed	23	22	24	27
Maximum Speed in Lane	60 to 64 MPH	55 to 59 MPH	50 to 54 MPH	55 to 59 MPH

24-Hour Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue

	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	442	1348	1528	985	254	22								4579
DAY 2	268	952	1623	1257	445	81	11							4637
DAY 3	203	845	1761	1377	574	111	15	1						4887
4706	304	1048	1637	1206	424	71	13	1						4706
TOTAL PERCENTAGE	6.5%	22.3%	34.8%	25.6%	9.0%	1.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	3043	18346	36840	33174	13791	2675	553	48	0	0	0	0	0	23
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	3243	1631	1717	1506	623	137	29	4	2					8892
DAY 2	3775	1598	1547	1224	434	108	24	7						8717
DAY 3	3195	1704	1791	1475	470	62	8							8705
TOTAL	3404	1644	1685	1402	509	102	20	6	2					8775
TOTAL PERCENTAGE	38.8%	18.7%	19.2%	16.0%	5.8%	1.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	34043	28776	37913	38546	16543	3838	864	261	105	0	0	0	0	18

Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	198	1227	3879	2809	632	81	13	4						8843
DAY 2	238	1032	3588	2858	778	98	20	5						8617
DAY 3	204	1240	4138	2500	514	69	8							8673
TOTAL	213	1166	3868	2722	641	83	14	5						8713
TOTAL PERCENTAGE	2.4%	13.4%	44.4%	31.2%	7.4%	0.9%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	2133	20411	87038	74854	20843	3100	581	214	0	0	0	0	0	24
	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	3082	2953	1998	1008	394	82	19							9536
DAY 2	3245	3004	1856	931	307	71	11	5						9430
DAY 3	2846	2792	2281	1091	381	66	10	2						9469
TOTAL	3058	2916	2045	1010	361	73	13	4						9480
TOTAL PERCENTAGE	32.3%	30.8%	21.6%	10.7%	3.8%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	30577	51036	46013	27775	11722	2738	567	166	0	0	0	0	0	18

Seminary Road btwn Echols Avenue and Heritage Lane/Fairbanks Avenue

Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	1375	1673	2542	2318	1260	546	161	52	13	5	2			9947
DAY 2	1440	1914	2647	2094	1147	472	145	45	10	7				9921
DAY 3	1502	1755	2460	2203	1178	505	139	58	17	3				9820
TOTAL	1439	1781	2550	2205	1195	508	148	52	13	5	2			9897
TOTAL PERCENTAGE	14.5%	18.0%	25.8%	22.3%	12.1%	5.1%	1.5%	0.5%	0.1%	0.1%	0.0%	0.0%	0.0%	100%
	14390	31162	57368	60638	38838	19038	6304	2454	700	288	125	0	0	23
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	517	1727	3934	3027	975	162	16	5	1					10364
DAY 2	561	1885	3838	3011	980	135	16	6						10432
DAY 3	496	1644	3965	3243	912	111	17	5	1					10394
TOTAL	525	1752	3912	3094	956	136	16	5	1					10397
TOTAL PERCENTAGE	5.0%	16.9%	37.6%	29.8%	9.2%	1.3%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	5247	30660	88028	85076	31059	5100	694	253	53	0	0	0	0	24
	10	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	70	

24-Hour Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue

	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	222	538	1073	793	215	25	6							2872
DAY 2	210	466	1063	821	197	27	5							2789
DAY 3	203	523	1148	779	175	27	4							2859
4706	212	509	1095	798	196	26	5	0	0	0	0	0	0	2840
TOTAL PERCENTAGE	7.5%	17.9%	38.5%	28.1%	6.9%	0.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	2117	8908	24630	21936	6359	988	213	0	0	0	0	0	0	23
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	2177	1567	1168	1133	672	221	83	20	6					7047
DAY 2	2198	1331	1121	1064	655	288	122	31	9	2				6821
DAY 3	1858	1411	1211	1238	738	222	49	8	5					6740
TOTAL	2078	1436	1167	1145	688	244	85	20	7	2	0	0	0	6871
TOTAL PERCENTAGE	30.2%	20.9%	17.0%	16.7%	10.0%	3.5%	1.2%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
	20777	25136	26250	31488	22371	9138	3598	934	350	115	0	0	0	20

Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	366	1436	3827	2551	657	99	15	4						8955
DAY 2	290	1262	3681	2719	696	122	25	8	3	7				8813
DAY 3	307	1108	3728	2884	746	104	19	7						8903
TOTAL	321	1269	3745	2718	700	108	20	6	3	7	0	0	0	8897
TOTAL PERCENTAGE	3.6%	14.3%	42.1%	30.5%	7.9%	1.2%	0.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	100%
	3210	22202	84270	74745	22739	4063	836	301	158	403	0	0	0	24
	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	1305	1156	1797	1453	981	468	184	61	14	6				7425
DAY 2	1334	1151	1768	1448	990	419	140	27	17	1	4			7299
DAY 3	1136	1055	1623	1755	996	439	176	54	10	4	4			7252
TOTAL	1258	1121	1729	1552	989	442	167	47	14	4	4	0	0	7327
TOTAL PERCENTAGE	17.2%	15.3%	23.6%	21.2%	13.5%	6.0%	2.3%	0.6%	0.2%	0.1%	0.1%	0.0%	0.0%	100%
	12583	19612	38910	42680	32143	16575	7083	2248	718	211	250	0	0	24

Seminary Road btwn Echols Avenue and Heritage Lane/Fairbanks Avenue

Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	1817	1214	1909	1726	925	415	150	52	12	2				8222
DAY 2	1971	1407	2011	1489	714	278	94	19	10					7993
DAY 3	2014	1403	1936	1503	835	290	92	31	9					8113
TOTAL	1934	1341	1952	1573	825	328	112	34	10	2	0	0	0	8111
TOTAL PERCENTAGE	23.8%	16.5%	24.1%	19.4%	10.2%	4.0%	1.4%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
	19340	23473	43920	43248	26802	12288	4760	1615	543	115	0	0	0	22
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	155	520	2303	2846	1267	310	67	12	8					7488
DAY 2	165	592	2066	2757	1313	297	71	17	10	6				7294
DAY 3	154	478	1903	2923	1316	320	71	24	4					7193
TOTAL	158	530	2091	2842	1299	309	70	18	7	6	0	0	0	7329
TOTAL PERCENTAGE	2.2%	7.2%	28.5%	38.8%	17.7%	4.2%	1.0%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	100%
	1590	9275	47040	78155	42207	11588	2961	839	385	345	0	0	0	27
	10	17.5	22.5	27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	70	

24-Hour Speed and Volume Summary

Seminary Road btwn Colfax Avenue and Dawes Avenue														
	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	
Northbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	1748	2399	3245	1370	144	14								8920
DAY 2	1708	2296	3110	1306	133	14								8567
DAY 3	1670	2253	3071	1313	126	14								8447
4706	1709	2316	3142	1330	134	14	0	0	0	0	0	0	0	8645
TOTAL PERCENTAGE	19.8%	26.8%	36.3%	15.4%	1.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	17087	40530	70695	36566	4366	525	0	0	0	0	0	0	0	20
Southbound Direction	0-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph	65-70 mph	> 70 mph	Total
DAY 1	82	218	178	59	13	3								553
DAY 2	40	149	166	68	19	7								449
DAY 3	79	204	155	28	3	1								470
TOTAL	67	190	166	52	12	4	0	0	0	0	0	0	0	491
TOTAL PERCENTAGE	13.7%	38.8%	33.9%	10.5%	2.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	670	3331	3743	1421	379	138	0	0	0	0	0	0	0	20

Attachment B: Crash Data

		Crash Severity				Collision Type								Weather Condition			
Intersection	Year	Severe	Visible	Nonvisibl	Property Damage Only	Rear End	Pedestrian	Backed Into	Other	Angle	Sideswipe - Same Direction	Fixed Object - Off Road	Head On	No Adverse Condition (Clear/Cloudy)	Rain	Snow	Total
Fillmore Avenue & Seminary Road	2019	0	1	0	1	0	0	0	0	2	0	0	0	2	0	0	*2*
	2020	0	1	0	1	2	0	0	0	0	0	0	0	2	0	0	*2*
	2021	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	*1*
	2022	0	0	1	1	2	0	0	0	0	0	0	0	2	0	0	*2*
	2023	0	0	1	1	0	0	0	0	0	0	1	1	2	0	0	*2*
Total		0	3	2	4	4	1	0	0	2	0	1	1	9	0	0	*9*
Annual Average		0	0.6	0.4	0.8	0.8	0.2	0	0	0.4	0	0.2	0.2	1.8	0	0	*1.13*

		Light Condition					Crash Time							
Intersection	Year	Dawn	Daylight	Dusk	Darkness - Road Lighted	Darkness - Road Not Lighted	12:00 am - 4:59 am	5:00 am - 8:59 am	9:00 am - 11:59 am	12:00 pm - 2:59 pm	3:00 pm - 6:59 pm	7:00 pm - 9:59 pm	10:00 pm - 11:59 pm	Total
Fillmore Avenue & Seminary Road	2019	0	1	0	1	0	0	0	0	1	0	1	0	*2*
	2020	0	2	0	0	0	0	0	1	0	1	0	0	*2*
	2021	0	1	0	0	0	0	0	0	0	1	0	0	*1*
	2022	0	1	0	1	0	0	0	1	0	0	0	0	*2*
	2023	0	0	0	2	0	1	1	0	0	0	0	0	*2*
Total		0	5	0	4	0	1	1	2	1	2	1	0	*9*
Annual Average		0.00	1.00	0.00	0.80	0.00	0.20	0.20	0.40	0.20	0.40	0.20	0.00	*1.13*

		Crash Severity				Collision Type								Weather Condition			
Intersection	Year	Severe	Visible	Nonvisibl	Property Damage Only	Rear End	Pedestrian	Backed Into	Other	Angle	Sideswipe - Same Direction	Fixed Object - Off Road	Head On	No Adverse Condition (Clear/Cloudy)	Rain	Snow	Total
Seminary Road & Echols Avenue	2019	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	*4*
	2020	1	0	0	1	1	0	0	0	0	1	0	0	1	1	0	*6*
	2021	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	*1*
	2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2023	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	*2*
Total		1	1	0	3	1	0	0	0	2	1	0	0	2	2	0	*13*
Annual Average		0.2	0.2	0	0.6	0.2	0	0	0	0.4	0.2	0	0	0.4	0.4	0	*1.63*

		Light Condition					Crash Time							
Intersection	Year	Dawn	Daylight	Dusk	Darkness - Road Lighted	Darkness - Road Not Lighted	12:00 am - 4:59 am	5:00 am - 8:59 am	9:00 am - 11:59 am	12:00 pm - 2:59 pm	3:00 pm - 6:59 pm	7:00 pm - 9:59 pm	10:00 pm - 11:59 pm	Total
Seminary Road & Echols Avenue	2019	0	1	0	1	0	0	1	0	0	0	0	1	*2*
	2020	0	1	1	0	0	0	0	0	1	1	0	0	*2*
	2021	0	1	0	0	0	0	0	0	0	0	0	0	*1*
	2022	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2023	0	1	0	0	0	0	1	0	0	0	0	0	*1*
Total		0	4	1	1	0	0	2	0	1	1	0	1	*6*
Annual Average		0.00	0.80	0.20	0.20	0.00	0.00	0.40	0.00	0.20	0.20	0.00	0.20	*0.75*

		Crash Severity				Collision Type								Weather Condition			
Intersection	Year	Severe	Visible	Nonvisibl	Property Damage Only	Rear End	Pedestrian	Backed Into	Other	Angle	Sideswipe - Same Direction	Fixed Object - Off Road	Head On	No Adverse Condition (Clear/Cloudy)	Rain	Snow	Total
Seminary Road & Dover Place	2019	0	0	0	1	1	0	0	0	0	0	1	0	0	1	0	*4*
	2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2023	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	*3*
Total		0	0	1	1	1	0	0	0	0	0	2	0	1	1	0	*7*
Annual Average		0	0	0.2	0.2	0.2	0	0	0	0	0	0.4	0	0.2	0.2	0	*0.88*

		Light Condition					Crash Time							
Intersection	Year	Dawn	Daylight	Dusk	Darkness - Road Lighted	Darkness - Road Not Lighted	12:00 am - 4:59 am	5:00 am - 8:59 am	9:00 am - 11:59 am	12:00 pm - 2:59 pm	3:00 pm - 6:59 pm	7:00 pm - 9:59 pm	10:00 pm - 11:59 pm	Total
Seminary Road & Dover Place	2019	0	1	0	0	0	0	0	0	0	1	0	0	*1*
	2020	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2021	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2022	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2023	0	0	0	1	0	0	0	0	0	0	1	0	*1*
Total		0	1	0	1	0	0	0	0	0	1	1	0	*2*
Annual Average		0.00	0.20	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.00	*0.25*

		Crash Severity				Collision Type								Weather Condition			
Intersection	Year	Severe	Visible	Nonvisibl	Property Damage Only	Rear End	Pedestrian	Backed Into	Other	Angle	Sideswipe - Same Direction	Fixed Object - Off Road	Head On	No Adverse Condition (Clear/Cloudy)	Rain	Snow	Total
Seminary Road & Fairbanks Avenue	2019	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	*3*
	2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2021	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	*3*
	2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total		0	0	0	2	1	0	0	0	0	1	0	0	2	0	0	*6*
Annual Average		0	0	0	0.4	0.2	0	0	0	0	0.2	0	0	0.4	0	0	*0.75*

		Light Condition					Crash Time							
Intersection	Year	Dawn	Daylight	Dusk	Darkness - Road Lighted	Darkness - Road Not Lighted	12:00 am - 4:59 am	5:00 am - 8:59 am	9:00 am - 11:59 am	12:00 pm - 2:59 pm	3:00 pm - 6:59 pm	7:00 pm - 9:59 pm	10:00 pm - 11:59 pm	Total
Seminary Road & Fairbanks Avenue	2019	0	0	1	0	0	0	0	0	0	0	1	0	*1*
	2020	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2021	0	0	0	0	1	1	0	0	0	0	0	0	*1*
	2022	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2023	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total		0	0	1	0	1	1	0	0	0	0	1	0	*2*
Annual Average		0.00	0.00	0.20	0.00	0.20	0.20	0.00	0.00	0.00	0.00	0.20	0.00	*0.25*

		Crash Severity				Collision Type								Weather Condition			
Intersection	Year	Severe	Visible	Nonvisibl	Property Damage Only	Rear End	Pedestrian	Backed Into	Other	Angle	Sideswipe - Same Direction	Fixed Object - Off Road	Head On	No Adverse Condition (Clear/Cloudy)	Rain	Snow	Total
Seminary Road & Heritage Lane	2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2020	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	*3*
	2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total		0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	*3*
Annual Average		0	0	0	0.2	0	0	0	0	0.2	0	0	0	0.2	0	0	*0.38*

		Light Condition					Crash Time							
Intersection	Year	Dawn	Daylight	Dusk	Darkness - Road Lighted	Darkness - Road Not Lighted	12:00 am - 4:59 am	5:00 am - 8:59 am	9:00 am - 11:59 am	12:00 pm - 2:59 pm	3:00 pm - 6:59 pm	7:00 pm - 9:59 pm	10:00 pm - 11:59 pm	Total
Seminary Road & Heritage Lane	2019	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2020	0	1	0	0	0	0	0	0	1	0	0	0	*1*
	2021	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2022	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2023	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total		0	1	0	0	0	0	0	0	1	0	0	0	*1*
Annual Average		0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	*0.13*

		Crash Severity				Collision Type								Weather Condition			
Intersection	Year	Severe	Visible	Nonvisibl	Property Damage Only	Rear End	Pedestrian	Backed Into	Other	Angle	Sideswipe - Same Direction	Fixed Object - Off Road	Head On	No Adverse Condition (Clear/Cloudy)	Rain	Snow	Total
Seminary Road & Dawes Avenue	2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2023	1	0	0	1	0	0	0	0	0	0	1	1	2	0	0	*6*
Total		1	0	0	1	0	0	0	0	0	0	1	1	2	0	0	*6*
Annual Average		0.2	0	0	0.2	0	0	0	0	0	0	0.2	0.2	0.4	0	0	*0.75*

		Light Condition					Crash Time							
Intersection	Year	Dawn	Daylight	Dusk	Darkness - Road Lighted	Darkness - Road Not Lighted	12:00 am - 4:59 am	5:00 am - 8:59 am	9:00 am - 11:59 am	12:00 pm - 2:59 pm	3:00 pm - 6:59 pm	7:00 pm - 9:59 pm	10:00 pm - 11:59 pm	Total
Seminary Road & Dawes Avenue	2019	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2020	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2021	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2022	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2023	1	0	0	1	0	1	1	0	0	0	0	0	*2*
Total		1	0	0	1	0	1	1	0	0	0	0	0	*2*
Annual Average		0.20	0.00	0.00	0.20	0.00	0.20	0.20	0.00	0.00	0.00	0.00	0.00	*0.25*

		Crash Severity				Collision Type									Weather Condition			
Intersection	Year	Severe	Visible Inonvisibl		Property Damage Only	Rear End	Pedestrian	Backed Into	Other	Angle	Sideswipe - Same Direction	Fixed Object - Off Road	Head On	Bicycle	No Adverse Condition (Clear/Cloudy)	Rain	Snow	Total
Seminary Road & S George Mason Drive	2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2022	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	*3*
	2023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total		0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	*3*
Annual Average		0	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0.2	0	0	*0.38*

		Light Condition					Crash Time							
Intersection	Year	Dawn	Daylight	Dusk	Darkness - Road Lighted	Darkness - Road Not Lighted	12:00 am - 4:59 am	5:00 am - 8:59 am	9:00 am - 11:59 am	12:00 pm - 2:59 pm	3:00 pm - 6:59 pm	7:00 pm - 9:59 pm	10:00 pm - 11:59 pm	Total
Seminary Road & S George Mason Drive	2019	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2020	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2021	0	0	0	0	0	0	0	0	0	0	0	0	*0*
	2022	0	0	0	1	0	0	0	0	0	0	1	0	*1*
	2023	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total		0	0	0	1	0	0	0	0	0	0	1	0	*1*
Annual Average		0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	*0.13*

Attachment C: Traffic Analysis

		Existing AM			Build 1 AM			Build 2 AM			Existing PM			Build 1 PM			Build 2 PM		
Intersection Name	Movement	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
SIGNALIZED SEMINARY ROAD & SHOPPING CENTER ENTRANCE & S. GEORGE MASON DRIVE	EBL	D	36.9	0.25	D	36.9	0.24	D	36.9	0.25	D	36.9	0.26	D	36.9	0.26	C	34.4	0.22
	EBT	D	36.9	0.25	D	36.9	0.24	D	36.9	0.25	D	36.9	0.26	D	36.9	0.26	C	34.3	0.22
	EBR	D	38.1	0.38	D	38.2	0.38	D	38.1	0.38	E	57.3	0.82	E	57.3	0.82	D	53.6	0.82
	WBT	D	39.7	0.11	D	40.7	0.12	D	39.7	0.11	D	43.7	0.21	D	43.7	0.21	D	44.9	0.21
	NBL	C	33.7	0.74	C	34.1	0.74	C	33.7	0.74	D	43.1	0.8	D	43.1	0.8	D	53.1	0.89
	NBT	B	13.5	0.3	B	13.7	0.3	B	13.5	0.3	D	35.7	0.47	D	35.7	0.47	D	36.2	0.46
	SBL	D	45.4	0.25	D	46.1	0.25	D	45.4	0.25	C	32.8	0.21	C	32.8	0.21	D	36.7	0.24
	SBT	C	27	0.22	C	27.6	0.22	C	27	0.22	D	40.8	0.67	D	40.8	0.67	D	42.7	0.69
	SBR	C	25.7	0.03	C	26.2	0.03	C	25.7	0.03	C	34.2	0.13	C	34.2	0.13	D	35.4	0.13
	NB	C	24.9	0	C	25.2		C	24.9	0	D	40.4		D	40.4		D	47	0
	SB	C	27.7	0	C	28.3		C	27.7	0	D	38.3		D	38.3		D	40.2	0
	EB	D	37.9	0	D	38		D	37.9	0	D	53.8		D	53.8		D	50.3	
	WB	D	39.7	0	D	40.7		D	39.7	0	D	43.7		D	43.7		D	44.9	
	Intersection	C	29.6	0.45	C	29.9	0.45	C	29.6	0.45	D	44.5	0.68	D	44.5	0.68	D	46.2	0.72
SEMINARY ROAD & COLFAX AVENUE	EBR	B	11.4	0.16	C	18.9	0.3	B	11.4	0.16	B	11.9	0.09	B	11.9	0.09	B	11.3	0.09
	WBR	A	0	0	A	0	0	A	0	0	A	0	0	A	0	0	A	0	0
	NBT	A	0	0.21	A	0	0.21	A	0	0.72	A	0	0.19	A	0	0.26	A	0	0.65
	NBR	A	0	0.21	A	0	0.21	A	0	0.72	A	0	0.19	A	0	0.26	A	0	0.65
	SBT	A	0	0.29	A	0	0.43	A	0	0.22	A	0	0.48	A	0	0.48	A	0	0.36
	SBR	A	0	0.15	A	0	0.01	A	0	0.22	A	0	0.3	A	0	0.3	A	0	0.36
	NB	A	0	0	A	0		A	0		A	0		A	0		A	0	
	SB	A	0	0	A	0		A	0		A	0		A	0		A	0	
	EB	A	11.4	0	C	18.9		B	11.4		B	11.9		B	11.9		B	11.3	
	WB	A	0	0	A	0		A	0		A	0		A	0		A	0	
	Intersection	A		0	A			A			A			A			A		
SIGNALIZED SEMINARY ROAD & DAWES AVENUE	EBT	E	64.1	0.33	E	63.4	0.31	E	63.4	0.31	E	59.1	0.31	E	59.1	0.31	E	59.5	0.32
	WBT	E	64.5	0.37	E	63.8	0.34	E	63.8	0.34	E	64.3	0.58	E	64.3	0.58	E	65.7	0.59
	WBR	E	62.2	0.02	E	61.7	0.02	E	61.7	0.02	E	57	0.02	E	57	0.02	E	57.3	0.02
	NBL	A	3	0.12	A	0.3	0.14	A	2.9	0.14	A	6.6	0.33	A	6.8	0.33	D	52.7	0.59
	NBT	A	5.1	0.45	A	0.6	0.45	A	5.7	0.86	A	6.2	0.41	B	12.6	0.78	B	11.9	0.78
	SBL	A	3.5	0.08	A	3.7	0.08	B	16.8	0.13	A	3.7	0.07	B	11.2	0.1	B	10.6	0.1
	SBT	A	5.8	0.31	A	9.7	0.59	A	9.7	0.59	A	7.9	0.5	A	7.9	0.5	D	36	0.97
	SBR	A	5.8	0.31	A	4.4	0	A	9.7	0.59	A	7.9	0.5	A	7.9	0.5	D	36	0.97
	NB	A	5	0	A	0.6		A	5.6		A	6.2		B	12.1		B	15.8	
	SB	A	5.7	0	A	9.5		A	10		A	7.8		A	8		D	35.4	
	EB	E	64.1	0	E	62.8		E	63.4		E	59.1		E	59.1		E	59.5	
	WB	E	63.4	0	E	63.4		E	62.8		E	61.9		E	61.9		E	62.9	
	Intersection	A	8.1	0.45	A	7	0.55	B	10	0.83	B	10.5	0.49	B	13.2	0.75	C	28.3	0.9
SEMINARY ROAD & FILLMORE AVENUE/DOVER PLACE	EBL	B	12	0.11	C	21.5	0.22	C	23.5	0.24	B	14.2	0.11	B	12.5	0.09	F	124.6	0.68
	EBT	B	12	0.11	C	21.5	0.22	C	23.5	0.24	B	14.2	0.11	B	12.5	0.09	F	124.6	0.68
	EBR	B	12	0.11	C	21.5	0.22	C	23.5	0.24	B	14.2	0.11	B	12.5	0.09	F	124.6	0.68
	WBL	D	28.3	0.08	C	21.1	0.05	F	63.2	0.17	F	99.8	0.18	E	47.8	0.09	F	153.2	0.25
	WBT	D	28.3	0.08	C	21.1	0.05	F	63.2	0.17	F	99.8	0.18	E	47.8	0.09	F	153.2	0.25
	WBR	D	28.3	0.08	C	21.1	0.05	F	63.2	0.17	F	99.8	0.18	E	47.8	0.09	F	153.2	0.25
	NBL	A	1.5	0.06	B	10.8	0.07	B	10.7	0.07	A	2.5	0.09	B	12.4	0.09	D	32.2	0.26
	NBT	A	0	0.39	A	0	0.52	A	0	0.78	A	0	0.37	A	0	0	A	0	0.73
	NBR	A	0	0.39	A	0	0.52	A	0	0.78	A	0	0.37	A	0	0	A	0	0.73
	SBL	A	0.1	0	B	11.3	0	C	21.9	0.01	A	0.2	0.01	C	17.1	0.01	C	16.9	0.01
	SBT	A	0	0.27	A	0	0.53	A	0	0.53	A	0.2	0.01	A	0	0	A	0	0.82
	SBR	A	0.1	0.27	A	0	0.53	A	0	0.53	A	0	0.41	A	0	0	A	0	0.82
	NB	A	0		A	0		A	0		A	1.3		A	0.5		A	1.2	
	SB	A	0		A	0		A	0		A	0.1		A	0		A	0	
	EB	B	12		C	21.5		C	23.5		B	14.2		B	12.5		F	124.6	
	WB	D	28.3	0	C	21.1		F	63.2		F	99.8		E	47.8		F	153.2	
	Intersection	A		0	A			A			A			A			A		
SEMINARY ROAD & FILLMORE AVENUE	WBL	B	13.2	0.12	B	12.1	0.11	F	99.6	0.66	B	11.1	0.13	F	66.4	0.62	F	54.8	0.56
	WBT	B	13.2	0.12	B	12.1	0.11	F	99.6	0.66	B	11.1	0.13	F	66.4	0.62	F	54.8	0.56
	NBT	A	0	0.52	A	0	0.52	A	0	0.79	A	0	0.47	A	0	0.72	A	0	0.72
	NBR	A	0	0.27	A	0	0.27	A	0	0.79	A	0	0.24	A	0	0.72	A	0	0.72
	SBL	A	2.6	0.08	B	11.9	0.08	D	27.9	0.22	A	3	0.11	C	19.5	0.23	C	19.3	0.23
	SBT	A	2.6	0.08	A	0	0.54	A	0	0.54	A	0	0.53	A	0	0.4	A	0	0.79
	NB	A	0	0	A	0		A	0		A	0		A	0		A	0	
	SB	A	0.9	0	A	0.6		A	1.3		A	1.1		A	1		A	1	
	WB	B	13.2		B	12.1		F	99.6		B	11.1		F	66.4		F	54.8	
	Intersection	A		0	A			A			A			A			A		
SIGNALIZED SEMINARY ROAD & ECHOLS AVENUE	EBT	A	0	0	A	0	0	A	0	0	E	55.4	0.06	E	55.4	0.06	E	55.4	0.06
	WBT	E	60.5	0.02	E	60.5	0.02	E	57.6	0.03	E	64.3	0.01	E	64.3	0.01	E	64.3	0.01
	NBL	C	28.1	0.51	A	9	0.51	D	45.3	1.01	B	19.5	0.72	B	14.6	0.27	F	122.7	0.92
	NBT	C	28.1	0.51	A	9	0.51	D	45.3	1.01	B	19.5	0.72	D	50.8	0	D	46.7	0.98
	SBL	A	6.9	0.33	A	7.8	0	E	61.8	0.01	B	11.2	0.58	C	27.3	0.02	D	38.4	0.02
	SBT	A	6.9	0.33	A	3.6	0.57	A	3.9	0.59	B	11.2	0.58	A	3.8	0.53	C	22.5	1
	NB	C	28.1	0	A	9		D	45.3		B	19,5		D	49.4		D	49.7	
	SB	A	6.9	0	A	3.6		A	3.9		B	11.2		A	3.9		C	22.5	
	EB	A	0	0	A	0		A	0		E	55.4		E	55.4		E	55.4	
	WB	E	60.5	0	E	60.5		E	57.6		E	64.3		E	64.3		E	64.3	
	Intersection	C	20.3	0.47	A	7.7	0.57	C	29.2	0.91	B	16.8	0.58	C	26.5	0.8	D	36.1	0.87
SEMINARY ROAD & HERITAGE LANE/FAIRBANKS AVENUE	EBL	B	13.6	0.16	C	18.7	0.04	C	22.3	0.05	B	10.5	0.01	B	11.1	0.01	F	152.1	0.14
	EBT	B	13.6	0.16	C	18.7	0.04	C	22.3	0.05	B	10.5	0.01	B	11.1	0.01	F	152.1	0.14
	EBR	B	13.6	0.16	C	18.7	0.04	C	22.3	0.05	B	10.5	0.01	B	11.1	0.01	F	152.1	0.14
	WBL	D	34.2	0.03	C	21.9	0.02	D	32.4	0.03	F	141	0.28	F	99.1	0.21	F	475.1	0.7
	WBT	D	34.2	0.03	C	21.9	0.02	D	32.4	0.03	F	141	0.28	F	99.1	0.21	F	475.1	0.7
	WBR	D	34.2	0.03	C	21.9	0.02	D	32.4	0.03	F	141	0.28	F	99.1	0.21	F	475.1	0.7
	NBL	A	0	0.4	A	0	0	A	0.6	0.02	A	1.3	0.04	A	2.3	0.05	B	14.4	0.19
	NBT	A	0	0.41	A	0	0.41	A	0	0.41	A	0	0.36	A	0	0	A	0	0.36
	NBR	A	0	0.41	A	0	0.41	A	0	0.41	A	0	0.36	A	0	0	A	0	0.36
	SBL	A	0.3	0.01	B	11.2	0.01	B	12.4	0.01	A	0	0	A	0	0	A	0	0
	SBT	A	0	0	A	0	0.54	B	12.4	0.01	A	0	0.44	A	0	0.59	A	0	0.89
	SBR	A	0	0	A	0	0.54	B	12.4	0.01	A	0	0.44	A	0	0.3	A	0	0.89
	NB	A	0.2		A	0.3		A	0.3		A	0.7		A	2.3		A	0	
	SB	A	0.2		A	0.1		A	0.1		A	0		A	0		A	0	
	EB	B	13.6		C	18.7		C	22.3		B	10.5		B	11.1		F	152.1	
	WB	D	34.2		C	21.9		D	32,4		F	141		F	99.1		F	475.1	
	Intersection	A			A			A			A			A			A		

		Existing AM		Build 1 AM		Build 2 AM		Existing PM		Build 1 PM		Build 2 PM	
	Movement	Queue	Storage	Queue	Storage	Queue	Storage	Queue	Storage	Queue	Storage	Queue	Storage
	SEMINARY ROAD & SHOPPING CENTER ENTRANCE & S. GEORGE MASON DRIVE												
SEMINARY ROAD & SHOPPING CENTER ENTRANCE & S. GEORGE MASON DRIVE	EBL	88	225	102	225	98	225	129	225	124	225	149	225
	EB TL	36	595	44	595	45	595	63	595	130	595	182	595
	EB R	-	250	-	250	-	250	352	250	325	250	335	250
	WB TL	4	n/a	37	n/a	46	n/a	93	n/a	89	n/a	102	n/a
	WB TR	182		6		4		25		35		48	
	NB L1	158	205	180	205	195	205	191	205	193	205	202	205
	NB L2	122		194		212		203		215		219	
	NB T	-	490	124	490	174	490	170	490	162	490	152	490
	NB TR	134		156		182		175		167		173	
	SB L	47	135	42	135	44	135	108	135	121	135	120	135
	SB T	154	215	154	215	155	215	243	215	274	215	325	215
	SB T	50		57		126		189		250		305	
	SB R	-	220	-	220	-	220	-	220	82	220	136	220
	SEMINARY ROAD & COLFAX AVENUE												
SEMINARY ROAD & COLFAX AVENUE	EB LTR	25	770	107	770	89	770	69	770	67	770	406	770
	WB LTR	30	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
	NB T1	-	N/A	-	N/A	-	N/A	-	N/A	76	N/A	-	N/A
	NB T2	-		-		-		-		96		-	
	NB TL	52		3		-		84		-		-	
	NB TR	-		29		149		95		27		238	
	SB T	-	205	171	205	94	205	31	205	9	205	253	205
	SB T2	-		-		102		34		6		-	
	SB R	-		156		5		-		-		341	
	SB TL	94		-		-		-		-		-	
	SEMINARY ROAD & DAWES AVENUE												
SEMINARY ROAD & DAWES AVENUE	EB LTR	124	685	115	685	107	685	139	685	117	685	135	685
	WB TL	43	1010	73	1010	81	1010	106	1010	121	1010	131	1010
	WB R	47	100	54	100	66	100	68	100	59	100	76	100
	NB L	48	70	62	70	119	70	124	70	124	70	100	70
	NB T	29	280	20	280	-	280	264	280	-	280	-	280
	NB TR	224		58		260		252		259		258	
	SB L	65	265	84	265	112	265	45	265	50	265	241	265
	SB T	140	305	289	305	-	305	312	305	267	305	-	305
	SB TR	144		4		333		301		275		364	
	SEMINARY ROAD & FILLMORE AVENUE/DOVER PLACE												
SEMINARY ROAD & FILLMORE AVENUE/DOVER PLACE	EB LTR	54	600	80	600	85	600	118	600	78	600	122	600
	WB LTR	29	250	46	250	42	250	29	250	38	250	46	250
	NB L	-	95	50	45	60	45	-	45	61	45	61	45
	NB T	-		9	95	-	95	-	95	-	95	-	95
	NB TL	92		-		-		99		-		-	
	NB TR	92		-		111		125		112		123	
	SB L	-	280	21	75	22	75	-	75	32	75	25	75
	SB T	-		-	280	-	280	-	280	30	280	-	280
	SB TL	31		-		-		265		-		-	
	SB TR	55		28		151		271		8		227	
	SEMINARY ROAD & FILLMORE AVENUE												
SEMINARY ROAD & FILLMORE AVENUE	WB LR	55	600	73	600	129	600	73	600	191	600	245	600
	NB T	-	410	8	410	-	410	250	410	-	410	-	410
	NB TR	20		53		313		214		353		372	
	SB L	-	95	59	45	61	45	-	45	62	45	65	45
	SB TL	96		-	95	-	95	110	95	100	95	-	95
	SB T	87		58		128		125		43		129	
	SEMINARY ROAD & ECHOLS AVENUE												
SEMINARY ROAD & ECHOLS AVENUE	EB LTR	0	360		360	0	360	136	360	152	360	147	360
	WB LTR	74	725	83	725	98	725	72	725	60	725	60	725
	NB L	-	400	-	75	-	75	-	75	96	75	99	75
	NB T	-		7		-		-		-		-	
	NB TL	254		-	400	-	400	485	400	-	400	-	400
	NB TR	292		31		492		496		492		496	
	SB L	-	430	-	75	8	75	-	75	26	75	41	75
	SB T	-		-		-		-		225		-	
	SB TL	84		-	430	-	430	244	430	-	430	-	430
	SB TR	110		227		227		260		256		434	
	SEMINARY ROAD & HERITAGE LANE/FAIRBANKS AVENUE												
SEMINARY ROAD & HERITAGE LANE/FAIRBANKS AVENUE	EB LTR	25	75	27	75	44	75	25	75	24	75	22	75
	WB LTR	30	160	30	160	34	160	30	160	50	160	63	160
	NB TL	52	520	112	520	309	520	648	520	652	520	538	520
	NB TR	-		113		290		665		-		541	
	NB R	-		-		-		-		525		-	
	SB L	-	435	-	75	40	75	-	75	-	75	-	75
	SB T	-		-		-		-		6		-	
	SB TR	-		-	435	11	435	-	435	6	435	10	435
	SB TL	94		27		-		-		-		-	

Signalized Fairbanks Scenario

		Existing AM Alt			Build 1 AM			Build 2 AM			Existing PM Alt			Build 1 PM			Build 2 PM		
Intersection Name	Movement	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
SIGNALIZED SEMINARY ROAD & SHOPPING CENTER ENTRANCE & S. GEORGE MASON DRIVE	EBL	D	36.9	0.25	D	36.9	0.24	D	36.9	0.25	D	36.9	0.26	D	36.9	0.26	C	34.4	0.22
	EBT	D	36.9	0.25	D	36.9	0.24	D	36.9	0.25	D	36.9	0.26	D	36.9	0.26	C	34.3	0.22
	EBR	D	38.1	0.38	D	38.2	0.38	D	38.1	0.38	E	57.3	0.82	E	57.3	0.82	D	53.6	0.82
	WBT	D	39.7	0.11	D	40.7	0.12	D	39.7	0.11	D	43.7	0.21	D	43.7	0.21	D	44.9	0.21
	NBL	C	33.7	0.74	C	34.1	0.74	C	33.7	0.74	D	43.1	0.8	D	43.1	0.8	D	53.1	0.89
	NBT	B	13.5	0.3	B	13.7	0.3	B	13.5	0.3	D	35.7	0.47	D	35.7	0.47	D	36.2	0.46
	SBL	D	45.4	0.25	D	46.1	0.25	D	45.4	0.25	C	32.8	0.21	C	32.8	0.21	D	36.7	0.24
	SBT	C	27	0.22	C	27.6	0.22	C	27	0.22	D	40.8	0.67	D	40.8	0.67	D	42.7	0.69
	SBR	C	25.7	0.03	C	26.2	0.03	C	25.7	0.03	C	34.2	0.13	C	34.2	0.13	D	35.4	0.13
	NB	C	24.9		C	25.2		C	24.9		D	40.4		D	40.4		D	47	
	SB	C	27.7		C	28.3		C	27.7		D	38.3		D	38.3		D	40.2	
	EB	D	37.9		D	38		D	37.9		D	53.8		D	53.8		D	50.3	
	WB	D	39.7		D	40.7		D	39.7		D	43.7		D	43.7		D	44.9	
	Intersection	C	29.6	0.45	C	29.9	0.45	C	29.6	0.45	D	44.5	0.68	D	44.5	0.68	D	46.2	0.72
SEMINARY ROAD & COLFAX AVENUE	EBR	B	11.4	0.16	C	18.9	0.3	B	11.4	0.16	B	11.9	0.09	B	11.9	0.09	B	11.3	0.09
	WBR	A	0	0	A	0	0	A	0	0	A	0	0	A	0	0	A	0	0
	NBT	A	0	0.21	A	0	0.21	A	0	0.72	A	0	0.19	A	0	0.26	A	0	0.65
	NBR	A	0	0.21	A	0	0.21	A	0	0.72	A	0	0.19	A	0	0.26	A	0	0.65
	SBT	A	0	0.29	A	0	0.43	A	0	0.22	A	0	0.48	A	0	0.48	A	0	0.36
	SBR	A	0	0.15	A	0	0.01	A	0	0.22	A	0	0.3	A	0	0.3	A	0	0.36
	NB	A	0		A	0		A	0		A	0		A	0		A	0	
	SB	A	0		A	0		A	0		A	0		A	0		A	0	
	EB	A	11.4		C	18.9		B	11.4		B	11.9		B	11.9		B	11.3	
	WB	A	0		A	0		A	0		A	0		A	0		A	0	
	Intersection	A			A	0	0	A	0	0	A			A	0	0	A	0	0
SIGNALIZED SEMINARY ROAD & DAWES AVENUE	EBT	E	64.1	0.33	E	63.4	0.31	E	63.4	0.31	E	59.1	0.31	E	59.1	0.31	E	59.5	0.32
	WBT	E	64.5	0.37	E	63.8	0.34	E	63.8	0.34	E	64.3	0.58	E	64.3	0.58	E	65.7	0.59
	WBR	E	62.2	0.02	E	61.7	0.02	E	61.7	0.02	E	57	0.02	E	57	0.02	E	57.3	0.02
	NBL	A	3	0.12	A	0.3	0.14	A	2.9	0.14	A	6.6	0.33	A	6.8	0.33	D	52.7	0.59
	NBT	A	5.1	0.45	A	0.6	0.45	A	5.7	0.86	A	6.2	0.41	B	12.6	0.78	B	11.9	0.78
	SBL	A	3.5	0.08	A	3.7	0.08	B	16.8	0.13	A	3.7	0.07	B	11.2	0.1	B	10.6	0.1
	SBT	A	5.8	0.31	A	9.7	0.59	A	9.7	0.59	A	7.9	0.5	A	7.9	0.5	D	36	0.97
	SBR	A	5.8	0.31	A	4.4	0	A	9.7	0.59	A	7.9	0.5	A	7.9	0.5	D	36	0.97
	NB	A	5		A	0.6		A	5.6		A	6.2		B	12.1		B	15.8	
	SB	A	5.7		A	9.5		A	10		A	7.8		A	8		D	35.4	
	EB	E	64.1		E	62.8		E	63.4		E	59.1		E	59.1		E	59.5	
	WB	E	63.4		E	63.4		E	62.8		E	61.9		E	61.9		E	62.9	
	Intersection	A	8.1	0.45	A	7	0.55	B	10	0.83	B	10.5	0.49	B	13.2	0.75	C	28.3	0.9
SEMINARY ROAD & FILLMORE AVENUE/DOVER PLACE	EBL	B	12	0.11	C	21.5	0.22	C	23.5	0.24	B	14.2	0.11	B	12.5	0.09	F	124.6	0.68
	EBT	B	12	0.11	C	21.5	0.22	C	23.5	0.24	B	14.2	0.11	B	12.5	0.09	F	124.6	0.68
	EBR	B	12	0.11	C	21.5	0.22	C	23.5	0.24	B	14.2	0.11	B	12.5	0.09	F	124.6	0.68
	WBL	D	28.3	0.08	C	21.1	0.05	F	63.2	0.17	F	99.8	0.18	E	47.8	0.09	F	153.2	0.25
	WBT	D	28.3	0.08	C	21.1	0.05	F	63.2	0.17	F	99.8	0.18	E	47.8	0.09	F	153.2	0.25
	WBR	D	28.3	0.08	C	21.1	0.05	F	63.2	0.17	F	99.8	0.18	E	47.8	0.09	F	153.2	0.25
	NBL	A	1.5	0.06	B	10.8	0.07	B	10.7	0.07	A	2.5	0.09	B	12.4	0.09	D	32.2	0.26
	NBT	A	0	0.39	A	0	0.52	A	0	0.78	A	0	0.37	A	0	0	A	0	0.73
	NBR	A	0	0.39	A	0	0.52	A	0	0.78	A	0	0.37	A	0	0	A	0	0.73
	SBL	A	0.1	0	B	11.3	0	C	21.9	0.01	A	0.2	0.01	C	17.1	0.01	C	16.9	0.01
	SBT	A	0	0.27	A	0	0.53	A	0	0.53	A	0.2	0.01	A	0	0	A	0	0.82
	SBR	A	0.1	0.27	A	0	0.53	A	0	0.53	A	0	0.41	A	0	0	A	0	0.82
	NB	A	0		A	0		A	0		A	1.3		A	0.5		A	1.2	
	SB	A	0		A	0		A	0		A	0.1		A	0		A	0	
	EB	B	12		C	21.5		C	23.5		B	14.2		B	12.5		F	124.6	
	WB	D	28.3		C	21.1		F	63.2		F	99.8		E	47.8		F	153.2	
	Intersection	A			A	0	0	A	0	0	A			A	0	0	A	0	0
SEMINARY ROAD & FILLMORE AVENUE	WBL	B	13.2	0.12	B	12.1	0.11	F	99.6	0.66	B	11.1	0.13	F	66.4	0.62	F	54.8	0.56
	WBT	B	13.2	0.12	B	12.1	0.11	F	99.6	0.66	B	11.1	0.13	F	66.4	0.62	F	54.8	0.56
	NBT	A	0	0.52	A	0	0.52	A	0	0.79	A	0	0.47	A	0	0.72	A	0	0.72
	NBR	A	0	0.27	A	0	0.27	A	0	0.79	A	0	0.24	A	0	0.72	A	0	0.72
	SBL	A	2.6	0.08	B	11.9	0.08	D	27.9	0.22	A	3	0.11	C	19.5	0.23	C	19.3	0.23
	SBT	A	2.6	0.08	A	0	0.54	A	0	0.54	A	0	0.53	A	0	0.4	A	0	0.79
	NB	A	0		A	0		A	0		A	0		A	0		A	0	
	SB	A	0.9		A	0.6		A	1.3		A	1.1		A	1		A	1	
	WB	B	13.2		B	12.1		F	99.6		B	11.1		F	66.4		F	54.8	
	Intersection	A			A	0		A	0		A			A	0		A	0	
SIGNALIZED SEMINARY ROAD & ECHOLS AVENUE	EBT	A	0	0	A	0	0	A	0	0	E	55.4	0.06	E	55.4	0.06	E	55.4	0.06
	WBT	E	60.5	0.02	E	60.5	0.02	E	57.6	0.03	E	64.3	0.01	E	64.3	0.01	E	64.3	0.01
	NBL	B	17.6	0.51	A	0.7	0.51	D	45.3	1.01	C	21.8	0.72	B	12.7	0.27	F	121.4	0.92
	NBT	B	17.6	0.51	A	0.7	0.51	D	45.3	1.01	C	21.8	0.72	D	45.7	1	D	46	0.98
	SBL	A	6.9	0.33	A	7.8	0	E	61.8	0.01	A	5.5	0.58	C	27.3	0.02	D	38.4	0.02
	SBT	A	6.9	0.33	A	3.7	0.57	A	3.9	0.59	A	5.5	0.58	A	3.8	0.53	C	22.5	1
	NB	B	17.6		A	0.7		D	45.3		C	21.8		D	44.4		D	49.1	
	SB	A	6.9		A	3.6		A	3.9		A	5.5		A	3.9		C	22.5	
	EB	A	0		A	0		A	0		E	55.4		E	55.4		E	55.4	
	WB	E	60.5		E	60.5		E	57.6		E	64.3		E	64.3		E	64.3	
	Intersection	B	14.1	0.47	A	7.7	0.57	C	29.2	0.91	B	14.9	0.58	C	25.8	0.8	D	35.8	0.87
SIGNALIZED SEMINARY ROAD & HERITAGE LANE/FAIRBANKS AVENUE	EBL	E	65.4	0.01	E	65.4	0.01	E	65.4	0.01	E	66.6	0	E	66.6	0	E	66.6	0
	EBT	E	65.4	0.01	E	65.4	0.01	E	65.4	0.01	E	66.6	0	E	66.6	0	E	66.6	0
	EBR	E	65.4	0.01	E	65.4	0.01	E	65.4	0.01	E	66.6	0	E	66.6	0	E	66.6	0
	WBL	E	65.4	0	E	65.4	0	E	65.4	0	E	68.7	0.16	E	68.7	0.16	E	68.7	0.16
	WBT	E	65.4	0	E	65.4	0	E	65.4	0	E	68.7	0.16	E	68.7	0.16	E	68.7	0.16
	WBR	E	65.4	0	E	65.4	0	E	65.4	0	E	68.7	0.16	E	68.7	0.16	E	68.7	0.16
	NBL	B	16	0.45	B	11.9	0.45	A	1.1	0.45	A	0.8	0.42	A	3.9	0.75	A	0.8	0.42
	NBT	B	16	0.45	B	11.9	0.45	A	1.1	0.45	A	0.8	0.42	A	3.9	0.75	A	0.8	0.42
	NBR	B	16	0.45	B	11.9	0.45	A	1.1	0.45	A	0.8	0.42	A	0.3	0	A	0.8	0.42
	SBL	A	0.5	0.3	A	0.1	0.02	A	0.1	0.02	A	0.4	0.45	A	0	0	A	7.5	0.86
	SBT	A	0.5	0.3	A	1.2	0.53	A	1.7	0.59	A	0.4	0.45	A	0.6	0.45	A	7.5	0.86
	SBR	A	0.5	0.3	A	1.2	0.53	A	1.7	0.59	A	0.4	0.45	A	0.6	0.45	A	7.5	0.86
	NB	B	11.8		B	11.9		A	1.1		A	0.8		A	3.9		A	0.8	
	SB	A	1.3		A	1.2		A	1.7		A	0.4		A	0.6		A	7.5	
	EB	E	65.4		E	65.4		E	65.4		E	66.6		E	66.6		E	66.6	
	WB	E	65.4		E	65.4		E	65.4		E	68.7		E	68.7		E	68.7	
	Intersection	B	8	0.44	A	8.4	0.51	A	1.7	0.57	A	0.9	0.45	A	2.4	0.74	A	4.8	0.84

Signalized Fairbanks Scenario

		Existing AM Alt		Build 1 AM		Build 2 AM		Existing PM Alt		Build 1 PM		Build 2 PM	
	Movement	Queue	Storage	Queue	Storage	Queue	Storage	Queue	Storage	Queue	Storage	Queue	Storage
	SEMINARY ROAD & SHOPPING CENTER ENTRANCE & S. GEORGE MASON DRIVE												
SEMINARY ROAD & SHOPPING CENTER ENTRANCE & S. GEORGE MASON DRIVE	EBL	88	225	83	225	89	225	129	225	108	225	106	225
	EB TL	36	595	30	595	33	595	63	595	81	595	149	595
	EB R	-	250	-	250	-	250	352	250	205	250	372	250
	WB TL	4	n/a	25	n/a	31	n/a	93	n/a	63	n/a	105	n/a
	WB TR	182		5		4		25		16		28	
	NB L1	158	205	150	205	171	205	191	205	194	205	212	205
	NB L2	122		176		179		203		215		222	
	NB T	-	490	94	490	135	490	170	490	148	490	128	490
	NB TR	134		121		150		175		162		147	
	SB L	47	135	31	135	33	135	108	135	96	135	395	135
	SB T	154	215	133	215	131	215	243	215	245	215	463	215
	SB T	50		37		74		189		207		444	
	SB R	-	220	-	220	-	220	-	220	58	220	58	220
	SEMINARY ROAD & COLFAX AVENUE												
SEMINARY ROAD & COLFAX AVENUE	EB LTR	25	770	90	770	67	770	69	770	57	770	447	770
	WB LTR	30	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A
	NB T1	-	N/A	-	N/A	-	N/A	-	N/A	32	N/A	-	N/A
	NB T2	-		-		-		-		38		-	
	NB TL	52		10		-		84		-		-	
	NB TR	-		-		44		95		9		95	
	SB T	-	205	59	205	48	205	31	205	13	205	263	205
	SB T2	-		-		51		34		14		277	
	SB R	-		45		8		-		-		452	
	SB TL	94		-		-		-		-		-	
	SEMINARY ROAD & DAWES AVENUE												
SEMINARY ROAD & DAWES AVENUE	EB LTR	124	685	88	685	96	685	139	685	95	685	107	685
	WB TL	43	1010	56	1010	66	1010	106	1010	105	1010	109	1010
	WB R	47	100	43	100	52	100	68	100	48	100	49	100
	NB L	48	70	50	70	86	70	124	70	115	70	113	70
	NB T	29	280	11	280	-	280	264	280	-	280	-	280
	NB TR	224		39		287		252		324		339	
	SB L	65	265	54	265	68	265	45	265	39	265	138	265
	SB T	140	305	268	305	-	305	312	305	221	305	-	305
	SB TR	144		4		298		301		237		466	
	SEMINARY ROAD & FILLMORE AVENUE/DOVER PLACE												
SEMINARY ROAD & FILLMORE AVENUE/DOVER PLACE	EB LTR	54	600	63	600	75	600	118	600	64	600	136	600
	WB LTR	29	250	33	250	38	250	29	250	28	250	33	250
	NB L	-	95	44	45	47	45	-	45	51	45	55	45
	NB T	-		17	95	-	95	-	95	-	95	-	95
	NB TL	92		-		-		99		-		-	
	NB TR	92		-		65		125		130		131	
	SB L	-	280	6	75	12	75	-	75	19	75	14	75
	SB T	-		-	280	-	280	-	280	43	280	-	280
	SB TL	31		-		-		265		-		-	
	SB TR	55		26		57		271		41		225	
	SEMINARY ROAD & FILLMORE AVENUE												
SEMINARY ROAD & FILLMORE AVENUE	WB LR	55	600	59	600	96	600	73	600	175	600	215	600
	NB T	-	410	3	410	-	410	250	410	-	410	-	410
	NB TR	20		25		139		214		224		277	
	SB L	-	95	48	45	60	45	-	45	70	45	65	45
	SB TL	96		-	95	-	95	110	95	78	95	-	95
	SB T	87		32		60		125		29		110	
	SEMINARY ROAD & ECHOLS AVENUE												
SEMINARY ROAD & ECHOLS AVENUE	EB LTR	0	360	-	360	-	360	136	360	97	360	131	360
	WB LTR	74	725	63	725	74	725	72	725	47	725	51	725
	NB L	-	400	-	75	-	75	-	75	69	75	110	75
	NB T	-		6	400	-	400	-	400	-	400	-	400
	NB TL	254		-		-		485		-		-	
	NB TR	292		18		547		496		613		622	
	SB L	-	430	-	75	12	75	-	75	21	75	10	75
	SB T	-		-	430	-	430	-	430	154	430	-	430
	SB TL	84		1		-		244		-		-	
	SB TR	110		171		146		260		174		459	
	SEMINARY ROAD & HERITAGE LANE/FAIRBANKS AVENUE												
SIGNALIZED SEMINARY ROAD & HERITAGE LANE/FAIRBANKS AVENUE	EB LTR	26	75	25	75	25	75	16	75	15	75	25	75
	WB LTR	23	160	21	160	14	160	35	160	29	160	14	160
	NB TL	63	520	50	520	370	520	167	520	729	520	370	520
	NB TR	56		33		330		155		-		330	
	NB R	-		-		-		-		364		-	
	SB L	-	435	12	75	24	75	-	75	-	75	24	75
	SB T	-		-	435	-	435	-	435	45	435	-	435
	SB TR	62		63		82		44		56		82	
	SB TL	50		-		-		32		-		-	

Attachment D: Walk Audit Notes

Seminary Road Safety Improvements Walk Audit

Briefing Booklet

Project Overview:

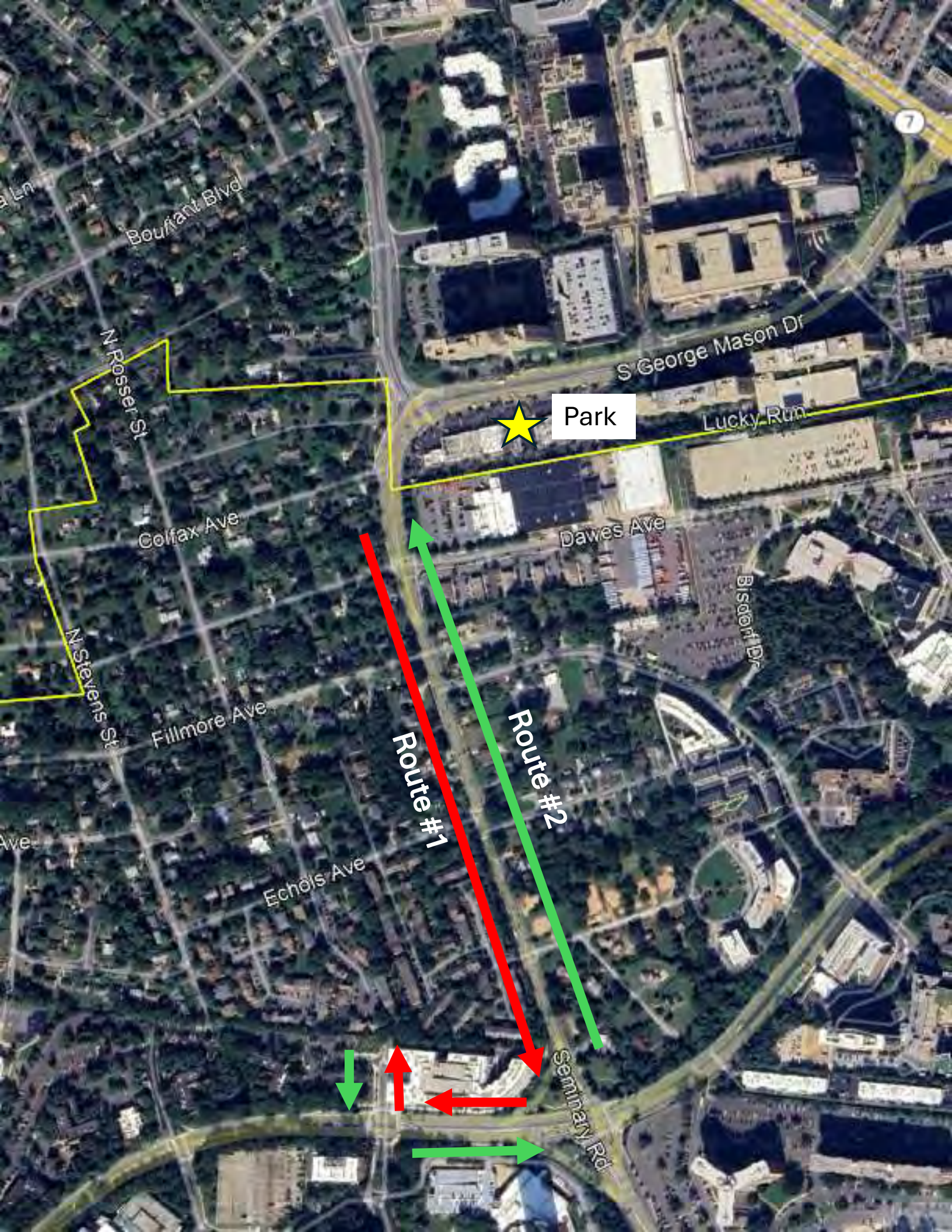
The Seminary Road Safety Improvements Project is focused on enhancing safety on Seminary Road between the intersections of S. George Mason Drive and N. Beauregard Street for people who walk, drive, and bike. More than 106 crashes have occurred along this corridor since 2019, making the corridor rank among the City's high-crash sites.

This project is supported by the City's Vision Zero efforts to eliminate fatal and severe crashes. It is also supported by the Alexandria Mobility Plan (AMP), Complete Streets Policy, and Alex West Small Area Plan. The AMP identifies the corridor as a bicycle priority facility and an area for a continuous pedestrian network. The Alex West Small Area Plan includes a future shared-use path along Seminary Road and planned future improvements to the North Beauregard Street intersection. Other nearby improvements include the West End Transitway project which will connect several transit facilities and stations to the future Innova Hospital Complex. The City's Transit Vision Plan does consider a transit network operating through this corridor.

This project will consider these planned improvements when providing safety recommendations. Improvements to this corridor will improve safety far beyond an immediate footprint and reinforce the City's commitment to addressing urgent and preventable safety risks.

Walk Audit Goals and Objectives:

- Observe the project location holistically from both driver and pedestrian perspectives
- Gain insight on driver and pedestrian behaviors and interactions
- Assess the functionality of existing infrastructure through qualitative observation
- Identify potential safety hazards for all road users
- Suggest measures to eliminate/mitigate safety problems


Bouffant Blvd
N Rosser St
S George Mason Dr
Park
Lucky Run
Colfax Ave
Dawes Ave
Bisdorf Dr
N Stevens St
Fillmore Ave
Route #1
Route #2
Echols Ave
Seminary Rd
7

Seminary Road Driving Route Directions

Route #1 – Southbound Approach (Red)

1. Head Southbound on Seminary Road
2. Turn Right onto N. Beauregard Street
3. Turn Right onto Mark Center Drive
4. U-turn and stop at N. Beauregard intersection

Route #2 – Northbound Approach (Green)

1. Turn Left onto N. Beauregard Street
2. Turn Left onto Seminary Road
3. Turn Right at George Mason Drive to return to parking

Walk Audit Guiding Questions

Infrastructure				
Location	**Placement**	**Quality/Condition**	**Connectivity/Consistency**	**Visibility**
Intersections	• What characteristics increase/decrease driver, ped, and bike safety? (ex. Curb radii, crossing distances, channelized right turns, right-turn-on-red) • Is pavement free of obstacles? (potholes, drainage grates, joints)	• How many legs have a crosswalk? • Are curb ramps in good condition and ADA compliant? Is there a ramp for each crosswalk or does a single ramp serve both? • Are ped push buttons accessible and properly located/connected to the walkway? Are they functioning correctly?	• Are pavement markings, signs, and signals consistent across intersections? • Do crosswalks line up with sidewalks?	• Can peds, bikes and drivers see each other at all legs? • Are there utility poles or other objects blocking the view of traffic? • Is lighting adequate at all corners of the intersection?
Along the Street	• How are peds and bikes accommodated on both sides of the street? • Are facilities shared, separate, or buffered? • What is the comfort level for users? • Are ped and bike facilities appropriate forthe adjacent land use? • Do parked vehicles obstruct ped paths? • Does parking adversely affect bike safety?	• Are bike/ped facilities in good condition? • Are there obstacles in the pedestrian path? • Are sidewalks wide enough for 2 people to walk together?	• How are peds accommodated at driveways/access points? • Are walkways continuous?	• Are there obstructions blocking the view of peds and bikes? • Are sidewalks and bike facilities adequately lit?
Crosswalks	• Are crossings isolated or frequently used? • Are there any crosswalk enhancements? • Do the crossing locations make sense?	• Are signs and pavement markings in good condition and legible?	• Do the crosswalks connect to ped/bike generators? • How far is it to the next crosswalk? •	• Are crossings adequately lit? • Are there obstructions blocking the view of pedestrians as they use the crosswalk?

Walk Audit Guiding Questions

Traffic Control Devices			
Location	**Signs and Pavement Markings**	**Signals**	**Compliance?**
Intersections	• Is paint on the stop bars, crosswalks and yield markings worn, missing? • Are there sign or pavement marking enhancements?	• How long is the pedestrian signal? Is there enough time to cross? • Is there a pedestrian countdown? • Are crossings push-button activated? • Is there a leading pedestrian interval (LPI)? • Are there restrictions on turning movements? • How long to pedestrians have to wait in between signals? • Do vehicles have permitted or protected left turn control?	• Are drivers, pedestrians and bicyclists compliant with traffic control devices? • Are drivers yielding to pedestrians? • Are bicyclists yielding to pedestrians?
Crosswalks	• Are crossing points marked? • Are there signage enhancements for the crossing, like RRFBs or flashing beacons?	• Are pedestrian push buttons accessible, with a locator tone and functioning correctly?	• Are drivers, pedestrians and bicyclists compliant with traffic control devices? • Are drivers yielding to pedestrians? • Are bicyclists yielding to pedestrians?

Operations/Interactions/Behaviors			
Location	**Characteristics**	**Mode Behavior**	**Interactions**
Intersections	• What are vehicle speeds? • What are vehicle, pedestrian, and bicycle volumes at the intersection?	• Are drivers stopping in the crosswalk? • Are pedestrians crossing with the pedestrian signal? • Do pedestrians use the push button to actuate a crossing?	• Is it clear between the roadway users who has the right of way and is there compliance? • Do drivers yield to pedestrians and bicyclists when turning? • Do drivers allow extra space or reduce speeds when driving near bicyclists? • Do roadway users look/scan for other travel modes? • Are there pavement markings that separate users?
Crosswalks	• What are pedestrian and bicycle volumes for the crosswalks?	• Are pedestrians waiting for gaps in traffic and crossing without a ped signal?	• Are the physical environment and traffic control devices adequate for a safe crossing?

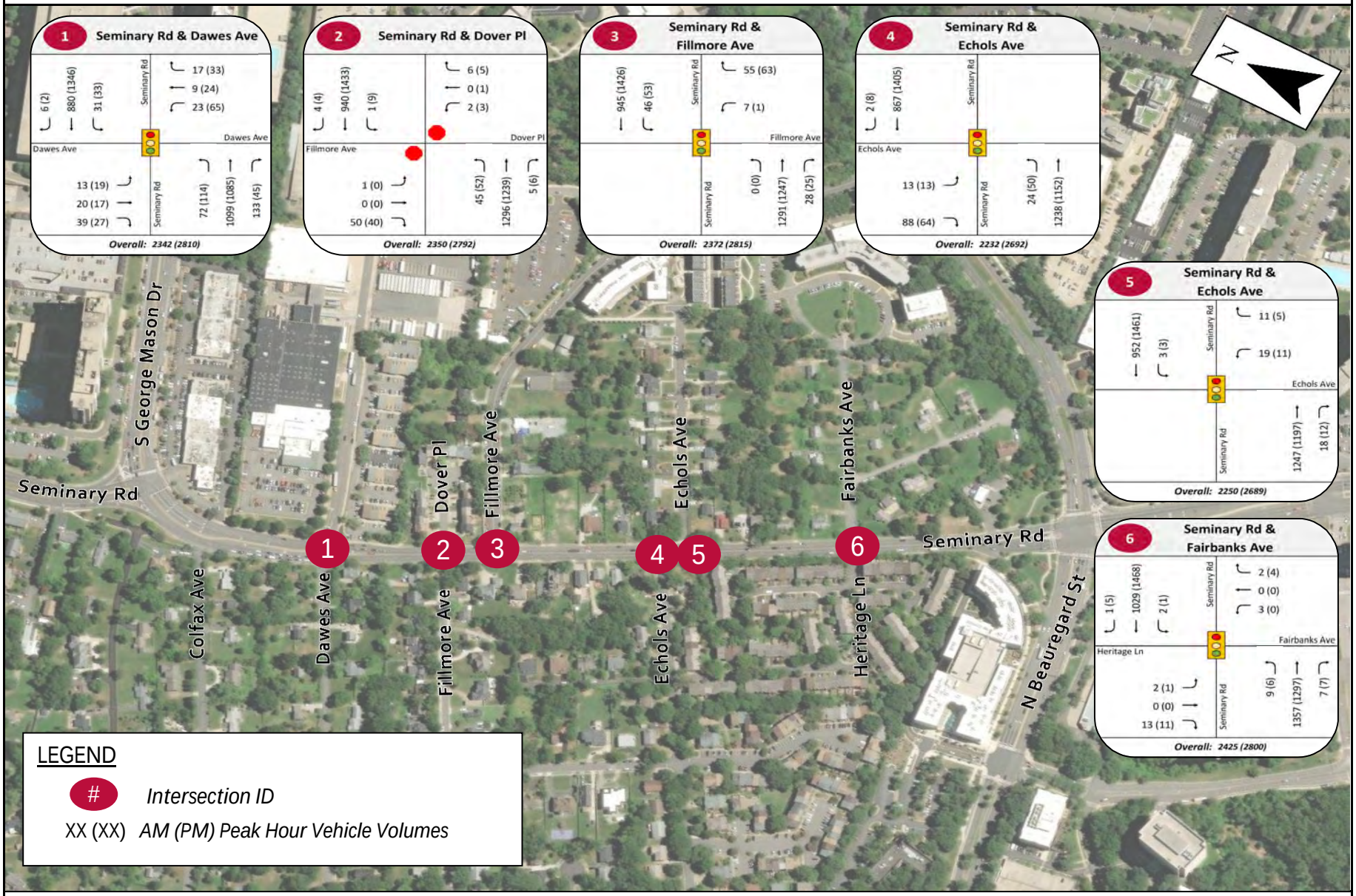

City of Falls Church
City of Alexandria
N
S. George Mason Drive
Colfax Ave
Dawes Ave
Dawes Ave
Filmore Ave
Filmore Ave
Crash Severity
A. Severe Injury
B. Visible Injury
C. Nonvisible Injury
K. Fatal Injury
PDO. Property Damage Only
<all other values>
City Boundary
0
0.02
0.04
Miles
Kimley»Horn
Expect More. Experience Better.
Page 1


N
Echols Ave
Echols Ave
Fairbanks Ave
Crash Severity
A. Severe Injury
B. Visible Injury
C. Nonvisible Injury
K. Fatal Injury
PDO. Property Damage Only
<all other values>
City Boundary
0
0.02
0.04
Miles
Kimley»Horn
Expect More. Experience Better.
Page 2

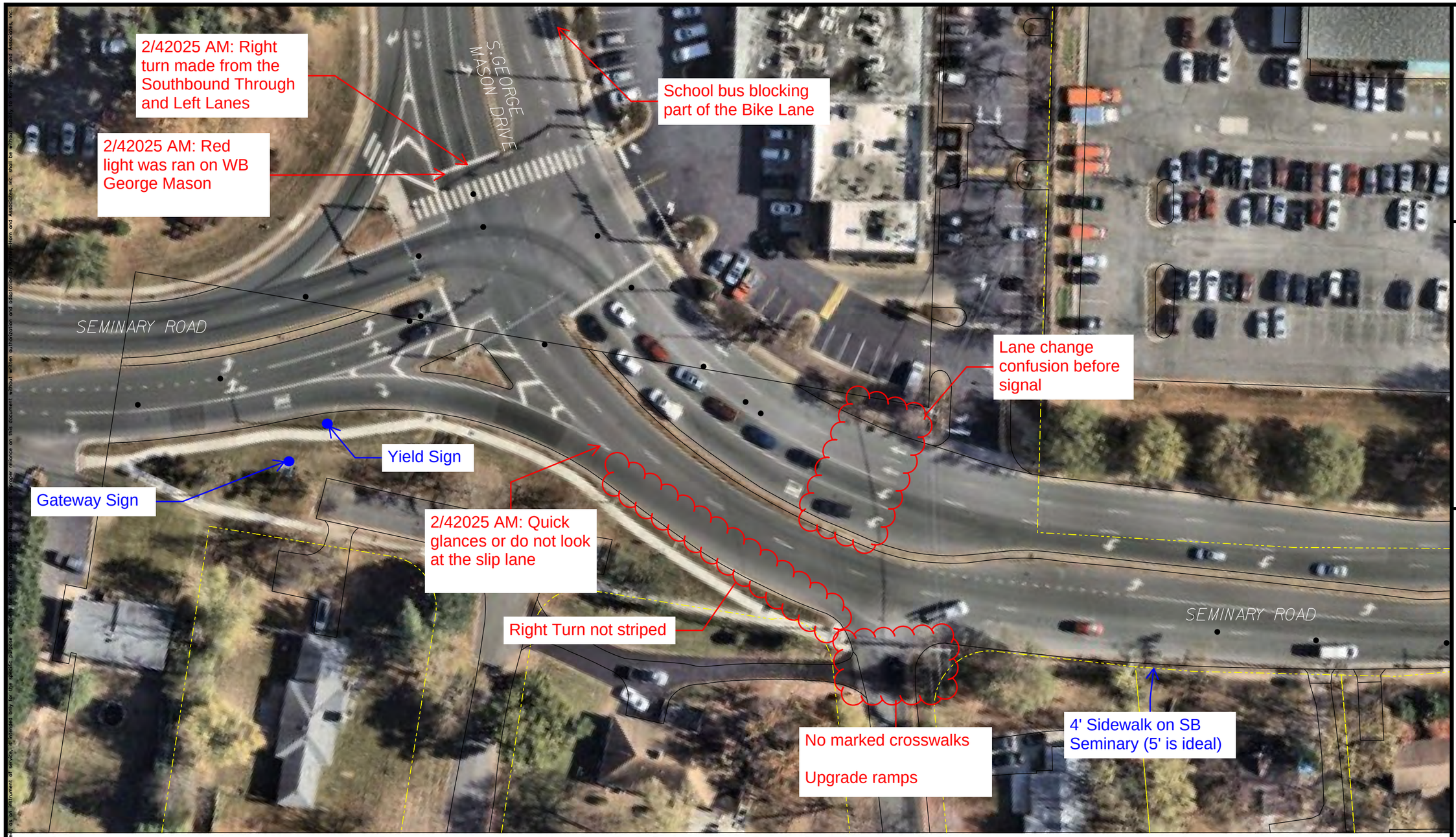

City of Falls Church
City of Alexandria
N
S. George Mason Drive
Colfax Ave
Dawes Ave
Dawes Ave
Filmore Ave
Filmore Ave
City Boundary
Collision Type
Rear End
Pedestrian
Angle
Head On
Sideswipe - Same Direction
Non-Collision
Bicycle
Fixed Object - Off Road
Other
<all other values>
0
0.02
0.04
Miles
Kimley»Horn
Expect More. Experience Better.
Page 1


N
Echols Ave
Echols Ave
Fairbanks Ave
City Boundary
Collision Type
Rear End
Pedestrian
Angle
Head On
Sideswipe - Same Direction
Non-Collision
Bicycle
Fixed Object - Off Road
Other
<all other values>
0
0.02
0.04
Miles
Kimley»Horn
Expect More. Experience Better.
Page 2

Existing Conditions AM & PM Peak Hour Vehicle Volumes



Kimley»Horn



SCALE
0 50' 100'

Kimley»Horn

NOTE TAKING SHEET

SEMINARY ROAD
SAFETY IMPROVEMENTS

SHEET NUMBER
/

Kimley»Horn

NOTE TAKING SHEET

SEMINARY ROAD
SAFETY IMPROVEMENTS

SHEET NUMBER
2

SCALE

0 50' 100'

Kimley»Horn

NOTE TAKING SHEET

SEMINARY ROAD
SAFETY IMPROVEMENTS

SHEET NUMBER
3

SCALE
0 50' 100'

Kimley»Horn

NOTE TAKING SHEET

SEMINARY ROAD
SAFETY IMPROVEMENTS

SHEET NUMBER
4

Attachment E: Signal Warrant Analysis

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

Scenario: Existing (2025)

	Included?	Warrant Satisfied?	Notes and Comments:
Warrant 1, Eight-Hour Vehicular Volume	Yes	**No**	
Warrant 2, Four-Hour Vehicular Volume	Yes	**No**	
Warrant 3, Peak Hour	Yes	**No**	
Warrant 4, Pedestrian Volume	Yes	**No**	
Warrant 5, School Crossing	No		
Warrant 6, Coordinated Signal System	Yes	**No**	
Warrant 7, Crash Experience	Yes	**No**	
Warrant 8, Roadway Network	No		
Warrant 9, Intersection Near a Grade Crossing	No		

Conclusion: Do Not Install New Traffic Signal

Notes:

Results by Scenario									
Scenario	W1	W2	W3	W4	W5	W6	W7	W8	W9
Existing (2025)	No	No	No				No		

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Intersection Name: Seminary Road at Filmore Avenue
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No

Number of Lanes for Moving Traffic on Each Approach	
Major Street (NB/SB)	2 or More Lanes
Minor Street 1 (EB)	1 Lane
Minor Street 2 (WB)	1 Lane

Apply 70% Reduction to Warrant Thresholds? No

Notes:

Lanes	Adjusted Volumes			Condition A						Condition B						Combination A/B											
																Cond. A			Cond. B			Cond. A			Cond. B		
Major/Minor	Major Street (NB/SB)	Minor Street 1 (EB)	Minor Street 2 (WB)	100%			70%			100%			70%			80%			80%			56%			56%		
				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2	Maj.	Min. 1	Min. 2						
1 / 1				500	150	150				750	75	75				400	120	120	600	60	60						
2+ / 1	X	X	X	600	150	150				900	75	75				480	120	120	720	60	60						
2+ / 2+	X			600	200	200				900	100	100				480	160	160	720	80	80						
1 / 2+				500	200	200				750	100	100				400	160	160	600	80	80						
HOURS MET				**19**	**0**					**18**	**2**					**20**	**0**		**19**	**7**							
WARRANT SATISFIED (8+ Hours)?				**NO**						**NO**						**NO**											
12:00 AM	284	9	11																								
12:15 AM	245	8	9																								
12:30 AM	218	7	7																								
12:45 AM	210	6	6																								
1:00 AM	190	5	5																								
1:15 AM	179	4	4																								
1:30 AM	181	4	4																								
1:45 AM	176	4	4																								
2:00 AM	174	4	4																								
2:15 AM	169	4	4																								
2:30 AM	154	4	4																								
2:45 AM	148	4	4																								
3:00 AM	146	4	4																								
3:15 AM	577	17	0													X											
3:30 AM	179	5	5																								
3:45 AM	219	6	7																								
4:00 AM	1079	27	0	X						X									X								
4:15 AM	319	10	12																								
4:30 AM	378	12	15																								
4:45 AM	1660	52	0													X											
5:00 AM	577	18	21																								
5:15 AM	722	22	25	X															X								
5:30 AM	2076	53	0							X																	
5:45 AM	1079	30	29													X											
6:00 AM	1265	33	44																								
6:15 AM	1432	33	52	X															X								
6:30 AM	1660	42	56							X																	
6:45 AM	1804	44	60													X											
7:00 AM	1964	53	58																								
7:15 AM	2076	63	59	X															X	X		X					
7:30 AM	2058	63	64							X																	
7:45 AM	2099	59	63													X											
8:00 AM	2057	47	54																								
8:15 AM	2041	36	50	X															X								
8:30 AM	1951	32	46							X																	
8:45 AM	1812	31	42													X											
9:00 AM	1729	32	44																								
9:15 AM	1644	40	47	X															X								
9:30 AM	1648	44	52							X																	
9:45 AM	1663	49	58													X											
10:00 AM	1642	55	60																								
10:15 AM	1698	56	61	X															X		X	X					
10:30 AM	1693	56	61							X																	
10:45 AM	1710	56	62													X											
11:00 AM	1744	58	63																								
11:15 AM	1747	51	59	X															X								
11:30 AM	1824	45	57							X																	
11:45 AM	1890	39	54													X											

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Intersection Name: Seminary Road at Filmore Avenue
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No

Number of Lanes for Moving Traffic on Each Approach	
Major Street (NB/SB)	2 or More Lanes
Minor Street 1 (EB)	1 Lane
Minor Street 2 (WB)	1 Lane

Apply 70% Reduction to Warrant Thresholds? No

Notes:

Lanes	Adjusted Volumes			Condition A						Condition B						Combination A/B											
																Cond. A			Cond. B			Cond. A			Cond. B		
Major/Minor	Major Street (NB/SB)	Minor Street 1 (EB)	Minor Street 2 (WB)	100%			70%			100%			70%			80%			80%			56%			56%		
				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2	Maj.	Min. 1	Min. 2						
1 / 1				500	150	150				750	75	75				400	120	120	600	60	60						
2+ / 1	X	X	X	600	150	150				900	75	75				480	120	120	720	60	60						
2+ / 2+	X			600	200	200				900	100	100				480	160	160	720	80	80						
1 / 2+				500	200	200				750	100	100				400	160	160	600	80	80						
HOURS MET				**19**	**0**					**18**	**2**					**20**	**0**		**19**	**7**							
WARRANT SATISFIED (8+ Hours)?				**NO**						**NO**						**NO**											
12:00 PM	1968	32	52																								
12:15 PM	2004	32	53	X															X								
12:30 PM	1989	32	52							X																	
12:45 PM	1950	31	51													X											
1:00 PM	1884	30	49																								
1:15 PM	1947	31	51	X															X								
1:30 PM	2025	32	53							X																	
1:45 PM	2086	33	55													X											
2:00 PM	2266	36	59																								
2:15 PM	2265	31	61	X															X		X	X					
2:30 PM	2258	30	71							X																	
2:45 PM	2262	30	85													X											
3:00 PM	2175	32	90																								
3:15 PM	2214	32	84	X															X		X	X					
3:30 PM	2248	35	77							X		X	X														
3:45 PM	2370	37	64													X											
4:00 PM	2396	38	59																								
4:15 PM	2410	44	64	X															X		X	X					
4:30 PM	2443	43	67							X																	
4:45 PM	2421	41	68													X											
5:00 PM	2471	45	78																								
5:15 PM	2410	42	84	X															X		X	X					
5:30 PM	2422	42	86							X		X	X														
5:45 PM	2386	39	95													X											
6:00 PM	2395	27	88																								
6:15 PM	2393	29	80	X															X		X	X					
6:30 PM	2369	29	74							X																	
6:45 PM	2346	33	64													X											
7:00 PM	2206	36	58																								
7:15 PM	2099	34	56	X															X								
7:30 PM	1945	31	52							X																	
7:45 PM	1789	29	48													X											
8:00 PM	1692	27	46																								
8:15 PM	1645	26	45	X															X								
8:30 PM	1569	25	43							X																	
8:45 PM	1500	24	41													X											
9:00 PM	1427	23	39																								
9:15 PM	1333	22	35	X															X								
9:30 PM	1242	20	32							X																	
9:45 PM	1158	18	29													X											
10:00 PM	1066	17	26																								
10:15 PM	975	15	24	X															X								
10:30 PM	879	14	21																								
10:45 PM	781	13	19													X											
11:00 PM	677	11	16																								
11:15 PM	462	8	11																								
11:30 PM	281	5	7																								
11:45 PM	123	2	3																								

WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Intersection Name: Seminary F
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No

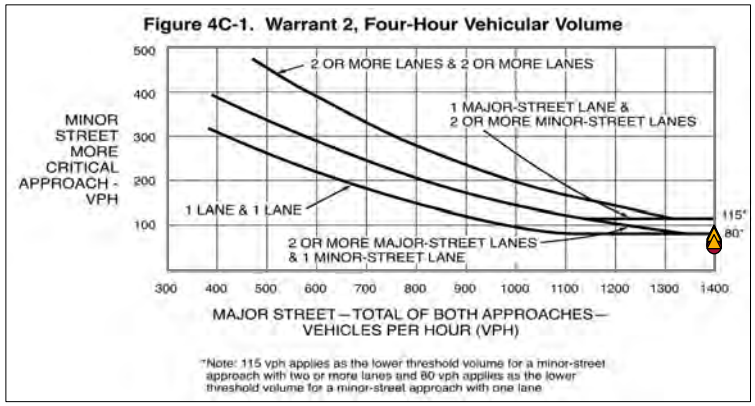
Number of Lanes for Moving Traffic on Each Approach	
Major Street (NB/SB)	2 or More Lanes
Minor Street 1 (EB)	1 Lane
Minor Street 2 (WB)	1 Lane

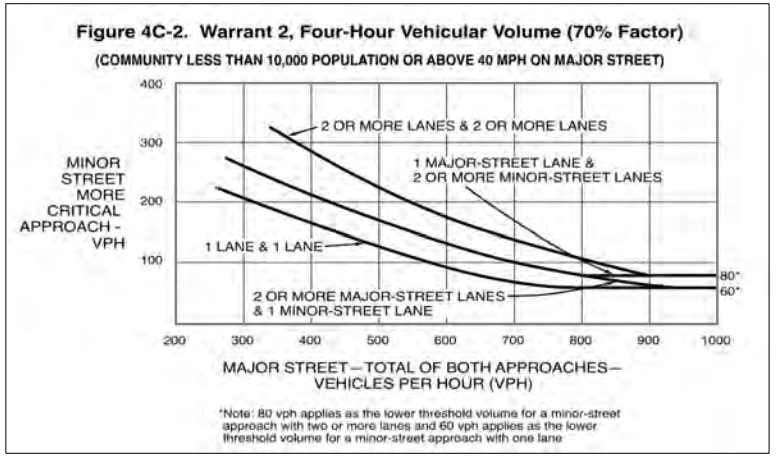
Apply 70% Reduction to Warrant Thresholds? No

Total Number of Unique Hours Met on Figure 4C-1	2
Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	N/A

Hour Interval Beginning At	Approach Vehicles Per Hour (VPH)				Total Major Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Major		Minor 1	Minor 2			
	Northbound	Southbound	Eastbound	Westbound			
12:00 AM	154	130	9	11	284		
12:15 AM	133	112	8	9	245		
12:30 AM	118	100	7	7	218		
12:45 AM	114	96	6	6	210		
1:00 AM	103	87	5	5	190		
1:15 AM	97	82	4	4	179		
1:30 AM	98	83	4	4	181		
1:45 AM	95	81	4	4	176		
2:00 AM	94	80	4	4	174		
2:15 AM	91	78	4	4	169		
2:30 AM	83	71	4	4	154		
2:45 AM	80	68	4	4	148		
3:00 AM	79	67	4	4	146		
3:15 AM	79	67	4	4	146		
3:30 AM	97	82	5	5	179		
3:45 AM	119	100	6	7	219		
4:00 AM	150	126	8	10	276		
4:15 AM	174	145	10	12	319		
4:30 AM	206	172	12	15	378		
4:45 AM	977	683	52	0	1660		
5:00 AM	313	264	18	21	577		
5:15 AM	388	334	22	25	722		
5:30 AM	1164	912	53	0	2076		
5:45 AM	598	481	30	29	1079		
6:00 AM	729	536	33	44	1265		
6:15 AM	845	587	33	52	1432		
6:30 AM	977	683	42	56	1660		
6:45 AM	1037	767	44	60	1804		
7:00 AM	1094	870	53	58	1964		
7:15 AM	1164	912	63	59	2076		
7:30 AM	1147	911	63	64	2058		
7:45 AM	1218	881	59	63	2099		
8:00 AM	1226	831	47	54	2057		
8:15 AM	1224	817	36	50	2041		
8:30 AM	1184	767	32	46	1951		
8:45 AM	1083	729	31	42	1812		
9:00 AM	1035	694	32	44	1729		
9:15 AM	951	693	40	47	1644		
9:30 AM	930	718	44	52	1648		
9:45 AM	930	733	49	58	1663		
10:00 AM	891	751	55	60	1642		
10:15 AM	921	777	56	61	1698		
10:30 AM	919	774	56	61	1693		
10:45 AM	928	782	56	62	1710		
11:00 AM	946	798	58	63	1744		
11:15 AM	921	826	51	59	1747		
11:30 AM	934	890	45	57	1824		
11:45 AM	941	949	39	54	1890		
12:00 PM	954	1014	32	52	1968		
12:15 PM	971	1033	32	53	2004		
12:30 PM	964	1025	32	52	1989		
12:45 PM	946	1004	31	51	1950		
1:00 PM	914	970	30	49	1884		
1:15 PM	945	1002	31	51	1947		
1:30 PM	982	1043	32	53	2025		
1:45 PM	1011	1075	33	55	2086		
2:00 PM	1098	1168	36	59	2266		
2:15 PM	1080	1185	31	61	2265		
2:30 PM	1043	1215	30	71	2258		

Legend
● Minor Street 1 (EB)
▲ Minor Street 2 (WB)





WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Intersection Name: Seminary F
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No

Number of Lanes for Moving Traffic on Each Approach	
Major Street (NB/SB)	2 or More Lanes
Minor Street 1 (EB)	1 Lane
Minor Street 2 (WB)	1 Lane

Apply 70% Reduction to Warrant Thresholds? No

Total Number of Unique Hours Met on Figure 4C-1	2
Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	N/A

Hour Interval Beginning At	Approach Vehicles Per Hour (VPH)				Total Major Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Major		Minor 1	Minor 2			
	Northbound	Southbound	Eastbound	Westbound			
2:45 PM	1012	1250	30	85	2262	Min. 2 Met	
3:00 PM	956	1219	32	90	2175		
3:15 PM	977	1237	32	84	2214		
3:30 PM	985	1263	35	77	2248		
3:45 PM	1055	1315	37	64	2370		
4:00 PM	1048	1348	38	59	2396		
4:15 PM	1070	1340	44	64	2410		
4:30 PM	1109	1334	43	67	2443		
4:45 PM	1110	1311	41	68	2421		
5:00 PM	1148	1323	45	78	2471		
5:15 PM	1093	1317	42	84	2410	Min. 2 Met	
5:30 PM	1092	1330	42	86	2422		
5:45 PM	1073	1313	39	95	2386		
6:00 PM	1107	1288	27	88	2395		
6:15 PM	1131	1262	29	80	2393		
6:30 PM	1146	1223	29	74	2369		
6:45 PM	1147	1199	33	64	2346		
7:00 PM	1069	1137	36	58	2206		
7:15 PM	1018	1081	34	56	2099		
7:30 PM	943	1002	31	52	1945		
7:45 PM	867	922	29	48	1789		
8:00 PM	820	872	27	46	1692		
8:15 PM	797	848	26	45	1645		
8:30 PM	760	809	25	43	1569		
8:45 PM	727	773	24	41	1500		
9:00 PM	692	735	23	39	1427		
9:15 PM	646	687	22	35	1333		
9:30 PM	602	640	20	32	1242		
9:45 PM	561	597	18	29	1158		
10:00 PM	516	550	17	26	1066		
10:15 PM	472	503	15	24	975		
10:30 PM	426	453	14	21	879		
10:45 PM	378	403	13	19	781		
11:00 PM	328	349	11	16	677		
11:15 PM	224	238	8	11	462		
11:30 PM	136	145	5	7	281		
11:45 PM	60	63	2	3	123		

Legend
● Minor Street 1 (EB)
▲ Minor Street 2 (WB)

Top Hours for Figure 4C-1 - Minor Street 1 (EB)				
	Start Time	End Time	Major Street	Minor Street
Top Hour	7:15 AM	8:15 AM	2076	63
2nd Highest Hour	11:00 AM	12:00 PM	1744	58
3rd Highest Hour	10:00 AM	11:00 AM	1642	55
4th Highest Hour	5:30 AM	6:30 AM	2076	53

Top Hours for Figure 4C-1 - Minor Street 2 (WB)				
	Start Time	End Time	Major Street	Minor Street
Top Hour	2:45 PM	3:45 PM	2262	85
2nd Highest Hour	5:15 PM	6:15 PM	2410	84
3rd Highest Hour	6:15 PM	7:15 PM	2393	80
4th Highest Hour	4:15 PM	5:15 PM	2410	64

WARRANT 3, PEAK HOUR

Intersection Name: Seminary Road
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No

Number of Lanes for Moving Traffic on Each Approach	
Major Street (NB/SB)	2 or More Lanes
Minor Street 1 (EB)	1 Lane
Minor Street 2 (WB)	1 Lane

Is traffic at this intersection generated by office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time? **Yes**

Apply 70% Reduction to Warrant Thresholds? **No**

:Peak Hour :Conditions A2 and A3 meet

Hour Interval Beginning At	Major Street (NB/SB) Combined Vehicles Per Hour (VPH)	Minor Street 1 (EB) Vehicles Per Hour (VPH)	Minor Street 2 (WB) Vehicles Per Hour (VPH)	A2	A3
12:00 AM	284	9	11		
12:15 AM	245	8	9		
12:30 AM	218	7	7		
12:45 AM	210	6	6		
1:00 AM	190	5	5		
1:15 AM	179	4	4		
1:30 AM	181	4	4		
1:45 AM	176	4	4		
2:00 AM	174	4	4		
2:15 AM	169	4	4		
2:30 AM	154	4	4		
2:45 AM	148	4	4		
3:00 AM	146	4	4		
3:15 AM	146	4	4		
3:30 AM	722	22	0		Y
3:45 AM	219	6	7		
4:00 AM	276	8	10		
4:15 AM	1265	41	0		Y
4:30 AM	378	12	15		
4:45 AM	1660	52	0		Y
5:00 AM	577	18	21		
5:15 AM	722	22	25		Y
5:30 AM	2076	53	0		Y
5:45 AM	1079	30	29		Y
6:00 AM	1265	33	44		Y
6:15 AM	1432	33	52		Y
6:30 AM	1660	42	56		Y
6:45 AM	1804	44	60		Y
7:00 AM	1964	53	58		Y
7:15 AM	2076	63	59		Y
7:30 AM	2058	63	64		Y
7:45 AM	2099	59	63		Y
8:00 AM	2057	47	54		Y
8:15 AM	2041	36	50		Y
8:30 AM	1951	32	46		Y
8:45 AM	1812	31	42		Y
9:00 AM	1729	32	44		Y
9:15 AM	1644	40	47		Y
9:30 AM	1648	44	52		Y
9:45 AM	1663	49	58		Y
10:00 AM	1642	55	60		Y
10:15 AM	1698	56	61		Y
10:30 AM	1693	56	61		Y
10:45 AM	1710	56	62		Y
11:00 AM	1744	58	63		Y
11:15 AM	1747	51	59		Y
11:30 AM	1824	45	57		Y
11:45 AM	1890	39	54		Y

Category A: If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:

A1: The total stopped-time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach

A2: The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes

A3: The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches

or

Category B: The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the more critical minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 or 4 for the existing combination of approach lanes.

A3: The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches

Minor Street 1						
4C-3	7:15 AM	8:15 AM	2076	63	100	Met
Minor Street 2						
4C-3	5:45 PM	6:45 PM	2386	95	100	Met

Note: The hours plotted may not always be the "peak" hour. The hours plotted are the hours that most dramatically meet the threshold.

Legend
- Minor Street 1 (EB)
- Minor Street 2 (WB)

WARRANT 3, PEAK HOUR

Intersection Name: Seminary Road
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No

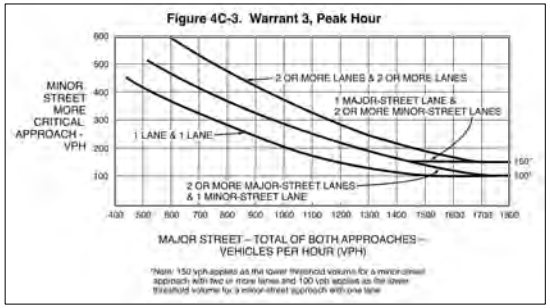
Number of Lanes for Moving Traffic on Each Approach	
Major Street (NB/SB)	2 or More Lanes
Minor Street 1 (EB)	1 Lane
Minor Street 2 (WB)	1 Lane

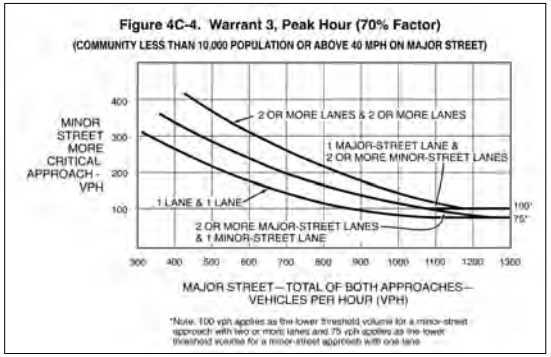
Is traffic at this intersection generated by office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time? **Yes**

Apply 70% Reduction to Warrant Thresholds? **No**

:Peak Hour :Conditions A2 and A3 meet

Hour Interval Beginning At	Major Street (NB/SB) Combined Vehicles Per Hour (VPH)	Minor Street 1 (EB) Vehicles Per Hour (VPH)	Minor Street 2 (WB) Vehicles Per Hour (VPH)	A2	A3
12:00 PM	1968	32	52		Y
12:15 PM	2004	32	53		Y
12:30 PM	1989	32	52		Y
12:45 PM	1950	31	51		Y
1:00 PM	1884	30	49		Y
1:15 PM	1947	31	51		Y
1:30 PM	2025	32	53		Y
1:45 PM	2086	33	55		Y
2:00 PM	2266	36	59		Y
2:15 PM	2265	31	61		Y
2:30 PM	2258	30	71		Y
2:45 PM	2262	30	85		Y
3:00 PM	2175	32	90		Y
3:15 PM	2214	32	84		Y
3:30 PM	2248	35	77		Y
3:45 PM	2370	37	64		Y
4:00 PM	2396	38	59		Y
4:15 PM	2410	44	64		Y
4:30 PM	2443	43	67		Y
4:45 PM	2421	41	68		Y
5:00 PM	2471	45	78		Y
5:15 PM	2410	42	84		Y
5:30 PM	2422	42	86		Y
5:45 PM	2386	39	95		Y
6:00 PM	2395	27	88		Y
6:15 PM	2393	29	80		Y
6:30 PM	2369	29	74		Y
6:45 PM	2346	33	64		Y
7:00 PM	2206	36	58		Y
7:15 PM	2099	34	56		Y
7:30 PM	1945	31	52		Y
7:45 PM	1789	29	48		Y
8:00 PM	1692	27	46		Y
8:15 PM	1645	26	45		Y
8:30 PM	1569	25	43		Y
8:45 PM	1500	24	41		Y
9:00 PM	1427	23	39		Y
9:15 PM	1333	22	35		Y
9:30 PM	1242	20	32		Y
9:45 PM	1158	18	29		Y
10:00 PM	1066	17	26		Y
10:15 PM	975	15	24		Y
10:30 PM	879	14	21		Y
10:45 PM	781	13	19		Y
11:00 PM	677	11	16		Y
11:15 PM	462	8	11		
11:30 PM	281	5	7		
11:45 PM	123	2	3		





WARRANT 7, CRASH EXPERIENCE

Intersection: Seminary Road at Filmore Avenue
Jurisdiction: 0
Scenario: Existing (2025)

Warrant Met: No

Number of Lanes for Moving Traffic on Each Approach	
Major Street (NB/SB)	2 or More Lanes
Minor Street 1 (EB)	1 Lane
Minor Street 2 (WB)	1 Lane
Number of Legs	3

Has adequate trial of alternative with satisfactory observance and enforcement failed to reduce the crash frequency? Yes

Table 4C-2. Minimum Number of Reported Crashes in a One-Year Period

Number of through lanes on each approach				Total of angle and pedestrian crashes (all severities)		Total of fatal-and-injury angle and pedestrian crashes	
Major/Minor	Major Street (NB/SB)	Minor Street 1 (EB)	Minor Street 2 (WB)	Four Legs	Three Legs	Four Legs	Three Legs
1 / 1				5	4	3	3
2+ / 1	X	X	X	5	**4**	3	**3**
2+ / 2+	X			5	4	3	3
1 / 2+				5	4	3	3
			Crash History	2		1	
			Threshold Met?	**No**		**No**	

Table 4C-3. Minimum Number of Reported Crashes in a Three-Year Period

Number of through lanes on each approach				Total of angle and pedestrian crashes (all severities)		Total of fatal-and-injury angle and pedestrian crashes	
Major/Minor	Major Street (NB/SB)	Minor Street 1 (EB)	Minor Street 2 (WB)	Four Legs	Three Legs	Four Legs	Three Legs
1 / 1				6	5	4	4
2+ / 1	X	X	X	6	**5**	4	**4**
2+ / 2+	X			6	5	4	4
			Crash History	2		1	
			Threshold Met?	**No**		**No**	

No

For each of any 8 hours of an average day, the vehicles per hour given in both the 80% columns of Condition A in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection. If in a built-up isolated community with less than 10,000 population or above 40 mph on major street, the 56% columns may be used. No

For each of any 8 hours of an average day, the vehicles per hour given in both the 80% columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection. If in a built-up isolated community with less than 10,000 population or above 40 mph on major street, the 56% columns may be used. No

The volume of pedestrian traffic is 80% or more of the requirements specified in Warrant 4, the Pedestrian Volume warrant. No

WARRANT 8, ROADWAY NETWORK

Intersection: Seminary Road at Filmore Avenue
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No

See Warrant Inputs tab

WARRANT 4, PEDESTRIAN VOLUME

Intersection Name: Seminary Road at Filmore Avenue
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No

Peak Hour					
Figure	Start Time	End Time	Vehicles	Pedestrians	Met?
4C-6	9:00 AM	10:00 AM	1729	3	No

Note: The hours plotted may not always be the "peak" hour. The hours plotted are the hours that most dramatically meet the threshold.

Number of Hours That Met the 4-Hour Criteria 4C-5	0
Number of Hours That Met the 4-Hour Criteria 4C-7 (70% Factor)	N/A

15th Percentile Pedestrian Crossing Speed Less than 3.5 f/s?* — No

Is the major street divided with a median wide enough for pedestrians to wait? — No

Is the distance to the nearest traffic control signal or STOP sign controlling the major street that pedestrians desire to cross less than 300 feet? — No

:Peak Hour

Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Total of All Pedestrians Crossing Major Street Pedestrians Per Hour (PPH)	Fig. 4C-5 Hour Met? (4-Hour)	Fig. 4C-6 Hour Met? (Peak Hour)	Fig. 4C-7 Hour Met? (4-Hour 70%)	Fig. 4C-8 Hour Met? (Peak Hour 70%)
12:00 AM	284	0				
12:15 AM	245	0				
12:30 AM	218	0				
12:45 AM	210	0				
1:00 AM	190	0				
1:15 AM	179	0				
1:30 AM	181	0				
1:45 AM	176	0				
2:00 AM	174	0				
2:15 AM	169	0				
2:30 AM	154	0				
2:45 AM	148	0				
3:00 AM	146	0				
3:15 AM	146	0				
3:30 AM	179	0				
3:45 AM	219	0				
4:00 AM	276	0				
4:15 AM	319	0				
4:30 AM	378	0				
4:45 AM	1660	0				
5:00 AM	577	0				
5:15 AM	722	0				
5:30 AM	2076	0				
5:45 AM	1079	0				
6:00 AM	1265	1				
6:15 AM	1432	2				
6:30 AM	1660	2				
6:45 AM	1804	2				
7:00 AM	1964	1				
7:15 AM	2076	0				
7:30 AM	2058	0				
7:45 AM	2099	1				
8:00 AM	2057	1				
8:15 AM	2041	2				
8:30 AM	1951	2				
8:45 AM	1812	2				
9:00 AM	1729	3				
9:15 AM	1644	2				
9:30 AM	1648	2				
9:45 AM	1663	1				
10:00 AM	1642	0				
10:15 AM	1698	0				
10:30 AM	1693	0				
10:45 AM	1710	0				
11:00 AM	1744	0				
11:15 AM	1747	0				
11:30 AM	1824	0				
11:45 AM	1890	0				
12:00 PM	1968	0				
12:15 PM	2004	0				
12:30 PM	1989	0				
12:45 PM	1950	0				

Top Hours for Figure 4C-5				
	Start Time	End Time	Vehicles	Pedestrians
Top Hour	9:00 AM	10:00 AM	1729	3
2nd Highest Hour	4:30 PM	5:30 PM	2443	2
3rd Highest Hour	6:45 AM	7:45 AM	1804	2
4th Highest Hour	5:30 PM	6:30 PM	2422	1

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

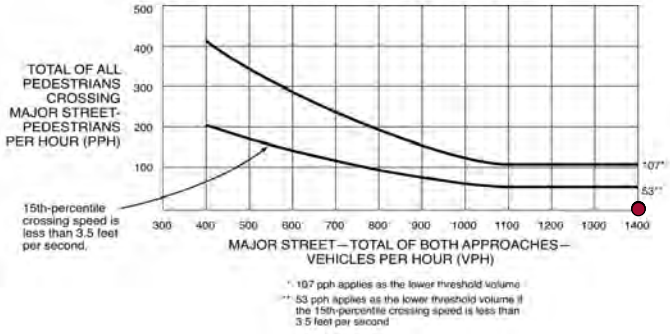
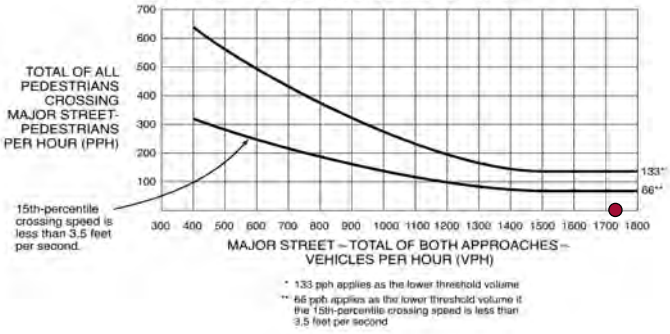


Figure 4C-6. Warrant 4, Pedestrian Peak Hour



WARRANT 4, PEDESTRIAN VOLUME

Intersection Name: Seminary Road at Filmore Avenue
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No

Peak Hour					
Figure	Start Time	End Time	Vehicles	Pedestrians	Met?
4C-6	9:00 AM	10:00 AM	1729	3	No

Note: The hours plotted may not always be the "peak" hour. The hours plotted are the hours that most dramatically meet the threshold.

Number of Hours That Met the 4-Hour Criteria 4C-5	0
Number of Hours That Met the 4-Hour Criteria 4C-7 (70% Factor)	N/A

15th Percentile Pedestrian Crossing Speed Less than 3.5 f/s?* — No

Is the major street divided with a median wide enough for pedestrians to wait? — No

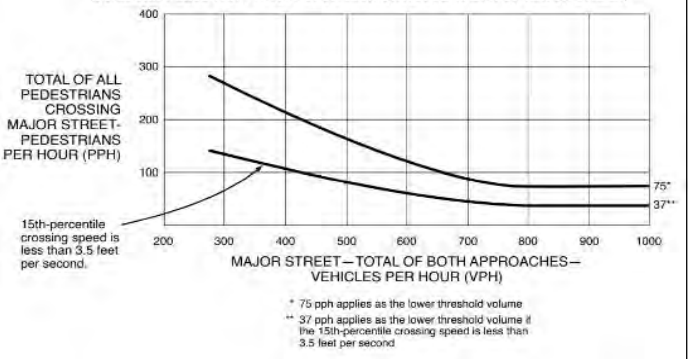
Is the distance to the nearest traffic control signal or STOP sign controlling the major street that pedestrians desire to cross less than 300 feet? — No

:Peak Hour

Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Total of All Pedestrians Crossing Major Street Pedestrians Per Hour (PPH)	Fig. 4C-5 Hour Met? (4-Hour)	Fig. 4C-6 Hour Met? (Peak Hour)	Fig. 4C-7 Hour Met? (4-Hour 70%)	Fig. 4C-8 Hour Met? (Peak Hour 70%)
1:00 PM	1884	0				
1:15 PM	1947	0				
1:30 PM	2025	0				
1:45 PM	2086	0				
2:00 PM	2266	0				
2:15 PM	2265	0				
2:30 PM	2258	0				
2:45 PM	2262	0				
3:00 PM	2175	0				
3:15 PM	2214	0				
3:30 PM	2248	0				
3:45 PM	2370	1				
4:00 PM	2396	1				
4:15 PM	2410	1				
4:30 PM	2443	2				
4:45 PM	2421	1				
5:00 PM	2471	1				
5:15 PM	2410	2				
5:30 PM	2422	1				
5:45 PM	2386	1				
6:00 PM	2395	1				
6:15 PM	2393	0				
6:30 PM	2369	0				
6:45 PM	2346	0				
7:00 PM	2206	0				
7:15 PM	2099	0				
7:30 PM	1945	0				
7:45 PM	1789	0				
8:00 PM	1692	0				
8:15 PM	1645	0				
8:30 PM	1569	0				
8:45 PM	1500	0				
9:00 PM	1427	0				
9:15 PM	1333	0				
9:30 PM	1242	0				
9:45 PM	1158	0				
10:00 PM	1066	0				
10:15 PM	975	0				
10:30 PM	879	0				
10:45 PM	781	0				
11:00 PM	677	0				
11:15 PM	462	0				
11:30 PM	281	0				
11:45 PM	123	0				

Figure 4C-7. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

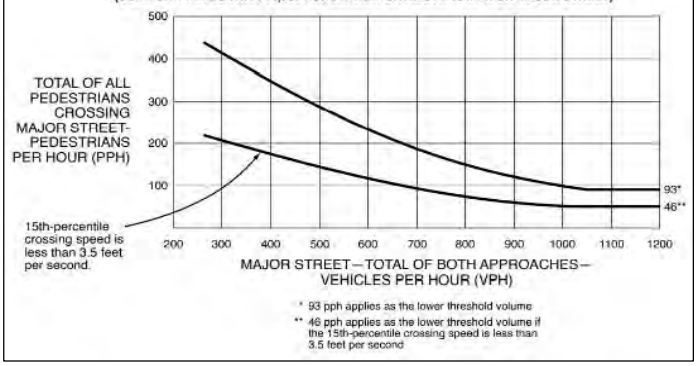


* 75 pph applies as the lower threshold volume

** 37 pph applies as the lower threshold volume if the 15th-percentile crossing speed is less than 3.5 feet per second

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* 93 pph applies as the lower threshold volume

** 46 pph applies as the lower threshold volume if the 15th-percentile crossing speed is less than 3.5 feet per second

WARRANT 5, SCHOOL CROSSING

Intersection: Seminary Road at Filmore Avenue
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No

See Warrant Inputs tab

WARRANT 6, COORDINATED SIGNAL SYSTEM

Intersection: Seminary Road at Filmore Avenue
Jurisdiction: Alexandria
Scenario: Existing (2025)

Warrant Met: No