WELLS + ASSOCIATES

HIGHER GROUND EDUCATION, INC

LOCAL AREA TRANSPORTATION REVIEW

MONTGOMERY COUNTY, MARYLAND

July 23, 2021

HIGHER GROUND EDUCATION, INC

Local Area Transportation Review

Montgomery County, Maryland

July 23, 2021

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TABLE OF CONTENTS

PAGE

SECTION 1: INTRODUCTION _____ 1
OVERVIEW 1
EXECUTIVE SUMMARY 2
DESCRIPTION OF MULTI-MODAL ADEQUACY TESTS 3
MOTOR VEHICLE ADEQUACY 3
BICYCLE SYSTEM ADEQUACY 3
PEDESTRIAN SYSTEM ADEQUACY 3
BUS TRANSIT SYSTEM ADEQUACY 4
LATR VISION ZERO STATEMENT 4

SECTION 2: BACKGROUND DATA 8
OVERVIEW 8
PLANNED SITE USER 8
VEHICULAR ACCESS 8
PARKING 8
PUBLIC ROAD NETWORK 8
PROGRAMMED IMPROVEMENTS 8
NON-AUTO TRANSOPRTATION FACILITIES 9
STUDY AREA DEFINITION 10
EXISTING TRAFFIC COUNTS 10

SECTION 3: LOCAL AREA TRANSPORTATION REVIEW (LATR) _____ 15
OVERVIEW 15
CONGESTION STANDARD 15
EXISTING CONDITIONS 15
BACKGROUND FUTURE CONDITIONS 17
TOTAL FUTURE CONDITIONS 24

SECTION 4: PEDESTRIAN, BICYCLE, TRANSIT, and VISION ZERO _____ 31
OVERVIEW 31
BICYCLE FACILITIES 31
BICYCLE SYSTEM ADEQUACY 31
PEDESTRIAN FACILITIES 31
PEDESTRIAN SYSTEM ADEQUACY 33
STREETLIGHT INVENTORY 34
ADA COMPLIANCE 35
TRANSIT FACILITIES 35
BUS TRANSIT SYSTEM ADEQUACY 35
VISION ZERO STATEMENT 36

SECTION 5: CONCLUSION 45

LIST OF FIGURES

FIGURE	TITLE	PAGE
1	SITE PLAN	7
2	EXISTING LANE USE AND TRAFFIC CONTROLS	11
3	ADJUSTED EXISTING PEAK HOUR TRAFFIC COUNTS	12
4	EXISTING PEDESTRIAN COUNTS	13
5	EXISTING BICYCLE VOLUMES	14
6	PIPELINE DEVELOPMENT LOCATIONS	21
7	COMBINED PIPELINE TRIP ASSIGNMENTS WITH EXISTING SITE TRIPS	22
8	BACKGROUND FUTURE TRAFFIC FORECASTS	23
9	SITE TRAFFIC ASSIGNMENTS	29
10	TOTAL FUTURE TRAFFIC FORECASTS	30
11	BICYCLE MASER PLAN	39
12	PEDESTRIAN FACILITIES	40
13	BUS TRANSIT FACILITIES	41
14	STREETLIGHT LOCATIONS	42
15	EXISTING PEDESTRIAN LEVEL OF COMFORT STUDY	43

LIST OF TABLES

TABLE	TITLE	PAGE
1	EXISTING INTERSECTION ANALYSES SUMMARY	16
2	PIPELINE DEVELOPMENT TRIP GENERATION	19
3	FUTURE BACKGROUND CONDITIONS ANALYSES SUMMARY	20
4	TRIP GENERATION SUMMARY	26
5	AUTO DRIVER TRIP GENERATION FOR THE PROPOSED SITE USER	27
6	TOTAL FUTURE CONDITIONS ANALYSES SUMMARY	28
7	PEDESTRIAN CROSSING TIMES	38
8	SPEED STUDY	44

LIST OF APPENDICES

APPENDIX	TITLE
A	SCOPING LETTER (WITH MAP ADJUSTMENTS DUE TO STUDENT POPULATION DECREASE)
B	TRAFFIC COUNTS AND FIELD DATA/INVENTORY
C	SIGNAL TIMING WORKSHEETS
D	EXISTING INTERSECTION DELAYS, CLVS, AND HCM WORKSHEETS
E	TRAFFIC FORECASTING WORKSHEETS
F	BACKGROUND INTERSECTION DELAYS, CLVS, AND HCM WORKSHEETS
G	TOTAL FUTURE INTERSECTION DELAYS, CLVS, AND HCM WORKSHEETS
H	BUS ROUTES/MAPS

HIGHER GROUND EDUCATION, INC

Section 1
INTRODUCTION

OVERVIEW

This report details a Local Area Transportation Review (LATR) for Guidepost A LLC c/o Higher Ground Education, Inc, the "Applicant", located at 7108 Bradley Boulevard, Bethesda, Maryland. The subject site is located along the south side of Bradley Boulevard (MD 191) within the Bethesda/Chevy Chase (Orange) Policy Area of Montgomery County, as shown on Figure 1. All study intersections are located within the Bethesda/Chevy Chase (Orange) and/or the Potomac (Yellow) Policy Areas of Montgomery County. This study was prepared in support of the Special Exception Modification and to satisfy the 2021 LATR requirements in accordance with the Maryland-National Capital Park and Planning Commission (M-NCPPC) guidelines.

The subject property is currently occupied by the Rochambeau French International School with restrictions on hours of operation during the AM and PM Peak periods. The Applicant will retain the private educational institution use within the existing facilities with modified hours of operation, from the current hours of 9:00 AM to 3:20 PM to 7:00 AM to 7:00 PM with a capacity of up to 180 children/students. Vehicular access is currently provided via a single curb cut along Bradley Boulevard (MD 191), and no changes to access are proposed within this application. The existing school building and parking lot will be used without any proposed increases to the building or parking lot footprint.

This application is subject to Local Area Transportation Review (LATR) since the proposed development is expected to generate 50 or more new peak hour person trips during the AM and PM peak periods. The scope of this LATR traffic study was established in consultation with M-NCPPC, Maryland State Highway and Montgomery County Department of Transportation (MCDOT) Staff. The Scope of Work Agreement is included in Appendix A. The Scope of work Agreement in Appendix A is based on the original request for a maximum of 200 students. Higher Ground Education, Inc has reduced the capacity request to a maximum of 180 students. Therefore, the LATR requirements/thresholds contained in this report have been slightly reduced based on the reduced student capacity.

EXECUTIVE SUMMARY

The Special Exception Modification proposes to change the current hours of operation from 9:00 AM to 3:20 PM (existing) to 7:00 AM to 7:00 PM (proposed) with a capacity of up to 180 children/students the subject property is located in the Bethesda/Chevy Chase Policy Area (Orange) of Montgomery County.

The application is subject to all of the 2021 LATR adequacy test. These include the Vehicle, Bicycle, Pedestrian, Transit and Vision Zero Adequacy Tests. A summary of the findings and mitigation for each is provided below:

- The AM and PM peak vehicle delays and/or CLVs at the study intersections operate well within the Bethesda/Chevy Chase Policy Area congestion standard of 80.0 seconds/vehicle and Potomac Policy Area CLV congestion, under existing, background and total future conditions. No mitigation is required by this application to pass the motor vehicle adequacy test.
- The site does not pass the Bicycle System Adequacy Test within the applicable study area. A shared use path, for both bicyclists and pedestrians, is recommended for the north side of Bradley Boulevard from Redwood Avenue to Oak Forest Lane, between the proposed bus shelters, to satisfy the required mitigation.
- There are no existing ADA ramps or sidewalks within the required study area. Therefore, no ADA corrective measures are needed.
- The site does not pass the Pedestrian System Adequacy test due to the lack of pedestrian facilities. As noted in the Bicycle System Adequacy Test section, a shared use path is recommended for the north side of Bradley Boulevard from Redwood Avenue to Oak Forest Lane to satisfy the required mitigation.
- The site does not pass the Transit System Adequacy Test due to a lack of bus shelters. The installation of two bus shelters is recommended to satisfy the required mitigation.
- An evaluation of vision zero standards included a review of accidents and speed studies. They were in a high accident location within the study area. The speed data within the study area indicates that the 85th percentile speed of vehicles traveling along Bradley Boulevard is in excess of the 35-mph posted speed limit.

DESCRIPTION OF MULTI-MODAL ADEQUACY TESTS

The following section describes the various multi-modal tests for determining transportation adequacy per the LATR guidelines and the recently enacted Montgomery County Growth Policy:

Motor vehicle adequacy (Red Policy Areas are Exempt from this test). This test is required for any development generating 50 or more peak hour person trips. Intersections located within Orange policy areas are evaluated for adequacy using the Highway Capacity Manual analyses methodology. Intersections within Yellow policy areas are evaluated using the Critical Lane Volume (CLV) analyses methodology. The congestion standard (HCM delay based) for isolated signalized intersections in the Bethesda/Chevy Chase policy area is an overall average vehicle delay of 80 seconds per vehicle. The congestion standard (CLV) for intersections in the Potomac policy area is a CLV of 1,450. The scope of the study is based on the motor vehicle trip generation. For sites generating less than 250 peak hour trips, the study area is required to include a minimum of one significant intersection in each direction. **The proposed application will generate less than 250 peak hour vehicle trips and is required to study at least one significant intersection in each direction from the site. The following study area was identified in consultation with Staff during the scoping process:**

1. **Site Driveway / Bradley Boulevard (Bethesda/Chevy Chase Policy Area)**
2. **Seven Locks Road / Bradley Boulevard (Potomac Policy Area)**
3. **Burdette Road / Bradley Boulevard (Bethesda/Chevy Chase Policy Area)**
4. **Fernwood Road / Bradley Boulevard (Bethesda/Chevy Chase Policy Area)**

Bicycle system adequacy. This analysis considers the following:

Bicycle system adequacy is defined as providing a low Level of Traffic Stress (LTS-2) for bicyclists. Bicycle system analysis will be based on the following standards and scoping:

"For any site generating at least 50 peak-hour person trips, conduct an analysis of existing and programmed conditions to ensure low Level of Traffic Stress (LTS-2) conditions on all transportation rights-of-way within a certain distance of the site frontage, specified in Table 12. If current and programmed connections will not create adequate conditions, the applicant must construct side paths, separated bike lanes, or trails, consistent with the Bicycle Master Plan, that create or extend LTS-2 conditions up to the specified distance from the site frontage."

Based on the expected person trips to be generated by this site, the required distance for the bicycle study area is within 750' of the site.

Pedestrian System Adequacy. This analysis includes three components:

"Pedestrian Level of Comfort (PLOC). Pedestrian system adequacy is defined as providing a "Somewhat Comfortable" (PLOC-2) or "Very Comfortable" (PLOC-1) score on streets and

intersections for roads classified as Primary Residential or higher (excluding Controlled Major Highways and Freeways, and their ramps), within a certain walkshed from the site frontage."

"Street Lighting. The applicant must evaluate existing street lighting based on MCDOT standards along roadways or paths from the development to destinations within a certain walkshed from the site frontage."

"ADA Compliance. The applicant must fix Americans with Disabilities Act (ADA) noncompliance issues within a certain walkshed from the site frontage equivalent to half the walkshed specified."

Based on the expected person trips to be generated by this site, the required distances for the three components of the pedestrian study area are as follows:

- **Pedestrian Level of Comfort and streetlighting study area**
  750' in in all directions from the property
- **ADA Compliance study area**
  375' in all directions from the site

Bus Transit System Adequacy. This analysis considers the following:

"For any site generating at least 50 net new weekday peak-hour person trips in Red, Orange, and Yellow policy areas, bus transit system adequacy for LATR is determined by the conduct an analysis of existing and programmed conditions to ensure that there are bus shelters outfitted with real-time travel information displays and other standard amenities, along with a safe, efficient, and accessible path between the site and a bus stop, at a certain number of bus stops within a certain distance of the site frontage."

Based on the expected person trips to be generated by this site, the required distance for the transit study area is within 1000' of the site.

LATR Vision Zero Statement. This component considers the following:

"All LATR studies for a site that will generate 50 or more peak-hour person trips must develop a Vision Zero Statement. This statement must assess and propose solutions to high injury network and safety issues, review traffic speeds, and describe in detail how safe site access will be provided. With concurrence of the responsible agency, projects must implement or contribute to the implementation of safety countermeasures. The County Council may adopt predictive safety analysis as part of this statement, when available."

1. "Review High Injury Network segments: Document any segments on the High Injury Network (HIN) that are within a certain distance of the site frontage, as specified in Table 1."

2. "Assess proximate safety issues: Review the crash history for all segments and crossings within a certain distance of the site frontage, as specified in Table 1."

3. "Review traffic speeds: Conduct speed studies within a certain distance from the site frontage, specified locations and timing for the speed study will be determined by Planning staff in collaboration with MCDOT staff and will prioritize filling in gaps in the inventory of speed studies. Relevant speed studies that have been completed within the past three years may be used to fulfill this requirement if gaps do not remain in the inventory of speed studies."

4. "Describe site access: Address the safety issues identified in steps 1 through 3 and describe how site circulation promotes safety, outlining how safe access will be provided to the site. Note if the applicant is contributing a fee in lieu of constructing a countermeasure. Reference the Vision Zero Community Toolkit (forthcoming) or national best practices and research in outlining the appropriate treatments to address identified safety issues."

Tasks undertaken in this study included the following:

- Preparation of Motor Vehicle Adequacy Test
- Preparation of Bicycle System Adequacy Test
- Preparation of Pedestrian System Adequacy Test
- Preparation of Bus Transit System Adequacy Test
- Preparation of Vision Zero Statement
- Review of the proposed plans, background materials provided, and the Local Area Transportation Review Guidelines requirements for the Bethesda/Chevy Chase Policy Area.
- Coordination with M-NCPPC Staff to identify the necessary scope and analyses to be included in the LATR study.
- Collection of new vehicular turning movement, bicycle, and pedestrian counts at the study intersections.
- Adjusting the newly collected traffic count data using a factor of 1.07, as applicable, per the current Montgomery County policy on collecting traffic data.
- Calculation of adjusted existing conditions average vehicle delay and/or CLV for each study intersection.
- Forecast background future traffic volumes by compiling the adjusted existing peak hour traffic volumes and the traffic forecasted to be generated by pipeline projects that are currently approved or planned for development.
- Calculation of background future peak hour conditions average vehicle delay and/or CLV for each study intersection based on the background future traffic forecasts and the existing or planned intersection geometrics.
- Estimation of the number of AM and PM peak hour vehicle trips that will be generated by the proposed private school/daycare use based on the Trip

Generation Manual, 10th Edition, published by the Institute of Transportation Engineers and the Bethesda/Chevy Chase policy area adjustment factors.

- Assignment of the site trips based on previously approved distributions for the subject site.
- Forecast of total future traffic volumes by combining the new site trips generated by the proposed child daycare facility with the background traffic forecasts.
- Calculation of total future peak hour conditions average vehicle delay and/or CLV for each study intersection based on the total future traffic forecasts and existing or planned intersection geometrics.
- Review of available public bus transportation options proximate to the site.

Sources of data for this study include: the M-NCPPC, the MCDOT, the Maryland State Highway Administration (SHA), the Maryland Transit Administration (MTA), Institute of Transportation Engineers (ITE), and Wells + Associates Inc.

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Figure 1
Site Plan

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SECTION 2

BACKGROUND DATA

OVERVIEW

This section presents the following background information for the LATR:

- Description of the proposed site user.
- Description of the existing vehicular ingress/egress.
- Definition of the study area.
- Description of the study area public road network and transportation facilities.
- Vehicular, pedestrian and bicycle traffic counts.

PLANNED SITE USER

This study considers a similar private school/daycare user for the subject property with modification of the hours of operation, from the current hours of 9:00 AM to 3:20 PM that would allow the user to operate from 7:00 AM to 7:00 PM with a capacity up to 180 children/students.

VEHICULAR ACCESS

The site is currently accessed via an existing site driveway located along the south side of Bradley Boulevard (MD 191). No changes to the existing site access are proposed.

PARKING

The new site user will occupy the existing building and utilize the existing surface parking area.

PUBLIC ROAD NETWORK

Existing Network/Site Access

Regional access and local direct vehicular access to the site is provided by Bradley Boulevard (MD 191).

Bradley Boulevard (MD 191) is a state-owned two-lane undivided roadway adjacent to the site. Traffic signals and additional turn lanes are typically provided at major intersections. Bradley Boulevard (MD 191) has a posted speed limit of 35 mph.

PROGRAMMED IMPROVEMENTS

No planned or programmed roadway improvements have been identified within the study area.

NON-AUTO TRANSPORTATION FACILITIES

Capital Bikeshare and Bicycle Facilities

The Bicycle Master Plan shows that there are Master Planned bikeways along the study area. Separated bikeways and striped bikeways are proposed on Bradley Boulevard between the Capital Beltway and Fairfax Road. Separated bikeways and bikeable shoulders are proposed on Bradley Boulevard between the Capital Beltway and Persimmon Tree Road.

The nearest Capital Bikeshare station is located adjacent to the National Institute of Health, approximately two (2) miles east of the site, at Old Georgetown Road and Southwick Street. Additional stations are located within downtown Bethesda and at the Bethesda Metro Station.

Sidewalks

Sidewalks are generally not provided within the required study area along Bradley Boulevard or side streets. There is a small section (approximately 50 feet in length) of sidewalk along the northeast quadrant of the Bradley Boulevard/Redwood Avenue intersection.

Metrorail

There are no Metrorail stations within the site vicinity.

WMATA Metrobus

There are no Metrobus Routes within the site vicinity.

Montgomery County RideOn

The site is located within walking distance of RideOn Bus 36, approximately 700’ to the west of the property. Additional stops for Route 36 are located near all study intersections along Bradley Boulevard.

STUDY AREA DEFINITION

The study area for this LATR study was established through consultation with M-NCPPC Staff and is contained in the scoping letter provided in Appendix A. The study area assumed in this LATR is consistent with the requirements outlined in M-NCPPC's Local Area Transportation Review guidelines. The following intersections and driveway were included in the study as discussed with M-NCPPC Staff through the scoping process:

1. Bradley Boulevard (MD 191) / Site Access (Rochambeau French International School)
2. Bradley Boulevard (MD 191) / Seven Locks Road
3. Bradley Boulevard (MD 191) / Burdette Road
4. Bradley Boulevard (MD 191) / Fernwood Road

Figure 2 shows the existing lane use and traffic control for the study area.

EXISTING TRAFFIC COUNTS

Existing AM and PM peak hour vehicular, pedestrian, and bicycle traffic counts were collected on Thursday, May 6, 2021, at the study intersections, in accordance with the current County traffic count guidelines. Additional details about the current guidelines to address COVID-19 impacts to traffic volumes is provided attached to the scope in Appendix A. Traffic counts were collected at each of the study intersections from 6:30 AM to 9:30 AM and from 4:00 PM to 7:00 PM. Consistent with current County traffic count guidelines to address Covid-19 impacts to traffic volumes, the AM peak hour traffic volumes were multiplied by a factor of 1.07. Further, all PM traffic data occurring before 4:30 PM were also multiplied by the 1.07 adjustment factor. The following is a breakdown of the traffic data used for each intersection:

1. Bradley Boulevard (MD 191) / Site Access
    - AM adjustment factor of 1.07. PM peak hour occurred from 5:00-6:00 PM and no PM adjustment factor was included.
2. Bradley Boulevard (MD 191) / Seven Locks Road
    - AM adjustment factor of 1.07. PM peak hour occurred from 4:00-5:00 PM with the 4:00-4:30 volumes adjusted with a factor of 1.07.
3. Bradley Boulevard (MD 191) / Burdette Road
    - AM adjustment factor of 1.07. PM peak hour occurred from 4:30-5:30 PM and no PM adjustment factor was included.
4. Bradley Boulevard (MD 191) / Fernwood Road
    - AM adjustment factor of 1.07. PM peak hour occurred from 4:30-5:30 PM and no PM adjustment factor was included.

Figure 3 shows the adjusted existing AM and PM peak hour vehicular traffic volumes. Pedestrian and bicycle volumes at the study intersections are summarized on Figures 4 and 5, respectively, and the detailed count data is provided in Appendix B.

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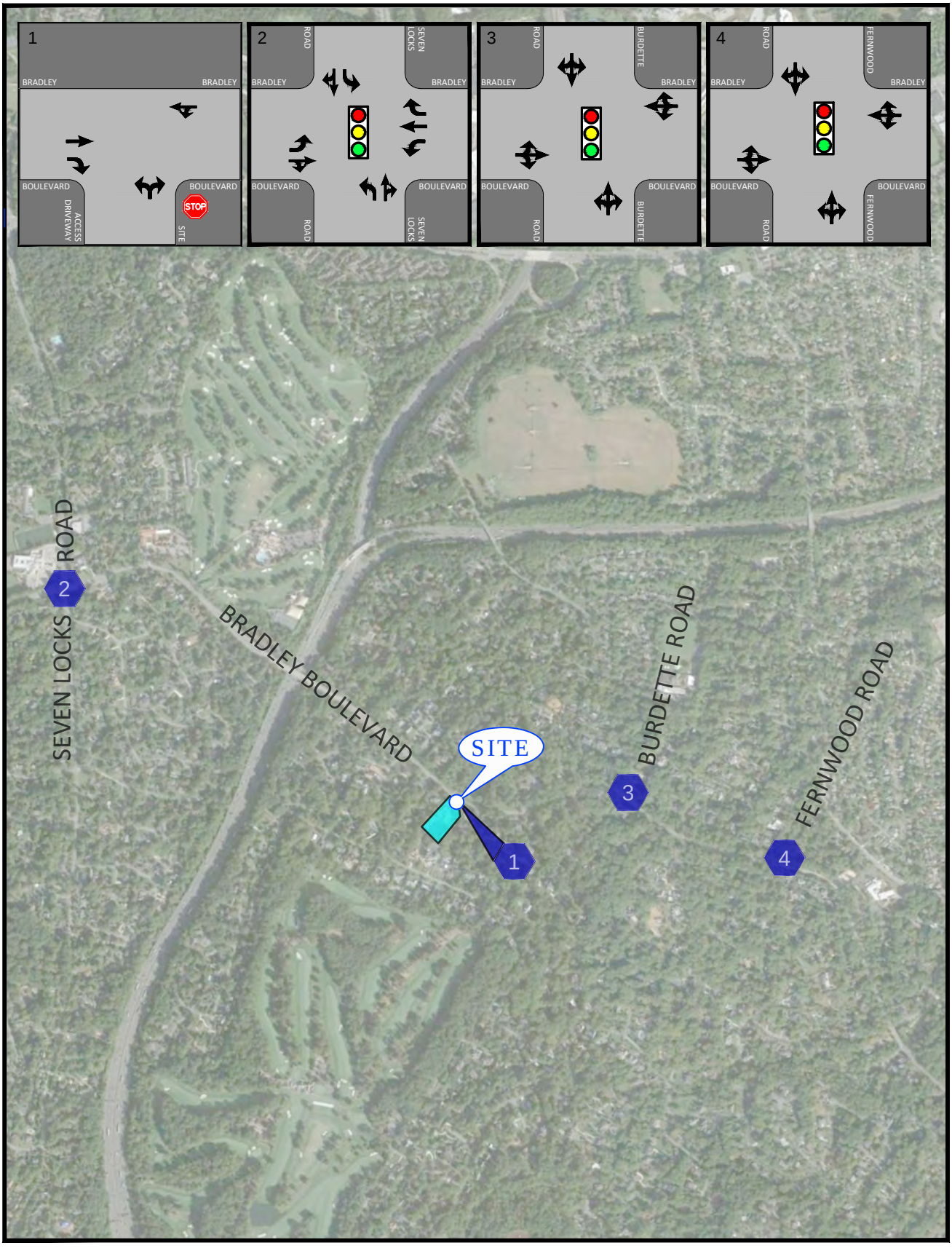

Figure 2
Existing Lane Use and Traffic Control

Represents One Travel Lane
Signalized Intersection
Stop Sign

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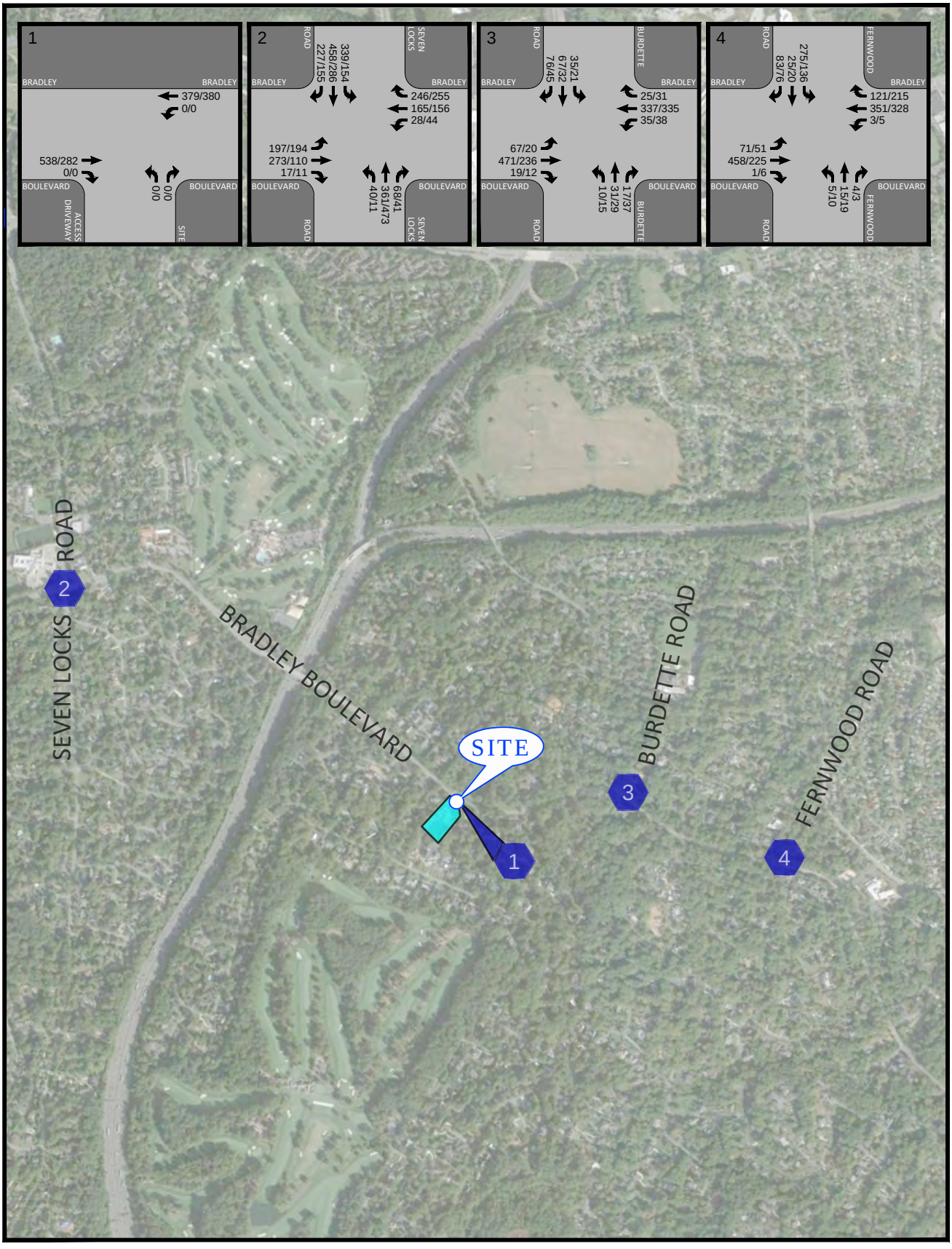

Figure 3
Adjusted Existing AM/PM Peak Hour Volumes

AM PEAK HOUR
PM PEAK HOUR
000 / 000

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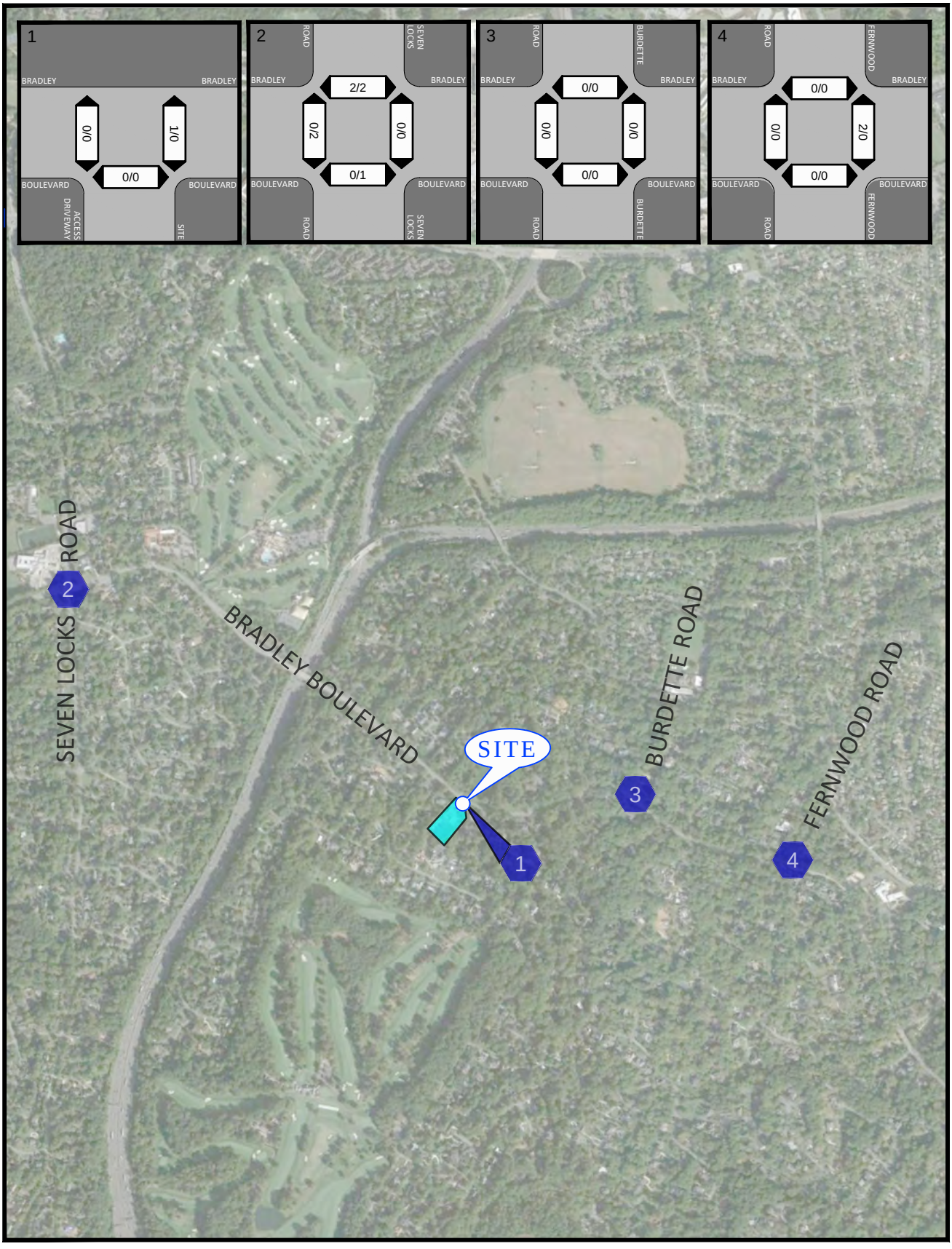

Figure 4
Existing Pedestrian Peak Hour Volume

AM/PM

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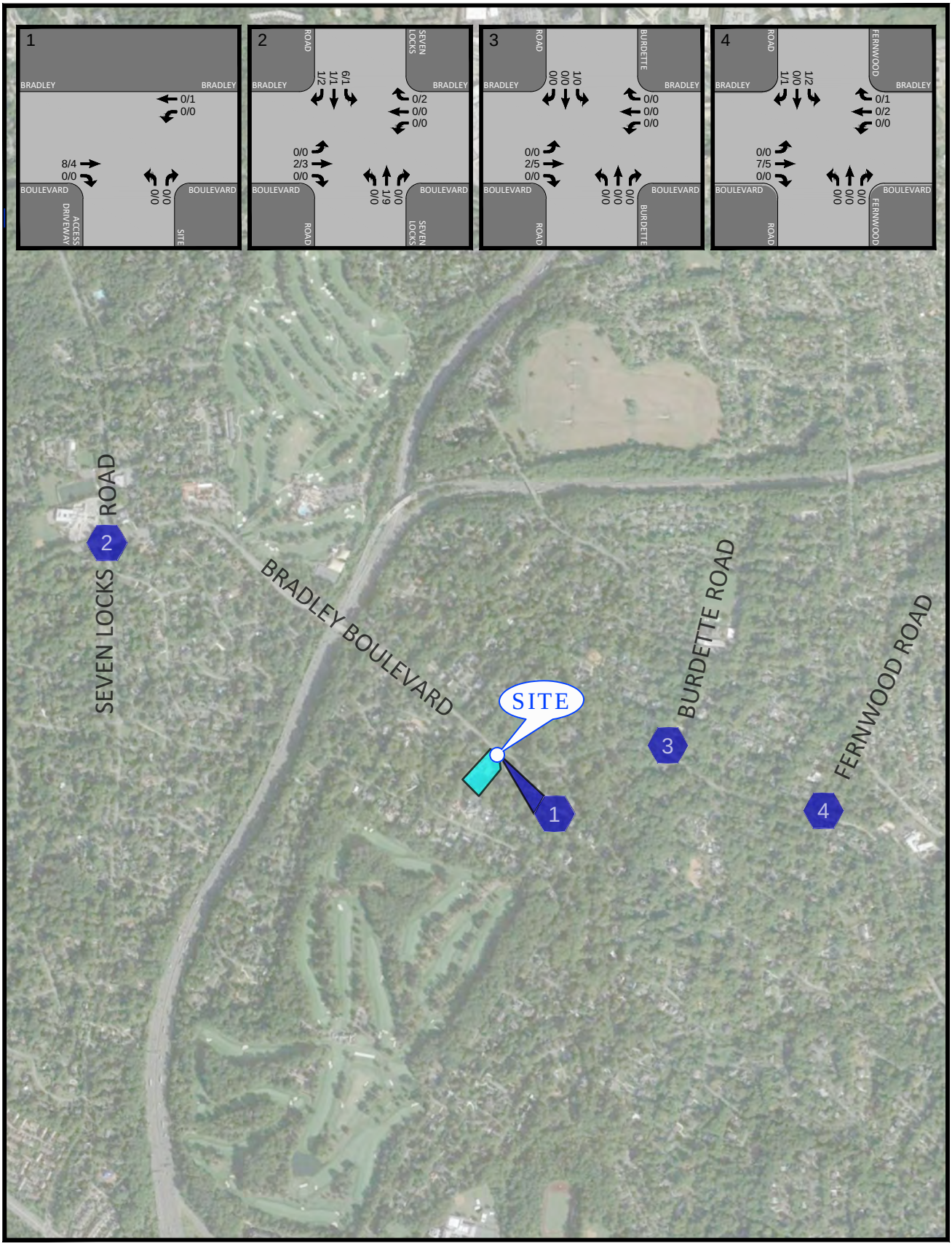

Figure 5
Existing Bicycle Peak Hour Volume

AM PEAK HOUR
PM PEAK HOUR
000 / 000

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SECTION 3

LOCAL AREA TRANSPORTATION REVIEW (LATR)

OVERVIEW

This section presents the details of the LATR. It includes: a listing of applicable congestion standards; analyses of existing critical lane volumes; a summary of site and pipeline trip generation projections; and analyses of future critical lane volumes without and with the site development. Additionally, there is a requirement for adequacy tests of different modes that include motor vehicle, pedestrian, bicycle, and bus transit.

CONGESTION STANDARD

Three of the four study intersections, including the subject site, are located within the Bethesda/Chevy Chase Policy Area (Orange) of Montgomery County. The Bradley Boulevard/Seven Locks Road intersection is located within the Potomac Policy Area (Yellow) of Montgomery County.

The adequacy for intersections located within the Bethesda/Chevy Chase Policy Area (Orange) is a maximum intersection delay of 80 seconds per vehicle. The critical lane volume congestion within the Potomac Policy Area (Yellow) is 1,450.

EXISTING CONDITIONS

Vehicular Analysis

Existing peak hour delays and/or CLVs were analyzed for each of the study intersections per the guidelines.

Calculation of the existing intersection delays and/or CLVs were based on: the existing lane use and traffic control shown on Figure 2, existing traffic signal phasing/timing obtained from Montgomery County Department of Transportation (MCDOT) (Appendix C), the adjusted existing vehicular traffic volumes shown on Figure 3, the HCM 2000 methodology for signalized and unsignalized intersections, and the LATR CLV methodology. CLV worksheets are presented for each intersection in Appendix D along with the HCM worksheets for Orange Policy Area intersections. The results of the existing analyses are summarized in Table 1.

Under the existing conditions all of the study intersections within the Bethesda/Chevy Chase Policy Area operate below the delay congestion standard of 80.0 seconds per vehicle, and the Bradley Boulevard/Seven Locks Road intersection operates below the Potomac CLV congestion standard of 1,450.

Table 1
Higher Ground Education, Inc
Existing Analyses Summary

Intersection	Control	Congestion Standard	Adjusted Existing Conditions AM	Adjusted Existing Conditions PM
1. Bradley Boulevard / Site Access Driveway **Bethesda/Chevy Chase (Orange) Policy Area: Adequacy Based on HCM Delay**	Unsignalized	CLV	379	380
		HCM Delay: LOS (sec/veh)	0.0	0.0
HCM Average Vehicle Delay Standard:		Max of 80 sec/veh	Pass	Pass
2. Bradley Boulevard / Seven Locks Road **Potomac (Yellow) Policy Area: Adequacy Based on CLV if < 1,350**	Signalized			
		CLV	1211	1117
CLV Congestion Standard:		Max of 1450	Pass	Pass
3. Bradley Boulevard / Burdette Road **Bethesda/Chevy Chase (Orange) Policy Area: Adequacy Based on HCM Delay**	Signalized	CLV	780	537
		HCM Delay: LOS (sec/veh)	11.1	9.4
HCM Average Vehicle Delay Standard:		Max of 80 sec/veh	Pass	Pass
4. Bradley Boulevard / Fernwood Road **Bethesda/Chevy Chase (Orange) Policy Area: Adequacy Based on HCM Delay**	Signalized	CLV	934	841
		HCM Delay: LOS (sec/veh)	22.6	13.4
HCM Average Vehicle Delay Standard:		Max of 80 sec/veh	Pass	Pass

BACKGROUND FUTURE CONDITIONS

Pipeline Developments

The following two pipeline developments (approved, planned, or under construction and within the site vicinity) were identified during the scoping process for inclusion in this LATR study:

1. WMAL Bethesda (Plan No. 820170170)
   - 309 dwelling units (159 detached, 150 townhouse) including 40 MPDUs, private roads, related residential amenities, and the associated Final Forest Conservation Plan.
2. Andrus Property (Plan No. 120180130)
   - Subdivide seven (7) existing lots into a total of fifteen (15) lots, for a total of eight (8) new single-family detached lots/houses.

A graphic showing the location of each pipeline development in relation to the project is provided on Figure 6.

Pipeline Trip Generation

The trip generation for each pipeline development was obtained from their respective traffic study, traffic statement, or associated Staff reports. The pipeline developments are forecasted to add a combined 223 AM peak hour vehicle trips and 282 PM peak hour trips to the area road network at full build-out and occupancy. A portion of these trips would travel through the study intersections. A summary of the trip generation totals for each pipeline development is provided on Table 2.

Due to COVID-19, the existing school was not open, therefore the existing traffic volume data collected at the study intersections did not include the traffic volumes generated by the approved French International School. Therefore, the existing AM trips from the prior study were assumed to be on the road under the background conditions and were added to the approved development peak hour traffic volumes. These trips were assigned to the road network using distributions consistent with the M-NCPPC standards.

Pipeline Trip Assignments

The peak hour trip assignments for each of the pipeline developments were developed based on previously approved traffic studies for each of the respective developments. The combined approved development peak hour traffic volumes and existing site trip assignments traveling through the study intersections and the French International School are shown on Figure 7. The individual traffic assignments for each of the above listed approved development projects are shown in the traffic forecasting worksheets contained in Appendix E.

Background Traffic Forecasts

Background traffic forecasts represent future conditions without the Higher Ground Education, Inc user and proposed modification to hours of operation. Background traffic forecasts were

estimated by adding the combined pipeline traffic assignments (Figure 7) to the adjusted existing peak hour traffic volumes shown on Figure 3. The resulting background future traffic forecasts are summarized on Figure 8.

Vehicular Analysis

The background peak hour intersection delays and/or CLVs without the proposed development were estimated based on: the background traffic forecasts; the existing lane use and traffic controls (Figure 2), the existing traffic signal phasing/timing, the HCM methodology, and the LATR CLV methodology. The background future intersection delays and CLVs are presented in Appendix F and summarized in Table 3.

As shown in Table 3, each of the study intersections will operate with delays or CLVs below the applicable policy area congestion threshold.

Table 2
Higher Ground Education, Inc
Pipeline Development Vehicle Trip Generation

Development/Land Use	Amount	Unit	Vehicle Trips					
			AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
1. WMAL Property - Residential[1]								
Single Family Detached	170	DU	33	97	130	102	58	160
Townhouse/ Condo Units	158	DU	13	66	79	74	37	111
WMAL Property Subtotal			**46**	**163**	**209**	**176**	**95**	**271**
2. Andrus Property - Residential[2]								
Single Family Detached (9 Net New DU)	9	DU	4	10	14	7	4	11
Andrus Property Subtotal			**4**	**10**	**14**	**7**	**4**	**11**
Total Pipeline Development Trips			**50**	**173**	**223**	**183**	**99**	**282**

Notes:
1. Trip generation based on approved WMAL Property LATR, dated October 28, 2016.
2. Trip generation based on Andrus Property Traffic Exemption Statement, dated January 5, 2018.

Table 3
Higher Ground Education, Inc
Future Background Analyses Summary

Intersection	Control	Congestion Standard	Background Conditions AM	Background Conditions PM
1. Bradley Boulevard / Site Access Driveway **Bethesda/Chevy Chase (Orange) Policy Area: Adequacy Based on HCM Delay**	Unsignalized	CLV	427	383
		HCM Delay: LOS (sec/veh)	0.7	0.0
HCM Average Vehicle Delay Standard:		Max of 80 sec/veh	Pass	Pass
2. Bradley Boulevard / Seven Locks Road **Potomac (Yellow) Policy Area: Adequacy Based on CLV if < 1,350**	Signalized			
		CLV	1225	1121
CLV Congestion Standard:		Max of 1450	Pass	Pass
3. Bradley Boulevard / Burdette Road **Bethesda/Chevy Chase (Orange) Policy Area: Adequacy Based on HCM Delay**	Signalized	CLV	804	553
		HCM Delay: LOS (sec/veh)	11.6	9.5
HCM Average Vehicle Delay Standard:		Max of 80 sec/veh	Pass	Pass
4. Bradley Boulevard / Fernwood Road **Bethesda/Chevy Chase (Orange) Policy Area: Adequacy Based on HCM Delay**	Signalized	CLV	978	875
		HCM Delay: LOS (sec/veh)	24.3	14.0
HCM Average Vehicle Delay Standard:		Max of 80 sec/veh	Pass	Pass

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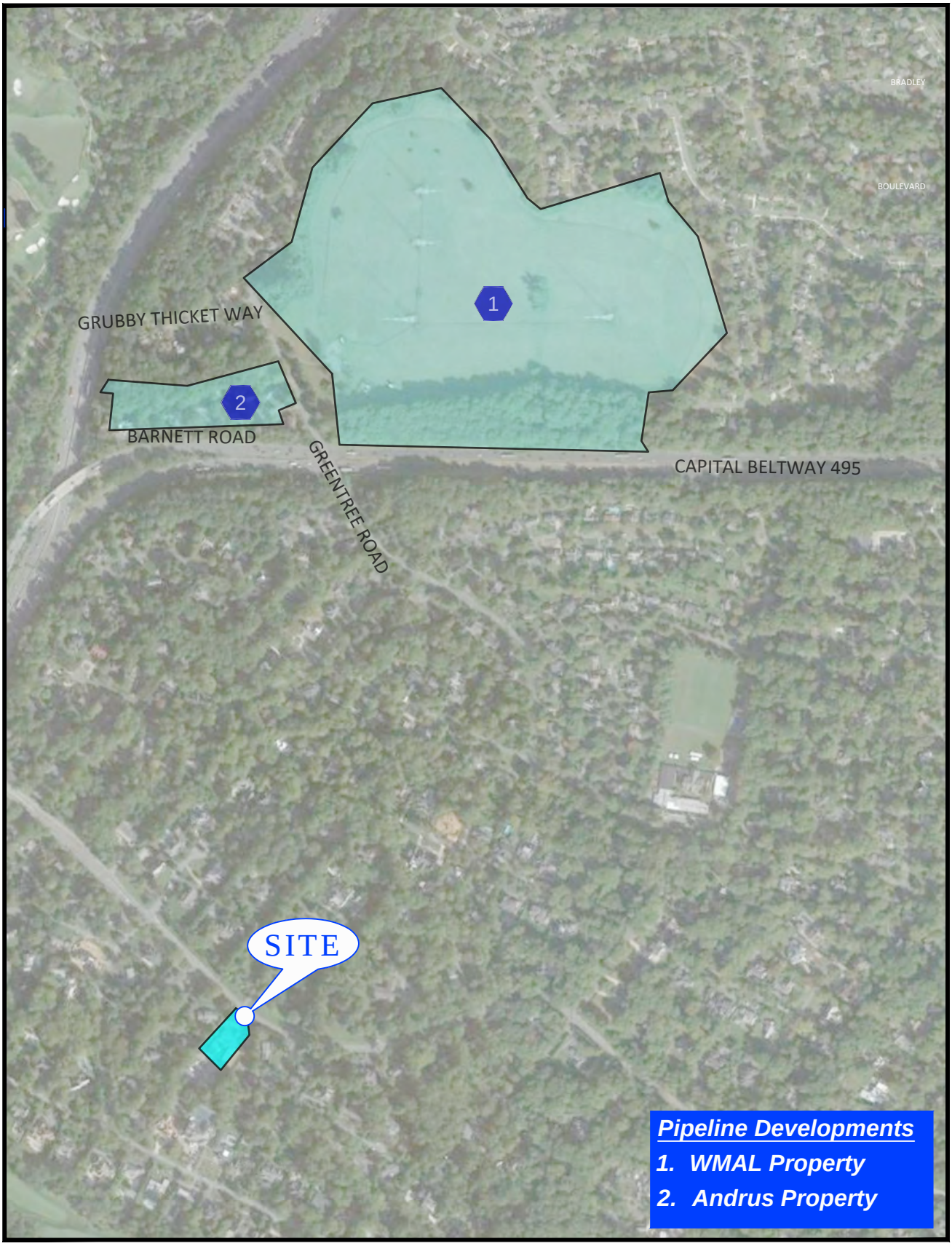

Figure 6
Pipeline Development Locations

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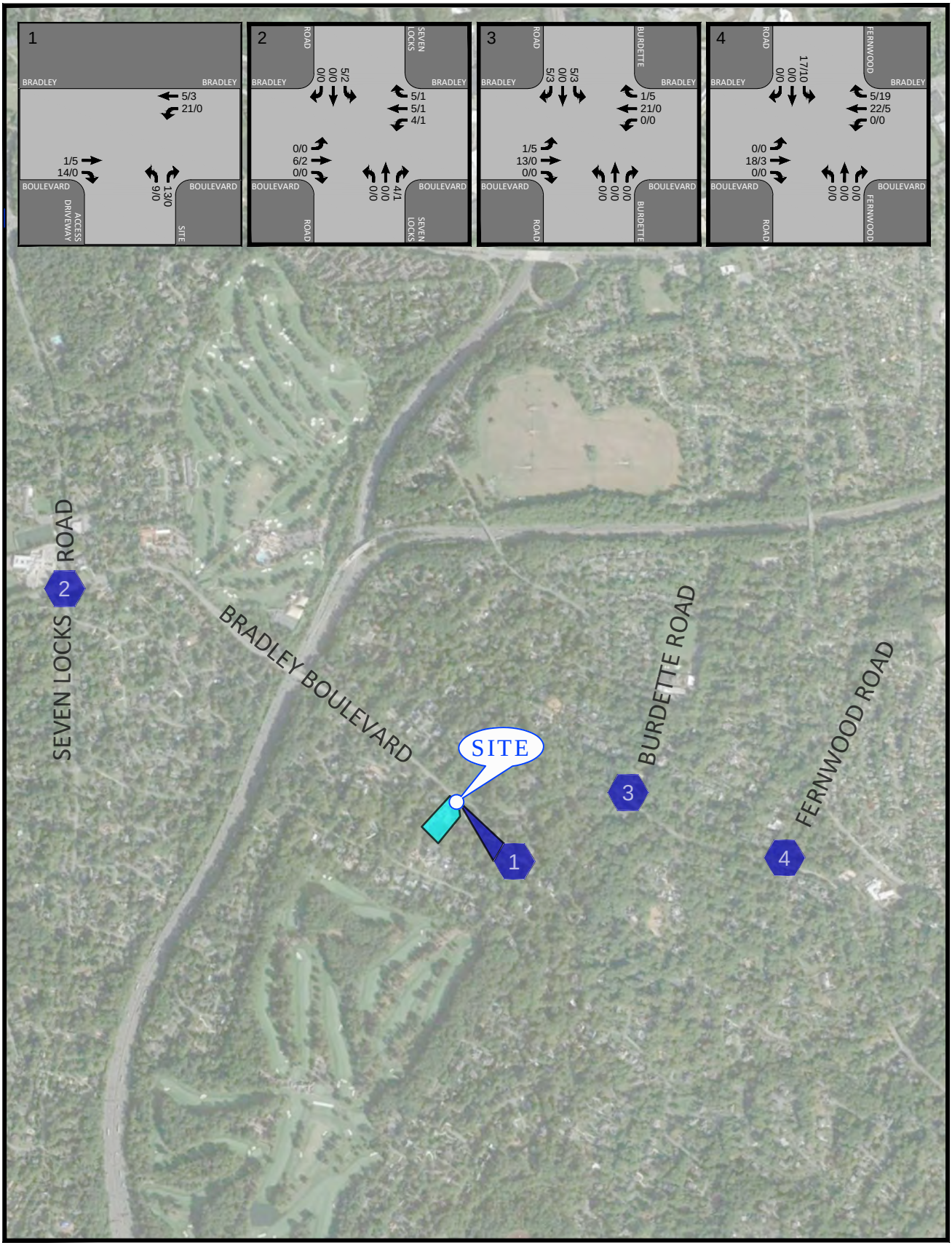

Figure 7
Total Pipieline Development Trip Assignments
(Includes Existing Site Trips (AM Peak Hour Only))

AM TRIPS
PM TRIPS
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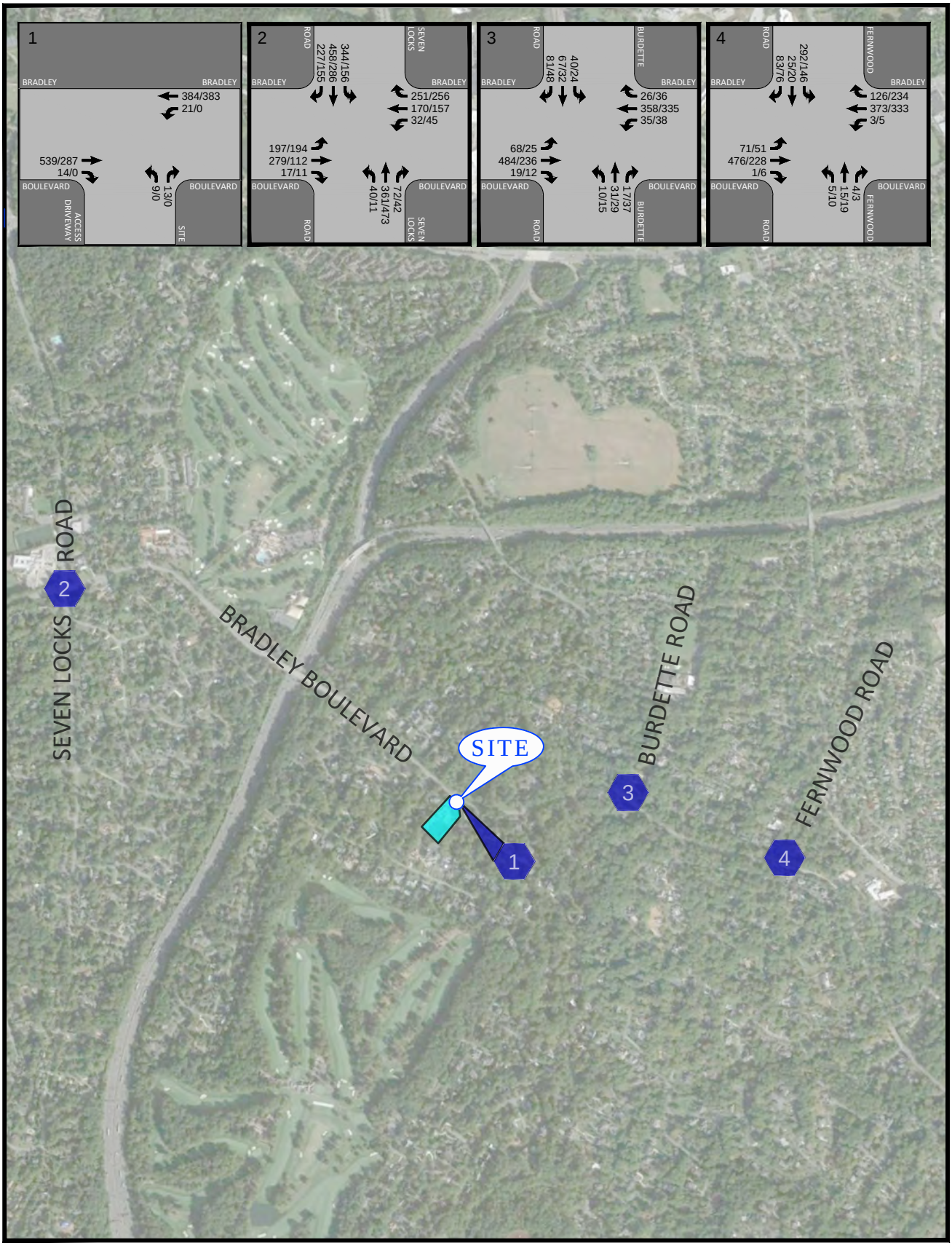

Figure 8
Background Future Traffic Forecasts

AM TRIPS
PM TRIPS
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TOTAL FUTURE CONDITIONS

The total future condition analyzes the impact of the repurposing of the existing school facilities for Higher Ground Education with the modification to hours of operation in combination with the future background conditions.

Trip Generation

Trip generation calculations for the Higher Ground Education are based on ITE trip generation rates and the Bethesda/Chevy Chase Policy Area adjustment factors provided in the LATR guidelines. The trip generation summary is shown in Table 4.

Higher Ground Education, a private school/child daycare facility, is expected to generate 156 new AM peak hour and 187 new PM peak hour **person trips**, 94 new AM peak hour and 113 new PM peak hour **auto-driver (vehicle) trips**, 20 new AM peak hour and 24 new PM peak hour **transit trips**, 15 new AM peak hour and 19 new PM peak hour **non-motorized (bicycle) trips**, and 35 new AM peak hour and 43 new PM peak hour **pedestrian trips**.

Table 4 shows the existing site trips (AM peak hour only) and the new vehicle and person trip generation for the proposed user with modification to hours of operation. For purposes of traffic forecasting, the existing site trips were included in background future conditions and for total future conditions, the increase (new trips due to modification of hours of operations) in site trips were applied to the road network.

Site Trip Assignments

The peak hour trip distributions for the site trips were developed consistently with the previously approved distributions for the site, as confirmed through the scoping process. (See Appendix A)

The following general distributions were utilized to assign the site trips:

To/From	(Distribution)
East via MD 191	60%
West via Md 191	40%
TOTAL	100%

The above trip distributions were used to assign the auto driver trips shown in Table 5 to the road network, as shown on Figure 9.

Total Future Forecasts

The total future traffic forecasts, shown on Figure 10, represent future conditions with Higher Ground Education, Inc. The total future traffic forecasts were developed by adding the proposed site traffic assignments shown on Figure 9 to the background future traffic forecasts shown on Figure 8.

Vehicular Analysis

The future intersection delays and/or CLVs were estimated for each of the study intersections based on: the total future traffic forecasts with the subject application; the existing lane use and traffic controls (Figure 2); existing traffic signal phasing/timing, the HCM methodology, and the LATR CLV methodology. The total future intersection capacity analyses with the project are presented in Appendix G and summarized in Table 6. Further, CLV and/or HCM worksheets are provided for each intersection in Appendix G.

As shown in Table 6, each of the study intersections would continue to operate within the applicable congestion threshold under total future conditions. In addition to this, each of the study intersections will operate within the applicable congestion standard, the proposed application passes the motor vehicle adequacy test.

Table 4
Higher Ground Education, Inc
Trip Generation Summary

Land Use	LUC	Amount	Unit	ITE Trip Generation[1] AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	LATR Mode Split Adjustments[2] AM Peak Hour Auto Driver	Auto Passenger	Transit	Non-Motorized	Pedestrian	Total Person Trips	PM Peak Hour Auto Driver	Auto Passenger	Transit	Non-Motorized	Pedestrian	Total Person Trips
Existing Uses																					
Existing use- pre French school[3]				35	22	57															
Proposed Uses																					
Private School (K-8)	534	180	Students	96	79	175	n/a	n/a	n/a	**139**	**39**	**29**	**23**	**52**	**230**						
Daycare	565	180	Students	n/a	n/a	n/a	67	75	142							**113**	**32**	**24**	**19**	**43**	**187**
Net Trips (Proposed vs. Existing)				**61**	**57**	**118**	**67**	**75**	**142**	**94**	**27**	**20**	**15**	**35**	**156**	**113**	**32**	**24**	**19**	**43**	**187**

Note:
1. Trip generation calculated using ITE Trip Generation Manual, 10th edition
2. Mode Split assumptions based on the Bethesda/Chevy Chase Policy, other land use category
3. Based on site driveway counts conducted by Wells & Associates on Wednesday, March, 1998.
4. Since the PM equation from ITE has an R^2 less than 0.75, the rate was used.

Table 5
Higher Ground Education, Inc
Auto Driver Trip Generation for Proposed Site User

Land Use	LUC	Amount	Unit	Auto-Driver Trip Generation					
				AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Proposed Uses									
Private School (K-8)	534	180	Students	76	63	139	n/a	n/a	n/a
Daycare	565	180	Students	n/a	n/a	n/a	53	60	113
Auto Driver Trips				**76**	**63**	**139**	**53**	**60**	**113**

Table 6
Higher Ground Education, Inc
Total Future Analyses Summary

Intersection	Control	Congestion Standard	Total Future Conditions AM	Total Future Conditions PM
1. Bradley Boulevard / Site Access Driveway **Bethesda/Chevy Chase (Orange) Policy Area: Adequacy Based on HCM Delay**	Unsignalized	CLV	493	475
		HCM Delay: LOS (sec/veh)	1.9	1.6
HCM Average Vehicle Delay Standard:		Max of 80 sec/veh	Pass	Pass
2. Bradley Boulevard / Seven Locks Road **Potomac (Yellow) Policy Area: Adequacy Based on CLV if < 1,350**	Signalized			
		CLV	1241	1143
CLV Congestion Standard:		Max of 1450	Pass	Pass
3. Bradley Boulevard / Burdette Road **Bethesda/Chevy Chase (Orange) Policy Area: Adequacy Based on HCM Delay**	Signalized	CLV	829	585
		HCM Delay: LOS (sec/veh)	11.6	9.1
HCM Average Vehicle Delay Standard:		Max of 80 sec/veh	Pass	Pass
4. Bradley Boulevard / Fernwood Road **Bethesda/Chevy Chase (Orange) Policy Area: Adequacy Based on HCM Delay**	Signalized	CLV	1003	907
		HCM Delay: LOS (sec/veh)	25.1	14.0
HCM Average Vehicle Delay Standard:		Max of 80 sec/veh	Pass	Pass

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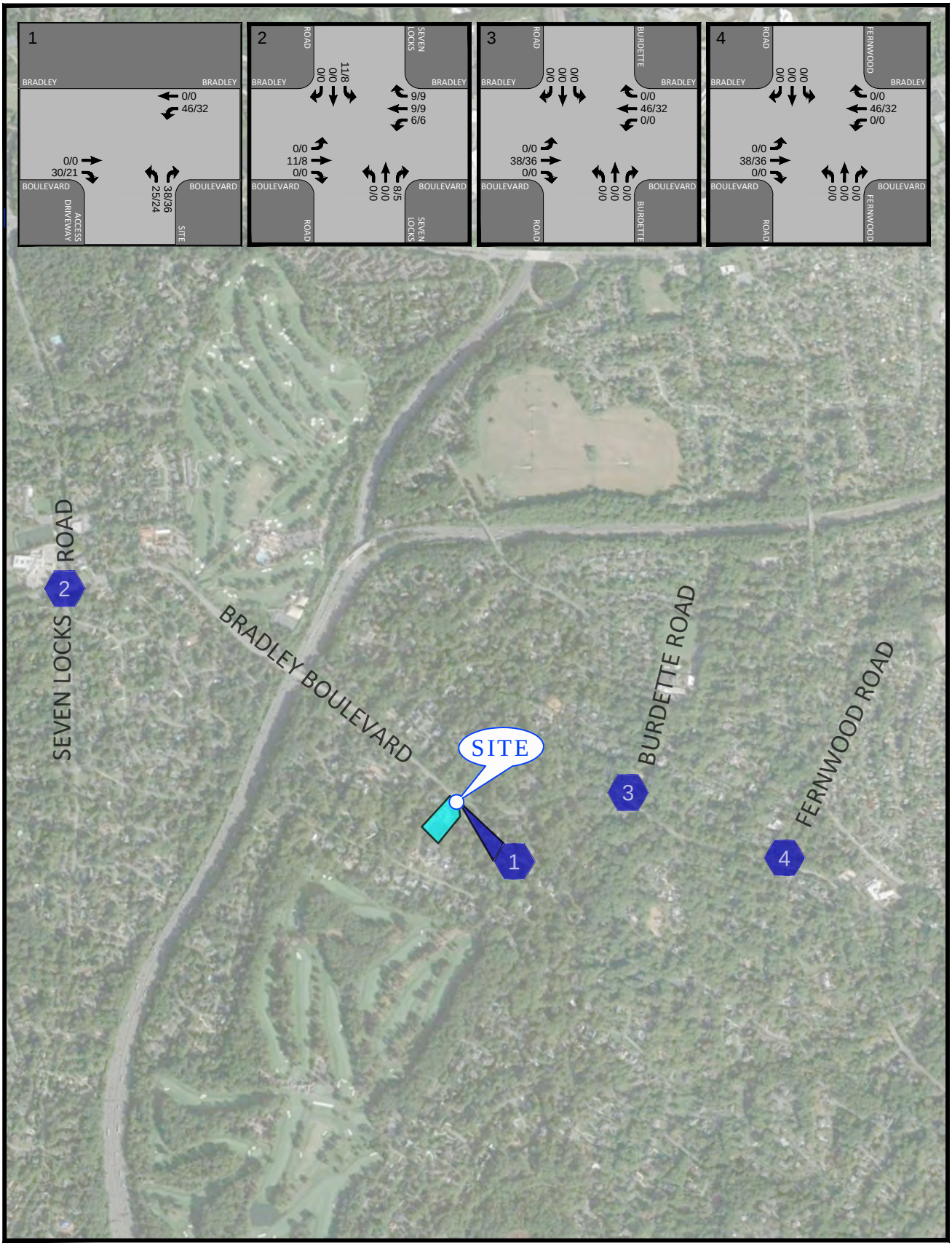

Figure 9
Site Traffic Trip Assignments

AM TRIPS
PM TRIPS
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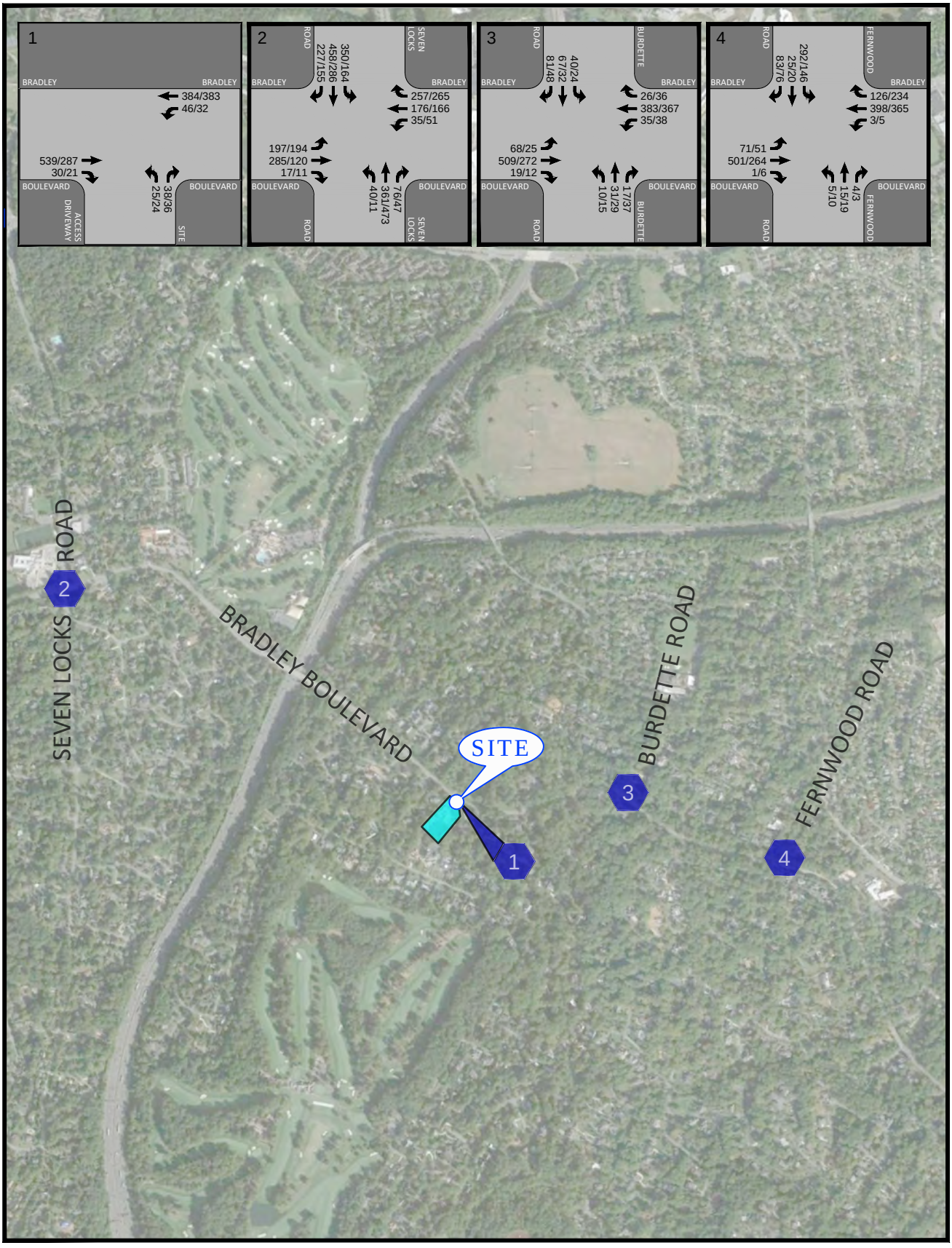

Figure 10
Total Future Peak Hour Traffic Forecasts with Development

AM TRIPS
PM TRIPS
000 / 000

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SECTION 4

BICYCLE, PEDESTRIAN, TRANSIT, and VISION ZERO

OVERVIEW

This section discusses the existing bicycle and pedestrian access and circulation in the vicinity of the site, as well as the transit and other non-automotive options in the study area; and the Bicycle Adequacy, Pedestrian System Adequacy, Bus Transit System Adequacy tests and the LATR Vision Zero Statement.

Bicycle System Adequacy

As previously discussed, "Bicycle system adequacy is defined as providing a low Level of Traffic Stress (LTS-2) for bicyclists."

The requirements for the Bicycle System Adequacy test are described in the Spring 2021 Local Area Transportation Review (LATR) Guidelines:

The applicable value for the proposed development would be 750' based on person trip generation between 100-199 and location within an Orange Policy Area. The Bicycle Adequacy Test Scoping Table is located within the 2021 LATR Guidelines on page 49.

There are no existing bicycle pathways along Bradley Boulevard, 750' from the site.

Bicycle Facilities

There are no bicycle facilities within the study area. However, the Bicycle Master Plan calls for a striped and separated bikeway on Bradley Boulevard between Seven Locks Road and Fernwood Road. The Bicycle Master Plan is shown on Figure 11.

Recommendations/Mitigations

As mentioned in the Pedestrian Level of Comfort Recommendations/Mitigation section, a shared use path, for both bicyclists and pedestrians, is recommended for the north side of Bradley Boulevard from the bus stop at Redwood Avenue to the bus stop at Oak Forest Lane, approximately 1,000' in length.

Pedestrian System Adequacy

As previously discussed, the Pedestrian System Adequacy Test consists of the following three components:

- Pedestrian Level of Comfort (PLOC)
- Street Lighting
- ADA Compliance

Pedestrian Facilities

The following provides a breakdown of sidewalk availability at the study intersections:

Intersection 1: Bradley Boulevard (MD 191) / Site Access

East Leg (Bradley Boulevard – MD 191)
- South Side: Existing: No sidewalk provided.
- North Side: Existing: No sidewalk provided.

South Leg (Site Access Driveway)
- East Side: Existing: No sidewalk provided.
- West Side: Existing: No sidewalk provided.

West Leg (Bradley Boulevard – MD 191)
- North Side: Existing: No sidewalk provided.
- South Side: Existing: No sidewalk provided.

Intersection 2: Bradley Boulevard (MD 191) / Seven Locks Road

East Leg (Bradley Boulevard – MD 191)
- North Side: Existing: Sidewalk provided.
- South Side: Existing: Sidewalk provided.

South Leg (Seven Locks Road)
- East Side: Existing: Sidewalk provided.
- West Side: Existing: Sidewalk provided.

West Leg (Bradley Boulevard – MD 191)
- North Side: Existing: Sidewalk provided.
- South Side: Existing: Sidewalk provided.

North Leg (Seven Locks Road)
- East Side: Existing: Sidewalk provided.
- West Side: Existing: Sidewalk provided.

Intersection 3: Bradley Boulevard (MD 191) / Burdette Road

East Leg (Bradley Boulevard – MD 191)
- North Side: Existing: No sidewalk provided.
- South Side: Existing: No sidewalk provided.

South Leg (Burdette Road)
- East Side: Existing: No Sidewalk provided.
- West Side: Existing: No sidewalk provided.

West Leg (Bradley Boulevard – MD 191)
- North Side: Existing: No sidewalk provided.
- South Side: Existing: No sidewalk provided.

North Leg (Burdette Road)
- East Side: Existing: No sidewalk provided.
- West Side: Existing: No sidewalk provided.

Intersection 4: Bradley Boulevard (MD 191) / Fernwood Road

East Leg (Bradley Boulevard – MD 191)
- South Side: Existing: No sidewalk provided.
- North Side: Existing: No sidewalk provided.

South Leg (Fernwood Road)
- East Side: Existing: No sidewalk provided.

West Side: Existing: No sidewalk provided.

West Leg (Bradley Boulevard – MD 191)
South Side: Existing: No sidewalk provided.
North Side: Existing: No sidewalk provided.

North Leg (Fernwood Road)
East Side: Existing: No sidewalk provided.
West Side: Existing: No sidewalk provided.

Crosswalks and curb ramps are provided at one study intersection as shown on Figure 12. Pedestrian signal heads with accompanying push buttons are provided wherever marked crosswalks are provided at the signalized intersections. Marked crosswalks are provided for all four (4) legs of the Seven Locks Road intersection at Bradley Boulevard (MD 191).

The crossing times were reviewed for the "walk" and "flashing don't walk" indicators. The "don't walk" indicator illuminates when the respective green cycle changes to amber. The pedestrian then has the amber and all-red phase of the cycle to complete the crossing, approximately an additional five (5) to seven (7) seconds.

Table 7 presents a summary of the crossing distances for each leg of the Bradley Boulevard / Seven Locks Road intersection, as well as the required crossing times and the provisions of crossing time for those legs based on the signal timing plans obtained from MCDOT. As shown, there is adequate "Walk" time plus "Flashing Don't Walk" time available for pedestrians to cross within the crosswalks on each street.

When considering only the "Flashing Don't Walk" time, there is adequate time to cross within crosswalks on each street as well.

Pedestrian Level of Comfort (PLOC)

The requirements for the PLOC portion of the Pedestrian Adequacy Test are described in the Spring 2021 Local Area Transportation Review (LATR) Guidelines:

The applicable value for the proposed development would be 750' in all directions based on person trip generation between 100-199 and location within an Orange Policy Area. The Pedestrian Adequacy Test Scoping Table is located within the 2021 LATR Guidelines on page 46.

Existing PLOC for the subject site area was not available on Montgomery County's website viewer: https://mcatlas.org/pedplan/ Therefore, field observations were made to identify the PLOC within the PLOC study boundary.

Figure 15 shows the existing PLOC along with the applicable 750' from the site boundary. The following applicable deficiencies (beyond somewhat or very comfortable scores) have been identified within the 750' walkshed of the proposed development boundary:

Roadway:

Bradley Boulevard: Much of the section between Redwood Avenue and Oak Forest Lane and beyond does not provide a pedestrian pathway on either side of the roadway and is rated as "Undesirable".

As shown on Figure 15, Bradley Boulevard is a non-urban roadway without pedestrian sidewalk or pathway on majority of the road, and has a posted speed limit of 35 mph. Per the Montgomery Planning Pedestrian Level of Comfort Methodology, Version 1.2 (Section V - Pathway Evaluation Table), Bradley Boulevard has a score of 4, which is considered undesirable.

Recommendations/Mitigations

The Pedestrian Level of Comfort is below the county standards; therefore, mitigation is required. However, there is little to no Rights of Way (ROW) on the south side of Bradley Boulevard. Therefore, a shared use path, for both bicyclists and pedestrians, is recommended for the north side of Bradley Boulevard from the bus stop at Redwood Avenue to the bus stop at Oak Forest Lane, approximately 1,000' in length.

Streetlight Inventory

Streetlights are located within the study area as depicted on Figure 14. The inventory was prepared via field observations. A field survey during evening hours showed that all light fixtures were operational.

Street Lighting

The requirements for the Street Lighting portion of the Pedestrian Adequacy Test are described in the Spring 2021 Local Area Transportation Review (LATR) Guidelines:

The applicable value for the proposed development would be 750' in all directions from the property for approximately based on person trip generation between 100-199 and location within an Orange Policy Area.

Recommendations/Mitigations

A field verified inventory of streetlights along Bradley Boulevard, within the 750' study area boundary, is provided on Figure 14, and photos of each streetlight are provided in Appendix B. The streetlight functionality was field verified during evening hours and all lights are functioning. Therefore, no mitigation is required.

ADA Compliance

The requirements for the ADA Compliance portion of the Pedestrian Adequacy Test are described in the 2021 Local Area Transportation Review (LATR) Guidelines:

The applicable value for the proposed development would be one-half of 750' (375') based on person trip generation between 100-199 and location within an Orange Policy Area.

There are no ADA ramps or sidewalks located within the ADA study area along Bradley Boulevard.

Recommendations/Mitigations

No mitigations are required.

Bus Transit System Adequacy

The site is directly served by the following bus service east and west of the site (Bus stop locations shown on Figure 13):

RideOn 36 (Information regarding RideOn Route 36 is provided in Appendix H.)

- RideOn 36 Bus Stop (WB and EB) along Bradley Boulevard at Oak Forest Lane, providing service to and from the development, RideOn 36 Bus Stop (WB and EB) along Bradley Avenue at Redwood Avenue.
- Bethesda Metrorail Station and River Road.

Bus shelters are not provided in the vicinity of the subject property.

The requirements for the Bus Transit Adequacy test are described in the Spring 2021 Local Area Transportation Review (LATR) Guidelines:

The applicable requirement for the proposed development would be two (2) shelters within 1,000 feet of the site based on person trip generation between 100-199 and location within an Orange Policy Area. The Bus Transit Adequacy Test Scoping Table is located within the 2021 LATR Guidelines on page 52.

The existing bus transit stops within the study area are shown on Figure 13. None of the existing bus stops within the study area currently include bus shelters. Photos of each of the existing bus transit stops within the study area are provided in Appendix B.

Recommendations/Mitigations

The project does not pass the bus transit system adequacy test. Therefore, it is recommended that two (2) bus shelters should be constructed within 1000' of the site property.

Vision Zero Statement

The LATR Vision Zero Statement requirement consists of the following:

> "All LATR studies for a site that will generate 50 or more peak-hour person trips must develop a Vision Zero Statement. This statement must assess and propose solutions to high injury network and safety issues, review traffic speeds, and describe in detail how safe site access will be provided. With concurrence of the responsible agency, projects must implement or contribute to the implementation of safety countermeasures. The County Council may adopt predictive safety analysis as part of this statement, when available."

1. *"Review High Injury Network segments: Document any segments on the High Injury Network (HIN) that are within a certain distance of the site frontage, as specified in Table 1."*

The subject study area does not include any segments identified as High Injury Network segments by Montgomery County.

2. *"Assess proximate safety issues: Review the crash history for all segments and crossings within a certain distance of the site frontage, as specified in Table 1."*

One crash was identified during the scoping process for inclusion in the study. A crash report (MCP2942000P), which was within 750' of the site, was identified by M-NCPPC Staff. The incident occurred on June 26, 2015, at the Bradley Boulevard/Oak Forest Lane intersection and consisted of a rear-end collision between a bicyclist and a driver. No severe injuries were reported.

3. *"Review traffic speeds: Conduct speed studies within a certain distance from the site frontage, specified in Table 1. Locations and timing for the speed study will be determined by Planning staff in collaboration with MCDOT staff and will prioritize filling in gaps in the inventory of speed studies. Relevant speed studies that have been completed within the past three years may be used to fulfill this requirement if gaps do not remain in the inventory of speed studies."*

Per Table 1 from the LATR Vision Zero Statement Guidelines, up to six (6) speed studies could be required for the subject application. During the scoping process, four (4) speed study locations were identified as follows:

1. Bradley Blvd: I-495 ⇄ Redwood Ave
2. Bradley Blvd: Burdette Rd ⇄ Fernwood Road
3. Burdette Rd: Greentree Rd ⇄ Bradley Blvd
4. Burdette Rd: Hillmead Road ⇄ Bradley Blvd

The studies began on May 18, 2021, at 12:00 AM and concluded on May 20, 2021, lasting a total of 48 hours. Traffic statistics were recorded in 15-minute time periods. For each study location, two mechanical counters were used for redundancy, and the average speeds were

calculated between them. As shown on Table 8, the 85th percentile speed for vehicles driving along Bradley Boulevard was in excess of the 35-mph posted speed limit.

4. *"Describe site access: Address the safety issues identified in steps 1 through 3 and describe how site circulation promotes safety, outlining how safe access will be provided to the site. Note if the applicant is contributing a fee in lieu of constructing a countermeasure. Reference the Vision Zero Community Toolkit (forthcoming) or national best practices and research in outlining the appropriate treatments to address identified safety issues."*

No changes to the existing site access are proposed with the subject modification. As shown on the site plan (Figure 1), significant on-site storage is available for stacking within the existing drive aisles.

Table 7

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Pedestrian Crossing Times

Pedestrian Crossing	Leg of Intersection	Distance of Pedestrian Crossing* (feet)	Time needed for 3.5 feet/sec (seconds)	Clearance Time Reduction (seconds)	Net Crossing Time Required[2] (seconds)	Walk (seconds)	Flashing-don't walk (seconds)	Total Walk Time[3] (seconds)	Adequate time provided at rate of 3.5 ft/sec? With respect to Walk + Flash Don't Walk	Adequate time provided at rate of 3.5 ft/sec? With respect to Flash Don't Walk
1: Bradley Boulevard (MD 191) / Seven Locks Road										
Across Bradley Boulevard (MD 191)	East	66	19.0	6	13.0	7	15	22	**Yes**	**Yes**
Across Bradley Boulevard (MD 191)	West	52	15.0	6	9.0	7	15	22	**Yes**	**Yes**
Across Seven Locks Road	South	53	15.0	6	9.0	7	14	21	**Yes**	**Yes**
Across Seven Locks Road	North	63	18.0	6	12.0	7	14	21	**Yes**	**Yes**

Notes:

(1) Based on existing single timings obtained from Montgomery County DOT or field observations.

(2) Net Crossing Time Required = Time needed for 3.5 feet/sec - Clearance Time Reduction

(3) Total Walk Time = Walk + Flash Do Not Walk Time

* Distance from curb to far edge of traveled lane

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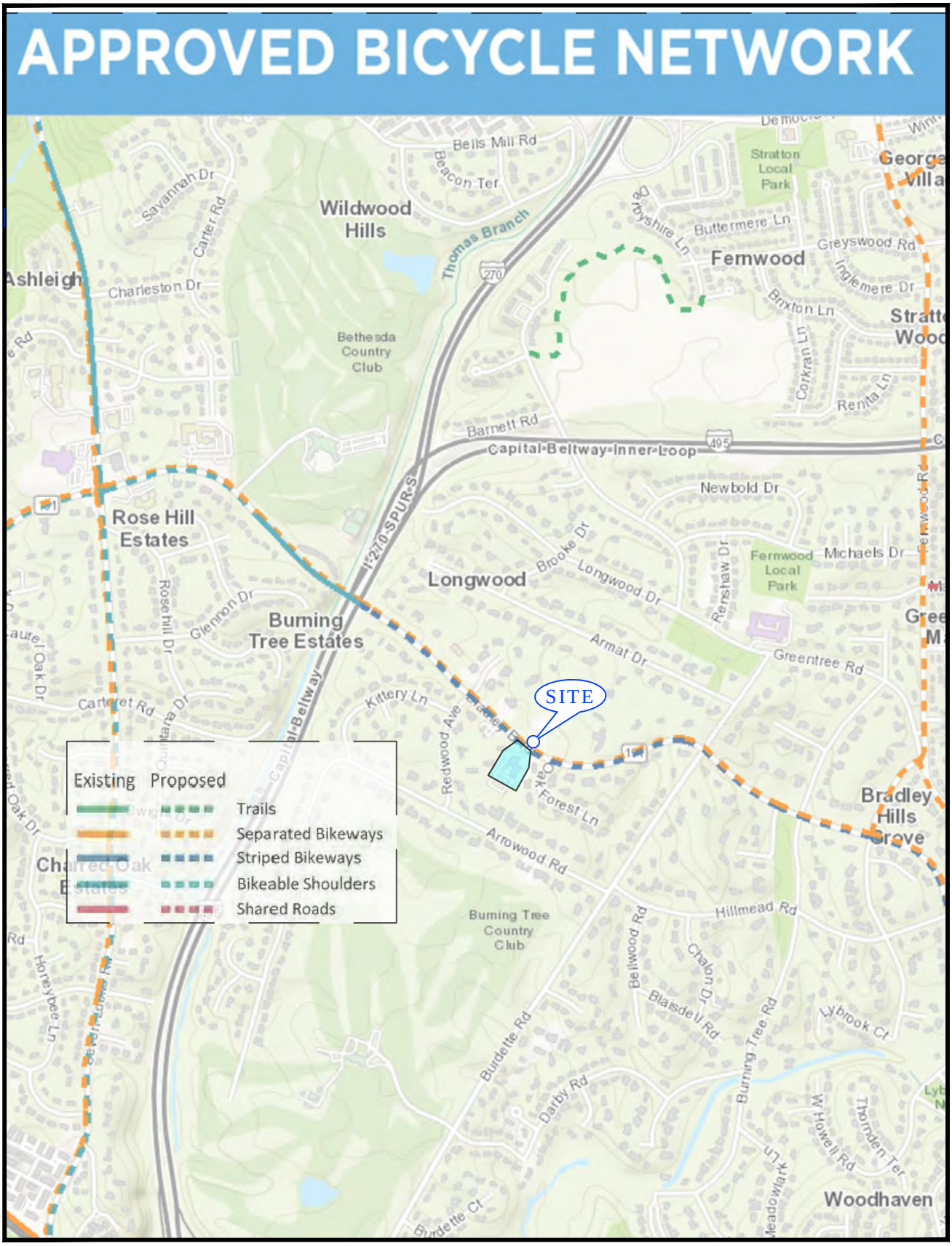

Figure 11
Bicycle Master Plan

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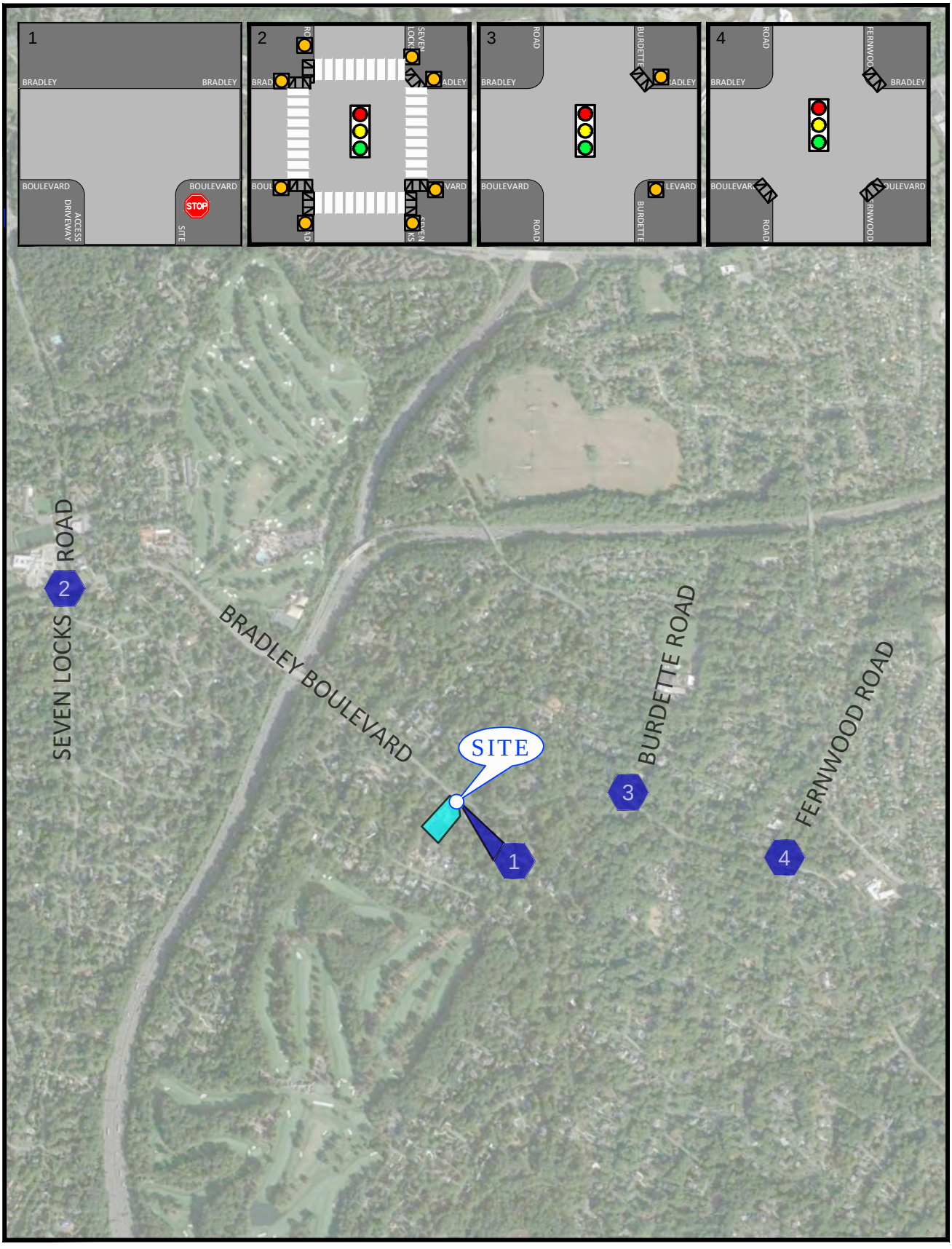

Figure 12
Pedestrian Facilities

Signalized Intersection
Stop Sign
ADA Ramp
Pedestrian Signal Head with Push Button
Pedestrian Crosswalk

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Figure 13
RideOn Bus Stop Locations

X Ride-On Bus Stop

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Figure 14
Streetlight Locations

X Existing Streetlight Location

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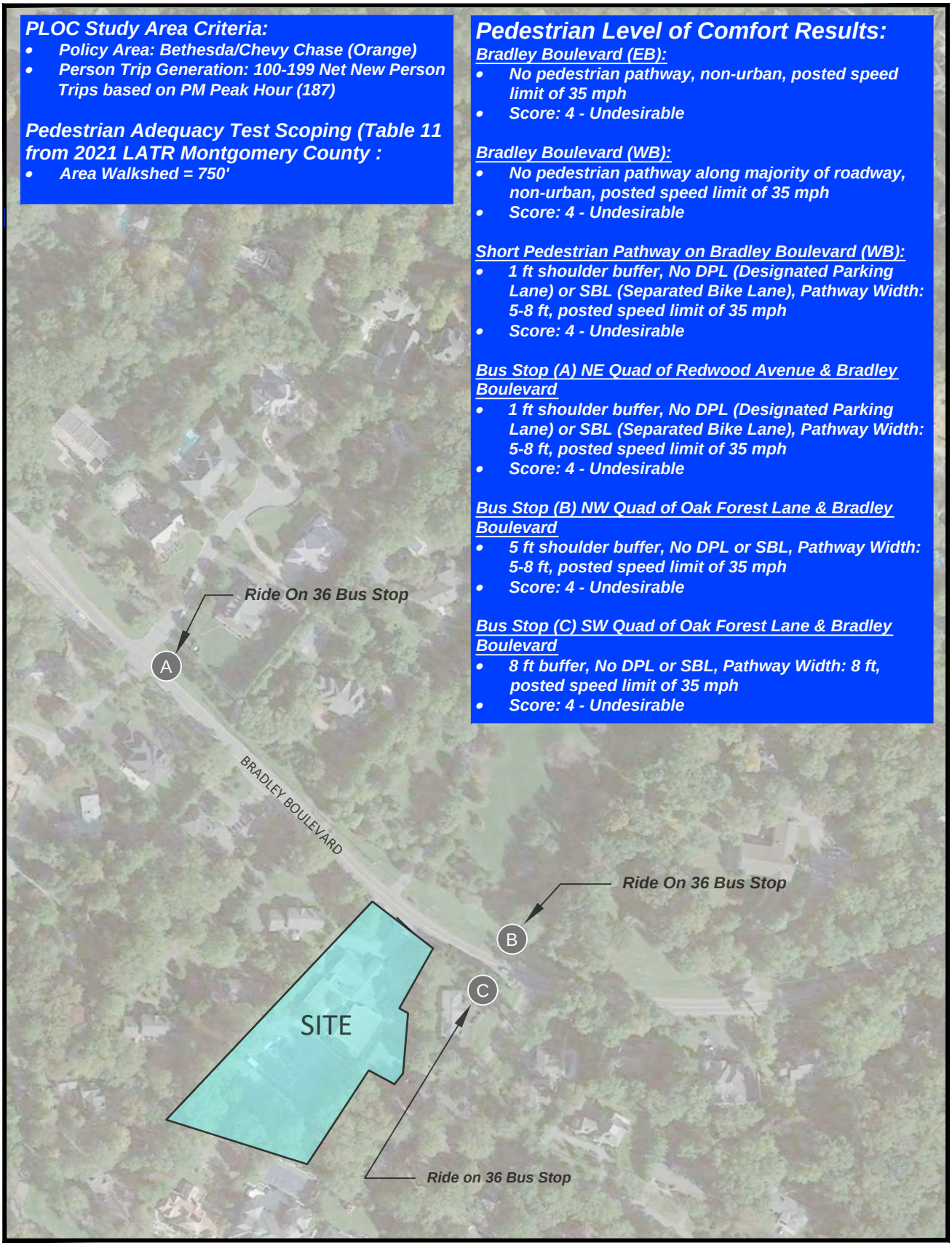

Figure 15
Pedestrian Level of Comfort Study

X Ride-On Bus Stop

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Table 8

Higher Ground Education, Inc

Summary of Speed Study

Counter Label	Road	Direction	Road Segment Between		10-Mile Per Hour Pace (mph)	Avg. Speed (mph)	85th Percentile (mph)	48-hr Volume (veh)	ADT	Speed Limit (mph)
358	Burdette Road	NB	Hillmeade Road	Bradley Boulevard	15-24 mph	22	26.35	1422	711	35
1064		NB			15-24 mph	20	24.39	1451	726	35
LOCATION "A-NB"				**Average**		**21**	**25.37**	**1436.5**	**718**	
641	Burdette Road	SB	Hillmeade Road	Bradley Boulevard	20-29 mph	24	28.59	1580	790	35
1264		SB			20-29 mph	24	28.75	1574	787	35
LOCATION "A-SB"				**Average**		**24**	**28.67**	**1577**	**789**	
366	Burdette Road	NB	Greentree Road	Bradley Boulevard	20-29 mph	21	27.61	1598	799	35
876		NB			15-24 mph	22	27.29	1597	799	35
LOCATION "B-NB"				**Average**		**22**	**27.45**	**1597.5**	**799**	
1134	Burdette Road	SB	Greentree Road	Bradley Boulevard	15-24 mph	22	27.31	1711	856	35
1212		SB			15-24 mph	21	25.65	1145	573	35
LOCATION "B-SB"				**Average**		**22**	**26.48**	**1428**	**714**	
588	Bradley Boulevard	EB	Burdette Road	Fernwood Road	30-39 mph	34	41.63	7767	3884	35
1211		EB			30-39 mph	36	43.14	7787	3894	35
LOCATION "C-EB"				**Average**		**35**	**42.39**	**7777**	**3889**	**Exceeds**
589	Bradley Boulevard	WB	Burdette Road	Fernwood Road	30-39 mph	35	40.94	7415	3708	35
875		WB			30-39 mph	33	38.98	7493	3747	35
LOCATION "C-WB"				**Average**		**34**	**39.96**	**7454**	**3727**	**Exceeds**
1202	Bradley Boulevard	WB	Beltway	Redwood Avenue	40-49 mph	45	52.25	7148	3574	35
2569		WB			35-44 mph	41	47.86	7144	3572	35
LOCATION "D-WB"				**Average**		**43**	**50.06**	**7146**	**3573**	**Exceeds**
1263	Bradley Boulevard	EB	Beltway	Redwood Avenue	35-44 mph	24	48.75	7653	3827	35
6064		EB			35-44 mph	41	47.18	7513	3757	35
LOCATION "D-EB"				**Average**		**33**	**47.97**	**7583**	**3792**	**Exceeds**

Section 5
CONCLUSIONS

The Special Exception Modification proposes to change the current hours of operation from 9:00 AM to 3:20 PM (existing) to 7:00 AM to 7:00 PM (proposed) with a capacity of up to 180 children/students the subject property is located in the Bethesda/Chevy Chase Policy Area (Orange) of Montgomery County.

- The proposed modification is expected to result in 156 new AM person trips and 187 new PM person trips resulting in approximately 94 new AM auto driver (vehicle) trips and 113 new PM auto driver (vehicle) trips.
- The AM and PM peak vehicle delays and/or CLVs at the study intersections operate well within the Bethesda/Chevy Chase Policy Area congestion standard of 80.0 seconds/vehicle and Potomac Policy Area CLV congestion, under existing, background and total future conditions. Therefore, no mitigation is required by this application to pass the motor vehicle adequacy test.
- The site does not pass the Bicycle System Adequacy Test within the applicable study area. A shared use path for both bicyclists and pedestrians is recommended for the north side of Bradley Boulevard from Redwood Avenue to Oak Forest Lane, between the two proposed bus shelters.
- There are no existing ADA ramps or sidewalks within the required study area. Therefore, no ADA corrective measures are needed.
- Using the Montgomery's Pedestrian Level of Comfort Methodology (Version 1.2), the pathways of the study area for this development were considered undesirable due to the lack of pedestrian facilities. As mentioned in the Bicycle System Adequacy Test section, a shared use path is recommended for the north side of Bradley Boulevard from Redwood Avenue to Oak Forest Lane, between the two proposed bus shelters.
- The site is served by RideOn bus service (Routes 36) with two (2) bus stops (without shelters) within 1000' of the site. The Bus Transit Adequacy Test requires the installation of two bus shelters.

APPENDIX A
SCOPING LETTER
(WITH MAP ADJUSTMENTS TO SCOPE DUE TO STUDENT POPULATION DECREASE)

MONTGOMERY COUNTY PLANNING DEPARTMENT
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Local Area Transportation Review

TRANSPORTATION IMPACT STUDY SCOPE OF WORK AGREEMENT

Updated Winter 2021

Scoping Approval - Prior to initiating a Local Area Transportation Review study or supplemental traffic study, scoping *must be approved* by relevant agencies, including the Planning Department, the Montgomery County Department of Transportation, and the State Highway Administration (where relevant). It is the responsibility of the Applicant to obtain approval, which is demonstrated below via signature or electronic signature of the relevant agency representatives. Generally, the Applicant should anticipate a turnaround time of ten (10) business days for form review. Substantially large projects may require additional time and/or may warrant a scoping meeting.

Montgomery County Planning Department
Name (print): _____ Signature: _____ Date: _____

Montgomery County Department of Transportation
Name (print): _____ Signature: _____ Date: _____

State Highway Administration (where relevant)
Name (print): _____ Signature: _____ Date: _____

Applicant Contact Information	
Transportation Consultant (company, contact name, email, and phone number)	William L. Zeid, PE - Wells + Associates - wlzeid@wellsandassociates.com - C: (571) 466-6605 Christine G. Bairan, EIT - Wells + Associates - cgbairan@wellsandassociates.com - C: (510) 750-8743
Name of Applicant / Developer	Higher Learning Education

Project Information *Include Tables/Graphics, As Needed*				
Project Name (include plan no. if known)	7108 Bradley Blvd - Higher Learning Education			
Project Location (include address if known)	7108 Bradley Blvd			
Policy Area(s) (subdivision staging policy map)	Bethesda/Chevy Chase	Master Plan(s) / Sector Plan Area(s)		
Application Type(s)	☐Preliminary Plan	☐ Site Plan	☐ Sketch/Concept/Pre-Preliminary (Optional)	☐ Amendment
	☒ Conditional Use (formerly special exception)	☐ Local Map Amendment	☐ APF at Building Permit	☐ Other:

Project Description & Previous Approvals (proposed land uses, zoning, no. of units, square footage, construction phasing, prior approvals and proposals, existing uses, site operations, year built, status of Adequate Public Facilities [APF], other relevant info)	The Conditional Use for 7108 Bradley Boulevard (the "Property") was originally approved in 1998 and thereafter modified in 2000. Our client is proposing to modify the long-standing Special Exception. The use will remain unchanged – the Property will continue to be used as a Private Education Institution. However, our client is seeking to modify the hours of operation, from the current hours of 9:00 AM to 3:30 PM to 7:00 AM to 7:00 PM with no more than 200 children/students. The existing occupied building and parking lot will not be enlarged.
1.Site Access (proposed access location(s), existing/adjacent/opposite curb cuts, interparcel connections, access configurations and restrictions, internal circulation, private roads, parking/loading areas, other relevant info)	The site is accessed via an existing site driveway located along the south side of Bradley Boulevard (MD 191). No changes to the existing site access are proposed.

2.Transportation Analysis Requirement	☒ Transportation Impact Study Generates 50 or more total weekday peak hour person trips (vehicular, transit, bicycle, and/or pedestrian) with no reductions other than a credit for existing developments over 12 years old, *AND* is outside of the White Flint and White Oak Policy Areas. Fill out remainder of this form and include in transportation impact study appendix.	☐ Transportation Study Exemption Statement Generates 49 or fewer total weekday peak hour person trips (vehicular, transit, bicycle, and/or pedestrian) with no reductions other than a credit for existing developments over 12 years old, *OR* within White Flint and White Oak Policy Areas.

3.Project-based Transportation Demand Management Plan Required (see Chapter 42, Articles I and II)	☒ No	☐ Yes (In Transportation Management District [TMD])	☐ Amend Existing TMAg
4.Established Transportation Management District (TMD)?	☒ No	☐ Yes TMD Name: _____	

Transportation Impact Study Assumptions	*Include Tables/Graphics, As Needed*	
5.Study Years / Phases	Existing Year: 2021	Phases / Build-out Year(s): 2022
6.Study Periods	☒ AM ☒ PM ☐ Mid-day ☐ Saturday ☐ Sunday ☐ Other: _____	

<table>
<tr><td>7.Study Intersections
(For projects generating 50 or more person trips, list all signalized & significant unsignalized intersections, and site driveways traffic counts must be collected within 12-months of completed and accepted application)</td><td colspan="5"># of tiers of intersections to study (refer current LATR Guidelines): 1-Tier
For the purpose of determining the number of tiers of study intersections, trip calculation for the subject site should also include nearby unbuilt properties in common ownership. No trip reductions should be taken in this calculation other than a credit for existing developments over 12 years old.
1) Bradley Blvd (MD 191)/Site Access (Rochambeau French International School)
2) Bradley Blvd (MD 191)/Seven Locks Road
3) Bradley Blvd (MD 191)/Burdette Road
4) Bradley Blvd (MD 191)/Fernwood Road
5)
6)
7)
8)
9)
10)
11)
attach more rows if necessary</td></tr>
<tr><td>8.Trip Generation
(clearly cite sources and methodology including use of average rates vs. equation; include trip generation for existing site, current approvals, proposed uses, and net changes)</td><td colspan="5"><table><tr><th>Total Person Trips</th><th>Vehicle Trips*
(Auto Driver)</th><th>Transit Trips*</th><th>Walking Trips*
(non-motorized + transit)</th><th>Bicycling Trips*
(non-motorized)</th></tr><tr><td>AM: 177
PM: 207</td><td>AM: 107
PM: 125</td><td>AM: 22
PM: 26</td><td>AM: 40
PM: 46</td><td>AM: 18
PM: 20</td></tr></table>* Only required if total peak hour person trips are 50 or more in either the AM or PM peak hour. Sum of all vehicle, transit, and non-motorized trips shall be the equivalent of total person trips. Use table at the end of the form to show all calculations and assumptions for mode breakout.</td></tr>
<tr><td>9.Trip Reductions
(include justification and supporting documentation for internal capture, pass-by, diverted, Transportation Demand Management)</td><td colspan="5">No reductions proposed at this time.</td></tr>
<tr><td>10.Trip Distribution %
(include a map of the proposed project in addition to a list or table)</td><td colspan="5">Same as prior approved study -
60 percent to from east on Bradley Boulevard
40 percent to from west on Bradley Boulevard- At Seven locks road/Bradley Blvd 15 percent to north 15 percent to west and 10 percent to south</td></tr>
<tr><td>11.Pipeline Developments to be considered as background traffic
(include name, plan #, land uses, and sizes for approved but unbuilt developments or concurrently pending applications; info can be obtained from the M-NCPPC Pipeline website: - website is updated quarterly)</td><td colspan="5">WMAL Bethesda #820170170
Andrus Property #120180130</td></tr>
<tr><td>12.Pipeline Transportation Projects to be considered as background condition
(fully funded for construction in County Capital Improvement Program, State Consolidated Transportation Program, developer projects, etc. within the next 6 years)</td><td colspan="5">No projects have been identified.</td></tr>
</table>

13. Vision Zero Statement	• Trigger: All LATR studies for a site that generates 50 or more weekday peak hour person trips must develop a Vision Zero Statement. • Requirements: The Vision Zero Statement consists of four components: 1. **Review High Injury Network segments:** Document any segments on the High Injury Network (HIN) that are within a certain distance of the site frontage. 2. **Assess proximate safety issues:** Review the crash history for all segments and crossings within a certain distance of the site frontage. 3. **Review traffic speeds:** Conduct speed studies within a certain distance from the site frontage. 4. **Describe site access:** Address the safety issues identified in steps 1 through 3 and describe how site circulation promotes safety, outlining how safe access will be provided to the site. The applicant should refer to the *LATR Guidelines* to determine the applicable scoping distance pertaining to steps 1 through 3 and requirements pertaining to steps 1 through 4.

Preliminary Mitigation Analysis		***Refer to the LATR Guidelines for details on how to mitigate***
14.Vehicular Analysis	☒ Vehicular Analysis Anticipated (Vehicular mitigation to be determined after study)	• TEST: The motor vehicle adequacy test will not be applied in "Red" policy areas and these areas will not be subject to LATR motor vehicle mitigation requirements. If the plan generates 50 or more weekday peak hour person trips, HCM Analysis is required to be provided for all intersections analyzed in studies for: 1) "Orange" policy areas, and 2) intersections with a CLV of more than 1,350 in "Yellow & Green" policy areas. 3) **With the exception of intersections located within "Red" policy areas, CLV analysis required for all intersections regardless of policy area. CLV assessment and signal timing worksheets are to be included in the study appendix.** • MITIGATION: The applicant must mitigate its impact on vehicle delay or down to the applicable policy area standard, whichever is less.
15.Pedestrian Analysis	☒ Pedestrian Mitigation Anticipated	• TEST: If the plan generates 50 or more weekday peak hour person trips, mitigation of surrounding pedestrian conditions is required. MITIGATION: Mitigation consists of three components: (1) **Pedestrian Level of Comfort (PLOC).** Pedestrian system adequacy is defined by providing a "Somewhat Comfortable" or "Very Comfortable PLOC score on streets and intersections for roads classified as Primary Residential or higher within a certain walkshed from the site. (2) **Street Lighting.** The applicant must evaluate existing street lighting based on MCDOT standards along roadways and paths from the development within a certain walkshed from the site frontage. Where standards are not met, the applicant must upgrade the street lighting to meet the applicable standard. (3) **ADA Compliance.** The applicant must fix ADA noncompliance issues within a certain walkshed from the site frontage equivalent to half the walkshed specified in

		the required scoping distance. The applicant should refer to the *LATR Guidelines* to determine the applicable scoping walkshed distance requirement for each component described above.
16.Bicycle Analysis	☒Bicycle Mitigation Anticipated	• TEST: If the plan generates 50 or more peak hour weekday person trips mitigation of surrounding bicycle conditions is required • MITIGATION: Required to ensure a low Level of Traffic Stress (LTS-2) on all existing transportation rights-of-way within a certain distance of the site frontage ; Alternatively, the project may provide a master planned improvement that provides an equivalent improvement in the level of traffic stress for cyclists within a certain distance of the site frontage. The applicant should refer to the *LATR Guidelines* to determine the applicable scoping distance requirement.
17.Bus Transit Analysis	☒ Transit Mitigation Anticipated	• TEST: If the plan generates 50 or more peak hour person trips mitigation of surrounding transit conditions is required. Projects located within "Green" policy areas are exempt from the bus transit adequacy test. • MITIGATION: Required to ensure that there are bus shelters outfitted with realtime traveler information displays and other standard amenities, along with a safe, efficient, and accessible path between the site and a bus stop, at a certain number of bus stops within a certain distance from the site. The applicant should refer to the *LATR Guidelines* to determine the applicable number of bus stop and scoping distance requirement.
Additional Analysis or Software Required	☒Queuing Analysis ☐ Signal Warrant Analysis ☐Weaving/Merge Analysis	☒Accident Analysis ☐ Synchro ☐SIDRA
		☐ VISSIM ☐ CORSIM ☐ Other _____

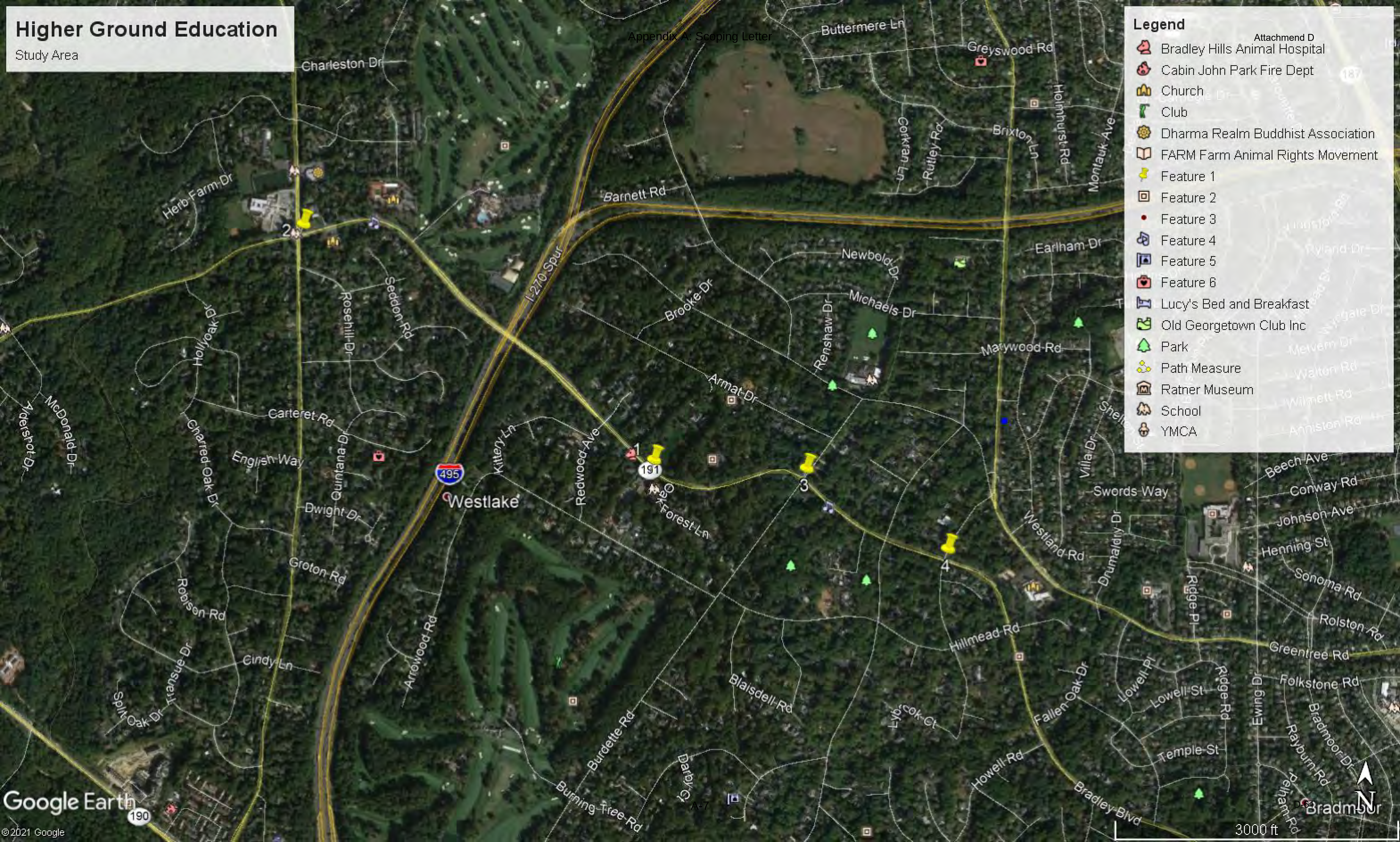
M-NCPPC Clarifications	**Additional Assumptions & Special Circumstances for Discussion**
• **Transportation impact study will comply** with all other requirements of the LATR Guidelines not listed on this form. • **If physical improvements are proposed as mitigation**, the transportation impact study will demonstrate feasibility with regards to right-of-way and utility relocation (at a minimum). • **If the development proposal significantly changes after this transportation impact study** scope has been agreed to, the Applicant will work with M-NCPPC staff to amend the scope to accurately reflect the new proposal. • **A receipt from MCDOT** showing that the transportation impact study review fee has been paid will be provided to M-NCPPC DARC at the time the development application is submitted. • **Minimum of seven paper copies** (more if near the County line or an incorporated City) and two PDF copies of the transportation impact study and appendices will be provided.	High Injury Network (HIN) Map Speed Studies - Maximum of 6 speed studies within 900' of the site

Site Trip Generation

Land Use	LUC	Amount	Unit	ITE Trip Generation [1] AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	LATR Mode Split Adjustments [2] AM Peak Hour Auto Driver	Auto Passenger	Transit	Non-Motorized	Pedestrian	Total Person Trips	PM Peak Hour Auto Driver	Auto Passenger	Transit	Non-Motorized	Pedestrian	Total Person Trips
Existing Uses																					
Existing use- pre French school[3]				35	22	57															
Proposed Uses																					
Private School (K-8)	534	200	Students	106	86	192	n/a	n/a	n/a												
Daycare	565	200	Students	n/a	n/a	n/a	74	84	158												
Net Trips (Proposed vs. Existing)				**71**	**64**	**135**	**74**	**84**	**158**	**107**	**30**	**22**	**18**	**40**	**177**	**125**	**35**	**26**	**20**	**46**	**207**

Note:

1. Trip generation calculated using ITE Trip Generation Manual, 10th edition
2. Mode Split assumptions based on the Bethesda/Chevy Chase Policy, other land use category
3. Based on site driveway counts conducted by Wells & Associates on Wednesday, March, 1998.
4. Since the PM equation from ITE has an R^2 less than 0.75, the rate was used.


Higher Ground Education
Study Area
Legend
Bradley Hills Animal Hospital
Cabin John Park Fire Dept
Church
Club
Dharma Realm Buddhist Association
FARM Farm Animal Rights Movement
Feature 1
Feature 2
Feature 3
Feature 4
Feature 5
Feature 6
Lucy's Bed and Breakfast
Old Georgetown Club Inc
Park
Path Measure
Ratner Museum
School
YMCA
1
2
3
4
Charleston Dr
Buttermere Ln
Greyswood Rd
Herb Farm Dr
Barnett Rd
I-270 Spur
Brixton Ln
Holmhurst Rd
Montauk Ave
Corkran Ln
Rutley Rd
Earlham Dr
Newbold Dr
Michaels Dr
Brooke Dr
Renshaw Dr
Marywood Rd
Seddon Rd
Rosehill Dr
Hollyoak Dr
Armat Dr
Carteret Rd
McDonald Dr
Aldershot Dr
Charred Oak Dr
English Way
Quintana Dr
Kittery Ln
Redwood Ave
495
191
Westlake
Dwight Dr
Oak Forest Ln
Swords Way
Villa Dr
Westland Rd
Drumaldry Dr
Beech Ave
Conway Rd
Johnson Ave
Henning St
Sonoma Rd
Rolston Rd
Greentree Rd
Folkstone Rd
Groton Rd
Robsen Rd
Cindy Ln
Transue Dr
Split Oak Dr
Arrowood Rd
Hillmead Rd
Blaisdell Rd
Burdette Rd
Darby Ct
Burning Tree Rd
Fallen Oak Dr
Lowell Pl
Lowell St
Ridge Pl
Ridge Rd
Ewing Dr
Temple St
Rayburn Rd
Bradmoor Dr
Howell Rd
Bradley Blvd
Bradmoor
190
Google Earth
© 2021 Google
3000 ft
N

APPENDIX A
STUDY AREAS OF MULTI-MODAL ADEQUACY TESTS BASED ON 200 STUDENTS

Project: Higher Learning (7108 Bradley Blvd)

Policy Area: Bethesda/Chevy Chase (Orange)

Person Trip Generation: 200-349 Net New Person Trips based on PM peak hour

Total Person Trips: AM Peak Hour – 177 / PM Peak Hour – 207

TL2.3 Pedestrian System Adequacy

1. Pedestrian Level of Comfort: From Table T4 – 900'
2. Street Lighting: From Table T4 = 900'
3. ADA Compliance: ½ of Table T4 – 450'

Table T4. Pedestrian Adequacy Test Scoping

Peak-Hour Person Trips Generated	Red and Orange Policy Area Walkshed*	Yellow and Green Policy Area Walkshed*
50 – 99	400'	250'
100 – 199	750'	400'
200 – 349	900'	500'
350 or more	1,000'	600'

* The maximum required length of sidewalk and streetlighting improvements beyond the frontage is 4 times the appropriate value in this column. The maximum span required for ADA improvements beyond the frontage is equal to the appropriate value in this column.

TL2.4 Bicycle System Adequacy

1. LTS-2: From Table T5 – 900'

Table T5. Bicycle Adequacy Test Scoping

Peak-Hour Person Trips Generated	Red and Orange Policy Areas	Yellow and Green Policy Areas
50 – 99	400'	250'
100 – 199	750'	400'
200 – 349	900'	500'
350 or more	1,000'	600'

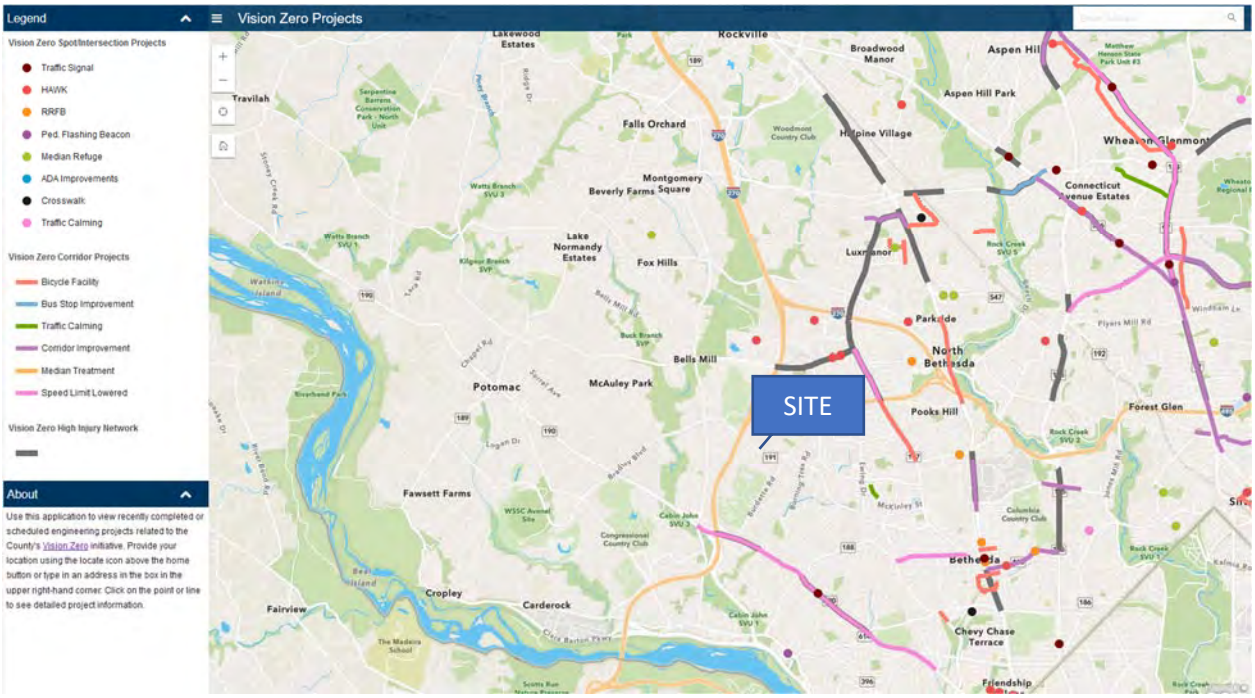
TL2.5 Bus Transit System Adequacy

1. Bus Shelters: From Table T6 – 3 shelters within 1,300'

Table T6. Transit Adequacy Test Scoping

Peak-Hour Person Trips Generated	Red and Orange Policy Areas	Yellow Policy Areas
50 – 99	2 shelters within 500'	1 shelters within 500'
100 – 199	2 shelters within 1,000'	2 shelters within 1,000'
200 – 349	3 shelters within 1,300'	2 shelters within 1,300'
350 or more	4 shelters within 1,500'	3 shelters within 1,500'

Vision Zero: Site is not located within a High Injury Network.



Crash Data: Per Table below: Within 900' of the site – One crash identified by M-NCPPC Staff.

4 Speed Studies identified by M-NCPPC Staff listed below. See attached.

1. Bradley Boulevard between the Beltway and Redwood Ave
2. Bradley Boulevard between Burdette Rd and Fernwood Rd
3. Burdette Road between Greentree Rd and Bradley Blvd
4. Burdette Road between Hillmead Rd and Bradley Blvd

Peak-Hour Person Trips Generated	Distance from Site Frontage		Max. Number of Speed Studies	
	Red and Orange Policy Areas	Yellow and Green Policy Areas	Red and Orange Policy Areas	Yellow and Green Policy Areas
50-99	400'	250'	2	1
100-199	750'	400'	4	2
200-349	900'	500'	6	3
350 or more	1,000'	600'	8	4

7108 Bradley Blvd - Higher Learning

1. Bradley Blvd (MD 191) / Site Access
2. Bradley Blvd (MD 191) / Seven Locks Rd
3. Bradley Blvd (MD 191) / Burdette Rd
4. Bradley Blvd (MD 191) / Fernwood Rd

Legend

- 900' Radius
- International School
- PLOC, Streelight, & LTS-2 Study Area
- Site 7108 Bradley Blvd

Kefauver Dr
Armat Dr
Kittery Ln
Kittery Ct
Redwood Ave
Oak Forest Ln
Burdette Rd
Arrowood Rd
191
1
3
N
900 ft
Google Earth
©2021 Google

7108 Bradley Blvd - Higher Learning

1. Bradley Blvd (MD 191) / Site Access
2. Bradley Blvd (MD 191) / Seven Locks Rd
3. Bradley Blvd (MD 191) / Burdette Rd
4. Bradley Blvd (MD 191) / Fernwood Rd

Legend

- 450' Radius
- ADA Compliance Study Area
- International School
- Site 7108 Bradley Blvd

Kittery Ln
Redwood Ave
Arrowood Rd
Oak Forest Ln
191
1
N
500 ft
Google Earth

7108 Bradley Blvd - Higher Learning

1. Bradley Blvd (MD 191) / Site Access
2. Bradley Blvd (MD 191) / Seven Locks Rd
3. Bradley Blvd (MD 191) / Burdette Rd
4. Bradley Blvd (MD 191) / Fernwood Rd

Legend

- 900' Radius
- Bicycle System Adequacy Study Area
- International School
- Site 7108 Bradley Blvd

Capital Beltway
Kittery Ln
Kittery Ct
Redwood Ave
Kefauver Dr
Armat Dr
Oak Forest Ln
Burdette Rd
Arrowood Rd
191
1
3
Google Earth
N

7108 Bradley Blvd - Higher Learning

1. Bradley Blvd (MD 191) / Site Access
2. Bradley Blvd (MD 191) / Seven Locks Rd
3. Bradley Blvd (MD 191) / Burdette Rd
4. Bradley Blvd (MD 191) / Fernwood Rd

Legend

- 1300' Radius
- Bus Transit System Adequacy Study Area
- International School
- Site 7108 Bradley Blvd

7108 Bradley Blvd - Higher Learning

1. Bradley Blvd (MD 191) / Site Access
2. Bradley Blvd (MD 191) / Seven Locks Rd
3. Bradley Blvd (MD 191) / Burdette Rd
4. Bradley Blvd (MD 191) / Fernwood Rd

Legend
- International School
- Site 7108 Bradley Blvd
- Speed Study

Brooke-Dr
Longwood-Dr
Michaels-Dr
Renshaw-Dr
Marywood-Rd
Greentree-Rd
Arfmat-Dr
I-270 Spur
495
Kittery-Ln
Kittery-Ct
Redwood-Ave
191
Oak-Forest-Ln
Burdette-Rd
Burning-Tree-Ct
Burning-Tree-Rd
Bradgrove-Dr
Bradgrove-Ct
Fernwood-Rd
Curry-Manor-Ct
Arrowood-Rd

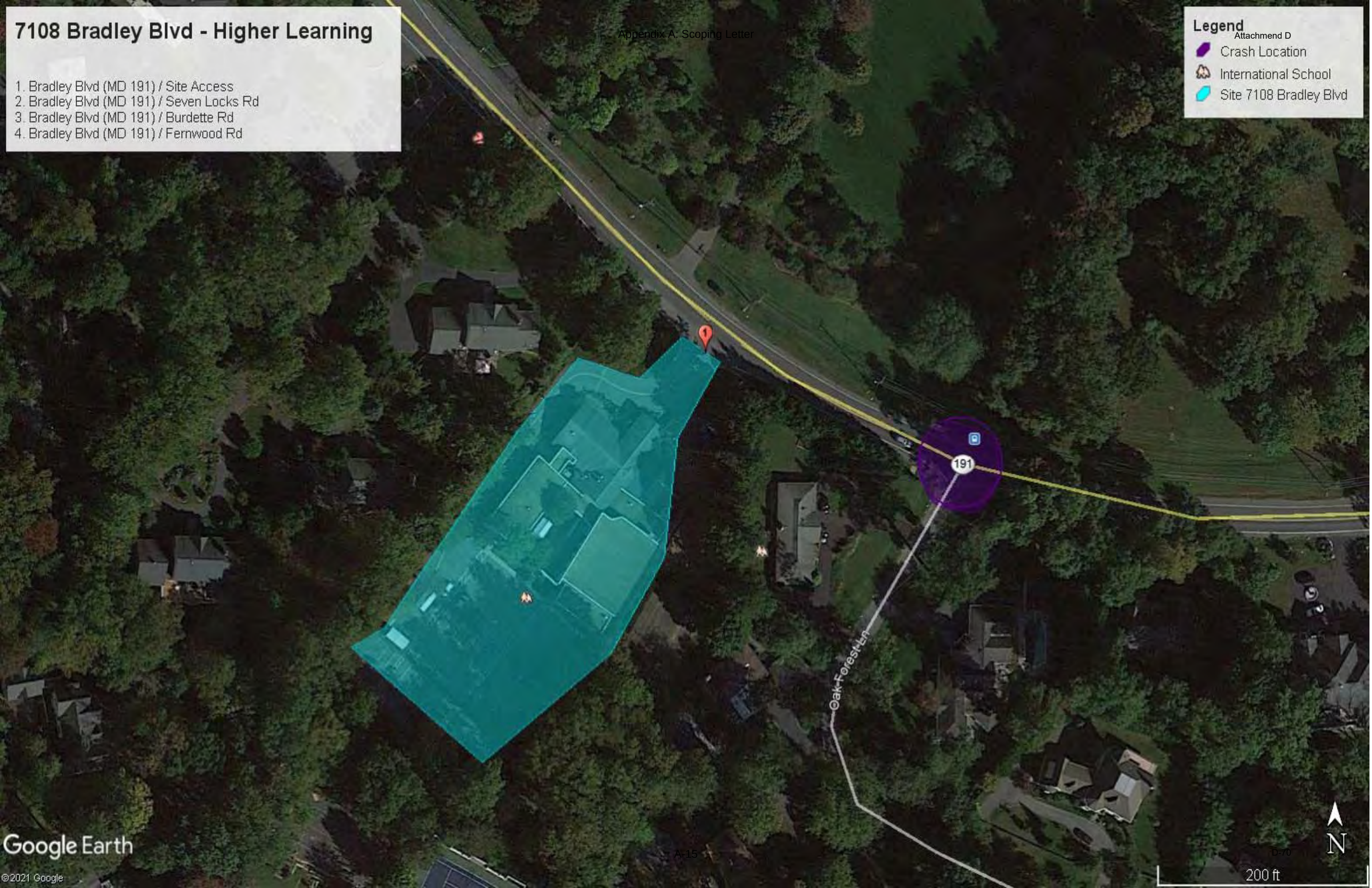
Google Earth

N
1000 ft

7108 Bradley Blvd - Higher Learning

1. Bradley Blvd (MD 191) / Site Access
2. Bradley Blvd (MD 191) / Seven Locks Rd
3. Bradley Blvd (MD 191) / Burdette Rd
4. Bradley Blvd (MD 191) / Fernwood Rd

Legend
- Crash Location
- International School
- Site 7108 Bradley Blvd



APPENDIX A
STUDY AREAS OF MULTI-MODAL ADEQUACY TESTS BASED ON 180 STUDENTS

Project: Higher Learning (7108 Bradley Blvd)

Policy Area: Bethesda/Chevy Chase (Orange)

Person Trip Generation: 100-199 Net New Person Trips based on PM peak hour

Total Person Trips: AM Peak Hour – 156 / PM Peak Hour – 187

TL2.3 Pedestrian System Adequacy

1. Pedestrian Level of Comfort: From Table T4 – 750'
2. Street Lighting: From Table T4 = 750'
3. ADA Compliance: ½ of Table T4 – 375'

Table T4. Pedestrian Adequacy Test Scoping

Peak-Hour Person Trips Generated	Red and Orange Policy Area Walkshed*	Yellow and Green Policy Area Walkshed*
50 – 99	400'	250'
100 – 199	750'	400'
200 – 349	900'	500'
350 or more	1,000'	600'

* The maximum required length of sidewalk and streetlighting improvements beyond the frontage is 4 times the appropriate value in this column. The maximum span required for ADA improvements beyond the frontage is equal to the appropriate value in this column.

TL2.4 Bicycle System Adequacy

1. LTS-2: From Table T5 – 750'

Table T5. Bicycle Adequacy Test Scoping

Peak-Hour Person Trips Generated	Red and Orange Policy Areas	Yellow and Green Policy Areas
50 – 99	400'	250'
100 – 199	750'	400'
200 – 349	900'	500'
350 or more	1,000'	600'

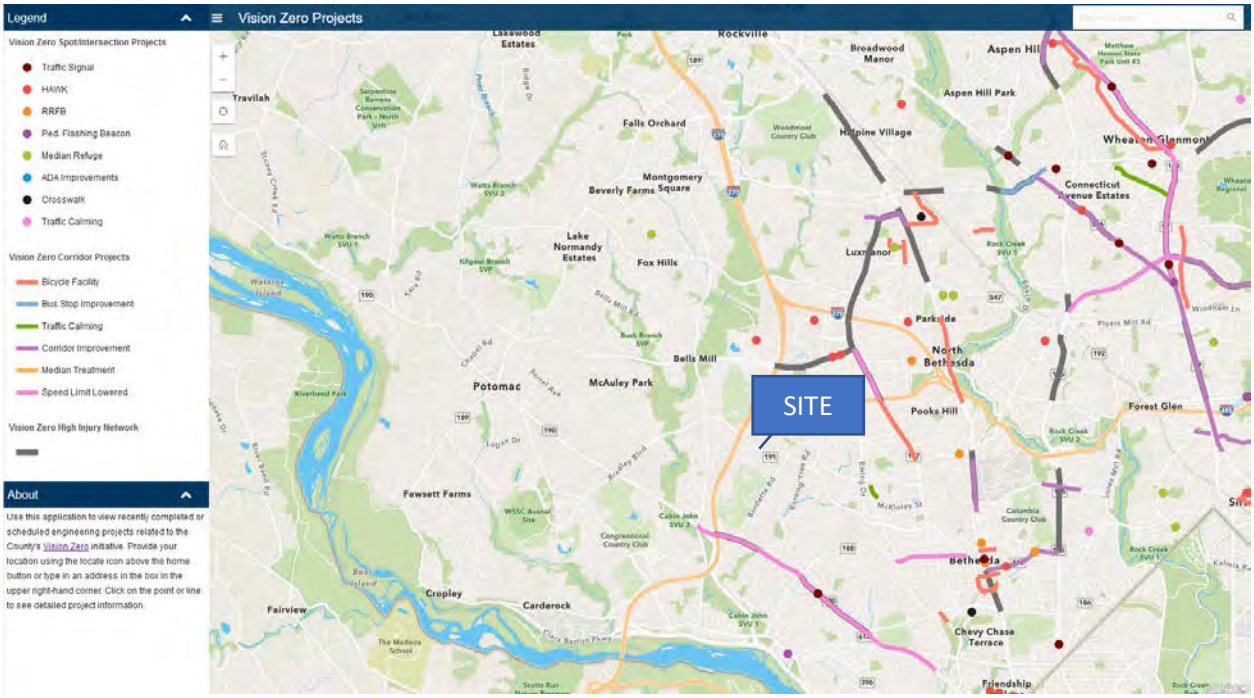
TL2.5 Bus Transit System Adequacy

1. Bus Shelters: From Table T6 – 2 shelters within 1,000'

Table T6. Transit Adequacy Test Scoping

Peak-Hour Person Trips Generated	Red and Orange Policy Areas	Yellow Policy Areas
50 – 99	2 shelters within 500'	1 shelters within 500'
100 – 199	2 shelters within 1,000'	2 shelters within 1,000'
200 – 349	3 shelters within 1,300'	2 shelters within 1,300'
350 or more	4 shelters within 1,500'	3 shelters within 1,500'

Vision Zero: Site is not located within a High Injury Network.



Crash Data: Per Table below: Within 750’ of the site – One crash identified by M-NCPPC Staff.

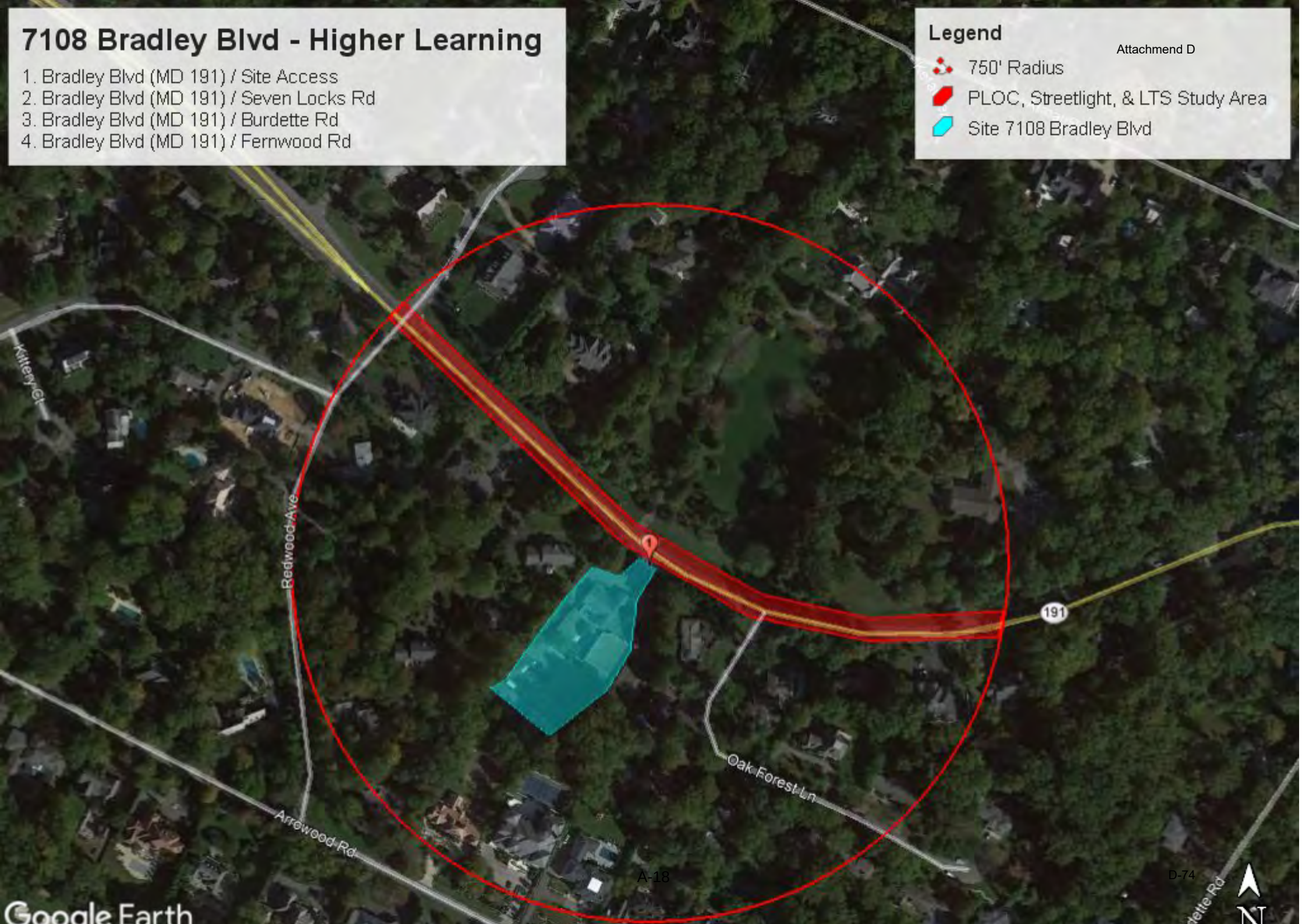
4 Speed Studies identified by M-NCPPC Staff listed below. See attached.

1. Bradley Boulevard between the Beltway and Redwood Ave
2. Bradley Boulevard between Burdette Rd and Fernwood Rd
3. Burdette Road between Greentree Rd and Bradley Blvd
4. Burdette Road between Hillmead Rd and Bradley Blvd

Peak-Hour Person Trips Generated	Distance from Site Frontage		Max. Number of Speed Studies	
	Red and Orange Policy Areas	Yellow and Green Policy Areas	Red and Orange Policy Areas	Yellow and Green Policy Areas
50-99	400’	250’	2	1
100-199	750’	400’	4	2
200-349	900’	500’	6	3
350 or more	1,000’	600’	8	4

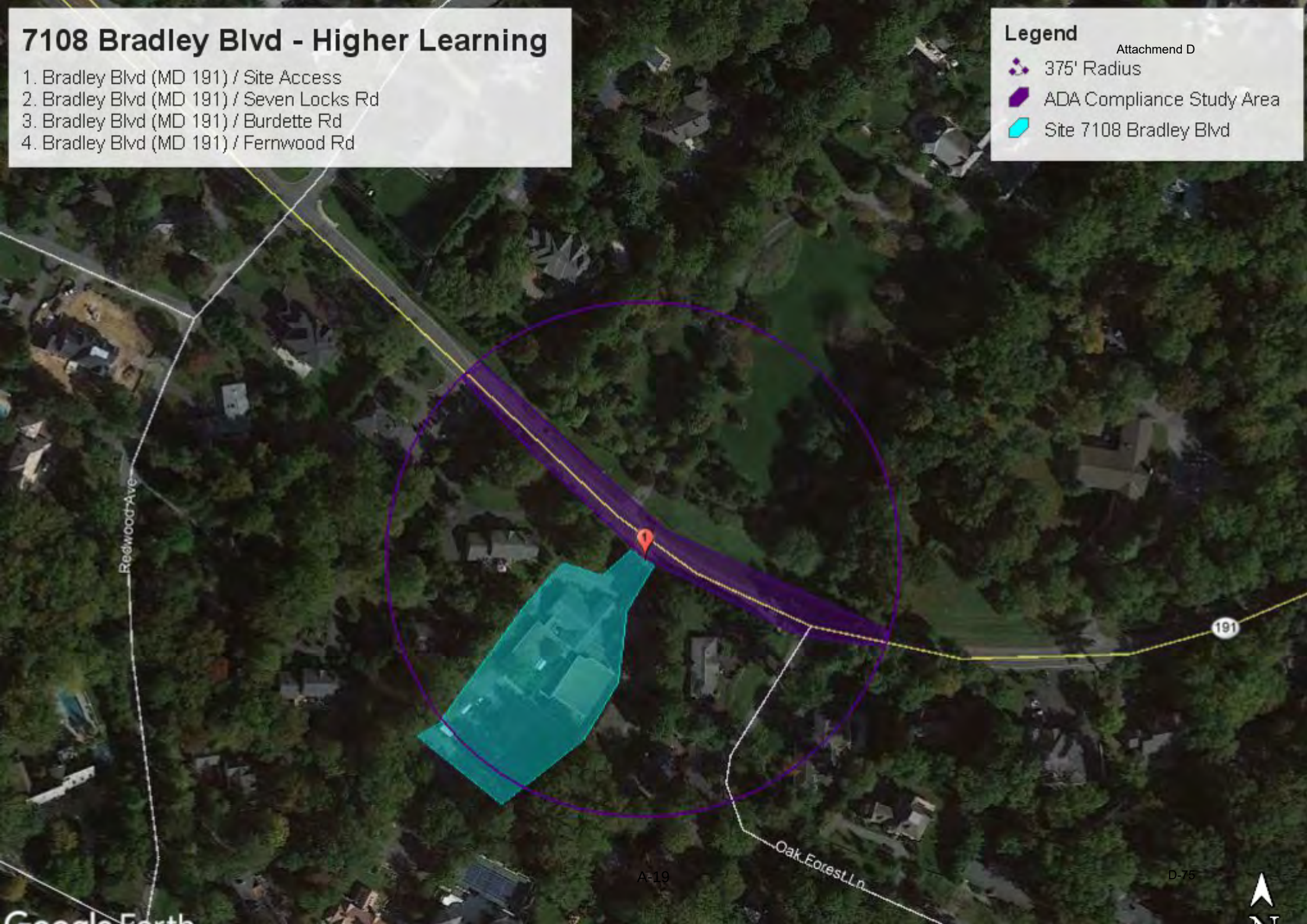
7108 Bradley Blvd - Higher Learning

1. Bradley Blvd (MD 191) / Site Access
2. Bradley Blvd (MD 191) / Seven Locks Rd
3. Bradley Blvd (MD 191) / Burdette Rd
4. Bradley Blvd (MD 191) / Fernwood Rd



7108 Bradley Blvd - Higher Learning

1. Bradley Blvd (MD 191) / Site Access
2. Bradley Blvd (MD 191) / Seven Locks Rd
3. Bradley Blvd (MD 191) / Burdette Rd
4. Bradley Blvd (MD 191) / Fernwood Rd

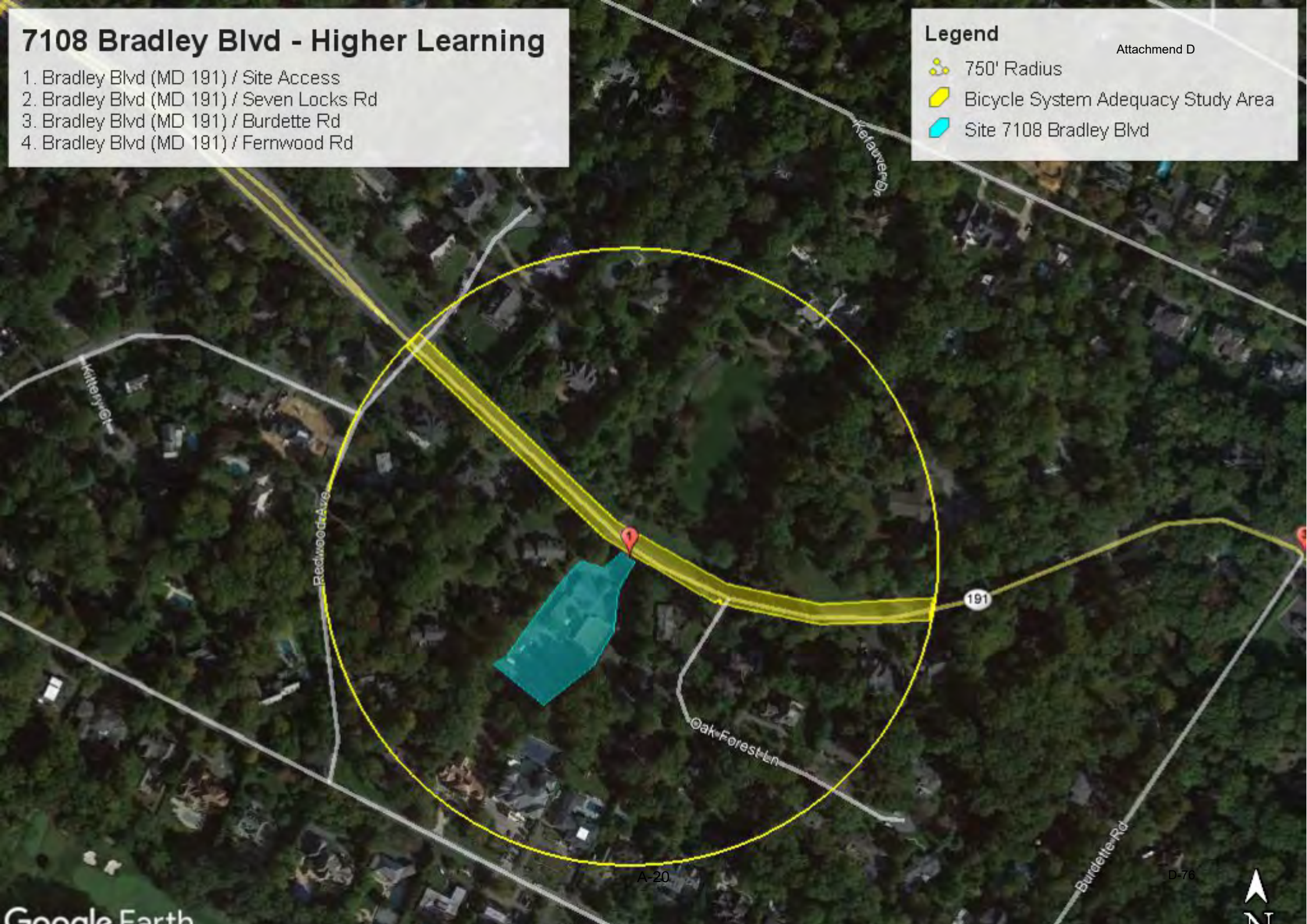


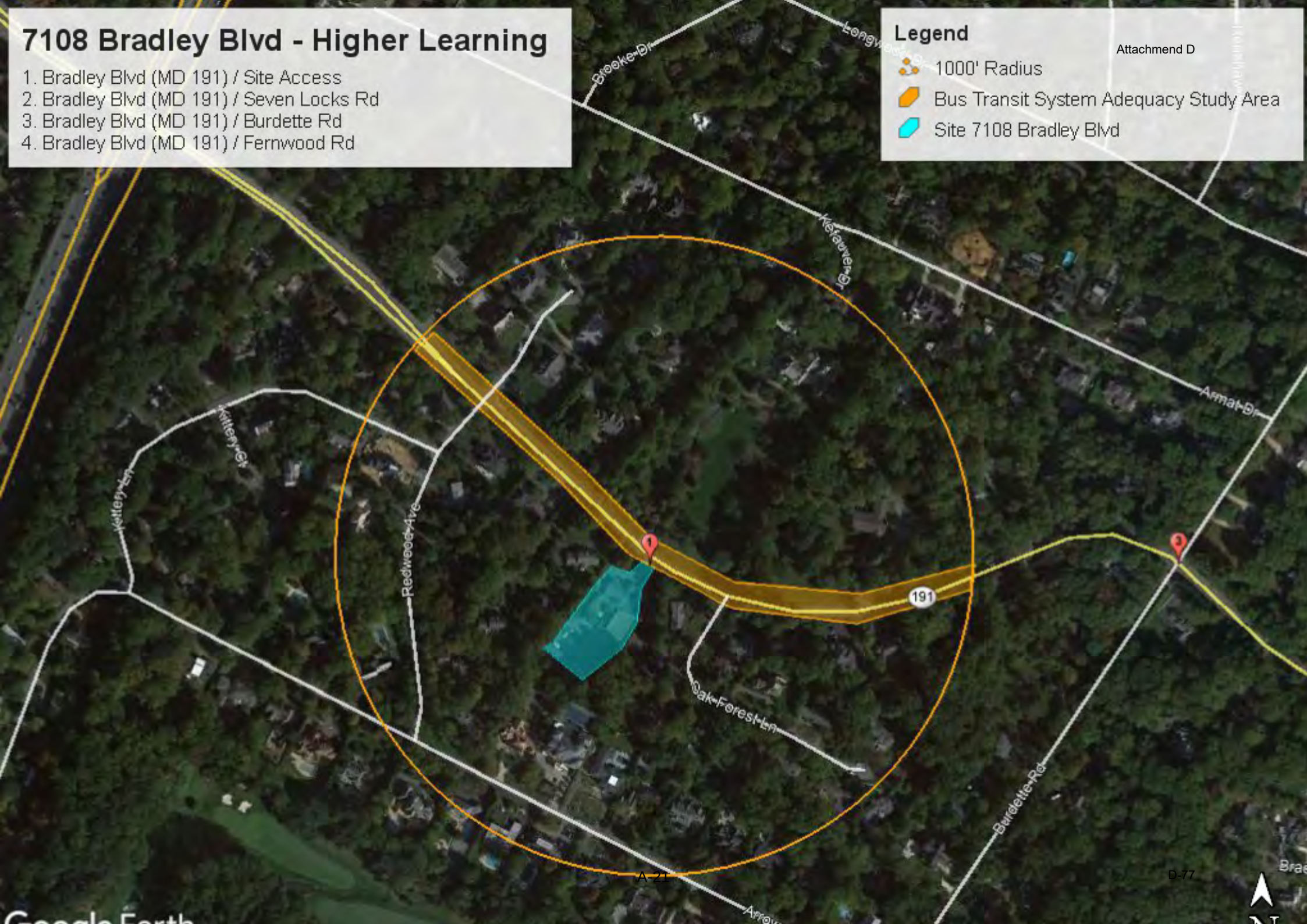
7108 Bradley Blvd - Higher Learning

1. Bradley Blvd (MD 191) / Site Access
2. Bradley Blvd (MD 191) / Seven Locks Rd
3. Bradley Blvd (MD 191) / Burdette Rd
4. Bradley Blvd (MD 191) / Fernwood Rd

Legend

- 750' Radius
- Bicycle System Adequacy Study Area
- Site 7108 Bradley Blvd





Attachmend D

MONTGOMERY COUNTY PLANNING DEPARTMENT
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB
Item No. 10
Date: 09/24/20

Item Name: Briefing on Updated Traffic Count Data Collection Policy During COVID-19 Pandemic

Eric Graye, Planning Supervisor, Countywide Planning and Policy Division, eric.graye@montgomeryplanning.org, 301-495-4632
Jason Sartori, Chief, Countywide Planning and Policy Division, jason.sartori@montgomeryplanning.org, 301-495-2172

Completed: 09/17/20

Description

On March 14, 2020, the Montgomery County Planning Department initiated an interim policy to not accept transportation impact studies using traffic counts taken during COVID-19 pandemic. The policy was updated on May 7, 2020 to reflect changing conditions and to allow the use of existing counts taken prior to the pandemic, with potential modifications.

The COVID-19 pandemic continues to add uncertainty into traffic analysis in Montgomery County. The impact on business, public offices, schools, other facilities, transit, coupled with the expansion of telework, has substantially reduced the total amount of motor vehicle and other traffic in the county. Nevertheless, Planning staff believes current conditions represent a new normal and that as the pandemic conditions subside, it will take quite a while for traffic volumes to slowly return to pre-pandemic levels.

The Planning Board will be briefed on Planning Department plans to move forward with the collection of traffic counts and the acceptance of transportation impact studies during the pandemic.

Attachment: Planning Staff Memorandum – Traffic Counts During COVID-19 Pandemic – Policy Update

ATTACHMENT

September 17, 2020

MEMORANDUM

TO: Gwen Wright, Planning Director

VIA: Jason Sartori, Chief, Countywide Planning & Policy Division

FROM: Eric Graye, Planning Supervisor, Countywide Planning & Policy Division

SUBJECT: Traffic Counts During COVID-19 Pandemic -Policy Update

Background

On March 13, 2020, as the State of Maryland and Montgomery County entered a state of emergency and increased restrictions due to the COVID-19 pandemic, Montgomery Planning informed transportation consultants that the Department would not accept any transportation impact studies (TIS) based on traffic counts conducted on March 14, or later. On May 7, 2020, the Department initiated an updated temporary policy pertaining to traffic counts to provide opportunities for transportation studies to move forward using historical traffic counts. This temporary policy also provided time to observe how the effect of increased teleworking in the region is manifested in observed traffic conditions. While it is unclear when (or if) traffic will return to pre-March 2020 levels, it appears likely that traffic growth will increase gradually over time.

Recent data obtained from the Maryland State Highway Administration show that current statewide daily traffic volumes have leveled off at approximately 83% of traffic compared with 2019 levels. These volumes, while lower than the pre-March 2020 volumes, reflect the existing new normal daily traffic conditions. While there is limited comparable data available to assess peak-hour traffic conditions, it appears reasonable that existing peak-hour volumes would reflect new normal traffic conditions as well.

Recommendation

The current interim traffic count data collection policy will end on September 30, 2020. A new interim traffic count data collection and TIS acceptance policy with the following options shall apply as of October 1, 2020:

- **Option A. New Counts.**
  - As long as the county remains in Phase 2 (or advances to Phase 3) of the COVID-19 recovery plan, a TIS may use traffic counts collected on or after October 1, 2020 with the application of an adjustment factor to account for the Montgomery County

Public School building closure and remote learning status. Should county public schools re-open for full in-person instruction, new traffic counts may be used without an adjustment factor and in accordance with the *2017 Local Area Transportation Review Guidelines.*

- The applicable adjustment factor will be determined by Montgomery Planning staff in advance of October 1.
- This traffic count option will immediately cease to be available for transportation impact studies should the county revert to Phase 1 of the COVID-19 recovery plan.
- Should the county fully reopen, new traffic counts may be used without an adjustment factor and in accordance with the *2017 Local Area Transportation Review Guidelines*, effective three months after the declaration of the county's open status.

- **Option B. Historical Counts.** Transportation Impact Studies based on traffic counts collected before March 14, will be accepted as follows:
  - Existing counts collected within a year of the application's 65-day deadline can be used in a TIS without adjustment.
  - Existing counts collected between one and three years prior to the application's 65-day deadline may only be used if modified by a growth factor. The growth factor must be developed based on the past ten-year historical traffic volume data for the nearest SHA roadway. This growth rate should be approved by the Planning Department in coordination with the Development Review Committee prior to acceptance of the TIS.
  - Traffic counts collected more than three years earlier than the application's 65-day deadline will not be accepted and may not be used to assess the finding of Adequate Public Facilities.

Combinations of the two options will be accepted as each is allowed, but under no circumstance will traffic counts collected between March 14 and September 30, 2020 be accepted.

This policy will be re-evaluated during the summer of 2021, or earlier if deemed necessary.

From: Graye, Eric
To: Sartori, Jason
Cc: Anspacher, David; Sanders, Carrie; Hisel-McCoy, Elza; Broullire, Bridget; Stern, Tanya; Provost, Russell; Wright, Gwen; Kronenberg, Robert; Pereira, Sandra; Dickel, Stephanie; Butler, Patrick; Reed, Patrick; Freer, Walker; Thompson, Iftin; Mencarini, Katherine; Van Alstyne, Chris; Campbell, Lauren; Gonzalez, Elwyn; Andy Smith; Anne M. (Nancy) Randall; Carl Wilson; Chris L. Kabatt; Christopher Turnbull; David Nelson; David Samba; Ed Papazian; Erwin N. Andres; Glenn Cook; Joe Caloggero; Joe Mehra; Katie Wagner; Michael J. Workosky; Mike Lenhart; Mike Nalepa; Paquilla Jones; Shahriar Etemadi; Wes Guckert; William L. Zeid; mlewisdegrace@symmetradesign.com; ndriban@lenharttraffic.com
Subject: RE: Montgomery Planning Policy on Traffic Counts during COVID-19 pandemic
Date: Tuesday, December 15, 2020 10:52:05 AM
Attachments: image002.png
image004.png
image006.png
image008.png
image010.png
image019.png
image021.png
image023.png
image025.png
image027.png

Good Morning:

The purpose of this note is to inform you of a **minor** clarification regarding the Planning Department's current policy pertaining to the collection of new traffic counts during the COVID-19 pandemic. This clarification is reflected as revisions to the language provided in the September 30th e-mail announcement of the policy. (Please see the revisions below in red text and ~~strikethrough~~.)

As a reminder, it should also be noted that new traffic counts will not be accepted in the event the county returns to Phase 1 of the COVID-19 recovery plan. We hope we don't find ourselves in this situation!

You are welcome to contact me (or Jason Sartori) should you have any questions concerning this matter. Thanks!

Regards,

Eric

Eric S. Graye, AICP, PTP
Planning Supervisor
Montgomery County Planning Department
2425 Reedie Drive, Wheaton, MD 20902
eric.graye@montgomeryplanning.org
p:301.495.4632
c:202.236.4483

Montgomery Planning

From: Sartori, Jason <Jason.Sartori@montgomeryplanning.org>
Sent: Wednesday, September 30, 2020 3:44 PM
To: Sartori, Jason <Jason.Sartori@montgomeryplanning.org>
Cc: Graye, Eric <eric.graye@montgomeryplanning.org>; Anspacher, David <david.anspacher@montgomeryplanning.org>; Sanders, Carrie <carrie.sanders@montgomeryplanning.org>; Hisel-McCoy, Elza <elza.hisel-mccoy@montgomeryplanning.org>; Broullire, Bridget <Bridget.Broullire@montgomeryplanning.org>; Stern, Tanya <tanya.stern@montgomeryplanning.org>; Provost, Russell <Russell.Provost@montgomeryplanning.org>; Wright, Gwen <gwen.wright@montgomeryplanning.org>; Kronenberg, Robert <robert.kronenberg@montgomeryplanning.org>; Pereira, Sandra <sandra.pereira@montgomeryplanning.org>; Dickel, Stephanie <Stephanie.Dickel@montgomeryplanning.org>; Butler, Patrick <patrick.butler@montgomeryplanning.org>; Reed, Patrick <patrick.reed@montgomeryplanning.org>; Freer, Walker <Walker.Freer@montgomeryplanning.org>; Thompson, Iftin <iftin.thompson@montgomeryplanning.org>; Mencarini, Katherine <katherine.mencarini@montgomeryplanning.org>; Van Alstyne, Chris <chris.vanalstyne@montgomeryplanning.org>; Campbell, Lauren <lauren.campbell@montgomeryplanning.org>; Gonzalez, Elwyn <Elwyn.Gonzalez@montgomeryplanning.org>; Andy Smith <andy.smith@kimley-horn.com>; Anne M. Randall <amrandall@wellsandassociates.com>; Carl Starkey <cstarkey@streettrafficstudies.com>; Carl Wilson <cwilson@trafficgroup.com>; Cherian Eapen <cherian@temoss.com>; Chris L. Kabatt <clkabatt@wellsandassociates.com>; Christopher Turnbull <cturnbull@wellsandassociates.com>; David Nelson <dnelson@streettrafficstudies.com>; David Samba <david.samba@kimley-horn.com>; Ed Papazian <Ed.Papazian@kimley-horn.com>; Erwin N. Andres <erwin.andres@goroveslade.com>; Glenn Cook <gcook@trafficgroup.com>; Joe Caloggero <jcaloggero@trafficgroup.com>; Joe Mehra <jmehra@mcvainc.com>; Katie Wagner <klw@goroveslade.com>; Michael J. Workosky <mjworkosky@mjwells.com>; Mike Lenhart <mlenhart@LENHARTTRAFFIC.COM>; Mike Nalepa <nalepa@streettrafficstudies.com>; Paquilla Jones <pjones@wellsandassociates.com>; Shahriar Etemadi <etemadi.sts@gmail.com>; Wes Guckert <wguckert@trafficgroup.com>; William L. Zeid <wlzeid@mjwells.com>
Subject: Montgomery Planning Policy on Traffic Counts during COVID-19 pandemic

Good afternoon,
Montgomery Planning would like to share an update on our policy pertaining to traffic counts used for Transportation Impact Studies. Planning staff briefed the Planning Board on the updated policy last Thursday. The details of the policy are outlined in this September 17 memo. Below is a summary of the options available regarding traffic counts, including additional information not in the aforementioned memo (namely, the adjustment factor to be used for new counts and its specific application):

1. **New Counts.**
    a. We will begin accepting new counts taken on or after October 1, as long as the county remains in Phase 2 or 3 of the COVID-19 recovery plan.
    b. The new counts must be adjusted by a factor to account for Montgomery County Public Schools not being in session in-person. The calculated adjustment factor of **1.07** must be applied as follows:
        i. AM peak period – Apply the 1.07 adjustment factor to all AM peak ~~hour~~ period traffic counts.

ii. PM peak period – Apply the 1.07 adjustment factor to any PM peak ~~hour~~ period traffic counts captured before 4:30 pm. No adjustment factor is required for counts captured after 4:30 pm.

c. Adjustment factor requirements will be lifted under certain conditions pertaining to the county and/or county schools reopening.

2. **Historical Counts.**
   a. We will continue to accept historical counts generally taken within the last three years.
   b. Certain other restrictions apply, and an adjustment factor is required under certain conditions.
   c. This option is a continuation of the interim policy that we have had in place since May. The details of that policy can be found in this April 30 memo.

For any given project, an applicant can use a combination of the above options, as applicable, to ensure all critical intersections are evaluated.

Please let us know if you have any questions.

Thank you,
Jason

Jason K. Sartori
Chief, Countywide Planning & Policy Division

Montgomery Planning

Montgomery Planning Department
2425 Reedie Drive, 13th Floor | Wheaton, MD 20902
jason.sartori@montgomeryplanning.org
c: 240.877.9388 | o: 301.495.2172

APPENDIX B
TRAFFIC COUNTS AND FIELD DATA/INVENTORY

Wells & Associates,Inc

McLean, Virginia

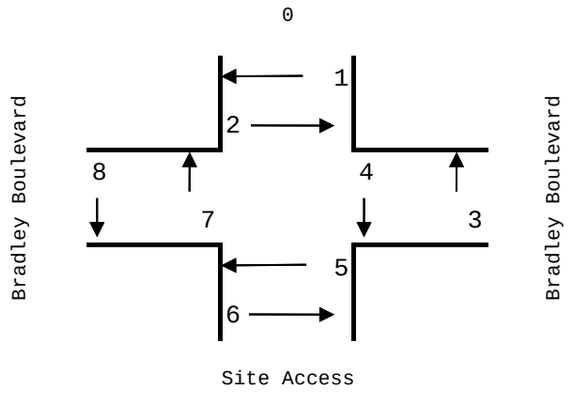
Existing Traffic Count

PROJECT:	Higher Learning	DATE:	5/6/2021	SOUTHBOUND ROAD:	0
W & A JOB NO.:	8455	DAY:	Thursday	NORTHBOUND ROAD:	Site Access
INTERSECTION:	Bradley Blvd. & Site Access	WEATHER:	clear	WESTBOUND ROAD:	Bradley Boulevard
LOCATION:	Montgomery Co.,MD	COUNTED BY:	Agan	EASTBOUND ROAD:	Bradley Boulevard
		INPUTED BY:	agan		

Time Period	Turning Movements																North & South	East & West	Total	PHF	Time Period
	Southbound 0				Westbound Bradley Boulevard				Northbound Site Access				Eastbound Bradley Boulevard								
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:30-6:45	0	0	0	0	0	6	0	6	0	0	0	0	0	14	0	14	0	20	20		6:30-6:45
6:45-7:00	0	0	0	0	0	9	0	9	0	0	0	0	0	21	0	21	0	30	30		6:45-7:00
7:00-7:15	0	0	0	0	0	29	1	30	0	0	0	0	0	26	0	26	0	56	56		7:00-7:15
7:15-7:30	0	0	0	0	0	33	0	33	0	0	0	0	0	60	0	60	0	93	93		7:15-7:30
7:30-7:45	0	0	0	0	0	58	0	58	0	0	0	0	0	56	0	56	0	114	114		7:30-7:45
7:45-8:00	0	0	0	0	0	126	0	126	0	0	0	0	0	110	0	110	0	236	236		7:45-8:00
8:00-8:15	0	0	0	0	0	79	0	79	0	0	0	0	0	158	0	158	0	237	237		8:00-8:15
8:15-8:30	0	0	0	0	0	78	0	78	0	0	0	0	0	139	0	139	0	217	217		8:15-8:30
8:30-8:45	0	0	0	0	0	71	0	71	0	0	0	0	0	96	0	96	0	167	167		8:30-8:45
8:45-9:00	0	0	0	0	0	60	0	60	0	0	0	0	0	105	0	105	0	165	165		8:45-9:00
9:00-9:15	0	0	0	0	0	59	0	59	0	0	0	0	0	63	0	63	0	122	122		9:00-9:15
9:15-9:30	0	0	0	0	0	36	0	36	0	0	0	0	0	54	0	54	0	90	90		9:15-9:30
3 Hour Totals	**0**	**0**	**0**	**0**	**0**	**644**	**1**	**645**	**0**	**0**	**0**	**0**	**0**	**902**	**0**	**902**	**0**	**1,547**	**1,547**		
1 Hour Totals																					
6:30-7:30	0	0	0	0	0	77	1	78	0	0	0	0	0	121	0	121	0	199	199	0.53	6:30-7:30
6:45-7:45	0	0	0	0	0	129	1	130	0	0	0	0	0	163	0	163	0	293	293	0.64	6:45-7:45
7:00-8:00	0	0	0	0	0	246	1	247	0	0	0	0	0	252	0	252	0	499	499	0.53	7:00-8:00
7:15-8:15	0	0	0	0	0	296	0	296	0	0	0	0	0	384	0	384	0	680	680	0.72	7:15-8:15
7:30-8:30	0	0	0	0	0	341	0	341	0	0	0	0	0	463	0	463	0	804	804	0.85	7:30-8:30
7:45-8:45	0	0	0	0	0	354	0	354	0	0	0	0	0	503	0	503	0	857	857	0.90	7:45-8:45
8:00-9:00	0	0	0	0	0	288	0	288	0	0	0	0	0	498	0	498	0	786	786	0.83	8:00-9:00
8:15-9:15	0	0	0	0	0	268	0	268	0	0	0	0	0	403	0	403	0	671	671	0.77	8:15-9:15
8:30-9:30	0	0	0	0	0	226	0	226	0	0	0	0	0	318	0	318	0	544	544	0.81	8:30-9:30
AM Peak 7:45-8:45	**0**	**0**	**0**	**0**	**0**	**354**	**0**	**354**	**0**	**0**	**0**	**0**	**0**	**503**	**0**	**503**	**0**	**857**	**857**	**0.90**	**AM Peak 7:45-8:45**
PM																					
4:00-4:15	0	0	0	0	0	81	1	82	0	0	0	0	0	63	0	63	0	145	145		4:00-4:15
4:15-4:30	0	0	0	0	0	102	0	102	0	0	2	2	2	55	0	57	2	159	161		4:15-4:30
4:30-4:45	0	0	0	0	0	104	0	104	0	0	0	0	0	59	0	59	0	163	163		4:30-4:45
4:45-5:00	0	0	0	0	0	90	0	90	0	0	0	0	0	67	0	67	0	157	157		4:45-5:00
5:00-5:15	0	0	0	0	0	81	0	81	1	0	0	1	0	71	0	71	1	152	153		5:00-5:15
5:15-5:30	0	0	0	0	0	107	0	107	0	0	0	0	0	66	0	66	0	173	173		5:15-5:30
5:30-5:45	0	0	0	0	0	81	0	81	0	0	0	0	0	81	0	81	0	162	162		5:30-5:45
5:45-6:00	0	0	0	0	0	111	0	111	1	0	0	1	0	64	0	64	1	175	176		5:45-6:00
6:00-6:15	0	0	0	0	0	89	0	89	0	0	0	0	0	50	0	50	0	139	139		6:00-6:15
6:15-6:30	0	0	0	0	0	69	1	70	0	0	0	0	0	59	0	59	0	129	129		6:15-6:30
6:30-6:45	0	0	0	0	0	61	1	62	1	0	0	1	0	61	0	61	1	123	124		6:30-6:45
6:45-7:00	0	0	0	0	0	48	0	48	0	0	0	0	0	51	0	51	0	99	99		6:45-7:00
3 Hour Totals	**0**	**0**	**0**	**0**	**0**	**1,024**	**3**	**1,027**	**3**	**0**	**2**	**5**	**2**	**747**	**0**	**749**	**5**	**1,776**	**1,781**		
1 Hour Totals																					
4:00-5:00	0	0	0	0	0	377	1	378	0	0	2	2	2	244	0	246	2	624	626	0.96	4:00-5:00
4:15-5:15	0	0	0	0	0	377	0	377	1	0	2	3	2	252	0	254	3	631	634	0.97	4:15-5:15
4:30-5:30	0	0	0	0	0	382	0	382	1	0	0	1	0	263	0	263	1	645	646	0.93	4:30-5:30
4:45-5:45	0	0	0	0	0	359	0	359	1	0	0	1	0	285	0	285	1	644	645	0.93	4:45-5:45
5:00-6:00	0	0	0	0	0	380	0	380	2	0	0	2	0	282	0	282	2	662	664	0.94	5:00-6:00
5:15-6:15	0	0	0	0	0	388	0	388	1	0	0	1	0	261	0	261	1	649	650	0.92	5:15-6:15
5:30-6:30	0	0	0	0	0	350	1	351	1	0	0	1	0	254	0	254	1	605	606	0.86	5:30-6:30
5:45-6:45	0	0	0	0	0	330	2	332	2	0	0	2	0	234	0	234	2	566	568	0.81	5:45-6:45
6:00-7:00	0	0	0	0	0	267	2	269	1	0	0	1	0	221	0	221	1	490	491	0.88	6:00-7:00
PM Peak 5:00-6:00	**0**	**0**	**0**	**0**	**0**	**380**	**0**	**380**	**2**	**0**	**0**	**2**	**0**	**282**	**0**	**282**	**2**	**662**	**664**	**0.94**	**PM Peak 5:00-6:00**

Appendix B: Existing Traffic Counts

Project Name:	Higher Learning
Project Number:	8455
Location:	Montgomery Co.,MD
Intersection:	Bradley Blvd. & Site Access
Weather:	clear
Date:	5/6/2021
Surveyor:	Agan



Hourly Pedestrian Count

		1	2	3	4	5	6	7	8					
	From:	SE	NE	SW	SE	SW	NW	NW	NE	Total	1 & 2	3 & 4	5 & 6	7 & 8
Time Period	To:	NE	SE	SE	SW	NW	SW	NE	NW					
AM PEAK														
6:30	7:30	0	1	0	0	1	0	0	0	2	1	0	1	0
6:45	7:45	0	1	0	0	1	0	0	0	2	1	0	1	0
7:00	8:00	0	1	0	0	0	0	0	0	1	1	0	0	0
7:15	8:15	0	1	0	0	0	0	0	0	1	1	0	0	0
7:30	8:30	1	0	0	0	0	0	0	0	1	1	0	0	0
7:45	8:45	1	0	0	0	0	0	0	0	1	1	0	0	0
8:00	9:00	1	0	0	0	0	0	0	0	1	1	0	0	0
8:15	9:15	2	0	0	0	0	0	0	0	2	2	0	0	0
8:30	9:30	1	0	0	0	0	0	0	0	1	1	0	0	0
PM PEAK														
16:00	17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	19:00	0	0	0	0	0	0	0	0	0	0	0	0	0

Wells & Associates,Inc

McLean, Virginia

Existing Traffic Count

PROJECT: Higher Learning
W & A JOB NO.: 8455
INTERSECTION: Bradley Blvd. & Site Access
LOCATION: Montgomery Co.,MD

DATE: 5/6/2021
DAY: Thursday
WEATHER: clear
COUNTED BY: Agan
INPUTED BY: agan

SOUTHBOUND ROAD: 0
NORTHBOUND ROAD: Site Access
WESTBOUND ROAD: Bradley Boulevard
EASTBOUND ROAD: Bradley Boulevard

BIKES

Time Period	Turning Movements: Southbound 0 — 1 Right	2 Thru	3 Left	Total	Westbound Bradley Boulevard — 4 Right	5 Thru	6 Left	Total	Northbound Site Access — 7 Right	8 Thru	9 Left	Total	Eastbound Bradley Boulevard — 10 Right	11 Thru	12 Left	Total	North & South	East & West	Total	PHF	Time Period
AM																					
6:30-6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6:30-6:45
6:45-7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	0	11	11		6:45-7:00
7:00-7:15	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2		7:00-7:15
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		7:15-7:30
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	3	3		7:30-7:45
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	6	6		7:45-8:00
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8:00-8:15
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2		8:15-8:30
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8:30-8:45
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8:45-9:00
9:00-9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		9:00-9:15
9:15-9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		9:15-9:30
3 Hour Totals	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**25**	**0**	**25**	**0**	**26**	**26**		
1 Hour Totals																					
6:30-7:30	0	0	0	0	0	1	0	1	0	0	0	0	0	13	0	13	0	14	14	0.32	6:30-7:30
6:45-7:45	0	0	0	0	0	1	0	1	0	0	0	0	0	16	0	16	0	17	17	0.39	6:45-7:45
7:00-8:00	0	0	0	0	0	1	0	1	0	0	0	0	0	11	0	11	0	12	12	0.50	7:00-8:00
7:15-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	0	10	10	0.42	7:15-8:15
7:30-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	0	11	11	0.46	7:30-8:30
7:45-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	0	8	8	0.33	7:45-8:45
8:00-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2	0.25	8:00-9:00
8:15-9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2	0.25	8:15-9:15
8:30-9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0.25	8:30-9:30
AM Peak 6:45-7:45	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**16**	**0**	**17**	**17**	**0.39**	**AM Peak 6:45-7:45**
PM																					
4:00-4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		4:00-4:15
4:15-4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		4:15-4:30
4:30-4:45	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	2	2		4:30-4:45
4:45-5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	3	3		4:45-5:00
5:00-5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5:00-5:15
5:15-5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	3	3		5:15-5:30
5:30-5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		5:30-5:45
5:45-6:00	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1		5:45-6:00
6:00-6:15	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	2	2		6:00-6:15
6:15-6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6:15-6:30
6:30-6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6:30-6:45
6:45-7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6:45-7:00
3 Hour Totals	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**9**	**0**	**14**	**14**		
1 Hour Totals																					
4:00-5:00	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	0	7	7	0.58	4:00-5:00
4:15-5:15	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	0	6	6	0.50	4:15-5:15
4:30-5:30	0	0	0	0	0	2	0	2	0	0	0	0	0	6	0	6	0	8	8	0.67	4:30-5:30
4:45-5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0	7	7	0.58	4:45-5:45
5:00-6:00	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	0	5	5	0.42	5:00-6:00
5:15-6:15	0	0	0	0	0	3	0	3	0	0	0	0	0	4	0	4	0	7	7	0.58	5:15-6:15
5:30-6:30	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	0	4	4	0.50	5:30-6:30
5:45-6:45	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	3	3	0.38	5:45-6:45
6:00-7:00	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	2	2	0.25	6:00-7:00
PM Peak 4:30-5:30	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**6**	**0**	**8**	**8**	**0.67**	**PM Peak 4:30-5:30**

Wells & Associates,Inc

McLean, Virginia

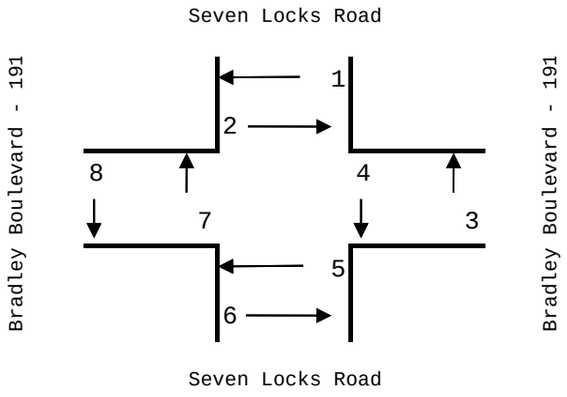
Existing Traffic Count

PROJECT:	Higher Learning	DATE:	5/6/2021	SOUTHBOUND ROAD:	Seven Locks Road
W & A JOB NO.:	8455	DAY:	Thursday	NORTHBOUND ROAD:	Seven Locks Road
INTERSECTION:	Bradley Blvd. & Seven Locks Rd.	WEATHER:	clear	WESTBOUND ROAD:	Bradley Boulevard - 191
LOCATION:	Montgomery Co.,MD	COUNTED BY:	Agan & Christine	EASTBOUND ROAD:	Bradley Boulevard - 191
		INPUTED BY:	agan		

Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound Seven Locks Road				Westbound Bradley Boulevard - 191				Northbound Seven Locks Road				Eastbound Bradley Boulevard - 191				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:30-6:45	18	28	11	57	5	3	0	8	2	15	1	18	0	6	2	8	75	16	91		6:30-6:45
6:45-7:00	25	31	15	71	2	5	0	7	3	12	1	16	2	7	5	14	87	21	108		6:45-7:00
7:00-7:15	19	43	26	88	10	3	6	19	3	13	3	19	2	7	4	13	107	32	139		7:00-7:15
7:15-7:30	24	46	31	101	16	15	4	35	8	30	4	42	3	15	7	25	143	60	203		7:15-7:30
7:30-7:45	45	76	39	160	24	23	2	49	9	48	8	65	2	22	18	42	225	91	316		7:30-7:45
7:45-8:00	70	63	75	208	51	71	5	127	16	89	21	126	2	46	42	90	334	217	551		7:45-8:00
8:00-8:15	69	111	102	282	80	44	7	131	20	110	9	139	9	103	75	187	421	318	739		8:00-8:15
8:15-8:30	36	134	71	241	60	20	7	87	14	82	2	98	4	60	37	101	339	188	527		8:15-8:30
8:30-8:45	37	120	69	226	39	19	7	65	14	56	5	75	1	46	30	77	301	142	443		8:30-8:45
8:45-9:00	41	99	70	210	43	19	12	74	10	62	7	79	1	25	24	50	289	124	413		8:45-9:00
9:00-9:15	51	85	62	198	41	25	5	71	5	65	3	73	3	13	47	63	271	134	405		9:00-9:15
9:15-9:30	33	74	61	168	31	7	5	43	15	54	1	70	5	11	38	54	238	97	335		9:15-9:30
3 Hour Totals	**468**	**910**	**632**	**2,010**	**402**	**254**	**60**	**716**	**119**	**636**	**65**	**820**	**34**	**361**	**329**	**724**	**2,830**	**1,440**	**4,270**		
1 Hour Totals																					
6:30-7:30	86	148	83	317	33	26	10	69	16	70	9	95	7	35	18	60	412	129	541	0.67	6:30-7:30
6:45-7:45	113	196	111	420	52	46	12	110	23	103	16	142	9	51	34	94	562	204	766	0.61	6:45-7:45
7:00-8:00	158	228	171	557	101	112	17	230	36	180	36	252	9	90	71	170	809	400	1,209	0.55	7:00-8:00
7:15-8:15	208	296	247	751	171	153	18	342	53	277	42	372	16	186	142	344	1,123	686	1,809	0.61	7:15-8:15
7:30-8:30	220	384	287	891	215	158	21	394	59	329	40	428	17	231	172	420	1,319	814	2,133	0.72	7:30-8:30
7:45-8:45	212	428	317	957	230	154	26	410	64	337	37	438	16	255	184	455	1,395	865	2,260	0.76	7:45-8:45
8:00-9:00	183	464	312	959	222	102	33	357	58	310	23	391	15	234	166	415	1,350	772	2,122	0.72	8:00-9:00
8:15-9:15	165	438	272	875	183	83	31	297	43	265	17	325	9	144	138	291	1,200	588	1,788	0.85	8:15-9:15
8:30-9:30	162	378	262	802	154	70	29	253	44	237	16	297	10	95	139	244	1,099	497	1,596	0.90	8:30-9:30
AM Peak 7:45-8:45	**212**	**428**	**317**	**957**	**230**	**154**	**26**	**410**	**64**	**337**	**37**	**438**	**16**	**255**	**184**	**455**	**1,395**	**865**	**2,260**	**0.76**	**AM Peak 7:45-8:45**
PM																					
4:00-4:15	33	75	44	152	53	42	12	107	8	111	2	121	0	40	60	100	273	207	480		4:00-4:15
4:15-4:30	34	64	26	124	58	35	5	98	10	103	1	114	4	23	40	67	238	165	403		4:15-4:30
4:30-4:45	35	66	36	137	66	43	10	119	13	128	4	145	2	15	40	57	282	176	458		4:30-4:45
4:45-5:00	43	62	38	143	61	26	14	101	7	100	3	110	4	25	41	70	253	171	424		4:45-5:00
5:00-5:15	32	62	51	145	65	23	7	95	5	92	6	103	8	25	31	64	248	159	407		5:00-5:15
5:15-5:30	29	46	42	117	64	32	10	106	7	121	7	135	5	15	37	57	252	163	415		5:15-5:30
5:30-5:45	21	66	39	126	51	19	14	84	14	120	4	138	2	27	37	66	264	150	414		5:30-5:45
5:45-6:00	36	62	37	135	71	36	8	115	10	125	8	143	4	23	31	58	278	173	451		5:45-6:00
6:00-6:15	31	54	27	112	46	29	10	85	14	99	2	115	2	14	30	46	227	131	358		6:00-6:15
6:15-6:30	48	51	27	126	33	22	11	66	12	91	7	110	6	24	24	54	236	120	356		6:15-6:30
6:30-6:45	13	48	42	103	46	18	10	74	6	65	0	71	4	19	23	46	174	120	294		6:30-6:45
6:45-7:00	29	52	22	103	32	14	7	53	10	73	4	87	3	13	28	44	190	97	287		6:45-7:00
3 Hour Totals	**384**	**708**	**431**	**1,523**	**646**	**339**	**118**	**1,103**	**116**	**1,228**	**48**	**1,392**	**44**	**263**	**422**	**729**	**2,915**	**1,832**	**4,747**		
1 Hour Totals																					
4:00-5:00	145	267	144	556	238	146	41	425	38	442	10	490	10	103	181	294	1,046	719	1,765	0.92	4:00-5:00
4:15-5:15	144	254	151	549	250	127	36	413	35	423	14	472	18	88	152	258	1,021	671	1,692	0.92	4:15-5:15
4:30-5:30	139	236	167	542	256	124	41	421	32	441	20	493	19	80	149	248	1,035	669	1,704	0.93	4:30-5:30
4:45-5:45	125	236	170	531	241	100	45	386	33	433	20	486	19	92	146	257	1,017	643	1,660	0.98	4:45-5:45
5:00-6:00	118	236	169	523	251	110	39	400	36	458	25	519	19	90	136	245	1,042	645	1,687	0.94	5:00-6:00
5:15-6:15	117	228	145	490	232	116	42	390	45	465	21	531	13	79	135	227	1,021	617	1,638	0.91	5:15-6:15
5:30-6:30	136	233	130	499	201	106	43	350	50	435	21	506	14	88	122	224	1,005	574	1,579	0.88	5:30-6:30
5:45-6:45	128	215	133	476	196	105	39	340	42	380	17	439	16	80	108	204	915	544	1,459	0.81	5:45-6:45
6:00-7:00	121	205	118	444	157	83	38	278	42	328	13	383	15	70	105	190	827	468	1,295	0.90	6:00-7:00
PM Peak 4:00-5:00	**145**	**267**	**144**	**556**	**238**	**146**	**41**	**425**	**38**	**442**	**10**	**490**	**10**	**103**	**181**	**294**	**1,046**	**719**	**1,765**	**0.92**	**PM Peak 4:00-5:00**

Appendix B: Existing Traffic Counts

Project Name:	Higher Learning
Project Number:	8455
Location:	Montgomery Co.,MD
Intersection:	Bradley Blvd. & Seven Locks Rd.
Weather:	clear
Date:	5/6/2021
Surveyor:	Agan & Christine



Hourly Pedestrian Count

		1	2	3	4	5	6	7	8					
	From:	SE	NE	SW	SE	SW	NW	NW	NE	Total	1 & 2	3 & 4	5 & 6	7 & 8
Time Period	To:	NE	SE	SE	SW	NW	SW	NE	NW					
AM PEAK														
6:30	7:30	1	1	0	1	0	1	0	2	6	2	1	1	2
6:45	7:45	1	1	0	1	0	1	0	2	6	2	1	1	2
7:00	8:00	1	1	0	1	0	1	0	0	4	2	1	1	0
7:15	8:15	1	1	0	1	0	1	0	0	4	2	1	1	0
7:30	8:30	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	8:45	0	0	0	0	0	0	1	1	2	0	0	0	2
8:00	9:00	0	0	0	0	0	0	1	1	2	0	0	0	2
8:15	9:15	3	0	3	0	0	2	1	4	13	3	3	2	5
8:30	9:30	6	0	6	0	3	2	9	8	34	6	6	5	17
PM PEAK														
16:00	17:00	0	0	1	0	1	1	2	0	5	0	1	2	2
16:15	17:15	0	0	2	0	1	1	1	0	5	0	2	2	1
16:30	17:30	0	0	1	0	1	1	1	0	4	0	1	2	1
16:45	17:45	1	0	1	0	2	3	1	2	10	1	1	5	3
17:00	18:00	1	0	1	0	1	3	0	2	8	1	1	4	2
17:15	18:15	1	0	0	0	1	5	0	2	9	1	0	6	2
17:30	18:30	1	0	0	0	1	5	0	2	9	1	0	6	2
17:45	18:45	0	0	0	0	0	3	0	0	3	0	0	3	0
18:00	19:00	0	1	0	0	0	3	0	0	4	1	0	3	0

Wells & Associates,Inc

McLean, Virginia

Existing Traffic Count

PROJECT: Higher Learning
W & A JOB NO.: 8455
INTERSECTION: Bradley Blvd. & Seven Locks Rd.
LOCATION: Montgomery Co.,MD

DATE: 5/6/2021
DAY: Thursday
WEATHER: clear
COUNTED BY: Agan & Christine
INPUTED BY: agan

SOUTHBOUND ROAD: Seven Locks Road
NORTHBOUND ROAD: Seven Locks Road
WESTBOUND ROAD: Bradley Boulevard - 191
EASTBOUND ROAD: Bradley Boulevard - 191

BIKES

Time Period	Turning Movements: Southbound Seven Locks Road				Westbound Bradley Boulevard - 191				Northbound Seven Locks Road				Eastbound Bradley Boulevard - 191				North & South	East & West	Total	PHF	Time Period
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:30-6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2		6:30-6:45
6:45-7:00	0	0	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	9	9		6:45-7:00
7:00-7:15	0	0	1	1	0	1	0	1	1	0	0	1	0	0	0	0	2	1	3		7:00-7:15
7:15-7:30	0	0	2	2	0	1	0	1	0	0	0	0	0	0	0	0	2	1	3		7:15-7:30
7:30-7:45	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		7:30-7:45
7:45-8:00	0	0	6	6	0	0	0	0	0	1	0	1	0	1	0	1	7	1	8		7:45-8:00
8:00-8:15	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2		8:00-8:15
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		8:15-8:30
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8:30-8:45
8:45-9:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		8:45-9:00
9:00-9:15	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2	0	2		9:00-9:15
9:15-9:30	0	2	0	2	0	0	0	0	0	1	0	1	0	1	0	1	3	1	4		9:15-9:30
3 Hour Totals	**1**	**4**	**10**	**15**	**0**	**11**	**0**	**11**	**1**	**4**	**0**	**5**	**0**	**5**	**0**	**5**	**20**	**16**	**36**		
1 Hour Totals																					
6:30-7:30	0	0	3	3	0	11	0	11	1	0	0	1	0	2	0	2	4	13	17	0.47	6:30-7:30
6:45-7:45	0	0	4	4	0	11	0	11	1	0	0	1	0	0	0	0	5	11	16	0.44	6:45-7:45
7:00-8:00	0	0	10	10	0	2	0	2	1	1	0	2	0	1	0	1	12	3	15	0.47	7:00-8:00
7:15-8:15	1	1	9	11	0	1	0	1	0	1	0	1	0	1	0	1	12	2	14	0.44	7:15-8:15
7:30-8:30	1	1	7	9	0	0	0	0	0	1	0	1	0	2	0	2	10	2	12	0.38	7:30-8:30
7:45-8:45	1	1	6	8	0	0	0	0	0	1	0	1	0	2	0	2	9	2	11	0.34	7:45-8:45
8:00-9:00	1	2	0	3	0	0	0	0	0	0	0	0	0	1	0	1	3	1	4	0.50	8:00-9:00
8:15-9:15	0	1	0	1	0	0	0	0	0	2	0	2	0	1	0	1	3	1	4	0.50	8:15-9:15
8:30-9:30	0	3	0	3	0	0	0	0	0	3	0	3	0	1	0	1	6	1	7	0.44	8:30-9:30
AM Peak 6:30-7:30	**0**	**0**	**3**	**3**	**0**	**11**	**0**	**11**	**1**	**0**	**0**	**1**	**0**	**2**	**0**	**2**	**4**	**13**	**17**	**0.47**	**AM Peak 6:30-7:30**
PM																					
4:00-4:15	2	1	1	4	0	0	0	0	0	6	0	6	0	0	0	0	10	0	10		4:00-4:15
4:15-4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		4:15-4:30
4:30-4:45	0	0	0	0	1	0	0	1	0	1	0	1	0	3	0	3	1	4	5		4:30-4:45
4:45-5:00	0	0	0	0	1	0	0	1	0	2	0	2	0	0	0	0	2	1	3		4:45-5:00
5:00-5:15	1	1	1	3	0	0	0	0	0	0	0	0	0	0	1	1	3	1	4		5:00-5:15
5:15-5:30	0	2	1	3	0	0	0	0	0	1	0	1	0	1	0	1	4	1	5		5:15-5:30
5:30-5:45	0	3	0	3	0	0	0	0	0	0	0	0	0	1	0	1	3	1	4		5:30-5:45
5:45-6:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		5:45-6:00
6:00-6:15	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	0	3	3		6:00-6:15
6:15-6:30	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1		6:15-6:30
6:30-6:45	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1		6:30-6:45
6:45-7:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		6:45-7:00
3 Hour Totals	**3**	**9**	**3**	**15**	**2**	**2**	**0**	**4**	**0**	**11**	**0**	**11**	**0**	**6**	**2**	**8**	**26**	**12**	**38**		
1 Hour Totals																					
4:00-5:00	2	1	1	4	2	0	0	2	0	9	0	9	0	3	0	3	13	5	18	0.45	4:00-5:00
4:15-5:15	1	1	1	3	2	0	0	2	0	3	0	3	0	3	1	4	6	6	12	0.60	4:15-5:15
4:30-5:30	1	3	2	6	2	0	0	2	0	4	0	4	0	4	1	5	10	7	17	0.85	4:30-5:30
4:45-5:45	1	6	2	9	1	0	0	1	0	3	0	3	0	2	1	3	12	4	16	0.80	4:45-5:45
5:00-6:00	1	7	2	10	0	0	0	0	0	1	0	1	0	2	1	3	11	3	14	0.70	5:00-6:00
5:15-6:15	0	6	1	7	0	1	0	1	0	1	0	1	0	3	1	4	8	5	13	0.65	5:15-6:15
5:30-6:30	0	4	0	4	0	1	0	1	0	1	0	1	0	2	1	3	5	4	9	0.56	5:30-6:30
5:45-6:45	0	1	0	1	0	2	0	2	0	1	0	1	0	1	1	2	2	4	6	0.50	5:45-6:45
6:00-7:00	0	1	0	1	0	2	0	2	0	1	0	1	0	1	1	2	2	4	6	0.50	6:00-7:00
PM Peak 4:00-5:00	**2**	**1**	**1**	**4**	**2**	**0**	**0**	**2**	**0**	**9**	**0**	**9**	**0**	**3**	**0**	**3**	**13**	**5**	**18**	**0.45**	**PM Peak 4:00-5:00**

Wells & Associates,Inc

McLean, Virginia

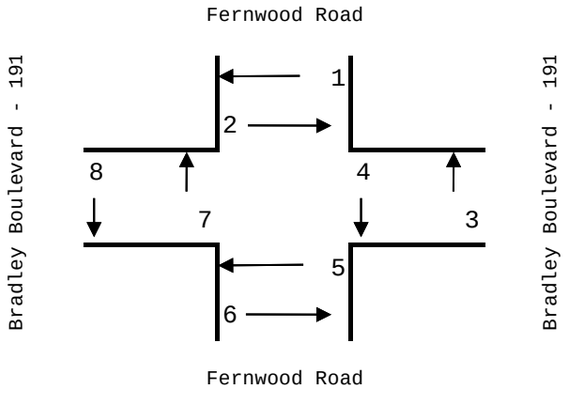
Existing Traffic Count

PROJECT:	Higher Learning	DATE:	5/6/2021	SOUTHBOUND ROAD:	Fernwood Road
W & A JOB NO.:	8455	DAY:	Thursday	NORTHBOUND ROAD:	Fernwood Road
INTERSECTION:	Bradley Blvd. & Fernwood Rd.	WEATHER:	clear	WESTBOUND ROAD:	Bradley Boulevard - 191
LOCATION:	Montgomery Co.,MD	COUNTED BY:	Agan	EASTBOUND ROAD:	Bradley Boulevard - 191
		INPUTED BY:	agan		

Time Period	Turning Movements: Southbound Fernwood Road				Westbound Bradley Boulevard - 191				Northbound Fernwood Road				Eastbound Bradley Boulevard - 191				North & South	East & West	Total	PHF	Time Period
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:30-6:45	3	1	14	18	9	3	0	12	0	0	1	1	0	10	3	13	19	25	44		6:30-6:45
6:45-7:00	9	1	21	31	11	5	0	16	1	1	1	3	0	16	9	25	34	41	75		6:45-7:00
7:00-7:15	11	3	39	53	18	18	1	37	2	0	2	4	0	21	11	32	57	69	126		7:00-7:15
7:15-7:30	12	2	41	55	19	24	0	43	1	2	1	4	1	31	10	42	59	85	144		7:15-7:30
7:30-7:45	20	7	42	69	21	58	0	79	0	1	0	1	0	52	14	66	70	145	215		7:30-7:45
7:45-8:00	26	6	52	84	25	86	2	113	0	3	2	5	0	81	12	93	89	206	295		7:45-8:00
8:00-8:15	25	4	62	91	24	91	0	115	2	4	0	6	0	129	21	150	97	265	362		8:00-8:15
8:15-8:30	14	5	74	93	39	84	1	124	1	2	1	4	1	119	18	138	97	262	359		8:15-8:30
8:30-8:45	13	8	69	90	25	67	0	92	1	5	2	8	0	99	15	114	98	206	304		8:30-8:45
8:45-9:00	14	5	41	60	32	58	0	90	0	3	2	5	0	91	14	105	65	195	260		8:45-9:00
9:00-9:15	10	4	32	46	27	51	1	79	0	2	1	3	0	68	11	79	49	158	207		9:00-9:15
9:15-9:30	8	3	29	40	26	42	0	68	1	4	0	5	1	54	10	65	45	133	178		9:15-9:30
3 Hour Totals	**165**	**49**	**516**	**730**	**276**	**587**	**5**	**868**	**9**	**27**	**13**	**49**	**3**	**771**	**148**	**922**	**779**	**1,790**	**2,569**		
1 Hour Totals																					
6:30-7:30	35	7	115	157	57	50	1	108	4	3	5	12	1	78	33	112	169	220	389	0.68	6:30-7:30
6:45-7:45	52	13	143	208	69	105	1	175	4	4	4	12	1	120	44	165	220	340	560	0.65	6:45-7:45
7:00-8:00	69	18	174	261	83	186	3	272	3	6	5	14	1	185	47	233	275	505	780	0.66	7:00-8:00
7:15-8:15	83	19	197	299	89	259	2	350	3	10	3	16	1	293	57	351	315	701	1,016	0.70	7:15-8:15
7:30-8:30	85	22	230	337	109	319	3	431	3	10	3	16	1	381	65	447	353	878	1,231	0.85	7:30-8:30
7:45-8:45	78	23	257	358	113	328	3	444	4	14	5	23	1	428	66	495	381	939	1,320	0.91	7:45-8:45
8:00-9:00	66	22	246	334	120	300	1	421	4	14	5	23	1	438	68	507	357	928	1,285	0.89	8:00-9:00
8:15-9:15	51	22	216	289	123	260	2	385	2	12	6	20	1	377	58	436	309	821	1,130	0.79	8:15-9:15
8:30-9:30	45	20	171	236	110	218	1	329	2	14	5	21	1	312	50	363	257	692	949	0.78	8:30-9:30
AM Peak 7:45-8:45	**78**	**23**	**257**	**358**	**113**	**328**	**3**	**444**	**4**	**14**	**5**	**23**	**1**	**428**	**66**	**495**	**381**	**939**	**1,320**	**0.91**	**AM Peak 7:45-8:45**
PM																					
4:00-4:15	21	5	31	57	47	61	0	108	1	2	0	3	0	47	9	56	60	164	224		4:00-4:15
4:15-4:30	19	2	28	49	53	80	1	134	1	4	2	7	1	44	12	57	56	191	247		4:15-4:30
4:30-4:45	15	4	33	52	49	87	1	137	1	2	1	4	2	58	14	74	56	211	267		4:30-4:45
4:45-5:00	23	5	38	66	57	81	2	140	1	3	3	7	1	56	10	67	73	207	280		4:45-5:00
5:00-5:15	20	6	39	65	61	78	1	140	0	5	2	7	2	58	11	71	72	211	283		5:00-5:15
5:15-5:30	18	5	26	49	48	82	1	131	1	9	4	14	1	53	16	70	63	201	264		5:15-5:30
5:30-5:45	20	8	39	67	49	72	0	121	1	3	1	5	1	55	11	67	72	188	260		5:30-5:45
5:45-6:00	23	5	25	53	56	73	2	131	0	5	1	6	2	56	21	79	59	210	269		5:45-6:00
6:00-6:15	24	2	36	62	39	64	1	104	0	7	2	9	2	34	22	58	71	162	233		6:00-6:15
6:15-6:30	16	7	36	59	47	59	2	108	1	4	0	5	2	42	17	61	64	169	233		6:15-6:30
6:30-6:45	21	5	34	60	38	44	2	84	0	2	1	3	1	44	11	56	63	140	203		6:30-6:45
6:45-7:00	14	7	30	51	24	38	0	62	0	4	1	5	0	39	17	56	56	118	174		6:45-7:00
3 Hour Totals	**234**	**61**	**395**	**690**	**568**	**819**	**13**	**1,400**	**7**	**50**	**18**	**75**	**15**	**586**	**171**	**772**	**765**	**2,172**	**2,937**		
1 Hour Totals																					
4:00-5:00	78	16	130	224	206	309	4	519	4	11	6	21	4	205	45	254	245	773	1,018	0.91	4:00-5:00
4:15-5:15	77	17	138	232	220	326	5	551	3	14	8	25	6	216	47	269	257	820	1,077	0.95	4:15-5:15
4:30-5:30	76	20	136	232	215	328	5	548	3	19	10	32	6	225	51	282	264	830	1,094	0.97	4:30-5:30
4:45-5:45	81	24	142	247	215	313	4	532	3	20	10	33	5	222	48	275	280	807	1,087	0.96	4:45-5:45
5:00-6:00	81	24	129	234	214	305	4	523	2	22	8	32	6	222	59	287	266	810	1,076	0.95	5:00-6:00
5:15-6:15	85	20	126	231	192	291	4	487	2	24	8	34	6	198	70	274	265	761	1,026	0.95	5:15-6:15
5:30-6:30	83	22	136	241	191	268	5	464	2	19	4	25	7	187	71	265	266	729	995	0.92	5:30-6:30
5:45-6:45	84	19	131	234	180	240	7	427	1	18	4	23	7	176	71	254	257	681	938	0.87	5:45-6:45
6:00-7:00	75	21	136	232	148	205	5	358	1	17	4	22	5	159	67	231	254	589	843	0.90	6:00-7:00
PM Peak 4:30-5:30	**76**	**20**	**136**	**232**	**215**	**328**	**5**	**548**	**3**	**19**	**10**	**32**	**6**	**225**	**51**	**282**	**264**	**830**	**1,094**	**0.97**	**PM Peak 4:30-5:30**

Appendix B: Existing Traffic Counts

Project Name:	Higher Learning
Project Number:	8455
Location:	Montgomery Co.,MD
Intersection:	Bradley Blvd. & Fernwood Rd.
Weather:	clear
Date:	5/6/2021
Surveyor:	Agan



Hourly Pedestrian Count

		1	2	3	4	5	6	7	8					
	From:	SE	NE	SW	SE	SW	NW	NW	NE	Total	1 & 2	3 & 4	5 & 6	7 & 8
Time Period	To:	NE	SE	SE	SW	NW	SW	NE	NW					
AM PEAK														
6:30	7:30	0	1	0	0	0	0	0	0	1	1	0	0	0
6:45	7:45	0	1	0	0	0	0	0	0	1	1	0	0	0
7:00	8:00	0	1	0	0	0	0	0	0	1	1	0	0	0
7:15	8:15	0	1	0	0	0	0	0	0	1	1	0	0	0
7:30	8:30	1	0	0	0	0	0	0	0	1	1	0	0	0
7:45	8:45	1	1	0	0	0	0	0	0	2	2	0	0	0
8:00	9:00	2	1	0	0	0	0	0	0	3	3	0	0	0
8:15	9:15	2	1	0	0	0	0	0	0	3	3	0	0	0
8:30	9:30	1	1	0	0	0	0	0	0	2	2	0	0	0
PM PEAK														
16:00	17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	18:00	0	0	0	0	1	0	0	0	1	0	0	1	0
17:15	18:15	0	0	0	0	1	0	0	0	1	0	0	1	0
17:30	18:30	0	0	0	0	1	0	0	0	1	0	0	1	0
17:45	18:45	0	0	0	0	1	0	0	0	1	0	0	1	0
18:00	19:00	0	0	0	0	0	0	0	0	0	0	0	0	0

Wells & Associates,Inc

McLean, Virginia

Existing Traffic Count

PROJECT: Higher Learning
W & A JOB NO.: 8455
INTERSECTION: Bradley Blvd. & Fernwood Rd.
LOCATION: Montgomery Co.,MD

DATE: 5/6/2021
DAY: Thursday
WEATHER: clear
COUNTED BY: Agan
INPUTED BY: agan

SOUTHBOUND ROAD: Fernwood Road
NORTHBOUND ROAD: Fernwood Road
WESTBOUND ROAD: Bradley Boulevard - 191
EASTBOUND ROAD: Bradley Boulevard - 191

BIKES

Time Period	Turning Movements: Southbound Fernwood Road 1 Right	2 Thru	3 Left	Total	Westbound Bradley Boulevard - 191 4 Right	5 Thru	6 Left	Total	Northbound Fernwood Road 7 Right	8 Thru	9 Left	Total	Eastbound Bradley Boulevard - 191 10 Right	11 Thru	12 Left	Total	North & South	East & West	Total	PHF	Time Period
AM																					
6:30-6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6:30-6:45
6:45-7:00	0	0	0	0	0	0	0	0	0	0	9	9	0	2	0	2	9	2	11		6:45-7:00
7:00-7:15	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2		7:00-7:15
7:15-7:30	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2		7:15-7:30
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	3	3		7:30-7:45
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	6	6		7:45-8:00
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8:00-8:15
8:15-8:30	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		8:15-8:30
8:30-8:45	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2		8:30-8:45
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8:45-9:00
9:00-9:15	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2		9:00-9:15
9:15-9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		9:15-9:30
3 Hour Totals	**2**	**0**	**4**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**9**	**0**	**15**	**0**	**15**	**15**	**15**	**30**		
1 Hour Totals																					
6:30-7:30	1	0	1	2	0	0	0	0	0	0	9	9	0	4	0	4	11	4	15	0.34	6:30-7:30
6:45-7:45	1	0	1	2	0	0	0	0	0	0	9	9	0	7	0	7	11	7	18	0.41	6:45-7:45
7:00-8:00	1	0	1	2	0	0	0	0	0	0	0	0	0	11	0	11	2	11	13	0.54	7:00-8:00
7:15-8:15	1	0	0	1	0	0	0	0	0	0	0	0	0	10	0	10	1	10	11	0.46	7:15-8:15
7:30-8:30	1	0	0	1	0	0	0	0	0	0	0	0	0	9	0	9	1	9	10	0.42	7:30-8:30
7:45-8:45	1	0	1	2	0	0	0	0	0	0	0	0	0	7	0	7	2	7	9	0.38	7:45-8:45
8:00-9:00	1	0	1	2	0	0	0	0	0	0	0	0	0	1	0	1	2	1	3	0.38	8:00-9:00
8:15-9:15	1	0	3	4	0	0	0	0	0	0	0	0	0	1	0	1	4	1	5	0.63	8:15-9:15
8:30-9:30	0	0	3	3	0	0	0	0	0	0	0	0	0	2	0	2	3	2	5	0.63	8:30-9:30
AM Peak 6:45-7:45	**1**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**9**	**0**	**7**	**0**	**7**	**11**	**7**	**18**	**0.41**	**AM Peak 6:45-7:45**
PM																					
4:00-4:15	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2		4:00-4:15
4:15-4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		4:15-4:30
4:30-4:45	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0	2	2	4		4:30-4:45
4:45-5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2		4:45-5:00
5:00-5:15	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	0	2	2		5:00-5:15
5:15-5:30	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2	1	2	3		5:15-5:30
5:30-5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5:30-5:45
5:45-6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5:45-6:00
6:00-6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6:00-6:15
6:15-6:30	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1		6:15-6:30
6:30-6:45	0	0	1	1	1	0	1	2	0	0	0	0	0	0	0	0	1	2	3		6:30-6:45
6:45-7:00	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	2	2		6:45-7:00
3 Hour Totals	**1**	**0**	**4**	**5**	**5**	**2**	**1**	**8**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**7**	**5**	**15**	**20**		
1 Hour Totals																					
4:00-5:00	1	0	2	3	0	2	0	2	0	0	0	0	0	4	0	4	3	6	9	0.56	4:00-5:00
4:15-5:15	1	0	1	2	1	2	0	3	0	0	0	0	0	4	0	4	2	7	9	0.56	4:15-5:15
4:30-5:30	1	0	2	3	1	2	0	3	0	0	0	0	0	5	0	5	3	8	11	0.69	4:30-5:30
4:45-5:45	0	0	1	1	1	0	0	1	0	0	0	0	0	5	0	5	1	6	7	0.58	4:45-5:45
5:00-6:00	0	0	1	1	1	0	0	1	0	0	0	0	0	3	0	3	1	4	5	0.42	5:00-6:00
5:15-6:15	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2	1	2	3	0.25	5:15-6:15
5:30-6:30	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0.25	5:30-6:30
5:45-6:45	0	0	1	1	2	0	1	3	0	0	0	0	0	0	0	0	1	3	4	0.33	5:45-6:45
6:00-7:00	0	0	1	1	4	0	1	5	0	0	0	0	0	0	0	0	1	5	6	0.50	6:00-7:00
PM Peak 4:30-5:30	**1**	**0**	**2**	**3**	**1**	**2**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**5**	**3**	**8**	**11**	**0.69**	**PM Peak 4:30-5:30**

Wells & Associates,Inc

McLean, Virginia

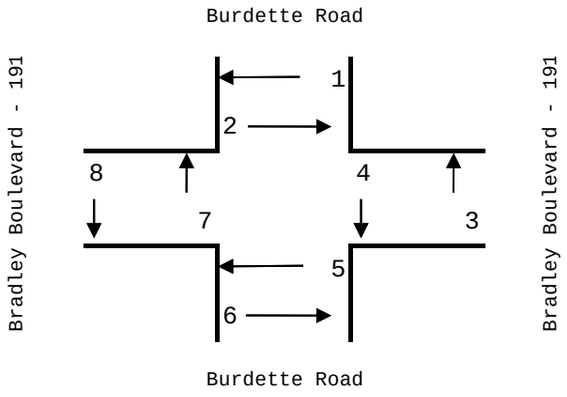
Existing Traffic Count

PROJECT:	Higher Learning	DATE:	5/6/2021	SOUTHBOUND ROAD:	Burdette Road
W & A JOB NO.:	8455	DAY:	Thursday	NORTHBOUND ROAD:	Burdette Road
INTERSECTION:	Bradley Blvd. & Burdette Rd.	WEATHER:	clear	WESTBOUND ROAD:	Bradley Boulevard - 191
LOCATION:	Montgomery Co.,MD	COUNTED BY:	Agan	EASTBOUND ROAD:	Bradley Boulevard - 191
		INPUTED BY:	agan		

Time Period	Turning Movements: Southbound Burdette Road				Westbound Bradley Boulevard - 191				Northbound Burdette Road				Eastbound Bradley Boulevard - 191				North & South	East & West	Total	PHF	Time Period
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:30-6:45	0	1	2	3	0	6	1	7	1	0	0	1	0	12	2	14	4	21	25		6:30-6:45
6:45-7:00	1	1	3	5	1	7	5	13	1	1	0	2	0	18	2	20	7	33	40		6:45-7:00
7:00-7:15	7	1	1	9	2	25	5	32	1	2	1	4	0	26	3	29	13	61	74		7:00-7:15
7:15-7:30	5	1	0	6	2	25	1	28	2	2	1	5	4	51	3	58	11	86	97		7:15-7:30
7:30-7:45	3	3	1	7	3	61	9	73	1	3	0	4	0	58	1	59	11	132	143		7:30-7:45
7:45-8:00	22	10	4	36	4	117	7	128	3	5	2	10	7	90	6	103	46	231	277		7:45-8:00
8:00-8:15	14	21	6	41	7	71	7	85	5	9	4	18	5	142	20	167	59	252	311		8:00-8:15
8:15-8:30	19	17	13	49	8	68	10	86	2	8	1	11	6	127	22	155	60	241	301		8:15-8:30
8:30-8:45	16	15	10	41	4	59	9	72	6	7	2	15	0	81	15	96	56	168	224		8:30-8:45
8:45-9:00	9	8	8	25	4	53	4	61	3	7	2	12	5	90	8	103	37	164	201		8:45-9:00
9:00-9:15	5	3	5	13	5	59	11	75	1	7	1	9	3	61	4	68	22	143	165		9:00-9:15
9:15-9:30	1	4	5	10	2	34	4	40	4	4	1	9	3	50	4	57	19	97	116		9:15-9:30
3 Hour Totals	**102**	**85**	**58**	**245**	**42**	**585**	**73**	**700**	**30**	**55**	**15**	**100**	**33**	**806**	**90**	**929**	**345**	**1,629**	**1,974**		
1 Hour Totals																					
6:30-7:30	13	4	6	23	5	63	12	80	5	5	2	12	4	107	10	121	35	201	236	0.61	6:30-7:30
6:45-7:45	16	6	5	27	8	118	20	146	5	8	2	15	4	153	9	166	42	312	354	0.62	6:45-7:45
7:00-8:00	37	15	6	58	11	228	22	261	7	12	4	23	11	225	13	249	81	510	591	0.53	7:00-8:00
7:15-8:15	44	35	11	90	16	274	24	314	11	19	7	37	16	341	30	387	127	701	828	0.67	7:15-8:15
7:30-8:30	58	51	24	133	22	317	33	372	11	25	7	43	18	417	49	484	176	856	1,032	0.83	7:30-8:30
7:45-8:45	71	63	33	167	23	315	33	371	16	29	9	54	18	440	63	521	221	892	1,113	0.89	7:45-8:45
8:00-9:00	58	61	37	156	23	251	30	304	16	31	9	56	16	440	65	521	212	825	1,037	0.83	8:00-9:00
8:15-9:15	49	43	36	128	21	239	34	294	12	29	6	47	14	359	49	422	175	716	891	0.74	8:15-9:15
8:30-9:30	31	30	28	89	15	205	28	248	14	25	6	45	11	282	31	324	134	572	706	0.79	8:30-9:30
AM Peak 7:45-8:45	**71**	**63**	**33**	**167**	**23**	**315**	**33**	**371**	**16**	**29**	**9**	**54**	**18**	**440**	**63**	**521**	**221**	**892**	**1,113**	**0.89**	**AM Peak 7:45-8:45**
PM																					
4:00-4:15	7	3	1	11	6	70	7	83	8	10	4	22	2	54	9	65	33	148	181		4:00-4:15
4:15-4:30	6	6	4	16	8	88	6	102	4	4	2	10	2	43	7	52	26	154	180		4:15-4:30
4:30-4:45	19	9	6	34	11	87	11	109	13	9	2	24	6	52	6	64	58	173	231		4:30-4:45
4:45-5:00	7	8	4	19	7	83	7	97	9	5	6	20	2	63	3	68	39	165	204		4:45-5:00
5:00-5:15	8	7	6	21	9	76	11	96	9	6	1	16	3	61	9	73	37	169	206		5:00-5:15
5:15-5:30	11	8	5	24	4	89	9	102	6	9	6	21	1	60	2	63	45	165	210		5:15-5:30
5:30-5:45	5	3	4	12	6	82	5	93	5	9	2	16	1	69	9	79	28	172	200		5:30-5:45
5:45-6:00	12	7	7	26	6	92	11	109	8	3	1	12	1	55	3	59	38	168	206		5:45-6:00
6:00-6:15	12	9	5	26	5	77	5	87	7	9	3	19	0	45	2	47	45	134	179		6:00-6:15
6:15-6:30	9	6	2	17	8	57	5	70	3	6	3	12	0	57	3	60	29	130	159		6:15-6:30
6:30-6:45	8	3	1	12	3	54	5	62	4	4	5	13	0	52	8	60	25	122	147		6:30-6:45
6:45-7:00	1	4	3	8	4	50	3	57	2	12	3	17	0	48	1	49	25	106	131		6:45-7:00
3 Hour Totals	**105**	**73**	**48**	**226**	**77**	**905**	**85**	**1,067**	**78**	**86**	**38**	**202**	**18**	**659**	**62**	**739**	**428**	**1,806**	**2,234**		
1 Hour Totals																					
4:00-5:00	39	26	15	80	32	328	31	391	34	28	14	76	12	212	25	249	156	640	796	0.86	4:00-5:00
4:15-5:15	40	30	20	90	35	334	35	404	35	24	11	70	13	219	25	257	160	661	821	0.89	4:15-5:15
4:30-5:30	45	32	21	98	31	335	38	404	37	29	15	81	12	236	20	268	179	672	851	0.92	4:30-5:30
4:45-5:45	31	26	19	76	26	330	32	388	29	29	15	73	7	253	23	283	149	671	820	0.98	4:45-5:45
5:00-6:00	36	25	22	83	25	339	36	400	28	27	10	65	6	245	23	274	148	674	822	0.98	5:00-6:00
5:15-6:15	40	27	21	88	21	340	30	391	26	30	12	68	3	229	16	248	156	639	795	0.95	5:15-6:15
5:30-6:30	38	25	18	81	25	308	26	359	23	27	9	59	2	226	17	245	140	604	744	0.90	5:30-6:30
5:45-6:45	41	25	15	81	22	280	26	328	22	22	12	56	1	209	16	226	137	554	691	0.84	5:45-6:45
6:00-7:00	30	22	11	63	20	238	18	276	16	31	14	61	0	202	14	216	124	492	616	0.86	6:00-7:00
PM Peak 4:30-5:30	**45**	**32**	**21**	**98**	**31**	**335**	**38**	**404**	**37**	**29**	**15**	**81**	**12**	**236**	**20**	**268**	**179**	**672**	**851**	**0.92**	**PM Peak 4:30-5:30**

Appendix B: Existing Traffic Counts

Project Name:	Higher Learning
Project Number:	8455
Location:	Montgomery Co.,MD
Intersection:	Bradley Blvd. & Burdette Rd.
Weather:	clear
Date:	5/6/2021
Surveyor:	Agan



Hourly Pedestrian Count

			1	2	3	4	5	6	7	8					
		From:	SE	NE	SW	SE	SW	NW	NW	NE	Total	1 & 2	3 & 4	5 & 6	7 & 8
Time Period		To:	NE	SE	SE	SW	NW	SW	NE	NW					
AM PEAK															
6:30	7:30		1	1	0	0	0	0	1	1	4	2	0	0	2
6:45	7:45		1	1	0	0	0	0	0	1	3	2	0	0	1
7:00	8:00		1	1	0	0	0	0	0	0	2	2	0	0	0
7:15	8:15		1	0	0	0	0	0	0	0	1	1	0	0	0
7:30	8:30		0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	8:45		0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	9:00		0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	9:15		0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	9:30		0	0	0	0	0	0	0	0	0	0	0	0	0
PM PEAK															
16:00	17:00		0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	17:15		0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	17:30		0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	17:45		0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	18:00		0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	18:15		0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	18:30		0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	18:45		0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	19:00		0	0	0	0	0	0	0	0	0	0	0	0	0

Wells & Associates,Inc

McLean, Virginia

Existing Traffic Count

PROJECT:	Higher Learning	DATE:	5/6/2021	SOUTHBOUND ROAD:	Burdette Road
W & A JOB NO.:	8455	DAY:	Thursday	NORTHBOUND ROAD:	Burdette Road
INTERSECTION:	Bradley Blvd. & Burdette Rd.	WEATHER:	clear	WESTBOUND ROAD:	Bradley Boulevard - 191
LOCATION:	Montgomery Co.,MD	COUNTED BY:	Agan	EASTBOUND ROAD:	Bradley Boulevard - 191
		INPUTED BY:	agan	**BIKES**	

Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound Burdette Road				Westbound Bradley Boulevard - 191				Northbound Burdette Road				Eastbound Bradley Boulevard - 191				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:30-6:45	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2		6:30-6:45
6:45-7:00	0	0	0	0	0	9	0	9	0	0	0	0	0	2	0	2	0	11	11		6:45-7:00
7:00-7:15	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	1	2	3		7:00-7:15
7:15-7:30	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	0	3	3		7:15-7:30
7:30-7:45	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	1	2	3		7:30-7:45
7:45-8:00	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2		7:45-8:00
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8:00-8:15
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		8:15-8:30
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8:30-8:45
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8:45-9:00
9:00-9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		9:00-9:15
9:15-9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		9:15-9:30
3 Hour Totals	**1**	**1**	**2**	**4**	**0**	**12**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**10**	**4**	**22**	**26**		
1 Hour Totals																					
6:30-7:30	0	1	1	2	0	12	0	12	0	0	0	0	0	5	0	5	2	17	19	0.43	6:30-7:30
6:45-7:45	1	0	1	2	0	12	0	12	0	0	0	0	0	6	0	6	2	18	20	0.45	6:45-7:45
7:00-8:00	1	0	2	3	0	3	0	3	0	0	0	0	0	5	0	5	3	8	11	0.92	7:00-8:00
7:15-8:15	1	0	1	2	0	2	0	2	0	0	0	0	0	4	0	4	2	6	8	0.67	7:15-8:15
7:30-8:30	1	0	1	2	0	0	0	0	0	0	0	0	0	4	0	4	2	4	6	0.50	7:30-8:30
7:45-8:45	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2	1	2	3	0.38	7:45-8:45
8:00-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0.25	8:00-9:00
8:15-9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0.25	8:15-9:15
8:30-9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0.25	8:30-9:30
AM Peak 6:45-7:45	**1**	**0**	**1**	**2**	**0**	**12**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**6**	**2**	**18**	**20**	**0.45**	**AM Peak 6:45-7:45**
PM																					
4:00-4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		4:00-4:15
4:15-4:30	0	0	0	0	1	1	0	2	1	0	0	1	0	1	0	1	1	3	4		4:15-4:30
4:30-4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1		4:30-4:45
4:45-5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2		4:45-5:00
5:00-5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5:00-5:15
5:15-5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2		5:15-5:30
5:30-5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	2	2		5:30-5:45
5:45-6:00	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		5:45-6:00
6:00-6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6:00-6:15
6:15-6:30	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2	0	2		6:15-6:30
6:30-6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6:30-6:45
6:45-7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6:45-7:00
3 Hour Totals	**2**	**0**	**0**	**2**	**1**	**1**	**0**	**2**	**1**	**0**	**1**	**2**	**0**	**8**	**1**	**9**	**4**	**11**	**15**		
1 Hour Totals																					
4:00-5:00	0	0	0	0	1	1	0	2	1	0	0	1	0	5	0	5	1	7	8	0.50	4:00-5:00
4:15-5:15	0	0	0	0	1	1	0	2	1	0	0	1	0	4	0	4	1	6	7	0.44	4:15-5:15
4:30-5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	5	5	0.63	4:30-5:30
4:45-5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	6	0	6	6	0.75	4:45-5:45
5:00-6:00	1	0	0	1	0	0	0	0	0	0	0	0	0	3	1	4	1	4	5	0.63	5:00-6:00
5:15-6:15	1	0	0	1	0	0	0	0	0	0	0	0	0	3	1	4	1	4	5	0.63	5:15-6:15
5:30-6:30	2	0	0	2	0	0	0	0	0	0	1	1	0	1	1	2	3	2	5	0.63	5:30-6:30
5:45-6:45	2	0	0	2	0	0	0	0	0	0	1	1	0	0	0	0	3	0	3	0.38	5:45-6:45
6:00-7:00	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0.25	6:00-7:00
PM Peak 4:00-5:00	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**2**	**1**	**0**	**0**	**1**	**0**	**5**	**0**	**5**	**1**	**7**	**8**	**0.50**	**PM Peak 4:00-5:00**

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Burdette Road
Location: between Hillmeade Road and Bradley Boulevard

A study of vehicle traffic was conducted with the device having serial number 400358. The study was done in the NB 358 lane at Burdette Road in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,422 vehicles passed through the location with a peak volume of 27 on 05/19/2021 at [01:45 PM-02:00 PM] and a minimum volume of 0 on 05/18/2021 at [09:45 PM-10:00 PM]. The AADT count for this study was 711.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 20 - 25 MPH range or lower. The average speed for all classifed vehicles was 21 MPH with 1.35% vehicles exceeding the posted speed of 35 MPH. 0.28% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 20MPH and the 85th percentile was 26.35 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
77	73	356	628	230	25	6	3	3	3	0	0	1	0	3

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 628 which represents 45 percent of the total classified vehicles. The number of Vans & Pickups in the study was 657 which represents 47 percent of the total classified vehicles. The number of Busses & Trucks in the study was 87 which represents 6 percent of the total classified vehicles. The number of Tractor Trailers in the study was 36 which represents 3 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
628	432	225	65	16	12	14	16							

CHART 2

HEADWAY

During the peak traffic period, on 05/19/2021 at [01:45 PM-02:00 PM] the average headway between vehicles was 32.143 seconds. During the slowest traffic period, on 05/18/2021 at [09:45 PM-10:00 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 57.00 and 127.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Burdette Road
Location: between Greentree Road and Bradley Boulevard

A study of vehicle traffic was conducted with the device having serial number 400366. The study was done in the NB 366 lane at Burdette Road in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,598 vehicles passed through the location with a peak volume of 42 on 05/18/2021 at [08:15 AM-08:30 AM] and a minimum volume of 0 on 05/18/2021 at [10:00 PM-10:15 PM]. The AADT count for this study was 799.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 20 - 25 MPH range or lower. The average speed for all classifed vehicles was 20 MPH with 1.41% vehicles exceeding the posted speed of 35 MPH. 0.19% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 20MPH and the 85th percentile was 27.61 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
229	68	267	598	299	75	10	5	1	3	1	0	1	0	1

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 639 which represents 41 percent of the total classified vehicles. The number of Vans & Pickups in the study was 631 which represents 41 percent of the total classified vehicles. The number of Busses & Trucks in the study was 232 which represents 15 percent of the total classified vehicles. The number of Tractor Trailers in the study was 49 which represents 3 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
639	418	213	119	73	52	10	34							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [08:15 AM-08:30 AM] the average headway between vehicles was 20.93 seconds. During the slowest traffic period, on 05/18/2021 at [10:00 PM-10:15 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 55.00 and 90.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Bradley Boulevard
Location: between Burdette Road & Fernwood Road

A study of vehicle traffic was conducted with the device having serial number 400588. The study was done in the EB 588 lane at Bradley Boulevard in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 7,767 vehicles passed through the location with a peak volume of 137 on 05/18/2021 at [08:00 AM-08:15 AM] and a minimum volume of 0 on 05/18/2021 at [12:00 AM-12:15 AM]. The AADT count for this study was 3,884.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 35 - 40 MPH range or lower. The average speed for all classifed vehicles was 34 MPH with 50.70% vehicles exceeding the posted speed of 35 MPH. 0.75% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 35MPH and the 85th percentile was 41.63 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
311	52	124	387	861	2083	2395	1093	297	83	27	14	8	2	7

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 3308 which represents 43 percent of the total classified vehicles. The number of Vans & Pickups in the study was 3778 which represents 49 percent of the total classified vehicles. The number of Busses & Trucks in the study was 499 which represents 6 percent of the total classified vehicles. The number of Tractor Trailers in the study was 145 which represents 2 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
3308	2442	1336	386	76	49	80	67							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [08:00 AM-08:15 AM] the average headway between vehicles was 6.522 seconds. During the slowest traffic period, on 05/18/2021 at [12:00 AM-12:15 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 55.00 and 115.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Bradley Boulevard
Location: between Burdette Road & Fernwood Road

A study of vehicle traffic was conducted with the device having serial number 400589. The study was done in the WB 589 lane at Bradley Boulevard in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 7,415 vehicles passed through the location with a peak volume of 125 on 05/18/2021 at [03:15 PM-03:30 PM] and a minimum volume of 0 on 05/18/2021 at [12:15 AM-12:30 AM]. The AADT count for this study was 3,708.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 30 - 35 MPH range or lower. The average speed for all classifed vehicles was 35 MPH with 44.51% vehicles exceeding the posted speed of 35 MPH. 3.53% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 30MPH and the 85th percentile was 40.94 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
269	99	88	406	1049	2101	1888	743	224	108	50	49	34	28	94

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 2824 which represents 40 percent of the total classified vehicles. The number of Vans & Pickups in the study was 2894 which represents 41 percent of the total classified vehicles. The number of Busses & Trucks in the study was 995 which represents 14 percent of the total classified vehicles. The number of Tractor Trailers in the study was 392 which represents 6 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
2824	1883	1011	534	295	217	154	312							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [03:15 PM-03:30 PM] the average headway between vehicles was 7.143 seconds. During the slowest traffic period, on 05/18/2021 at [12:15 AM-12:30 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 55.00 and 122.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Burdette Road
Location: between Hillmeade Road and Bradley Boulevard

A study of vehicle traffic was conducted with the device having serial number 400641. The study was done in the SB 641 lane at Burdette Road in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,580 vehicles passed through the location with a peak volume of 37 on 05/18/2021 at [08:00 AM-08:15 AM] and a minimum volume of 0 on 05/18/2021 at [09:00 PM-09:15 PM]. The AADT count for this study was 790.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 20 - 25 MPH range or lower. The average speed for all classifed vehicles was 24 MPH with 1.53% vehicles exceeding the posted speed of 35 MPH. 0.13% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 20MPH and the 85th percentile was 28.59 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
47	20	183	721	509	68	15	3	2	2	0	1	0	0	1

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 909 which represents 58 percent of the total classified vehicles. The number of Vans & Pickups in the study was 575 which represents 37 percent of the total classified vehicles. The number of Busses & Trucks in the study was 58 which represents 4 percent of the total classified vehicles. The number of Tractor Trailers in the study was 30 which represents 2 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
909	423	152	38	9	17	16	8							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [08:00 AM-08:15 AM] the average headway between vehicles was 23.684 seconds. During the slowest traffic period, on 05/18/2021 at [09:00 PM-09:15 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 55.00 and 115.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Bradley Boulevard
Location: between Burdette Road & Fernwood Road

A study of vehicle traffic was conducted with the device having serial number 400875. The study was done in the WB 875 lane at Bradley Boulevard in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 7,493 vehicles passed through the location with a peak volume of 125 on 05/18/2021 at [03:15 PM-03:30 PM] and a minimum volume of 0 on 05/18/2021 at [12:15 AM-12:30 AM]. The AADT count for this study was 3,747.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 30 - 35 MPH range or lower. The average speed for all classifed vehicles was 33 MPH with 33.61% vehicles exceeding the posted speed of 35 MPH. 2.01% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 30MPH and the 85th percentile was 38.98 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
304	106	117	501	1268	2636	1659	497	137	55	41	24	17	15	52

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 3026 which represents 41 percent of the total classified vehicles. The number of Vans & Pickups in the study was 2874 which represents 39 percent of the total classified vehicles. The number of Busses & Trucks in the study was 1088 which represents 15 percent of the total classified vehicles. The number of Tractor Trailers in the study was 368 which represents 5 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
3026	1921	953	521	335	306	149	218							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [03:15 PM-03:30 PM] the average headway between vehicles was 7.143 seconds. During the slowest traffic period, on 05/18/2021 at [12:15 AM-12:30 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 52.00 and 120.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Bradley Boulevard
Location: Between Beltway and Redwood Avenue

A study of vehicle traffic was conducted with the device having serial number 136064. The study was done in the EB 6064 lane at Bradley Boulevard in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 7,513 vehicles passed through the location with a peak volume of 174 on 05/18/2021 at [08:00 AM-08:15 AM] and a minimum volume of 0 on 05/18/2021 at [01:00 AM-01:15 AM]. The AADT count for this study was 3,757.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 35 - 40 MPH range or lower. The average speed for all classifed vehicles was 40 MPH with 75.80% vehicles exceeding the posted speed of 35 MPH. 6.20% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 35MPH and the 85th percentile was 47.18 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
0	19	67	88	308	1246	2388	1653	685	244	125	71	64	54	129

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 5382 which represents 75 percent of the total classified vehicles. The number of Vans & Pickups in the study was 1271 which represents 18 percent of the total classified vehicles. The number of Busses & Trucks in the study was 374 which represents 5 percent of the total classified vehicles. The number of Tractor Trailers in the study was 111 which represents 2 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
5382	960	311	237	75	90	52	34							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [08:00 AM-08:15 AM] the average headway between vehicles was 5.143 seconds. During the slowest traffic period, on 05/18/2021 at [01:00 AM-01:15 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 61.00 and 129.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Bradley Boulevard
Location: Between Beltway and Redwood Avenue

A study of vehicle traffic was conducted with the device having serial number 122569. The study was done in the Wb 2569 lane at Bradley Boulevard in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 7,144 vehicles passed through the location with a peak volume of 129 on 05/18/2021 at [03:15 PM-03:30 PM] and a minimum volume of 0 on 05/18/2021 at [01:15 AM-01:30 AM]. The AADT count for this study was 3,572.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 35 - 40 MPH range or lower. The average speed for all classifed vehicles was 40 MPH with 74.89% vehicles exceeding the posted speed of 35 MPH. 6.48% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 35MPH and the 85th percentile was 47.86 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
2	34	58	141	331	1151	2031	1644	733	270	139	90	48	31	135

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 4087 which represents 60 percent of the total classified vehicles. The number of Vans & Pickups in the study was 1974 which represents 29 percent of the total classified vehicles. The number of Busses & Trucks in the study was 621 which represents 9 percent of the total classified vehicles. The number of Tractor Trailers in the study was 156 which represents 2 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
4087	1341	633	389	152	112	78	46							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [03:15 PM-03:30 PM] the average headway between vehicles was 6.923 seconds. During the slowest traffic period, on 05/18/2021 at [01:15 AM-01:30 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 61.00 and 129.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Burdette Road
Location: between Hillmeade Road and Bradley Boulevard

A study of vehicle traffic was conducted with the device having serial number 401264. The study was done in the SB 1264 lane at Burdette Road in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,574 vehicles passed through the location with a peak volume of 37 on 05/18/2021 at [08:00 AM-08:15 AM] and a minimum volume of 0 on 05/18/2021 at [09:00 PM-09:15 PM]. The AADT count for this study was 787.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 20 - 25 MPH range or lower. The average speed for all classifed vehicles was 24 MPH with 1.72% vehicles exceeding the posted speed of 35 MPH. 0.13% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 20MPH and the 85th percentile was 28.74 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
48	21	198	673	530	75	14	9	2	0	1	0	0	0	1

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 776 which represents 49 percent of the total classified vehicles. The number of Vans & Pickups in the study was 708 which represents 45 percent of the total classified vehicles. The number of Busses & Trucks in the study was 60 which represents 4 percent of the total classified vehicles. The number of Tractor Trailers in the study was 28 which represents 2 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
776	510	198	31	20	12	10	15							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [08:00 AM-08:15 AM] the average headway between vehicles was 23.684 seconds. During the slowest traffic period, on 05/18/2021 at [09:00 PM-09:15 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 59.00 and 102.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Bradley Boulevard
Location: Between Beltway and Redwood Avenue

A study of vehicle traffic was conducted with the device having serial number 401263. The study was done in the EB 1263 lane at Bradley Boulevard in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 7,653 vehicles passed through the location with a peak volume of 175 on 05/18/2021 at [08:00 AM-08:15 AM] and a minimum volume of 0 on 05/18/2021 at [01:00 AM-01:15 AM]. The AADT count for this study was 3,827.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 40 - 45 MPH range or lower. The average speed for all classifed vehicles was 41 MPH with 85.26% vehicles exceeding the posted speed of 35 MPH. 6.86% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 40MPH and the 85th percentile was 48.75 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
216	76	52	65	100	594	2048	2347	1099	373	179	96	59	43	136

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 4218 which represents 57 percent of the total classified vehicles. The number of Vans & Pickups in the study was 2526 which represents 34 percent of the total classified vehicles. The number of Busses & Trucks in the study was 495 which represents 7 percent of the total classified vehicles. The number of Tractor Trailers in the study was 199 which represents 3 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
4218	1834	692	287	121	116	88	127							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [08:00 AM-08:15 AM] the average headway between vehicles was 5.114 seconds. During the slowest traffic period, on 05/18/2021 at [01:00 AM-01:15 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 59.00 and 124.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Burdette Road
Location: between Greentree Road and Bradley Boulevard

A study of vehicle traffic was conducted with the device having serial number 401212. The study was done in the SB 1212 lane at Burdette Road in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,145 vehicles passed through the location with a peak volume of 50 on 05/18/2021 at [03:00 PM-03:15 PM] and a minimum volume of 0 on 05/18/2021 at [09:45 PM-10:00 PM]. The AADT count for this study was 573.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 20 - 25 MPH range or lower. The average speed for all classifed vehicles was 21 MPH with 0.70% vehicles exceeding the posted speed of 35 MPH. 0.09% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 20MPH and the 85th percentile was 25.65 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
63	37	362	488	153	31	4	2	1	0	0	0	0	0	1

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 569 which represents 50 percent of the total classified vehicles. The number of Vans & Pickups in the study was 419 which represents 37 percent of the total classified vehicles. The number of Busses & Trucks in the study was 134 which represents 12 percent of the total classified vehicles. The number of Tractor Trailers in the study was 20 which represents 2 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
569	297	122	74	45	19	7	9							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [03:00 PM-03:15 PM] the average headway between vehicles was 17.647 seconds. During the slowest traffic period, on 05/18/2021 at [09:45 PM-10:00 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 32.00 and 90.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Bradley Boulevard
Location: Between Beltway and Redwood Avenue

A study of vehicle traffic was conducted with the device having serial number 401202. The study was done in the WB1202 lane at Bradley Boulevard in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 7,148 vehicles passed through the location with a peak volume of 127 on 05/18/2021 at [03:15 PM-03:30 PM] and a minimum volume of 0 on 05/18/2021 at [01:15 AM-01:30 AM]. The AADT count for this study was 3,574.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 40 - 45 MPH range or lower. The average speed for all classifed vehicles was 45 MPH with 88.81% vehicles exceeding the posted speed of 35 MPH. 9.93% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 40MPH and the 85th percentile was 52.25 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
129	74	46	46	118	369	1048	1982	1737	743	258	146	82	63	145

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 1969 which represents 28 percent of the total classified vehicles. The number of Vans & Pickups in the study was 3531 which represents 51 percent of the total classified vehicles. The number of Busses & Trucks in the study was 1143 which represents 17 percent of the total classified vehicles. The number of Tractor Trailers in the study was 279 which represents 4 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
1969	1920	1611	785	224	179	86	212							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [03:15 PM-03:30 PM] the average headway between vehicles was 7.031 seconds. During the slowest traffic period, on 05/18/2021 at [01:15 AM-01:30 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 57.00 and 120.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Burdette Road
Location: between Greentree Road and Bradley Boulevard

A study of vehicle traffic was conducted with the device having serial number 401134. The study was done in the SB 1134 lane at Burdette Road in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,711 vehicles passed through the location with a peak volume of 49 on 05/18/2021 at [03:00 PM-03:15 PM] and a minimum volume of 0 on 05/18/2021 at [09:45 PM-10:00 PM]. The AADT count for this study was 856.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 20 - 25 MPH range or lower. The average speed for all classifed vehicles was 22 MPH with 1.11% vehicles exceeding the posted speed of 35 MPH. 0.18% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 20MPH and the 85th percentile was 27.31 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
88	62	435	701	359	46	12	3	0	1	1	0	0	0	2

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 855 which represents 50 percent of the total classified vehicles. The number of Vans & Pickups in the study was 766 which represents 45 percent of the total classified vehicles. The number of Busses & Trucks in the study was 64 which represents 4 percent of the total classified vehicles. The number of Tractor Trailers in the study was 24 which represents 1 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
855	564	202	42	11	18	10	8							

CHART 2

HEADWAY

During the peak traffic period, on 05/18/2021 at [03:00 PM-03:15 PM] the average headway between vehicles was 18 seconds. During the slowest traffic period, on 05/18/2021 at [09:45 PM-10:00 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 57.00 and 82.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Potomac
Street: Burdette Road
Location: between Greentree Road and Bradley Boulevard

A study of vehicle traffic was conducted with the device having serial number 400876. The study was done in the NB 876 lane at Burdette Road in Potomac, MD in Montgomery County county. The study began on 05/18/2021 at 12:00 AM and concluded on 05/20/2021 at 12:00 AM, lasting a total of 48.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,597 vehicles passed through the location with a peak volume of 42 on 05/18/2021 at [08:15 AM-08:30 AM] and a minimum volume of 0 on 05/18/2021 at [10:00 PM-10:15 PM]. The AADT count for this study was 799.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 20 - 25 MPH range or lower. The average speed for all classifed vehicles was 22 MPH with 1.19% vehicles exceeding the posted speed of 35 MPH. 0.50% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 20MPH and the 85th percentile was 27.29 MPH.

< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >
75	62	330	752	293	63	9	2	0	0	2	0	2	1	3

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Vans & Pickups. The number of Passenger Vehicles in the study was 710 which represents 45 percent of the total classified vehicles. The number of Vans & Pickups in the study was 726 which represents 46 percent of the total classified vehicles. The number of Busses & Trucks in the study was 126 which represents 8 percent of the total classified vehicles. The number of Tractor Trailers in the study was 30 which represents 2 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >							
710	487	239	92	27	10	14	15							

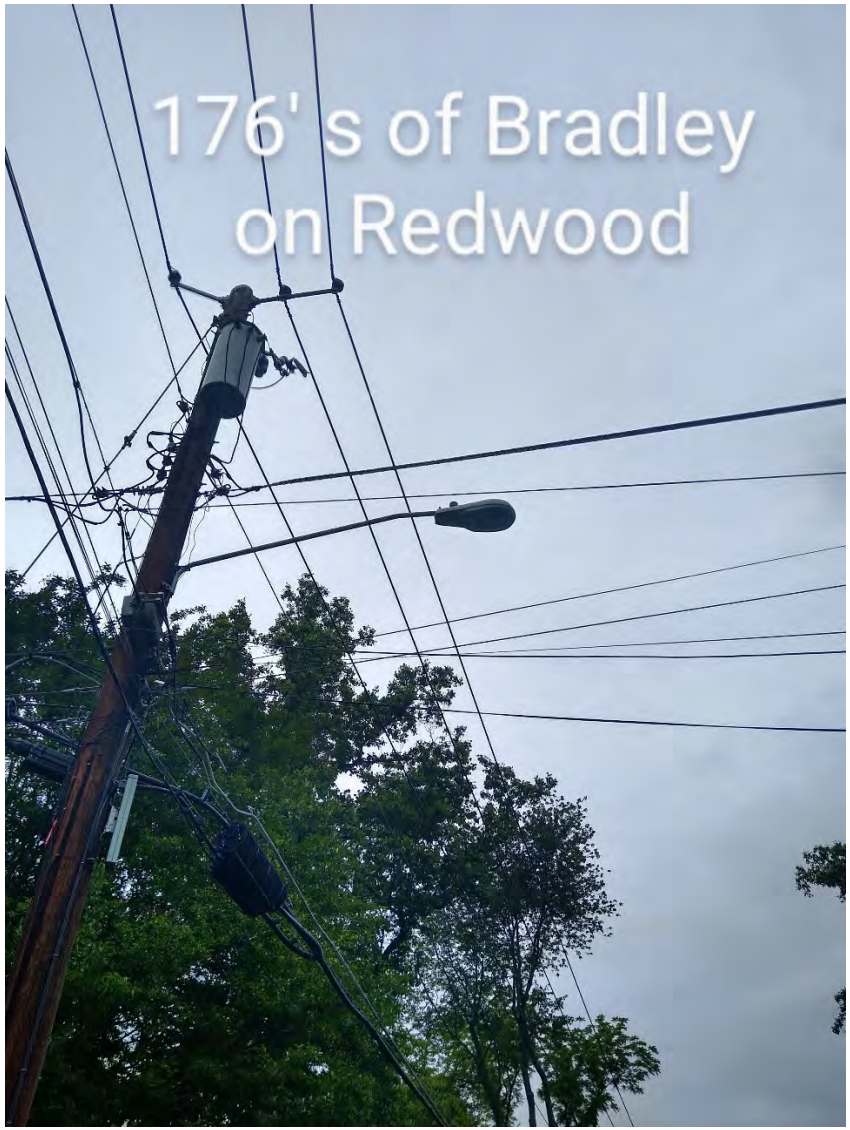
CHART 2

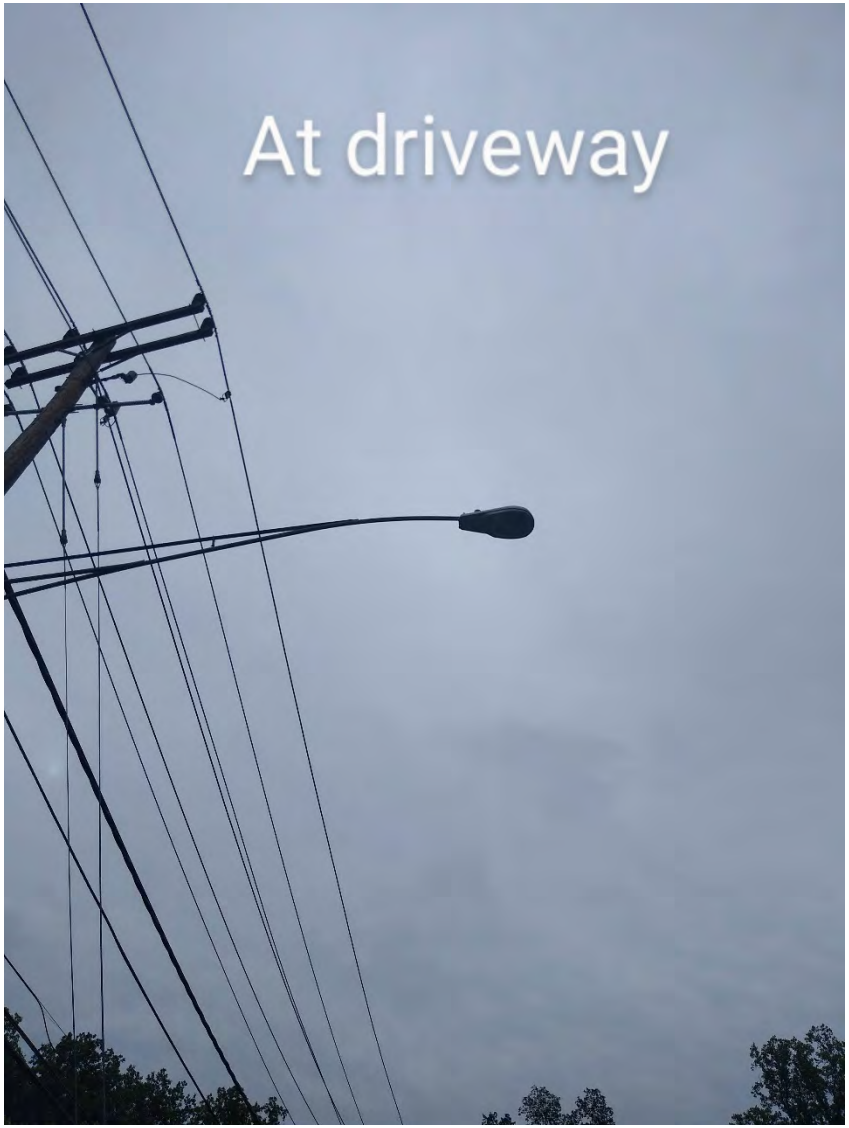
HEADWAY

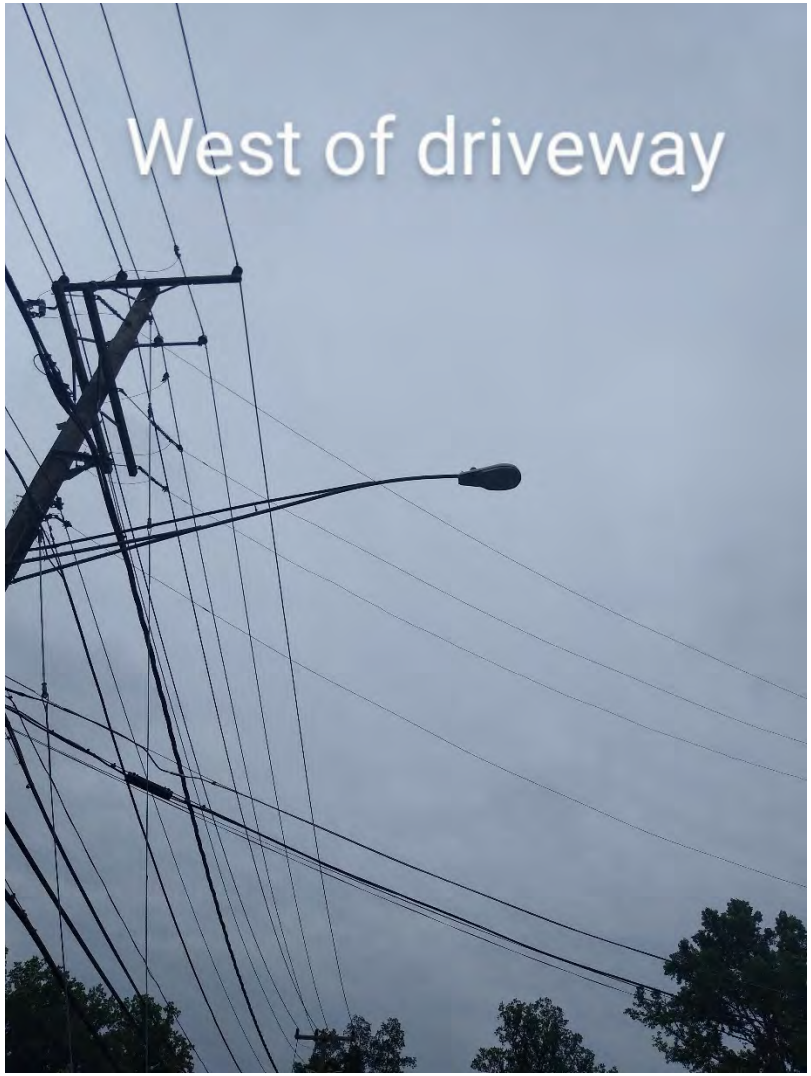
During the peak traffic period, on 05/18/2021 at [08:15 AM-08:30 AM] the average headway between vehicles was 20.93 seconds. During the slowest traffic period, on 05/18/2021 at [10:00 PM-10:15 PM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 57.00 and 95.00 degrees F.


176' s of Bradley
on Redwood


At driveway


West of driveway


140' east of driveway


260' east of driveway


36 Bethesda Ste.
FedEx


E


East of driveway
on north side

Bradley Blvd / Redwood Ave (ADA ramp)

Pathway Condition

Research indicates that pathway condition affects pedestrian comfort and this variable is included in other leading pedestrian comfort indices.[7] [8] [9] Montgomery County is currently collecting information about pathway condition throughout the county including cross slope (helps drain water and prevent pooling), tripping hazards, cracks, severe spalling (surface peeling or cracking of concrete), obstructions (to be accounted for in the Accessibility Evaluation), and missing sections. A sample survey is provided below.

HOT BUTTONS							
Ramps		**Pathways**		**Crosswalks**		**Bus pads**	
Detectable Warning Surface (DWS)	Yes/No	**Surface Type**	Concrete, Asphalt or Other	**Slope**		**Minimum Size (5' x 8')**	Yes/No
DWS Type	Cast in Place, Nail Down or Other	**Width**	In Feet 5'	**Marking Type**	Solid, Standard, Continental, Dashed, Zebra, Ladder, None	**Bus Stop Connected to Pathway (100' of pathway or nearest intersection)**	Yes/No
DWS Color	Red, Yellow, Gray or Other	**Cross Slope (2% or less but greater than 0)**	Yes/No	**Centered with Ramp**	Yes/No	**Midblock**	Yes/No
DWS Size	In Feet 2' x 5'	**Trip Hazard 1/4" or greater**	Yes/No	**Pedestrian Signal**	Yes/No		
Ramp Width	In Feet 5'	**Multiple Cracks in one section**	Yes/No	**Pushbutton**	Yes/No		
Ramp Slope (8.33% or less)	Yes/No 8.1%	**Severe Spalling**	Yes/No	**Pushbutton**	Heights, Distance from Pathway, Raised Tactile, Tone, Audible Indication, Actuated Indicator		
Ramp Landing area (2% or less)	Yes/No 0.2%	**Obstructions (less than 36" opening)**	Yes/No				
Ramp Landing Area (5' x 5')	Yes/No	**Obstruction Type**	Utility, Vegetation, Sign or Other				
		Missing Sections Lengths	In Feet				

Montgomery County Pathway Condition Survey

[7] Clifton, Kelly J., Andrea D. Livi Smith, and Daniel Rodriguez. 2007. "The development and testing of an audit for the pedestrian environment." Landscape and Urban Planning; 95-110.

[8] San Francisco Department of Public Health, 2012.

[9] Oregon DOT. 2018. "Multimodal Analysis." Chap. 14 in Analysis Procedure Manual.

APPENDIX C
SIGNAL TIMING WORKSHEETS

SIG#0409 Hub-EF

May 5, 2021

PHASE IN USE/PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IN USE		X		X		X		X								
EXCLUSIVE PED																

am

pm

PLAN 1

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MIN GRN	0	10	0	10	0	10	0	10	0	0	0	0	0	0	0	0
BK MGRN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS MGRN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DLY GRN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WALK	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
WALK2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WLK MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PED CLR	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0
PD CLR2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PC MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PED CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VEH EXT	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VH EXT2	0.0	4.0	0.0	4.0	0.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX1	0	50	0	30	0	50	0	30	0	0	0	0	0	0	0	0
MAX2	0	50	0	60	0	50	0	60	0	0	0	0	0	0	0	0
MAX3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM MAX	0	70	0	60	0	70	0	60	0	0	0	0	0	0	0	0
DYM STP	0.0	20.0	0.0	15.0	0.0	20.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOW	0.0	4.0	0.0	4.0	0.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED CLR	0.0	1.0	0.0	1.5	0.0	1.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED MAX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED RVT	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX INT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TIME B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CARS WT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDUC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTREDUC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PLAN 1

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOCK DET		X		X		X		X								
VE RCALL																
PD RCALL		X				X										
MX RCALL																
SF RCALL																
NO REST																
AI CALC																

NextEdit

SIG#0409 Hub-EF

May 5, 2021

COORDINATOR PATTERN 98

USE SPLIT PATTERN	0
CYCLE	0
OFFSET VAL	0
ACTUATED COORD	
ACT WALK REST	
PHASE RESERVICE	
MAX SELECT	NONE
STD (COS)	534
DWELL/ADD TIME	0

TIMING PLAN	0
SEQUENCE	0
ACTION PLAN	0
FORCE OFF	NONE
VEH PERM 1	0
VEH PERM 2	0
VEH PERM 2 - DISP	0
XART PTRN.	0

RING CONFIG

RING	1	2	3	4
SPLT EXT	0	0	0	0

RING	1	2	3	4
SPLIT DEMAND PTRN.	0	0		

RING	1	2	3	4
RING DISP		0	0	0

SPLIT PREF PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PREF 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PREF 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHASE MODES

Phase	1	2	3	4	5	6	7	8
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE MODES

Phase	9	10	11	12	13	14	15	16
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

SF OUT

PHASE	1	2	3	4	5	6	7	8
SF OUT								

COORDINATOR PATTERN 99

USE SPLIT PATTERN	0
CYCLE	0
OFFSET VAL	0
ACTUATED COORD	
ACT WALK REST	
PHASE RESERVICE	
MAX SELECT	NONE
STD (COS)	544
DWELL/ADD TIME	0

TIMING PLAN	0
SEQUENCE	0
ACTION PLAN	0
FORCE OFF	NONE
VEH PERM 1	0
VEH PERM 2	0
VEH PERM 2 - DISP	0
XART PTRN.	0

RING CONFIG

RING	1	2	3	4
SPLT EXT	0	0	0	0

RING	1	2	3	4
SPLIT DEMAND PTRN.	0	0		

RING	1	2	3	4
RING DISP		0	0	0

NextEdit

SIG#0409 Hub-EF

May 5, 2021

SPLIT PREF PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PREF 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PREF 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHASE MODES

Phase	1	2	3	4	5	6	7	8
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE MODES

Phase	9	10	11	12	13	14	15	16
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

SF OUT

PHASE	1	2	3	4	5	6	7	8
SF OUT								

COORDINATOR PATTERN 100

USE SPLIT PATTERN	0	TIMING PLAN	0
CYCLE	0	SEQUENCE	0
OFFSET VAL	0	ACTION PLAN	0
ACTUATED COORD		FORCE OFF	NONE
ACT WALK REST		VEH PERM 1	0
PHASE RESERVICE		VEH PERM 2	0
MAX SELECT	NONE	VEH PERM 2 - DISP	0
STD (COS)	554	XART PTRN.	0
DWELL/ADD TIME	0		

RING CONFIG

RING	1	2	3	4
SPLT EXT	0	0	0	0

RING	1	2	3	4
SPLIT DEMAND PTRN.	0	0		

RING	1	2	3	4
RING DISP		0	0	0

SPLIT PREF PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PREF 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PREF 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHASE MODES

Phase	1	2	3	4	5	6	7	8
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE MODES

Phase	9	10	11	12	13	14	15	16
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

SF OUT

PHASE	1	2	3	4	5	6	7	8
SF OUT								

NextEdit

SIG#0409 Hub-EF

am

ACTION PLAN 98

PATTERN	FREE	SYS OVERRIDE		PED PR RETURN	
TIMING PLAN	1	SEQUENCE	0	QUEUE DELAY	
VEH DET PLAN	0	DET LOG	0	PMT COND DELAY	
FLASH		RED REST			
VEH DET DIAG PLN	0	PED DET DIAG PLN	0		
DIMMING ENABLE		PRIORITY RETURN			

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2		X		X		X		X								
VEH RCL																
MAX RCL																
MAX 2																
MAX 3																
CS INH																
OMIT																
SPC FCT																
AUX FCT																

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

pm

ACTION PLAN 99

PATTERN	FREE	SYS OVERRIDE		PED PR RETURN	
TIMING PLAN	1	SEQUENCE	1	QUEUE DELAY	
VEH DET PLAN	0	DET LOG	0	PMT COND DELAY	
FLASH		RED REST			
VEH DET DIAG PLN	0	PED DET DIAG PLN	0		
DIMMING ENABLE		PRIORITY RETURN			

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2																
VEH RCL																
MAX RCL																

NextEdit

SIG#0409 Hub-EF

May 5, 2021

pm

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX 2																
MAX 3																
CS INH																
OMIT																
SPC FCT																
AUX FCT																

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

ACTION PLAN 100

PATTERN	FLSH	DIMMING ENABLE		PED DET DIAG PLN	0
TIMING PLAN	1	SYS OVERRIDE		PRIORITY RETURN	
VEH DET PLAN	0	SEQUENCE	1	PED PR RETURN	
FLASH	X	DET LOG	0	QUEUE DELAY	
VEH DET DIAG PLN	0	RED REST		PMT COND DELAY	

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2																
VEH RCL																
MAX RCL																
MAX 2																
MAX 3																
CS INH																
OMIT																
SPC FCT																
AUX FCT																

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

NextEdit

SIG#0599 Hub-EF

May 5, 2021

PHASE IN USE/PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IN USE		X		X		X		X								
EXCLUSIVE PED																

PLAN 1

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MIN GRN	0	10	0	5	0	10	0	5	0	0	0	0	0	0	0	0
BK MGRN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS MGRN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DLY GRN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WALK	0	5	0	0	0	5	0	6	0	0	0	0	0	0	0	0
WALK2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WLK MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PED CLR	0	5	0	0	0	5	0	6	0	0	0	0	0	0	0	0
PD CLR2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PC MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PED CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VEH EXT	0.0	6.0	0.0	3.0	0.0	6.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VH EXT2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX1	0	60	0	30	0	60	0	60	0	0	0	0	0	0	0	0
MAX2	0	60	0	40	0	60	0	40	0	0	0	0	0	0	0	0
MAX3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM STP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOW	0.0	4.0	0.0	3.5	0.0	4.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED CLR	0.0	1.0	0.0	1.5	0.0	1.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED MAX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED RVT	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX INT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TIME B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CARS WT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDUC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTREDUC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PLAN 1

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOCK DET																
VE RCALL																
PD RCALL		X				X										
MX RCALL		X				X										
SF RCALL																
NO REST																
AI CALC																

NextEdit

SIG#0599 Hub-EF

May 5, 2021

COORDINATOR PATTERN 99

USE SPLIT PATTERN	0
CYCLE	0
OFFSET VAL	0
ACTUATED COORD	
ACT WALK REST	
PHASE RESERVICE	
MAX SELECT	NONE
STD (COS)	544
DWELL/ADD TIME	0

TIMING PLAN	0
SEQUENCE	0
ACTION PLAN	0
FORCE OFF	NONE
VEH PERM 1	0
VEH PERM 2	0
VEH PERM 2 - DISP	0
XART PTRN.	0

RING CONFIG

RING	1	2	3	4
SPLT EXT	0	0	0	0

RING	1	2	3	4
SPLIT DEMAND PTRN.	0	0		

RING	1	2	3	4
RING DISP		0	0	0

SPLIT PREF PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PREF 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PREF 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHASE MODES

Phase	1	2	3	4	5	6	7	8
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE MODES

Phase	9	10	11	12	13	14	15	16
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

SF OUT

PHASE	1	2	3	4	5	6	7	8
SF OUT								

ACTION PLAN 99

PATTERN	FREE
TIMING PLAN	1
VEH DET PLAN	0
FLASH	
VEH DET DIAG PLN	0
DIMMING ENABLE	

SYS OVERRIDE	
SEQUENCE	1
DET LOG	0
RED REST	
PED DET DIAG PLN	0
PRIORITY RETURN	

PED PR RETURN	
QUEUE DELAY	
PMT COND DELAY	

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2																
VEH RCL																
MAX RCL																
MAX 2																

NextEdit

SIG#0599 Hub-EF

May 5, 2021

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX 3																
CS INH																
OMIT																
SPC FCT																
AUX FCT																

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Day Plan 1

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ACTION PLAN	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 1

EVENT	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 2

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ACTION PLAN	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 2

EVENT	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 3

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ACTION PLAN	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NextEdit

SIG#0599 Hub-EF

May 5, 2021

Day Plan 3

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 3

EVENT	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 4

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ACTION PLAN	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 4

EVENT	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 5

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ACTION PLAN	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 5

EVENT	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 6

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ACTION PLAN	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 6

EVENT	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NextEdit

SIG#0599 Hub-EF

Day Plan 7

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ACTION PLAN	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 7

EVENT	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NextEdit

SIG#0409 Hub-EF

Page 6

May 5, 2021

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Day Plan 1

am pm

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	98	99	98	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	6	9	15	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	30	30	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 1

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 2

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	98	99	98	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	6	9	15	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	30	30	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 2

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 3

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	98	99	98	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	6	9	15	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	30	30	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 3

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 4

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	98	99	98	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	6	9	15	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	30	30	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NextEdit

SIG#0409 Hub-EF

Day Plan 4

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 5

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	98	99	98	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	6	9	15	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	30	30	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 5

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 6

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 6

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 7

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 7

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NextEdit

SIG#0464 Hub-BA

May 6, 2021

PHASE IN USE/PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IN USE	X	X	X	X		X		X								
EXCLUSIVE PED																

PLAN 1

am

pm

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MIN GRN	5	10	5	5	0	10	0	5	0	0	0	0	0	0	0	0
BK MGRN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS MGRN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DLY GRN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WALK	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
WALK2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WLK MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PED CLR	0	14	0	15	0	14	0	15	0	0	0	0	0	0	0	0
PD CLR2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PC MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PED CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VEH EXT	3.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VH EXT2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX1	15	40	15	30	0	40	0	30	0	0	0	0	0	0	0	0
MAX2	40	60	30	40	0	60	0	60	0	0	0	0	0	0	0	0
MAX3	40	0	0	20	0	0	0	60	0	0	0	0	0	0	0	0
DYM MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM STP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOW	3.5	4.0	3.5	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
RED CLR	2.5	2.0	2.5	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED MAX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED RVT	5.0	2.0	5.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX INT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TIME B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CARS WT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDUC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTREDUC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PLAN 1

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOCK DET								X								
VE RCALL																
PD RCALL		X				X										
MX RCALL		X				X										
SF RCALL																
NO REST																
AI CALC																

NextEdit

SIG#0464 Hub-BA

May 6, 2021

COORDINATOR OPTIONS

MANUAL PATTERN	AUTO	ECPI COORD	X
SYSTEM SOURCE	SYS	SYSTEM FORMAT	STD
SPLITS IN	SECONDS	OFFSET IN	SECONDS
TRANSITION	SMOOTH	MAX SELECT	MAX2
DWELL/ADD TIME	255	FORCE OFF	FIXED
DLY COORD WK-LZ		CAL USE PED TM	X
OFFSET REF	LAG	PED RESERVE	
PED RECALL	X	FO ADD INI GRN	
LOCAL ZERO OVRD		MULTISYNC	
RE-SYNC COUNT	1		

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COORDINATOR PATTERN 1

USE SPLIT PATTERN	1	TIMING PLAN	1
CYCLE	150	SEQUENCE	1
OFFSET VAL	143	ACTION PLAN	0
ACTUATED COORD		FORCE OFF	NONE
ACT WALK REST		VEH PERM 1	0
PHASE RESERVICE		VEH PERM 2	0
MAX SELECT	NONE	VEH PERM 2 - DISP	0
STD (COS)	111	XART PTRN.	0
DWELL/ADD TIME	0		

RING CONFIG

RING	1	2	3	4
SPLT EXT	0	0	0	0

RING	1	2	3	4
SPLIT DEMAND PTRN.	0	0		

RING	1	2	3	4
RING DISP		0	0	0

SPLIT PREF PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PREF 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PREF 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHASE MODES

Phase	1	2	3	4	5	6	7	8
COORD		X				X		
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE MODES

Phase	9	10	11	12	13	14	15	16
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

SF OUT

PHASE	1	2	3	4	5	6	7	8
SF OUT								

COORDINATOR PATTERN 2

USE SPLIT PATTERN	2	ACTUATED COORD	
CYCLE	120	ACT WALK REST	
OFFSET VAL	0	PHASE RESERVICE	

NextEdit

SIG#0464 Hub-BA

COORDINATOR PATTERN 2

MAX SELECT	NONE
STD (COS)	121
DWELL/ADD TIME	0
TIMING PLAN	1
SEQUENCE	1
ACTION PLAN	0

FORCE OFF	NONE
VEH PERM 1	0
VEH PERM 2	0
VEH PERM 2 - DISP	0
XART PTRN.	0

RING CONFIG

RING	1	2	3	4
SPLT EXT	0	0	0	0

RING	1	2	3	4
SPLIT DEMAND PTRN.	0	0		

RING	1	2	3	4
RING DISP		0	0	0

SPLIT PREF PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PREF 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PREF 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHASE MODES

Phase	1	2	3	4	5	6	7	8
COORD		X				X		
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE MODES

Phase	9	10	11	12	13	14	15	16
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

SF OUT

PHASE	1	2	3	4	5	6	7	8
SF OUT								

pm

COORDINATOR PATTERN 3

USE SPLIT PATTERN	3
CYCLE	150
OFFSET VAL	20
ACTUATED COORD	
ACT WALK REST	
PHASE RESERVICE	
MAX SELECT	NONE
STD (COS)	131
DWELL/ADD TIME	0

TIMING PLAN	1
SEQUENCE	1
ACTION PLAN	0
FORCE OFF	NONE
VEH PERM 1	0
VEH PERM 2	0
VEH PERM 2 - DISP	0
XART PTRN.	0

RING CONFIG

RING	1	2	3	4
SPLT EXT	0	0	0	0

RING	1	2	3	4
SPLIT DEMAND PTRN.	0	0		

RING	1	2	3	4
RING DISP		0	0	0

SPLIT PREF PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PREF 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PREF 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NextEdit

SIG#0464 Hub-BA

May 6, 2021

pm

PHASE MODES

Phase	1	2	3	4	5	6	7	8
COORD		X				X		
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE MODES

Phase	9	10	11	12	13	14	15	16
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

SF OUT

PHASE	1	2	3	4	5	6	7	8
SF OUT								

COORDINATOR PATTERN 4

USE SPLIT PATTERN	4
CYCLE	110
OFFSET VAL	0
ACTUATED COORD	
ACT WALK REST	
PHASE RESERVICE	
MAX SELECT	NONE
STD (COS)	141
DWELL/ADD TIME	0

TIMING PLAN	1
SEQUENCE	1
ACTION PLAN	0
FORCE OFF	NONE
VEH PERM 1	0
VEH PERM 2	0
VEH PERM 2 - DISP	0
XART PTRN.	0

RING CONFIG

RING	1	2	3	4
SPLT EXT	0	0	0	0

RING	1	2	3	4
SPLIT DEMAND PTRN.	0	0		

RING	1	2	3	4
RING DISP		0	0	0

SPLIT PREF PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PREF 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PREF 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHASE MODES

Phase	1	2	3	4	5	6	7	8
COORD		X				X		
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE MODES

Phase	9	10	11	12	13	14	15	16
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

SF OUT

PHASE	1	2	3	4	5	6	7	8
SF OUT								

COORDINATOR PATTERN 30

USE SPLIT PATTERN	30
CYCLE	150
OFFSET VAL	36
ACTUATED COORD	
ACT WALK REST	

PHASE RESERVICE	
MAX SELECT	NONE
STD (COS)	252
DWELL/ADD TIME	0
TIMING PLAN	1

NextEdit

SIG#0464 Hub-BA

May 6, 2021

COORDINATOR PATTERN 30

SEQUENCE	1
ACTION PLAN	0
FORCE OFF	NONE
VEH PERM 1	0

VEH PERM 2	0
VEH PERM 2 - DISP	0
XART PTRN.	0

RING CONFIG

RING	1	2	3	4
SPLT EXT	0	0	0	0

RING	1	2	3	4
SPLIT DEMAND PTRN.	0	0		

RING	1	2	3	4
RING DISP		0	0	0

SPLIT PREF PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PREF 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PREF 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHASE MODES

Phase	1	2	3	4	5	6	7	8
COORD		X				X		
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

PHASE MODES

Phase	9	10	11	12	13	14	15	16
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

SF OUT

PHASE	1	2	3	4	5	6	7	8
SF OUT								

Split 1

PHASE	1	2	3	4	5	6	7	8
SPLIT	43	61	16	30	0	104	0	46
COORD		X				X		
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

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Split 1

PHASE	9	10	11	12	13	14	15	16
SPLIT	0	0	0	0	0	0	0	0
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Split 2

PHASE	1	2	3	4	5	6	7	8
SPLIT	18	42	24	36	0	60	0	60
COORD		X				X		
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Split 2

PHASE	9	10	11	12	13	14	15	16
SPLIT	0	0	0	0	0	0	0	0

PHASE	9	10	11	12	13	14	15	16
COORD								

NextEdit

SIG#0464 Hub-BA

Split 2

PHASE	9	10	11	12	13	14	15	16
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Split 3

PHASE	1	2	3	4	5	6	7	8
SPLIT	13	88	21	28	0	101	0	49
COORD		X				X		
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

pm

Split 3

PHASE	9	10	11	12	13	14	15	16
SPLIT	0	0	0	0	0	0	0	0
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Split 4

PHASE	1	2	3	4	5	6	7	8
SPLIT	17	42	19	32	0	59	0	51
COORD		X				X		
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Split 4

PHASE	9	10	11	12	13	14	15	16
SPLIT	0	0	0	0	0	0	0	0
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Split 30

PHASE	1	2	3	4	5	6	7	8
SPLIT	23	62	31	34	0	85	0	65
COORD		X				X		
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Split 30

PHASE	9	10	11	12	13	14	15	16
SPLIT	0	0	0	0	0	0	0	0
COORD								
PHASE MODE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

ACTION PLAN 1

PATTERN	1	DIMMING ENABLE		PED DET DIAG PLN	0
TIMING PLAN	1	SYS OVERRIDE		PRIORITY RETURN	
VEH DET PLAN	0	SEQUENCE	1	PED PR RETURN	
FLASH		DET LOG	0	QUEUE DELAY	
VEH DET DIAG PLN	0	RED REST		PMT COND DELAY	

NextEdit

am

SIG#0464 Hub-BA

May 6, 2021

am

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2																
VEH RCL																
MAX RCL																
MAX 2																
MAX 3	X															
CS INH																
OMIT																
SPC FCT																
AUX FCT																

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

ACTION PLAN 2

PATTERN	2	SYS OVERRIDE		PED PR RETURN	
TIMING PLAN	1	SEQUENCE	1	QUEUE DELAY	
VEH DET PLAN	0	DET LOG	0	PMT COND DELAY	
FLASH		RED REST			
VEH DET DIAG PLN	0	PED DET DIAG PLN	0		
DIMMING ENABLE		PRIORITY RETURN			

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2																
VEH RCL																
MAX RCL																
MAX 2																
MAX 3				X												
CS INH																
OMIT																
SPC FCT																
AUX FCT																

NextEdit

SIG#0464 Hub-BA

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

ACTION PLAN 3

pm

PATTERN	3	SYS OVERRIDE		PED PR RETURN	
TIMING PLAN	1	SEQUENCE	1	QUEUE DELAY	
VEH DET PLAN	0	DET LOG	0	PMT COND DELAY	
FLASH		RED REST			
VEH DET DIAG PLN	0	PED DET DIAG PLN	0		
DIMMING ENABLE		PRIORITY RETURN			

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2																
VEH RCL																
MAX RCL																
MAX 2																
MAX 3																
CS INH																
OMIT																
SPC FCT																
AUX FCT																

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

ACTION PLAN 4

PATTERN	4	VEH DET DIAG PLN	0	DET LOG	0	PED PR RETURN	
TIMING PLAN	1	DIMMING ENABLE		RED REST		QUEUE DELAY	
VEH DET PLAN	0	SYS OVERRIDE		PED DET DIAG PLN	0	PMT COND DELAY	
FLASH		SEQUENCE	1	PRIORITY RETURN			

NextEdit

SIG#0464 Hub-BA

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2																
VEH RCL																
MAX RCL																
MAX 2																
MAX 3				X												
CS INH																
OMIT																
SPC FCT																
AUX FCT																

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

ACTION PLAN 30

PATTERN	30	SYS OVERRIDE		PED PR RETURN	
TIMING PLAN	1	SEQUENCE	1	QUEUE DELAY	
VEH DET PLAN	0	DET LOG	0	PMT COND DELAY	
FLASH		RED REST			
VEH DET DIAG PLN	0	PED DET DIAG PLN	0		
DIMMING ENABLE		PRIORITY RETURN			

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2																
VEH RCL																
MAX RCL																
MAX 2																
MAX 3																
CS INH																
OMIT																
SPC FCT																
AUX FCT																

NextEdit

SIG#0464 Hub-BA

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

ACTION PLAN 99

PATTERN	FREE	SYS OVERRIDE		PED PR RETURN	
TIMING PLAN	1	SEQUENCE	1	QUEUE DELAY	
VEH DET PLAN	0	DET LOG	0	PMT COND DELAY	
FLASH		RED REST			
VEH DET DIAG PLN	0	PED DET DIAG PLN	0		
DIMMING ENABLE		PRIORITY RETURN			

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2																
VEH RCL																
MAX RCL																
MAX 2																
MAX 3																
CS INH																
OMIT																
SPC FCT																
AUX FCT																

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

ACTION PLAN 100

PATTERN	FLSH	VEH DET DIAG PLN	0	DET LOG	0
TIMING PLAN	1	DIMMING ENABLE		RED REST	
VEH DET PLAN	0	SYS OVERRIDE		PED DET DIAG PLN	0
FLASH	X	SEQUENCE	1	PRIORITY RETURN	

NextEdit

SIG#0464 Hub-BA

May 6, 2021

ACTION PLAN 100

PED PR RETURN		QUEUE DELAY		PMT COND DELAY	

PHASE TABLE

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RCL																
WALK 2																
VEX 2																
VEH RCL																
MAX RCL																
MAX 2																
MAX 3																
CS INH																
OMIT																
SPC FCT																
AUX FCT																

LP TABLE

LP Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Day Plan 1

am pm

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	1	2	30	3	4	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	6	9	14	16	19	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	0	30	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 1

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 2

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	1	2	30	3	4	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	6	9	14	16	19	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	0	30	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NextEdit

SIG#0464 Hub-BA

Day Plan 2

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 3

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	1	2	30	3	4	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	6	9	14	16	19	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	0	30	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 3

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 4

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	1	2	30	3	4	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	6	9	14	16	19	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	0	30	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 4

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 5

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	1	2	30	3	4	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	6	9	14	16	19	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	0	30	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 5

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 6

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	2	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	9	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NextEdit

SIG#0464 Hub-BA

Day Plan 6

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
START TIME - MM	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 6

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 7

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACTION PLAN	99	100	99	2	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	5	9	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day Plan 7

EVENT	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
ACTION PLAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - HH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
START TIME - MM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NextEdit

INT.#	Cabinet Type	System	INTERSECTION NAME:	TS.#
409	TS1	TSS	Bradley Blvd MD.191/Fernwood Road	B.1

2-1 CONTROLLER TIMING DATA

		WB Bradley Blvd MD.191		SB Fernwood Road		EB Bradley Blvd MD.191		NB Fernwood Road								
TIMING PLAN	1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN		10		~~5~~ 10		10		~~5~~ 10								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		2		7*		2										
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		2		~~8~~ 10		2										
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION		3.0		3.0		3.0		3.0								
VEHICLE EXTENSION 2		4.0		4.0		4.0		4.0								
MAX1		50		30		50		10								
MAX2		50		60		50		15								
MAX3																
DYNAMIC MAX		70		60		70		60								
DYNAMIC MAX STEP		20.0		15.0		20.0		15.0								
YELLOW CHANGE		4.0		4.0		4.0		4.0								
RED CLEARANCE		1.0		1.0		1.0		1.0								
RED MAX																
RED REVERT	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MINIMUM GAP																

*** TIMING PURPOSES ONLY**

TOD (Late) Flash 00:30 - 05:30 7 Days

Spec. Action Plan AP 98 calls VEXT 2 for all phases weekdays 6:30 - 9:30 & 15:00 - 18:30 (763) 9/27/2019

Spec. Action Plan

Submitted by / Date: Sheila Ingram/06/01/2010 Checked by / Date _____ Approved by / Date MK 8/18/2010

In Service by / Date/Time 7791215 10/13/2010

Attachmend D

SEQUENCE OF OPERATION SHEET

TRAFFIC OPERATIONS SECTION
DIVISION OF TRAFFIC ENGINEERING
MONTGOMERY COUNTY, MARYLAND

NO. 409-B

INTERSECTION: Bradley Blvd. (MD 191) & Fernwood Rd.

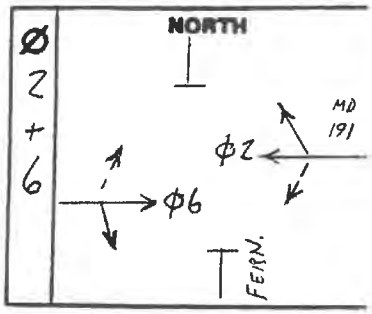
SIGNAL NO.	SIGNAL HEAD INDICATIONS					
	1-4			5-9		
TOTAL:	4			5		
	12"	12"	12"	8"		9" or 12"

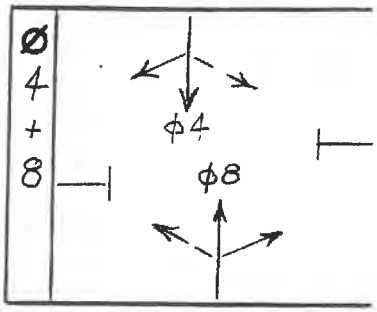
LEGEND
- OPTICALLY LIMITED
- R - RED
- Y - YELLOW
- G - GREEN
- ← ARROW
- F - FLASHING

SEQUENCE OF OPERATION

SIGNAL NO.	INTERVAL 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	FLASH
1	G	Y	R	R	R	R											Y
2	G	Y	R	R	R	R											Y
3	G	Y	R	R	R	R											Y
4	G	Y	R	R	R	R											Y
5	R	R	R	G	Y	R											R
6	R	R	R	G	Y	R											R
7	R	R	R	G	Y	R											R
8	R	R	R	G	Y	R											R
9	R	R	R	G	Y	R											R
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
PHASE	2+6	ALL RED		4+8	ALL RED												

PHASING





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NOTES:

CHANGE TO 'B' IS FOR CARPET REPLACEMENT

SUBMITTED: CR 12-1-94 CHECKED: EGW 12/7/94 APPROVED: DCM 12/7/94

IN SERVICE BY: _____ DATE: _____ TIME: _____

Appendix C: Signal Timing Worksheets

T.#	Cabinet Type	System	INTERSECTION NAME:	TS.#
4.64	TS1	TSS	Bradley Blvd. (Md.191) - Seven Locks Rd.	G.0

2-1 CONTROLLER TIMING DATA	SBLT Seven Locks Rd.	NB Seven Locks Rd.	EBLT Bradley Blvd.	WB Bradley Blvd. (Md.191)		SB Seven Locks Rd.		EB Bradley Blvd. (Md.191)								
TIMING PLAN 1																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	5	10	5	5		10		5								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		7		7		7		7								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		14		15		14		15								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	3.0		3.0	3.0				3.0								
VEHICLE EXTENSION 2																
MAX1	15	40	15	30		40		30								
MAX2	40	60	30	80		60		80								
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3.5	4.0	3.5	4.0		4.0		4.0								
RED CLEARANCE	2.5	2.0	2.5	2.0		2.0		2.0								
RED MAX																
RED REVERT	5.0	2.0	5.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MINIMUM GAP																

* TIMING PURPOSES ONLY

TOD (Late) Flash 00:30 - 05:30 7 Days * ADD Backup Prevent 7-6-2017

Spec. Action Plan

Spec. Action Plan

Submitted by / Date: C. Romaine 09/06/11 Checked by / Date KHammad 9/6/11 Approved by / Date KHammad 9/6/11

In Service by / Date/Time CR/ZK/SHA 6/14/12 at 1130

SEQUENCE OF OPERATION SHEET

TRAFFIC OPERATIONS SECTION
DIVISION OF TRAFFIC ENGINEERING
MONTGOMERY COUNTY, MARYLAND

Attachment D

NO. 767 G

INTERSECTION: Bradley Blvd. (MD 191) & Seven Locks Rd.

SIGNAL HEAD INDICATIONS

SIGNAL NO.	2-6-8	1,7				9-16
TOTAL:	6	2				8
	12"	12"	12"		12" 8"	

LEGEND
- O OPTICALLY LIMITED
- R - RED
- Y - YELLOW
- G - GREEN
- ← ARROW
- F - FLASHING

16" PEDESTRIAN COUNTDOWN SIGNAL HEAD "LED" TYPE

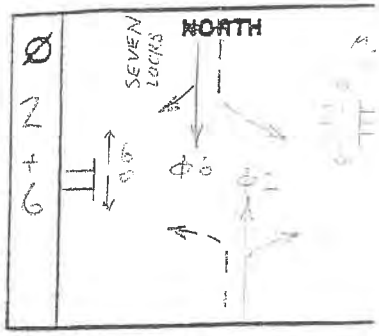
APS Push Buttons

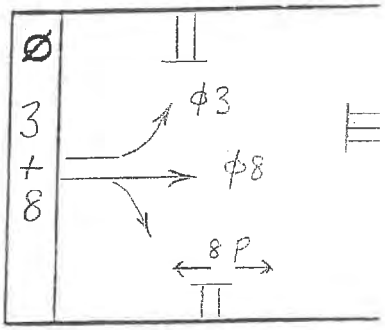
SEQUENCE OF OPERATION

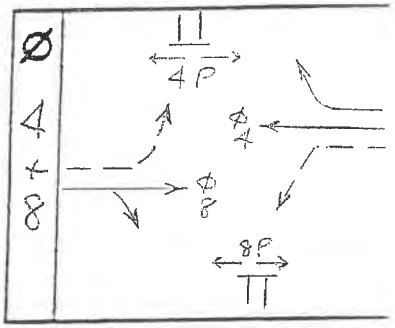
SIGNAL NO.	INTERVAL 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	FLASH
1	R	R	R	R	←G	←Y	←G	G	G	G	Y	R	R	R	R		R
2	R	R	R	R	G	G	G	G	G	G	Y	R	R	R	R		R
3	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R		R
4	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R		R
5	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R		Y
6	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R		Y
7	G	G	Y	R	R	R	R	R	R	R	R	R	←G	←Y	G		Y
8	G	G	Y	R	R	R	R	R	R	R	R	R	G	G	G		Y
9	DW	DW	DW	DW	DW	DW	DW	W	DW	DW	DW	DW	DW	DW	DW		—
10	DW	DW	DW	DW	DW	DW	DW	W	DW	DW	DW	DW	DW	DW	DW		—
11	DW	DW	DW	DW	W	W	W	W	DW	DW	DW	DW	DW	DW	DW		—
12	DW	DW	DW	DW	W	W	W	W	DW	DW	DW	DW	DW	DW	DW		—
13	W	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	W		—
14	W	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	W		—
15	W	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW		—
16	W	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW		—
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
PHASE	2+6		ALL RED	3+8		ALL RED	4+8					1+6		ALL RED			F

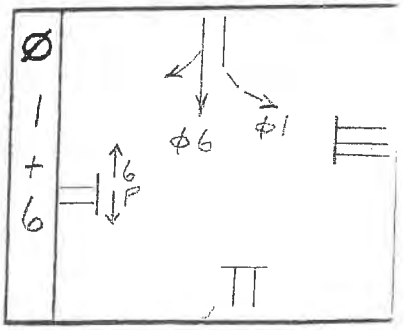
NOTES: "G" adds CD Panel, APS @ all 4 Legs.
Adds ϕ8 PED s/Leg Seven Locks.

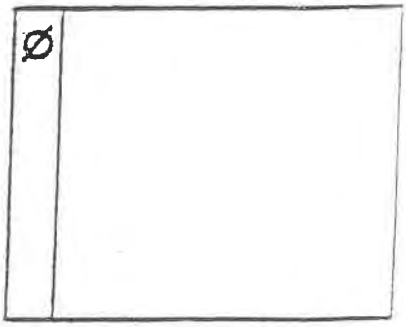
PHASING











SUBMITTED: CR 9-6-11 CHECKED: KHamed 9/6/11 APPROVED: KHamed 9/6/11

IN SERVICE BY: TRB DATE: 6/14/12 TIME: 1232

Appendix C: Signal Timing Worksheets

INT.#	Cabinet Type	System	INTERSECTION NAME:	TS.#
599	TS1	TSS	Bradley Blvd (MD.191) and Burdette Rd.	A.3
	Pole Mount		Hubbette: EF	

2-1 CONTROLLER TIMING DATA

		WB Bradley Blvd		SB Burdette Rd		EB Bradley Blvd.		NB Burdette Rd								
TIMING PLAN	1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN		10		5		10		5								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		5				5		6								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		5				5		6								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION		6.0		3.0		6.0		6.0								
VEHICLE EXTENSION 2																
MAX1		60		30		60		60								
MAX2		60		40		60		40								
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE		4.0		3.5		4.0		3.5								
RED CLEARANCE		1.0		1.5		1.0		1.5								
RED MAX																
RED REVERT	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MINIMUM GAP																

* TIMING PURPOSES ONLY

TOD (Late) Flash 24 Hour Color

Spec. Action Plan

Spec. Action Plan

Submitted by / Date: VP 09/05/2017 Checked by / Date K Hamud 9/11/17 Approved by / Date K Hamud 9/11/17

In Service by / Date/Time 766 9/13/17 1722

Attachment D

TRAFFIC OPERATIONS SECTION

DIVISION OF TRAFFIC ENGINEERING
MONTGOMERY COUNTY, MARYLAND

NO. I-599

INTERSECTION: Bradley Blvd. (Md. 191) - Burdette Rd.

SIGNAL HEAD INDICATIONS

SIGNAL NO.	2-5			1,6-9		
TOTAL:	4			5		
	R Y G 12"	R Y G 12"	R Y Y G G 12"	R Y G 8"		9" or 12"

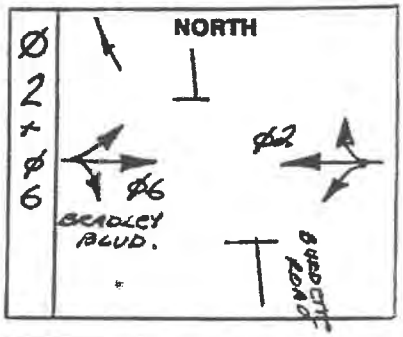
LEGEND
- O OPTICALLY LIMITED
- R - RED
- Y - YELLOW
- G - GREEN
- ← ARROW
- F - FLASHING

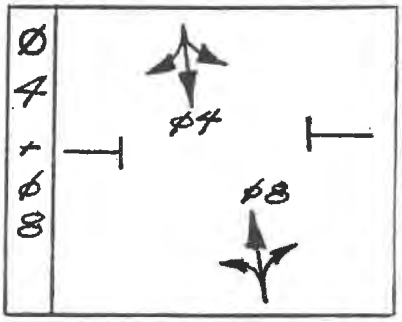
SEQUENCE OF OPERATION

SIGNAL NO.	INTERVAL 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	FLASH
1	G	Y	R	R	R	R											Y
2	G	Y	R	R	R	R											Y
3	G	Y	R	R	R	R											Y
4	G	Y	R	R	R	R											Y
5	G	Y	R	R	R	R											Y
6	R	R	R	G	Y	R											R
7	R	R	R	G	Y	R											R
8	R	R	R	G	Y	R											R
9	R	R	R	G	Y	R											R
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
PHASE	ϕ2+6	RED CL.		ϕ4+8	RED CL.												

NOTES:

PHASING





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SUBMITTED: TR 3/8/90 CHECKED: BLM 3/8/90 APPROVED: BLM 3/8/90

IN SERVICE BY: SHA DATE: 4/14/90 TIME: 10 AM

D-150

APPENDIX D
EXISTING INTERSECTION DELAYS, CLVs, and HCM WORKSHEETS

1

Critical Lane Volume and Level of Service Calculations

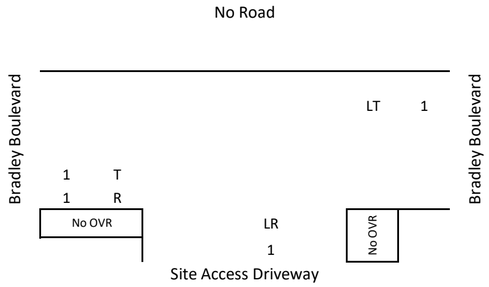
Intersection: Bradley Boulevard / Site Access Driveway

Jurisdiction: Montgomery County, MD

Scenario/Design Year: 2021 Adjusted Existing

Computed by: W+A

Intersection Lane Use & Traffic Control

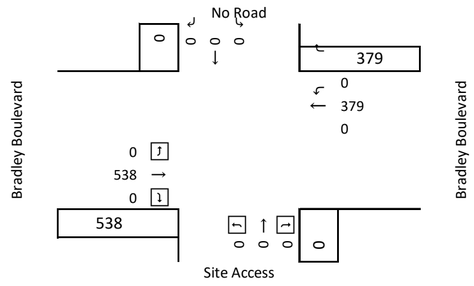


Signal?	Split?

or

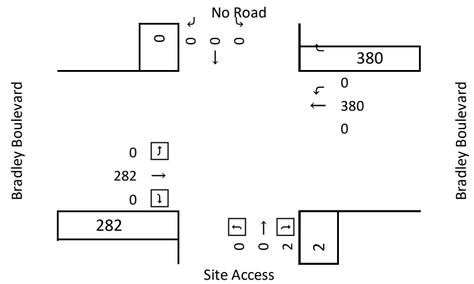
Stop Sign?	Directions
Yes	N/S

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	T	538			0	0	1.00	0	0	
	R	0	0		0				0	
WB	LT	379		1.00	379	0		0	379	*
			0		0				0	
NB	LR	0		1.00	0	0		0	0	*
			0		0				0	*
SB					0	0		0	0	
			0		0				0	*
Note:								CLV	379	
				Congestion Standard				v/c	0.237	
				1600						

PM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	T	282			0	0	1.00	0	0	
	R	0	0		0				0	
WB	LT	380		1.00	380	0		0	380	*
			0		0				0	
NB	LR	2		1.00	2	0		0	2	*
			0		0				0	
SB					0	0		0	0	
			0		0				0	
Note:								CLV	382	
				Congestion Standard				v/c	0.239	
				1600						

Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

Montgomery County LATR

		Lane Use Factors					
		Number of Lanes	Left Turn LUF	Through LUF			
		1	1	1.00			
		2	0.53	0.53			
		3	0.37	0.37			
		4		0.30			
		5		0.25			

2

Critical Lane Volume and Level of Service Calculations

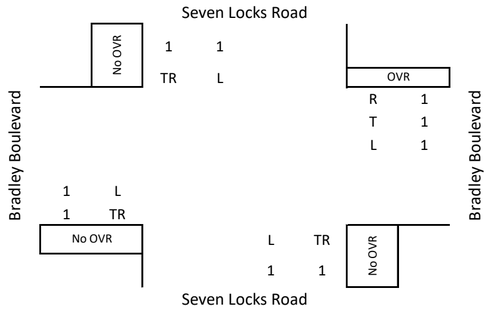
Intersection: Bradley Boulevard / Seven Locks Road

Jurisdiction: Montgomery County, MD

Scenario/Design Year: 2021 Adjusted Existing

Computed by: W+A

Intersection Lane Use & Traffic Control

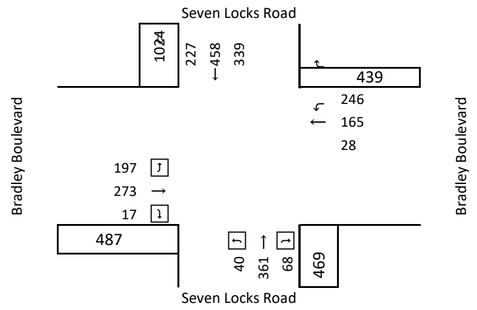


Signal?	Split?
Yes	

or

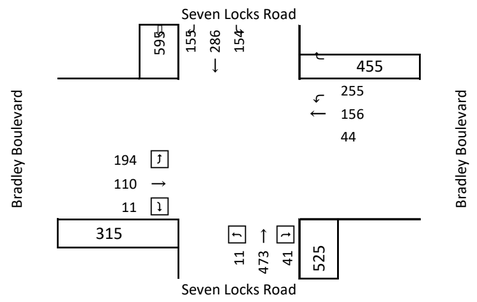
Stop Sign?	Directions

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	TR	290	0	1.00	290 0	28	1.00	28	318 28	
WB	T R	165 246	0	1.00 1.00	165 246	197	1.00	197	362 443	*
NB	TR	429	0	1.00	429 0	339	1.00	339	768 339	*
SB	TR	685	0	1.00	685 0	40	1.00	40	725 40	
Note:								**CLV**	**1211**	
				Potomac Congest. Eq				**v/c**	**0.835**	
				1450						

PM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	TR	121	0	1.00	121 0	44	1.00	44	165 44	
WB	T R	156 255	0	1.00 1.00	156 255	194	1.00	194	350 449	*
NB	TR	514	0	1.00	514 0	154	1.00	154	668 154	*
SB	TR	441	0	1.00	441 0	11	1.00	11	452 11	
Note:								**CLV**	**1117**	
				Potomac Congest. Eq				**v/c**	**0.770**	
				1450						

Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**Yes**	246	255		1.00	339	154		0.00	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

Montgomery County LATR

Number of Lanes	Left Turn LUF	Through LUF
1	1	1.00
2	0.53	0.53
3	0.37	0.37
4		0.30
5		0.25

3

Critical Lane Volume and Level of Service Calculations

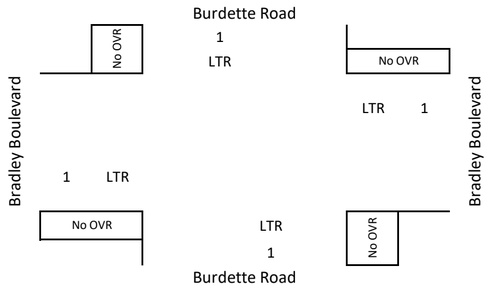
Intersection: Bradley Boulevard / Burdette Road

Jurisdiction: Montgomery County, MD

Scenario/Design Year: 2021 Adjusted Existing

Computed by: W+A

Intersection Lane Use & Traffic Control

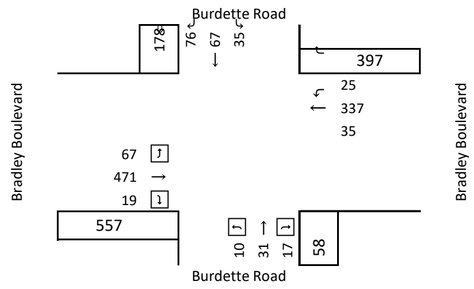


Signal?	Split?
Yes	None

or

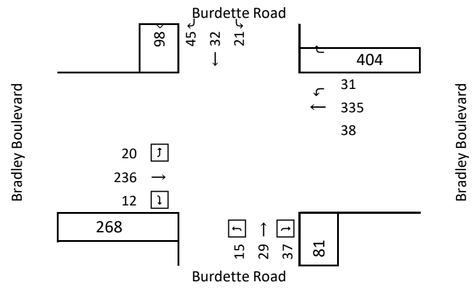
Stop Sign?	Directions

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	557	0	1.00	557 0	35	1.00	35	592 35	*
WB	LTR	397	0	1.00	397 0	67	1.00	67	464 67	
NB	LTR	58	0	1.00	58 0	35	1.00	35	93 35	
SB	LTR	178	0	1.00	178 0	10	1.00	10	188 10	*
Note:								CLV	780	
				Congestion Standard				v/c	0.488	
				1600						

PM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	268	0	1.00	268 0	38	1.00	38	306 38	
WB	LTR	404	0	1.00	404 0	20	1.00	20	424 20	*
NB	LTR	81	0	1.00	81 0	21	1.00	21	102 21	
SB	LTR	98	0	1.00	98 0	15	1.00	15	113 15	*
Note:								CLV	537	
				Congestion Standard				v/c	0.336	
				1600						

Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

Montgomery County LATR

Number of Lanes	Left Turn LUF	Through LUF
1	1	1.00
2	0.53	0.53
3	0.37	0.37
4		0.30
5		0.25

4

Critical Lane Volume and Level of Service Calculations

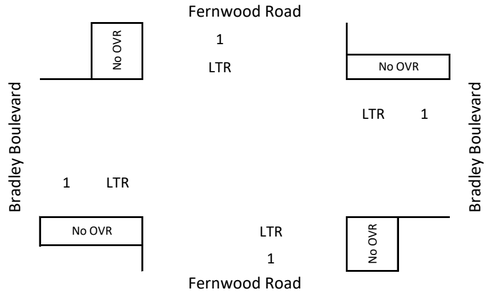
Intersection: Bradley Boulevard / Fernwood Road

Jurisdiction: Montgomery County, MD

Scenario/Design Year: 2021 Adjusted Existing

Computed by: W+A

Intersection Lane Use & Traffic Control

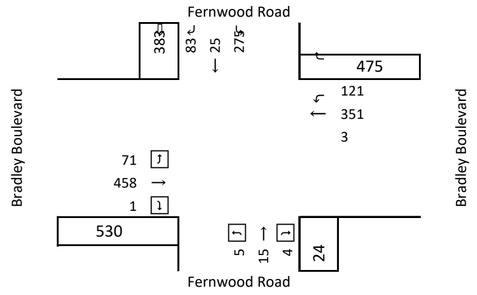


Signal?	Split?
Yes	None

or

Stop Sign?	Directions

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	530	0	1.00	530 0	3	1.00	3	533 3	
WB	LTR	475	0	1.00	475 0	71	1.00	71	546 71	*
NB	LTR	24	0	1.00	24 0	275	1.00	275	299 275	
SB	LTR	383	0	1.00	383 0	5	1.00	5	388 5	*
Note:								**CLV**	**934**	
					Congestion Standard			**v/c**	**0.584**	
					1600					

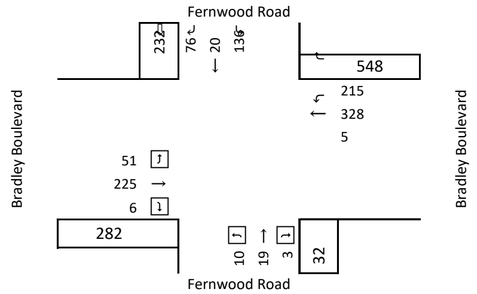
Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

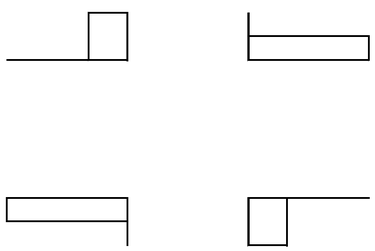
Montgomery County LATR

		Lane Use Factors					
		Number of Lanes	Left Turn LUF	Through LUF			
		1	1	1.00			
		2	0.53	0.53			
		3	0.37	0.37			
		4		0.30			
		5		0.25			

PM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	282	0	1.00	282 0	5	1.00	5	287 5	
WB	LTR	548	0	1.00	548 0	51	1.00	51	599 51	*
NB	LTR	32	0	1.00	32 0	136	1.00	136	168 136	
SB	LTR	232	0	1.00	232 0	10	1.00	10	242 10	*
Note:								**CLV**	**841**	
					Congestion Standard			**v/c**	**0.526**	
					1600					



HCM Unsignalized Intersection Capacity Analysis
1: Site Access Driveway & Bradley Boulevard #191

06/08/2021

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	538	0	0	379	0	0
Future Volume (Veh/h)	538	0	0	379	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	598	0	0	421	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			598		1019	598
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			598		1019	598
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			979		263	502

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	598	0	421	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	979	1700
Volume to Capacity	0.35	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS				A
Approach Delay (s)	0.0		0.0	0.0
Approach LOS				A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
3: Burdette Road & Bradley Boulevard #191

06/08/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	471	19	35	337	25	10	31	17	35	67	76
Future Volume (vph)	67	471	19	35	337	25	10	31	17	35	67	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	13	12	12	14	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.99			0.96			0.94	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1843			1839			1833			1854	
Flt Permitted		0.90			0.92			0.93			0.92	
Satd. Flow (perm)		1675			1704			1719			1724	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	75	529	21	39	379	28	11	35	19	39	75	85
RTOR Reduction (vph)	0	1	0	0	1	0	0	16	0	0	34	0
Lane Group Flow (vph)	0	624	0	0	445	0	0	49	0	0	165	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		55.1			55.1			12.6			12.6	
Effective Green, g (s)		55.1			55.1			12.6			12.6	
Actuated g/C Ratio		0.71			0.71			0.16			0.16	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		6.0			6.0			6.0			3.0	
Lane Grp Cap (vph)		1187			1208			278			279	
v/s Ratio Prot												
v/s Ratio Perm		c0.37			0.26			0.03			c0.10	
v/c Ratio		0.53			0.37			0.18			0.59	
Uniform Delay, d1		5.2			4.4			28.1			30.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.1			0.9			0.9			3.3	
Delay (s)		6.3			5.3			28.9			33.5	
Level of Service		A			A			C			C	
Approach Delay (s)		6.3			5.3			28.9			33.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	77.7	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: Fernwood Road & Bradley Boulevard #191

06/08/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	458	1	3	351	121	5	15	4	275	25	83
Future Volume (vph)	71	458	1	3	351	121	5	15	4	275	25	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.5			5.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.97			0.98			0.97	
Flt Protected		0.99			1.00			0.99			0.97	
Satd. Flow (prot)		1788			1738			1804			1746	
Flt Permitted		0.88			1.00			0.93			0.77	
Satd. Flow (perm)		1583			1735			1694			1395	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	78	503	1	3	386	133	5	16	4	302	27	91
RTOR Reduction (vph)	0	0	0	0	9	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	582	0	0	513	0	0	22	0	0	408	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		45.5			45.5			30.1			30.1	
Effective Green, g (s)		45.5			45.5			30.1			30.1	
Actuated g/C Ratio		0.53			0.53			0.35			0.35	
Clearance Time (s)		5.0			5.0			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		836			916			592			487	
v/s Ratio Prot												
v/s Ratio Perm		c0.37			0.30			0.01			c0.29	
v/c Ratio		0.70			0.56			0.04			0.84	
Uniform Delay, d1		15.1			13.6			18.5			25.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.5			2.5			0.0			12.0	
Delay (s)		17.7			16.1			18.5			37.7	
Level of Service		B			B			B			D	
Approach Delay (s)		17.7			16.1			18.5			37.7	
Approach LOS		B			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	10.5
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1: Site Access Driveway & Bradley Boulevard #191

06/08/2021

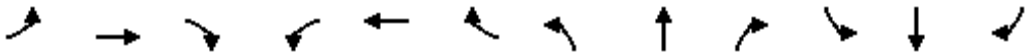
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	282	0	0	380	0	2
Future Volume (Veh/h)	282	0	0	380	0	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	300	0	0	404	0	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			300		704	300
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			300		704	300
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1261		403	740

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	300	0	404	2
Volume Left	0	0	0	0
Volume Right	0	0	0	2
cSH	1700	1700	1261	740
Volume to Capacity	0.18	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	9.9
Lane LOS				A
Approach Delay (s)	0.0		0.0	9.9
Approach LOS				A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
3: Burdette Road & Bradley Boulevard #191

06/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	236	12	38	335	31	15	29	37	21	32	45
Future Volume (vph)	20	236	12	38	335	31	15	29	37	21	32	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	13	12	12	14	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.94			0.94	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1845			1835			1790			1844	
Flt Permitted		0.96			0.95			0.93			0.93	
Satd. Flow (perm)		1777			1757			1688			1727	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	257	13	41	364	34	16	32	40	23	35	49
RTOR Reduction (vph)	0	1	0	0	2	0	0	35	0	0	42	0
Lane Group Flow (vph)	0	291	0	0	437	0	0	53	0	0	65	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		55.6			55.6			8.6			8.6	
Effective Green, g (s)		55.6			55.6			8.6			8.6	
Actuated g/C Ratio		0.75			0.75			0.12			0.12	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		6.0			6.0			6.0			3.0	
Lane Grp Cap (vph)		1331			1316			195			200	
v/s Ratio Prot												
v/s Ratio Perm		0.16			c0.25			0.03			c0.04	
v/c Ratio		0.22			0.33			0.27			0.33	
Uniform Delay, d1		2.8			3.1			29.9			30.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			0.7			2.1			1.0	
Delay (s)		3.0			3.8			32.0			31.1	
Level of Service		A			A			C			C	
Approach Delay (s)		3.0			3.8			32.0			31.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	74.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: Fernwood Road & Bradley Boulevard #191

06/08/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	225	6	5	328	215	10	19	3	136	20	76
Future Volume (vph)	51	225	6	5	328	215	10	19	3	136	20	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.5			5.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.95			0.99			0.96	
Flt Protected		0.99			1.00			0.99			0.97	
Satd. Flow (prot)		1779			1704			1812			1730	
Flt Permitted		0.85			1.00			0.90			0.80	
Satd. Flow (perm)		1533			1701			1662			1426	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	53	232	6	5	338	222	10	20	3	140	21	78
RTOR Reduction (vph)	0	0	0	0	13	0	0	2	0	0	24	0
Lane Group Flow (vph)	0	291	0	0	552	0	0	31	0	0	215	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		45.2			45.2			15.7			15.7	
Effective Green, g (s)		45.2			45.2			15.7			15.7	
Actuated g/C Ratio		0.63			0.63			0.22			0.22	
Clearance Time (s)		5.0			5.0			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		970			1076			365			313	
v/s Ratio Prot												
v/s Ratio Perm		0.19			c0.32			0.02			c0.15	
v/c Ratio		0.30			0.51			0.08			0.69	
Uniform Delay, d1		5.9			7.1			22.1			25.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			1.7			0.1			6.1	
Delay (s)		6.1			8.9			22.2			31.7	
Level of Service		A			A			C			C	
Approach Delay (s)		6.1			8.9			22.2			31.7	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	71.4	Sum of lost time (s)	10.5
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX E
TRAFFIC FORECASTING WORKSHEETS

1. Bradley Boulevard / Site Access Driveway															
				Southbound			Westbound			Northbound			Eastbound			
				No Road			Bradley Boulevard			Site Access Driveway			Bradley Boulevard			
Component	Period	Inbound	Outbound	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
Pipeline Trip Distributions																
1. WMAL Property - Residential		(+) Pos	(-) Neg					-3%						3%		
2. Andrus Property - Residential		(+) Pos	(-) Neg					-3%						3%		
Site Trip Distribution																
Daycare Site Trips									60%	-60%		-40%	40%			

1. Bradley Boulevard / Site Access Driveway																
				Southbound			Westbound			Northbound			Eastbound			
				No Road			Bradley Boulevard			Site Access Driveway			Bradley Boulevard			
Component	Period	IN	OUT	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
Existing 2021 Traffic Volumes	AM			0	0	0	0	354	0	0	0	0	0	503	0	857
	PM			0	0	0	0	380	0	0	0	0	0	282	0	662
Adjustments to Existing	AM	1.07		0	0	0	0	25	0	0	0	0	0	35	0	60
	PM	1.00 (after 4:30pm)		0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted Existing	**AM**			**0**	**0**	**0**	**0**	**379**	**0**	**0**	**0**	**0**	**0**	**538**	**0**	**917**
	PM			**0**	**0**	**0**	**0**	**380**	**0**	**0**	**0**	**0**	**0**	**282**	**0**	**662**
Pipeline Development																
1. WMAL Property - Residential	AM	46	163	0	0	0	0	5	0	0	0	0	0	1	0	6
	PM	176	95	0	0	0	0	3	0	0	0	0	0	5	0	8
2. Andrus Property - Residential	AM	4	10	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Subtotal	AM	50	173	0	0	0	0	5	0	0	0	0	0	1	0	6
	PM	183	99	0	0	0	0	3	0	0	0	0	0	5	0	8
Existing Trip Credits (AM Peak Hour Only)	AM	35	22	0	0	0	0	0	21	13	0	9	14	0	0	57
	PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Future Forecast	**AM**			**0**	**0**	**0**	**0**	**384**	**21**	**13**	**0**	**9**	**14**	**539**	**0**	**980**
	PM			**0**	**0**	**0**	**0**	**383**	**0**	**0**	**0**	**0**	**0**	**287**	**0**	**670**
Daycare Site Traffic	AM	76	63	0	0	0	0	0	46	38	0	25	30	0	0	139
	PM	53	60	0	0	0	0	0	32	36	0	24	21	0	0	113
Total Future Traffic Forecasts	**AM**			**0**	**0**	**0**	**0**	**384**	**46**	**38**	**0**	**25**	**30**	**539**	**0**	**1062**
	PM			**0**	**0**	**0**	**0**	**383**	**32**	**36**	**0**	**24**	**21**	**287**	**0**	**783**
																0
																0
																0
																0
Figure 7				**0**	**0**	**0**	**0**	**5**	**21**	**13**	**0**	**9**	**14**	**1**	**0**	**63**
				0	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**8**
																0
																0
																0
																0
1998 Traffic Volumes	AM			0	0	0	0	306	20	16	0	6	15	870	0	1233
	PM			0	0	0	0	531	3	7	0	2	1	258	0	802
2021 vs 1998	AM			0	0	0	0	73	-20	-16	0	-6	-15	-332	0	-316
	PM			0	0	0	0	-151	-3	-7	0	-2	-1	24	0	-140

2. Bradley Boulevard / Seven Locks Road																
				Southbound			Westbound			Northbound			Eastbound			
				Seven Locks Road			Bradley Boulevard			Seven Locks Road			Bradley Boulevard			
Component	Period	Inbound	Outbound	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
Pipeline Trip Distributions																
1. WMAL Property - Residential		(+) Pos	(-) Neg			1%	-1%	-1%	-1%	1%				1%		
2. Andrus Property - Residential		(+) Pos	(-) Neg			1%	-1%	-1%	-1%	1%				1%		
Daycare Site Trips		(+) Pos	(-) Neg			15%	-15%	-15%	-10%	10%				15%		

2. Bradley Boulevard / Seven Locks Road																
				Southbound			Westbound			Northbound			Eastbound			
				Seven Locks Road			Bradley Boulevard			Seven Locks Road			Bradley Boulevard			
Component	Period	IN	OUT	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
Existing 2021 Traffic Volumes	AM			212	428	317	230	154	26	64	337	37	16	255	184	2260
	PM			145	267	144	238	146	41	38	442	10	10	103	181	1765
Adjustments to Existing	AM	1.07		15	30	22	16	11	2	4	24	3	1	18	13	159
	PM	1.07 (before 4:30pm)		10	19	10	17	10	3	3	31	1	1	7	13	125
Adjusted Existing	**AM**			**227**	**458**	**339**	**246**	**165**	**28**	**68**	**361**	**40**	**17**	**273**	**197**	**2419**
	PM			**155**	**286**	**154**	**255**	**156**	**44**	**41**	**473**	**11**	**11**	**110**	**194**	**1890**
Pipeline Development																
1. WMAL Property - Residential	AM	46	163	0	0	0	2	2	1	0	0	0	0	1	0	6
	PM	176	95	0	0	2	1	1	1	1	0	0	0	2	0	8
2. Andrus Property - Residential	AM	4	10	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Subtotal	AM	50	173	0	0	0	2	2	1	0	0	0	0	1	0	6
	PM	183	99	0	0	2	1	1	1	1	0	0	0	2	0	8
Existing Trip Credits (AM Peak Hour Only)	AM	35	22	0	0	5	3	3	3	4	0	0	0	5	0	23
	PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Future Forecast	**AM**			**227**	**458**	**344**	**251**	**170**	**32**	**72**	**361**	**40**	**17**	**279**	**197**	**2448**
	PM			**155**	**286**	**156**	**256**	**157**	**45**	**42**	**473**	**11**	**11**	**112**	**194**	**1898**
Daycare Site Traffic	AM	76	63	0	0	11	9	9	6	8	0	0	0	11	0	54
	PM	53	60	0	0	8	9	9	6	5	0	0	0	8	0	45
Total Future Traffic Forecasts	**AM**			**227**	**458**	**350**	**257**	**176**	**35**	**76**	**361**	**40**	**17**	**285**	**197**	**2479**
	PM			**155**	**286**	**164**	**265**	**166**	**51**	**47**	**473**	**11**	**11**	**120**	**194**	**1943**
																0
																0
																0
																0
				0	**0**	**5**	**5**	**5**	**4**	**4**	**0**	**0**	**0**	**6**	**0**	**29**
				0	**0**	**2**	**1**	**1**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**8**
																0
																0
																0
																0
1998 Traffic Volumes	AM			160	687	565	165	122	22	69	303	18	27	311	192	2641
	PM			134	392	152	372	175	53	37	937	18	9	100	129	2508
2021 vs 1998	AM			67	-229	-226	81	43	6	-1	58	22	-10	-38	5	-222
	PM			21	-106	2	-117	-19	-9	4	-464	-7	2	10	65	-618

3. Bradley Boulevard / Burdette Road																
				Southbound			Westbound			Northbound			Eastbound			
				Burdette Road			Bradley Boulevard			Burdette Road			Bradley Boulevard			
Component	Period	Inbound	Outbound	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
Pipeline Trip Distributions																
1. WMAL Property - Residential		(+) Pos	(-) Neg	-3%		-3%	3%								3%	
2. Andrus Property - Residential		(+) Pos	(-) Neg	-3%		-3%	3%								3%	
Daycare Site Trips		(+) Pos	(-) Neg					60%						-60%		

3. Bradley Boulevard / Burdette Road																
				Southbound			Westbound			Northbound			Eastbound			
				Burdette Road			Bradley Boulevard			Burdette Road			Bradley Boulevard			
Component	Period	IN	OUT	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
Existing 2021 Traffic Volumes	AM			71	63	33	23	315	33	16	29	9	18	440	63	1113
	PM			45	32	21	31	335	38	37	29	15	12	236	20	851
Adjustments to Existing	AM	1.07		5	4	2	2	22	2	1	2	1	1	31	4	77
	PM	1.00 (at/after 4:30pm)		0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted Existing	**AM**			**76**	**67**	**35**	**25**	**337**	**35**	**17**	**31**	**10**	**19**	**471**	**67**	**1190**
	PM			**45**	**32**	**21**	**31**	**335**	**38**	**37**	**29**	**15**	**12**	**236**	**20**	**851**
Pipeline Development																
1. WMAL Property - Residential	AM	46	163	5	0	5	1	0	0	0	0	0	0	0	1	12
	PM	176	95	3	0	3	5	0	0	0	0	0	0	0	5	16
2. Andrus Property - Residential	AM	4	10	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipeline Subtotal	AM	50	173	5	0	5	1	0	0	0	0	0	0	0	1	12
	PM	183	99	3	0	3	5	0	0	0	0	0	0	0	5	16
Existing Trip Credits (AM Peak Hour Only)	AM	35	22	0	0	0	0	21	0	0	0	0	0	13	0	34
	PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Future Forecast	**AM**			**81**	**67**	**40**	**26**	**358**	**35**	**17**	**31**	**10**	**19**	**484**	**68**	**1236**
	PM			**48**	**32**	**24**	**36**	**335**	**38**	**37**	**29**	**15**	**12**	**236**	**25**	**867**
Daycare Site Traffic	AM	76	63	0	0	0	0	46	0	0	0	0	0	38	0	84
	PM	53	60	0	0	0	0	32	0	0	0	0	0	36	0	68
Total Future Traffic Forecasts	**AM**			**81**	**67**	**40**	**26**	**383**	**35**	**17**	**31**	**10**	**19**	**509**	**68**	**1286**
	PM			**48**	**32**	**24**	**36**	**367**	**38**	**37**	**29**	**15**	**12**	**272**	**25**	**935**
																0
																0
																0
																0
				5	**0**	**5**	**1**	**21**	**0**	**0**	**0**	**0**	**0**	**13**	**1**	**46**
				3	**0**	**3**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**16**
																0
																0
																0
																0
1998 Traffic Volumes	AM			45	43	54	13	257	28	25	38	14	8	870	56	1451
	PM			42	29	19	28	540	25	48	108	23	3	253	22	1140
2021 vs 1998	AM			31	24	-19	12	80	7	-8	-7	-4	11	-399	11	-261
	PM			3	3	2	3	-205	13	-11	-79	-8	9	-17	-2	-289

4. Bradley Boulevard / Fernwood Road																
				Southbound			Westbound			Northbound			Eastbound			
				Fernwood Road			Bradley Boulevard			Fernwood Road			Bradley Boulevard			
Component	Period	Inbound	Outbound	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
Pipeline Trip Distributions																
1. WMAL Property - Residential		(+) Pos	(-) Neg			-10%	10%	3%						-3%		
2. Andrus Property - Residential		(+) Pos	(-) Neg			-10%	10%	3%						-3%		
Daycare Site Trips		(+) Pos	(-) Neg					60%						-60%		

4. Bradley Boulevard / Fernwood Road																
				Southbound			Westbound			Northbound			Eastbound			
				Fernwood Road			Bradley Boulevard			Fernwood Road			Bradley Boulevard			
Component	Period	IN	OUT	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
Existing 2021 Traffic Volumes	AM			78	23	257	113	328	3	4	14	5	1	428	66	1320
	PM			76	20	136	215	328	5	3	19	10	6	225	51	1094
Adjustments to Existing	AM	1.07		5	2	18	8	23	0	0	1	0	0	30	5	92
	PM	1.00 (at/after 4:30pm)		0	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted Existing	**AM**			**83**	**25**	**275**	**121**	**351**	**3**	**4**	**15**	**5**	**1**	**458**	**71**	**1412**
	PM			**76**	**20**	**136**	**215**	**328**	**5**	**3**	**19**	**10**	**6**	**225**	**51**	**1094**
Pipeline Development																
1. WMAL Property - Residential	AM	46	163	0	0	16	5	1	0	0	0	0	0	5	0	27
	PM	176	95	0	0	10	18	5	0	0	0	0	0	3	0	36
2. Andrus Property - Residential	AM	4	10	0	0	1	0	0	0	0	0	0	0	0	0	1
	PM	7	4	0	0	0	1	0	0	0	0	0	0	0	0	1
Pipeline Subtotal	AM	50	173	0	0	17	5	1	0	0	0	0	0	5	0	28
	PM	183	99	0	0	10	19	5	0	0	0	0	0	3	0	37
Existing Trip Credits (AM Peak Hour Only)	AM	35	22	0	0	0	0	21	0	0	0	0	0	13	0	34
	PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Future Forecast	**AM**			**83**	**25**	**292**	**126**	**373**	**3**	**4**	**15**	**5**	**1**	**476**	**71**	**1474**
	PM			**76**	**20**	**146**	**234**	**333**	**5**	**3**	**19**	**10**	**6**	**228**	**51**	**1131**
Daycare Site Traffic	AM	76	63	0	0	0	0	46	0	0	0	0	0	38	0	84
	PM	53	60	0	0	0	0	32	0	0	0	0	0	36	0	68
Total Future Traffic Forecasts	**AM**			**83**	**25**	**292**	**126**	**398**	**3**	**4**	**15**	**5**	**1**	**501**	**71**	**1524**
	PM			**76**	**20**	**146**	**234**	**365**	**5**	**3**	**19**	**10**	**6**	**264**	**51**	**1199**
																0
																0
																0
																0
				0	**0**	**17**	**5**	**22**	**0**	**0**	**0**	**0**	**0**	**18**	**0**	**62**
				0	**0**	**10**	**19**	**5**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**37**
																0
																0
																0
																0
1998 Traffic Volumes	AM			85	33	351	203	246	1	0	53	0	0	668	115	1755
	PM			90	45	320	302	453	3	3	30	1	0	231	79	1557
2021 vs 1998	AM			-2	-8	-76	-82	105	2	4	-38	5	1	-210	-44	-343
	PM			-14	-25	-184	-87	-125	2	0	-11	9	6	-6	-28	-463

APPENDIX F
BACKGROUND INTERSECTION DELAYS, CLVs, and HCM WORKSHEETS

1

Critical Lane Volume and Level of Service Calculations

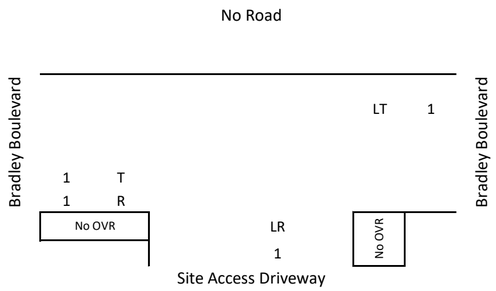
Intersection: Bradley Boulevard / Site Access Driveway

Jurisdiction: Montgomery County, MD

Scenario/Design Year: Background Future

Computed by: W+A

Intersection Lane Use & Traffic Control

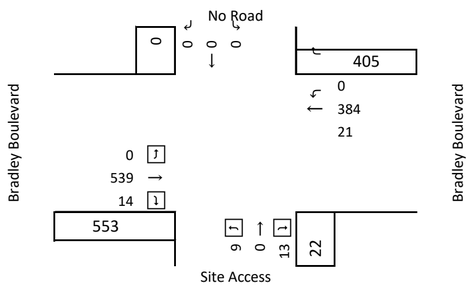


Signal?	Split?

or

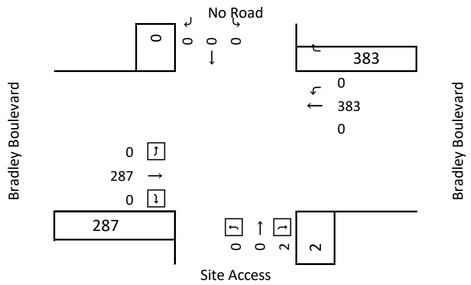
Stop Sign?	Directions
Yes	N/S

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	T	539			0	21	1.00	21	21	
	R	14	0		0				21	
WB	LT	405		1.00	405	0		0	405	*
			0		0				0	
NB	LR	22		1.00	22	0		0	22	*
			0		0				0	
SB					0	9		0	0	
			0		0				0	
Note:								CLV	427	
				Congestion Standard				v/c	0.267	
				1600						

PM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	T	287			0	0	1.00	0	0	
	R	0	0		0				0	
WB	LT	383		1.00	383	0		0	383	*
			0		0				0	
NB	LR	2		1.00	2	0		0	2	*
			0		0				0	
SB					0	0		0	0	
			0		0				0	
Note:								CLV	385	
				Congestion Standard				v/c	0.241	
				1600						

Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

Montgomery County LATR

	Lane Use Factors		
	Number of Lanes	Left Turn LUF	Through LUF
	1	1	1.00
	2	0.53	0.53
	3	0.37	0.37
	4		0.30
	5		0.25

2

Critical Lane Volume and Level of Service Calculations

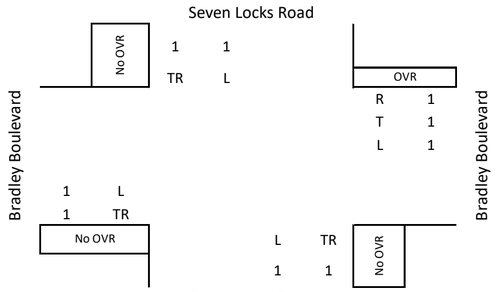
Intersection: Bradley Boulevard / Seven Locks Road

Jurisdiction: Montgomery County, MD

Scenario/Design Year: Background Future

Computed by: W+A

Intersection Lane Use & Traffic Control

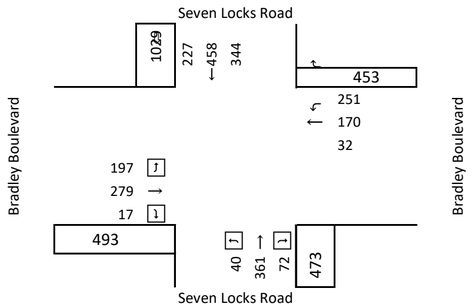


Signal?	Split?
Yes	

or

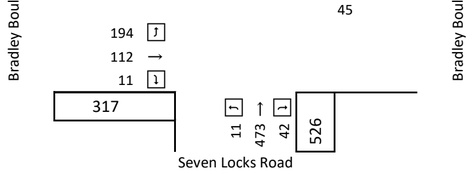
Stop Sign?	Directions

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	TR	296	0	1.00	296 0	32	1.00	32	328 32	
WB	T R	170 251	0	1.00 1.00	170 251	197	1.00	197	367 448	*
NB	TR	433	0	1.00	433 0	344	1.00	344	777 344	*
SB	TR	685	0	1.00	685 0	40	1.00	40	725 40	
Note:								**CLV**	**1225**	
				Potomac Congest. Eq				**v/c**	**0.845**	
				1450						

PM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	TR	123	0	1.00	123 0	45	1.00	45	168 45	
WB	T R	157 256	0	1.00 1.00	157 256	194	1.00	194	351 450	*
NB	TR	515	0	1.00	515 0	156	1.00	156	671 156	*
SB	TR	441	0	1.00	441 0	11	1.00	11	452 11	
Note:								**CLV**	**1121**	
				Potomac Congest. Eq				**v/c**	**0.773**	
				1450						

Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**Yes**	251	256		1.00	344	156		0.00	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

Montgomery County LATR

Lane Use Factors		
Number of Lanes	Left Turn LUF	Through LUF
1	1	1.00
2	0.53	0.53
3	0.37	0.37
4		0.30
5		0.25

3

Critical Lane Volume and Level of Service Calculations

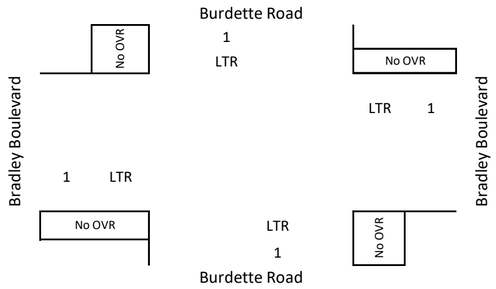
Intersection: Bradley Boulevard / Burdette Road

Jurisdiction: Montgomery County, MD

Scenario/Design Year: Background Future

Computed by: W+A

Intersection Lane Use & Traffic Control

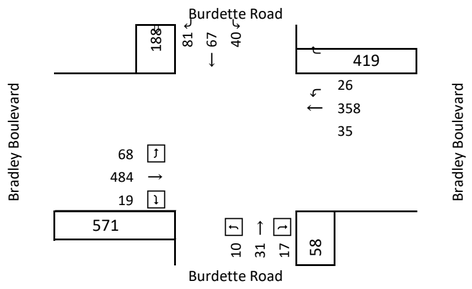


Signal?	Split?
Yes	None

or

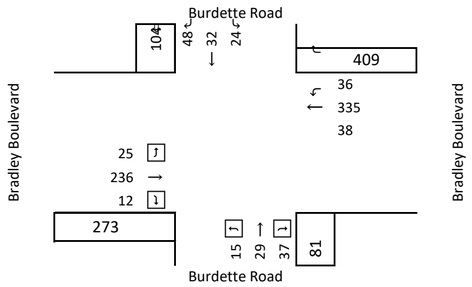
Stop Sign?	Directions

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	571	0	1.00	571 0	35	1.00	35	606 35	*
WB	LTR	419	0	1.00	419 0	68	1.00	68	487 68	
NB	LTR	58	0	1.00	58 0	40	1.00	40	98 40	
SB	LTR	188	0	1.00	188 0	10	1.00	10	198 10	*
Note:								CLV	804	
				Congestion Standard				v/c	0.503	
				1600						

PM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	273	0	1.00	273 0	38	1.00	38	311 38	
WB	LTR	409	0	1.00	409 0	25	1.00	25	434 25	*
NB	LTR	81	0	1.00	81 0	24	1.00	24	105 24	
SB	LTR	104	0	1.00	104 0	15	1.00	15	119 15	*
Note:								CLV	553	
				Congestion Standard				v/c	0.346	
				1600						

Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

Montgomery County LATR

Lane Use Factors		
Number of Lanes	Left Turn LUF	Through LUF
1	1	1.00
2	0.53	0.53
3	0.37	0.37
4		0.30
5		0.25

4

Critical Lane Volume and Level of Service Calculations

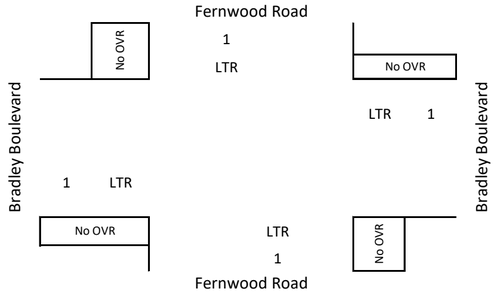
Intersection: Bradley Boulevard / Fernwood Road

Jurisdiction: Montgomery County, MD

Scenario/Design Year: Background Future

Computed by: W+A

Intersection Lane Use & Traffic Control

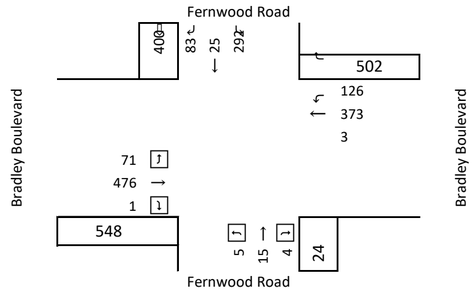


Signal?	Split?
Yes	None

or

Stop Sign?	Directions

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	548	0	1.00	548 0	3	1.00	3	551 3	
WB	LTR	502	0	1.00	502 0	71	1.00	71	573 71	*
NB	LTR	24	0	1.00	24 0	292	1.00	292	316 292	
SB	LTR	400	0	1.00	400 0	5	1.00	5	405 5	*
Note:								**CLV**	**978**	
				Congestion Standard				**v/c**	**0.611**	
				1600						

PM Peak Hour Critical Lane Volume Analysis

Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	285	0	1.00	285 0	5	1.00	5	290 5	
WB	LTR	572	0	1.00	572 0	51	1.00	51	623 51	*
NB	LTR	32	0	1.00	32 0	146	1.00	146	178 146	
SB	LTR	242	0	1.00	242 0	10	1.00	10	252 10	*
Note:								**CLV**	**875**	
				Congestion Standard				**v/c**	**0.547**	
				1600						

Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

Montgomery County LATR

		Lane Use Factors					
		Number of Lanes	Left Turn LUF	Through LUF			
		1	1	1.00			
		2	0.53	0.53			
		3	0.37	0.37			
		4		0.30			
		5		0.25			

HCM Unsignalized Intersection Capacity Analysis
1: Site Access Driveway & Bradley Boulevard #191

06/08/2021

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	539	14	21	384	9	13
Future Volume (Veh/h)	539	14	21	384	9	13
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	599	16	23	427	10	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			615		1072	599
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			615		1072	599
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		96	97
cM capacity (veh/h)			965		238	502

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	599	16	450	24
Volume Left	0	0	23	10
Volume Right	0	16	0	14
cSH	1700	1700	965	343
Volume to Capacity	0.35	0.01	0.02	0.07
Queue Length 95th (ft)	0	0	2	6
Control Delay (s)	0.0	0.0	0.7	16.3
Lane LOS			A	C
Approach Delay (s)	0.0		0.7	16.3
Approach LOS				C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
3: Burdette Road & Bradley Boulevard #191

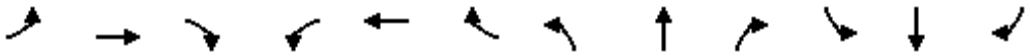
06/08/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	484	19	35	358	26	10	31	17	40	67	81
Future Volume (vph)	68	484	19	35	358	26	10	31	17	40	67	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	13	12	12	14	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.99			0.96			0.94	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1844			1840			1833			1852	
Flt Permitted		0.90			0.92			0.93			0.91	
Satd. Flow (perm)		1669			1708			1715			1707	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	76	544	21	39	402	29	11	35	19	45	75	91
RTOR Reduction (vph)	0	1	0	0	1	0	0	16	0	0	35	0
Lane Group Flow (vph)	0	640	0	0	469	0	0	49	0	0	176	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		55.1			55.1			13.1			13.1	
Effective Green, g (s)		55.1			55.1			13.1			13.1	
Actuated g/C Ratio		0.70			0.70			0.17			0.17	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		6.0			6.0			6.0			3.0	
Lane Grp Cap (vph)		1175			1203			287			285	
v/s Ratio Prot												
v/s Ratio Perm		c0.38			0.27			0.03			c0.10	
v/c Ratio		0.54			0.39			0.17			0.62	
Uniform Delay, d1		5.5			4.7			27.9			30.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.2			1.0			0.8			3.9	
Delay (s)		6.7			5.7			28.7			34.2	
Level of Service		A			A			C			C	
Approach Delay (s)		6.7			5.7			28.7			34.2	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: Fernwood Road & Bradley Boulevard #191

06/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	476	1	3	373	126	5	15	4	292	25	83
Future Volume (vph)	71	476	1	3	373	126	5	15	4	292	25	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.5			5.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.97			0.98			0.97	
Flt Protected		0.99			1.00			0.99			0.96	
Satd. Flow (prot)		1789			1739			1804			1747	
Flt Permitted		0.87			1.00			0.93			0.77	
Satd. Flow (perm)		1574			1736			1693			1391	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	78	523	1	3	410	138	5	16	4	321	27	91
RTOR Reduction (vph)	0	0	0	0	9	0	0	3	0	0	11	0
Lane Group Flow (vph)	0	602	0	0	542	0	0	22	0	0	428	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		45.6			45.6			31.9			31.9	
Effective Green, g (s)		45.6			45.6			31.9			31.9	
Actuated g/C Ratio		0.52			0.52			0.36			0.36	
Clearance Time (s)		5.0			5.0			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		815			899			613			504	
v/s Ratio Prot												
v/s Ratio Perm		c0.38			0.31			0.01			c0.31	
v/c Ratio		0.74			0.60			0.04			0.85	
Uniform Delay, d1		16.5			14.9			18.1			25.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.5			3.0			0.0			12.6	
Delay (s)		20.1			17.8			18.1			38.5	
Level of Service		C			B			B			D	
Approach Delay (s)		20.1			17.8			18.1			38.5	
Approach LOS		C			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	98.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1: Site Access Driveway & Bradley Boulevard #191

06/08/2021

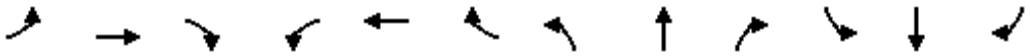
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	287	0	0	383	0	2
Future Volume (Veh/h)	287	0	0	383	0	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	305	0	0	407	0	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			305		712	305
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			305		712	305
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1256		399	735

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	305	0	407	2
Volume Left	0	0	0	0
Volume Right	0	0	0	2
cSH	1700	1700	1256	735
Volume to Capacity	0.18	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	9.9
Lane LOS				A
Approach Delay (s)	0.0		0.0	9.9
Approach LOS				A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
3: Burdette Road & Bradley Boulevard #191

06/08/2021

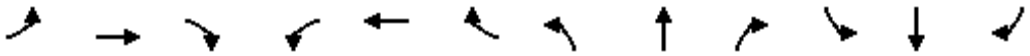


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	236	12	38	335	36	15	29	37	24	32	48
Future Volume (vph)	25	236	12	38	335	36	15	29	37	24	32	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	13	12	12	14	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.94			0.94	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1843			1832			1790			1842	
Flt Permitted		0.95			0.95			0.93			0.92	
Satd. Flow (perm)		1756			1754			1678			1717	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	257	13	41	364	39	16	32	40	26	35	52
RTOR Reduction (vph)	0	1	0	0	2	0	0	35	0	0	42	0
Lane Group Flow (vph)	0	296	0	0	442	0	0	53	0	0	71	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		55.5			55.5			8.6			8.6	
Effective Green, g (s)		55.5			55.5			8.6			8.6	
Actuated g/C Ratio		0.75			0.75			0.12			0.12	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		6.0			6.0			6.0			3.0	
Lane Grp Cap (vph)		1315			1313			194			199	
v/s Ratio Prot												
v/s Ratio Perm		0.17			c0.25			0.03			c0.04	
v/c Ratio		0.23			0.34			0.27			0.36	
Uniform Delay, d1		2.8			3.1			29.9			30.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			0.7			2.1			1.1	
Delay (s)		3.1			3.8			32.0			31.3	
Level of Service		A			A			C			C	
Approach Delay (s)		3.1			3.8			32.0			31.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: Fernwood Road & Bradley Boulevard #191

06/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	228	6	5	333	234	10	19	3	146	20	76
Future Volume (vph)	51	228	6	5	333	234	10	19	3	146	20	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.5			5.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.94			0.99			0.96	
Flt Protected		0.99			1.00			0.99			0.97	
Satd. Flow (prot)		1780			1700			1812			1732	
Flt Permitted		0.85			1.00			0.90			0.80	
Satd. Flow (perm)		1526			1698			1658			1420	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	53	235	6	5	343	241	10	20	3	151	21	78
RTOR Reduction (vph)	0	0	0	0	14	0	0	2	0	0	22	0
Lane Group Flow (vph)	0	294	0	0	575	0	0	31	0	0	228	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		45.2			45.2			16.5			16.5	
Effective Green, g (s)		45.2			45.2			16.5			16.5	
Actuated g/C Ratio		0.63			0.63			0.23			0.23	
Clearance Time (s)		5.0			5.0			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		955			1063			378			324	
v/s Ratio Prot												
v/s Ratio Perm		0.19			c0.34			0.02			c0.16	
v/c Ratio		0.31			0.54			0.08			0.70	
Uniform Delay, d1		6.3			7.6			21.9			25.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			2.0			0.1			6.7	
Delay (s)		6.4			9.6			22.0			32.3	
Level of Service		A			A			C			C	
Approach Delay (s)		6.4			9.6			22.0			32.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	72.2	Sum of lost time (s)	10.5
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX G
TOTAL FUTURE INTERSECTION DELAYS, CLVs, and HCM WORKSHEETS

1

Critical Lane Volume and Level of Service Calculations

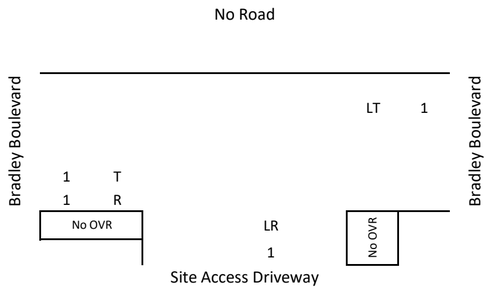
Intersection: Bradley Boulevard / Site Access Driveway

Jurisdiction: Montgomery County, MD

Scenario/Design Year: Background Future

Computed by: W+A

Intersection Lane Use & Traffic Control

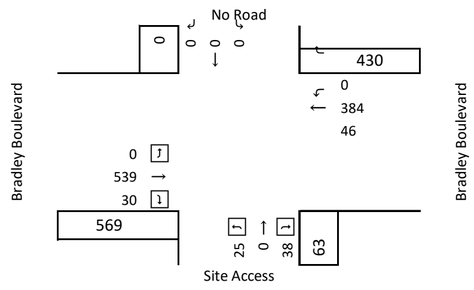


Signal?	Split?

or

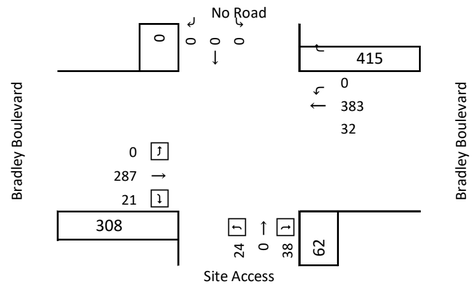
Stop Sign?	Directions
Yes	N/S

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	T	539			0	46	1.00	46	46	
	R	30	0		0				46	
WB	LT	430		1.00	430	0		0	430	*
			0		0				0	
NB	LR	63		1.00	63	0		0	63	*
			0		0				0	
SB					0	25		0	0	
			0		0				0	
Note:								CLV	493	
				Congestion Standard				v/c	0.308	
				1600						

PM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	T	287			0	32	1.00	32	32	
	R	21	0		0				32	
WB	LT	415		1.00	415	0		0	415	*
			0		0				0	
NB	LR	62		1.00	62	0		0	62	*
			0		0				0	
SB					0	24		0	0	
			0		0				0	
Note:								CLV	477	
				Congestion Standard				v/c	0.298	
				1600						

Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

Montgomery County LATR

Number of Lanes	Left Turn LUF	Through LUF
1	1	1.00
2	0.53	0.53
3	0.37	0.37
4		0.30
5		0.25

2

Critical Lane Volume and Level of Service Calculations

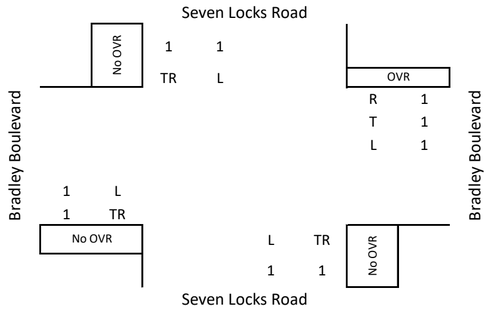
Intersection: Bradley Boulevard / Seven Locks Road

Jurisdiction: Montgomery County, MD

Scenario/Design Year: Background Future

Computed by: W+A

Intersection Lane Use & Traffic Control

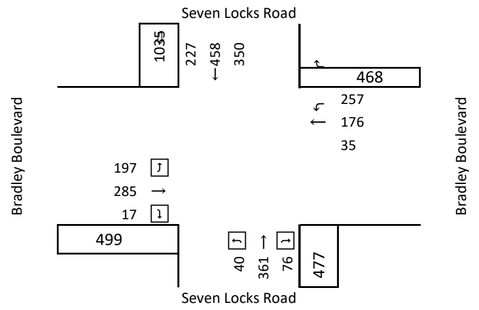


Signal?	Split?
Yes	

or

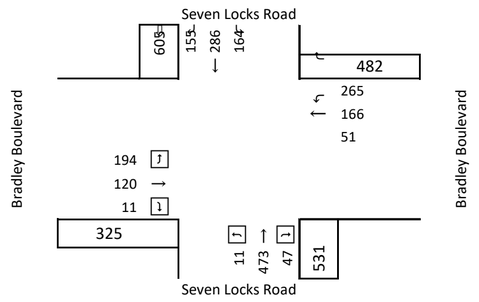
Stop Sign?	Directions

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	TR	302	0	1.00	302 0	35	1.00	35	337 35	
WB	T R	176 257	0	1.00 1.00	176 257	197	1.00	197	373 454	*
NB	TR	437	0	1.00	437 0	350	1.00	350	787 350	*
SB	TR	685	0	1.00	685 0	40	1.00	40	725 40	
Note:								CLV	1241	
				Potomac Congest. Eq				v/c	0.856	
				1450						

PM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	TR	131	0	1.00	131 0	51	1.00	51	182 51	
WB	T R	166 265	0	1.00 1.00	166 265	194	1.00	194	360 459	*
NB	TR	520	0	1.00	520 0	164	1.00	164	684 164	*
SB	TR	441	0	1.00	441 0	11	1.00	11	452 11	
Note:								CLV	1143	
				Potomac Congest. Eq				v/c	0.788	
				1450						

Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**Yes**	257	265		1.00	350	164		0.00	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

Montgomery County LATR

Number of Lanes	Left Turn LUF	Through LUF
1	1	1.00
2	0.53	0.53
3	0.37	0.37
4		0.30
5		0.25

3

Critical Lane Volume and Level of Service Calculations

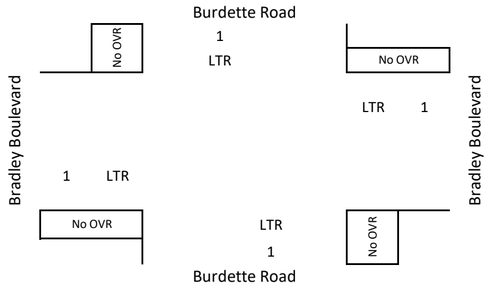
Intersection: Bradley Boulevard / Burdette Road

Jurisdiction: Montgomery County, MD

Scenario/Design Year: Background Future

Computed by: W+A

Intersection Lane Use & Traffic Control

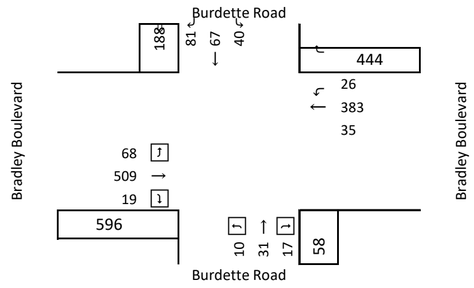


Signal?	Split?
Yes	None

or

Stop Sign?	Directions

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	596	0	1.00	596 0	35	1.00	35	631 35	*
WB	LTR	444	0	1.00	444 0	68	1.00	68	512 68	
NB	LTR	58	0	1.00	58 0	40	1.00	40	98 40	
SB	LTR	188	0	1.00	188 0	10	1.00	10	198 10	*
Note:								CLV	829	
				Congestion Standard				v/c	0.518	
				1600						

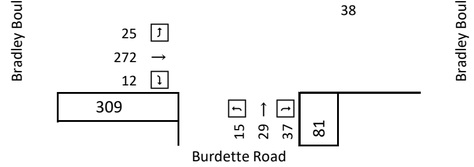
Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

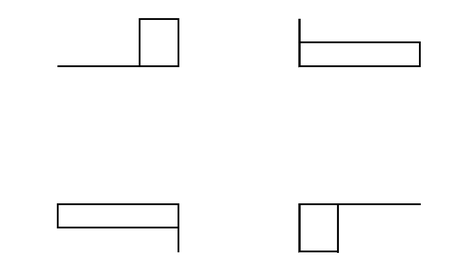
Montgomery County LATR

Number of Lanes	Left Turn LUF	Through LUF
1	1	1.00
2	0.53	0.53
3	0.37	0.37
4		0.30
5		0.25

PM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	309	0	1.00	309 0	38	1.00	38	347 38	
WB	LTR	441	0	1.00	441 0	25	1.00	25	466 25	*
NB	LTR	81	0	1.00	81 0	24	1.00	24	105 24	
SB	LTR	104	0	1.00	104 0	15	1.00	15	119 15	*
Note:								CLV	585	
				Congestion Standard				v/c	0.366	
				1600						



4

Critical Lane Volume and Level of Service Calculations

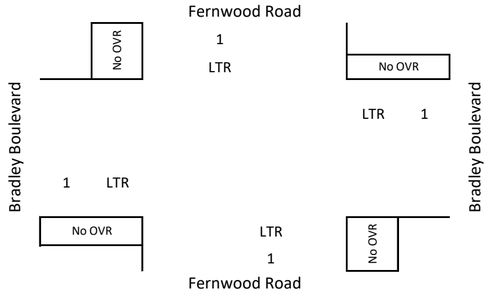
Intersection: Bradley Boulevard / Fernwood Road

Jurisdiction: Montgomery County, MD

Scenario/Design Year: Background Future

Computed by: W+A

Intersection Lane Use & Traffic Control

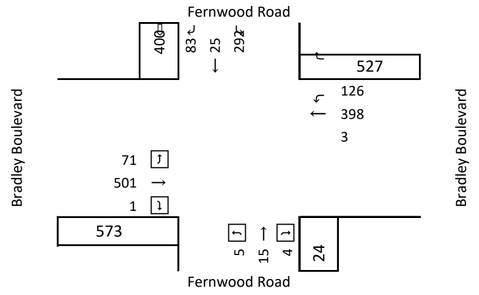


Signal?	Split?
Yes	None

or

Stop Sign?	Directions

AM Peak Hour Critical Lane Volume Analysis



Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	573	0	1.00	573 0	3	1.00	3	576 3	
WB	LTR	527	0	1.00	527 0	71	1.00	71	598 71	*
NB	LTR	24	0	1.00	24 0	292	1.00	292	316 292	
SB	LTR	400	0	1.00	400 0	5	1.00	5	405 5	*
Note:								**CLV**	**1003**	
					Congestion Standard			**v/c**	**0.627**	
					1600					

Right Turn Overlap

Approach	Excl. Right	Right Vol. AM	Right Vol. PM		Right Vol. LUF	Adjacent Overlap Vol. AM	Adjacent Overlap Vol. PM		Adjacent Overlap Vol. LUF	Overlap AM	Overlap PM	
Eastbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Westbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Northbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	
Southbound	**No**	n/a	n/a		n/a	n/a	n/a		n/a	0	0	

Montgomery County LATR

		Lane Use Factors					
		Number of Lanes	Left Turn LUF	Through LUF			
		1	1	1.00			
		2	0.53	0.53			
		3	0.37	0.37			
		4		0.30			
		5		0.25			

PM Peak Hour Critical Lane Volume Analysis

Direction	Lane Group	Lane Group Volume	Right Turn Overlap	Lane Use Factor (LUF)	Volume	Opposing Lefts	Lane Use Factor (LUF)	Opposing Volume	Critical Lane Volume (CLV)	Included in CLV
EB	LTR	321	0	1.00	321 0	5	1.00	5	326 5	
WB	LTR	604	0	1.00	604 0	51	1.00	51	655 51	*
NB	LTR	32	0	1.00	32 0	146	1.00	146	178 146	
SB	LTR	242	0	1.00	242 0	10	1.00	10	252 10	*
Note:								**CLV**	**907**	
					Congestion Standard			**v/c**	**0.567**	
					1600					

HCM Unsignalized Intersection Capacity Analysis
1: Site Access Driveway & Bradley Boulevard #191

06/08/2021

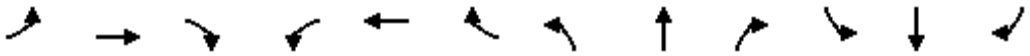
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	539	34	50	384	27	41
Future Volume (Veh/h)	539	34	50	384	27	41
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	599	38	56	427	30	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			637		1138	599
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			637		1138	599
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		86	91
cM capacity (veh/h)			947		210	502

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	599	38	483	76
Volume Left	0	0	56	30
Volume Right	0	38	0	46
cSH	1700	1700	947	324
Volume to Capacity	0.35	0.02	0.06	0.23
Queue Length 95th (ft)	0	0	5	22
Control Delay (s)	0.0	0.0	1.7	19.5
Lane LOS			A	C
Approach Delay (s)	0.0		1.7	19.5
Approach LOS				C

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
3: Burdette Road & Bradley Boulevard #191

06/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	512	19	35	387	26	10	31	17	40	67	81
Future Volume (vph)	68	512	19	35	387	26	10	31	17	40	67	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	13	12	12	14	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.99			0.96			0.94	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1844			1841			1833			1852	
Flt Permitted		0.90			0.93			0.93			0.91	
Satd. Flow (perm)		1668			1711			1715			1707	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	76	575	21	39	435	29	11	35	19	45	75	91
RTOR Reduction (vph)	0	1	0	0	1	0	0	16	0	0	35	0
Lane Group Flow (vph)	0	671	0	0	502	0	0	49	0	0	176	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		55.1			55.1			13.1			13.1	
Effective Green, g (s)		55.1			55.1			13.1			13.1	
Actuated g/C Ratio		0.70			0.70			0.17			0.17	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		6.0			6.0			6.0			3.0	
Lane Grp Cap (vph)		1175			1205			287			285	
v/s Ratio Prot												
v/s Ratio Perm		c0.40			0.29			0.03			c0.10	
v/c Ratio		0.57			0.42			0.17			0.62	
Uniform Delay, d1		5.7			4.8			27.9			30.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.3			1.1			0.8			3.9	
Delay (s)		7.1			5.9			28.7			34.2	
Level of Service		A			A			C			C	
Approach Delay (s)		7.1			5.9			28.7			34.2	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: Fernwood Road & Bradley Boulevard #191

06/08/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	504	1	3	402	126	5	15	4	292	25	83
Future Volume (vph)	71	504	1	3	402	126	5	15	4	292	25	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.5			5.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.97			0.98			0.97	
Flt Protected		0.99			1.00			0.99			0.96	
Satd. Flow (prot)		1789			1743			1804			1747	
Flt Permitted		0.87			1.00			0.93			0.77	
Satd. Flow (perm)		1569			1739			1693			1391	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	78	554	1	3	442	138	5	16	4	321	27	91
RTOR Reduction (vph)	0	0	0	0	8	0	0	3	0	0	11	0
Lane Group Flow (vph)	0	633	0	0	575	0	0	22	0	0	428	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		45.6			45.6			31.9			31.9	
Effective Green, g (s)		45.6			45.6			31.9			31.9	
Actuated g/C Ratio		0.52			0.52			0.36			0.36	
Clearance Time (s)		5.0			5.0			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		813			901			613			504	
v/s Ratio Prot												
v/s Ratio Perm		c0.40			0.33			0.01			c0.31	
v/c Ratio		0.78			0.64			0.04			0.85	
Uniform Delay, d1		17.1			15.3			18.1			25.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		4.7			3.4			0.0			12.6	
Delay (s)		21.9			18.7			18.1			38.5	
Level of Service		C			B			B			D	
Approach Delay (s)		21.9			18.7			18.1			38.5	
Approach LOS		C			B			B			D	

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1: Site Access Driveway & Bradley Boulevard #191

06/08/2021

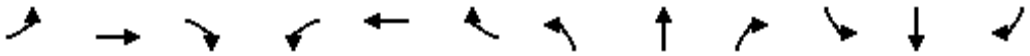
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	287	24	35	383	26	42
Future Volume (Veh/h)	287	24	35	383	26	42
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	305	26	37	407	28	45
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			331		786	305
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			331		786	305
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		92	94
cM capacity (veh/h)			1228		350	735

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	305	26	444	73
Volume Left	0	0	37	28
Volume Right	0	26	0	45
cSH	1700	1700	1228	517
Volume to Capacity	0.18	0.02	0.03	0.14
Queue Length 95th (ft)	0	0	2	12
Control Delay (s)	0.0	0.0	1.0	13.1
Lane LOS			A	B
Approach Delay (s)	0.0		1.0	13.1
Approach LOS				B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
3: Burdette Road & Bradley Boulevard #191

06/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	276	17	38	370	36	15	29	37	24	32	48
Future Volume (vph)	25	276	17	38	370	36	15	29	37	24	32	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	13	12	12	14	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.94			0.94	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1842			1835			1790			1842	
Flt Permitted		0.95			0.95			0.93			0.92	
Satd. Flow (perm)		1760			1754			1678			1717	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	300	18	41	402	39	16	32	40	26	35	52
RTOR Reduction (vph)	0	1	0	0	2	0	0	35	0	0	42	0
Lane Group Flow (vph)	0	344	0	0	480	0	0	53	0	0	71	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		55.5			55.5			8.6			8.6	
Effective Green, g (s)		55.5			55.5			8.6			8.6	
Actuated g/C Ratio		0.75			0.75			0.12			0.12	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		6.0			6.0			6.0			3.0	
Lane Grp Cap (vph)		1318			1313			194			199	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.27			0.03			c0.04	
v/c Ratio		0.26			0.37			0.27			0.36	
Uniform Delay, d1		2.9			3.2			29.9			30.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.3			0.8			2.1			1.1	
Delay (s)		3.2			4.0			32.0			31.3	
Level of Service		A			A			C			C	
Approach Delay (s)		3.2			4.0			32.0			31.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: Fernwood Road & Bradley Boulevard #191

06/08/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	268	6	5	368	234	10	19	3	146	20	76
Future Volume (vph)	51	268	6	5	368	234	10	19	3	146	20	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.5			5.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.95			0.99			0.96	
Flt Protected		0.99			1.00			0.99			0.97	
Satd. Flow (prot)		1782			1706			1812			1732	
Flt Permitted		0.86			1.00			0.90			0.80	
Satd. Flow (perm)		1542			1703			1658			1420	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	53	276	6	5	379	241	10	20	3	151	21	78
RTOR Reduction (vph)	0	0	0	0	13	0	0	2	0	0	22	0
Lane Group Flow (vph)	0	335	0	0	612	0	0	31	0	0	228	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		45.2			45.2			16.5			16.5	
Effective Green, g (s)		45.2			45.2			16.5			16.5	
Actuated g/C Ratio		0.63			0.63			0.23			0.23	
Clearance Time (s)		5.0			5.0			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		965			1066			378			324	
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.36			0.02			c0.16	
v/c Ratio		0.35			0.57			0.08			0.70	
Uniform Delay, d1		6.4			7.9			21.9			25.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			2.2			0.1			6.7	
Delay (s)		6.7			10.1			22.0			32.3	
Level of Service		A			B			C			C	
Approach Delay (s)		6.7			10.1			22.0			32.3	
Approach LOS		A			B			C			C	

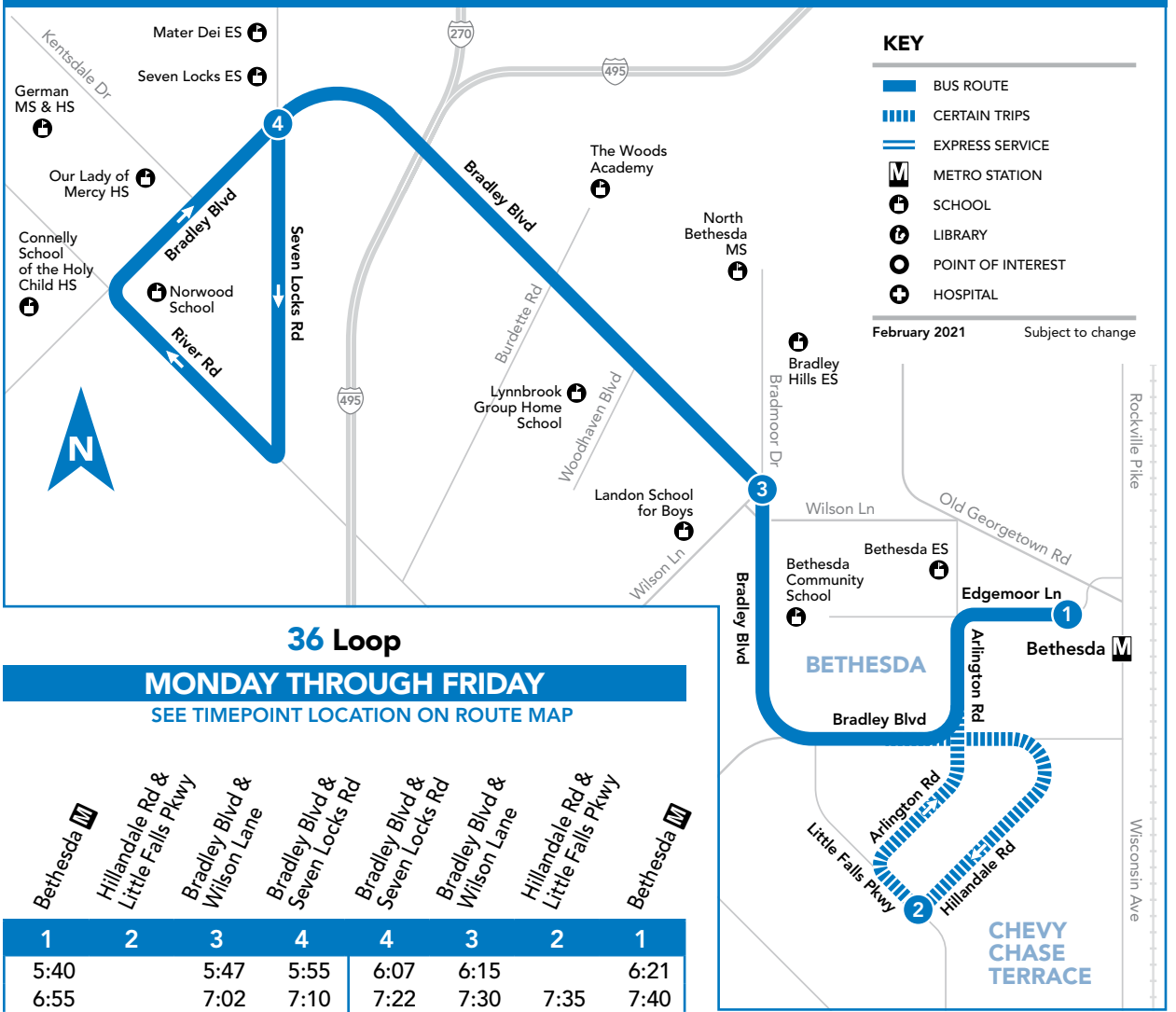
Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	72.2	Sum of lost time (s)	10.5
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX H
BUS ROUTES/MAPS

Attachmend D

36 Potomac – Bradley Blvd – Bethesda M

Ride On Montgomery County Transit



36 Loop

MONDAY THROUGH FRIDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Bethesda M	Hillandale Rd & Little Falls Pkwy	Bradley Blvd & Wilson Lane	Bradley Blvd & Seven Locks Rd	Bradley Blvd & Seven Locks Rd	Bradley Blvd & Wilson Lane	Hillandale Rd & Little Falls Pkwy	Bethesda M
1	2	3	4	4	3	2	1
5:40		5:47	5:55	6:07	6:15		6:21
6:55		7:02	7:10	7:22	7:30	7:35	7:40
8:10		8:18	8:27	8:39	8:48	8:53	8:58
9:25		9:33	9:41	9:53	10:01		10:07
10:40		10:48	10:56	11:08	11:16		11:22
11:55		**12:03**	**12:11**	**12:23**	**12:31**		**12:37**
1:10		**1:18**	**1:26**	**1:38**	**1:46**		**1:52**
2:25		**2:33**	**2:41**	**2:53**	**3:01**		**3:07**
3:40		**3:48**	**3:56**	**4:08**	**4:17**		**4:25**
4:55	**5:02**	**5:08**	**5:16**	**5:28**	**5:37**		**5:45**
6:10	**6:17**	**6:23**	**6:31**	**6:43**	**6:52**		**6:58**
7:30		**7:37**	**7:45**	**7:57**	**8:04**		**8:10**

NOTES:

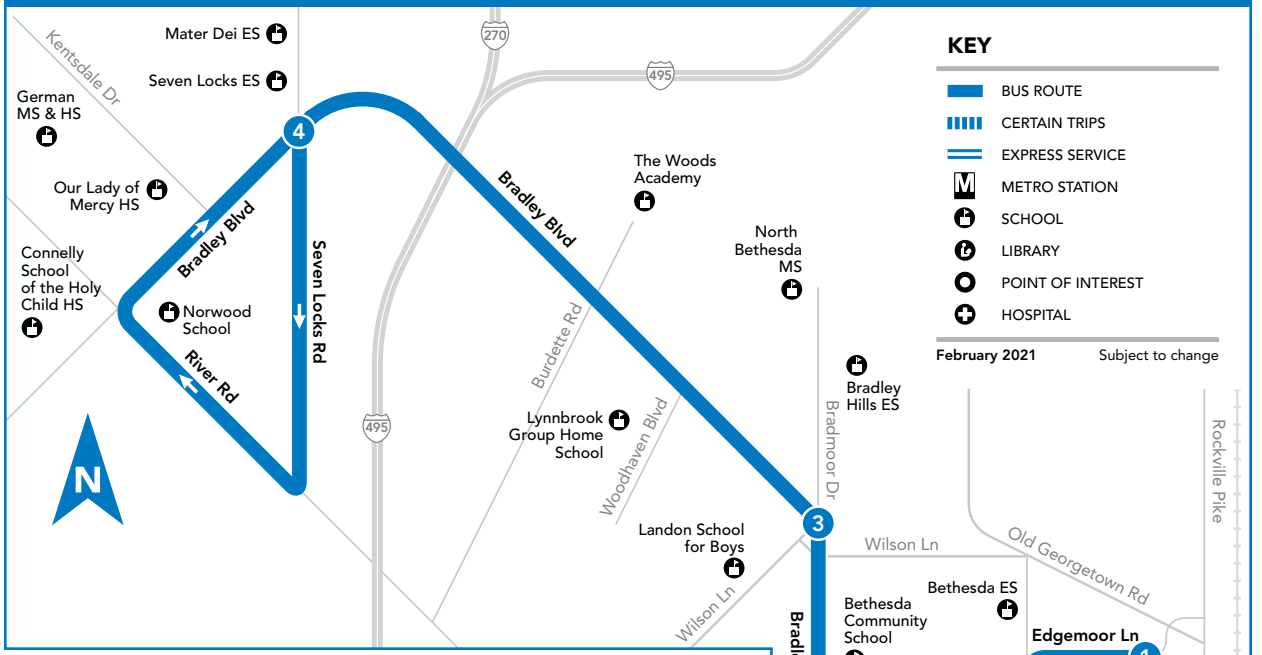
AM	PM

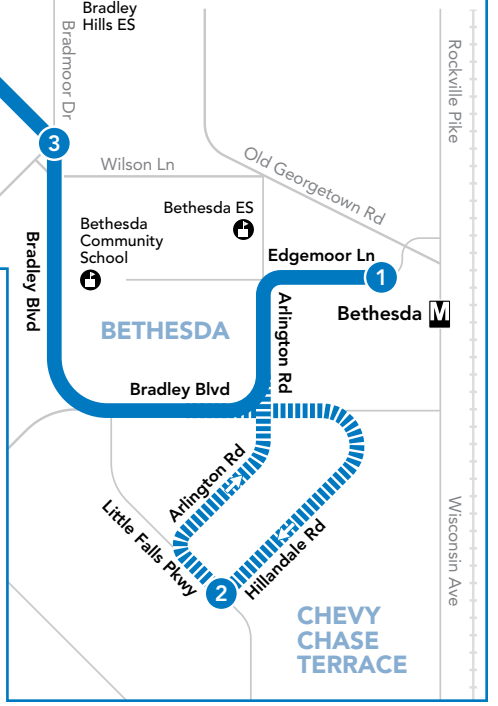
Please arrive at your stop several minutes ahead of your bus' scheduled arrival. Since safe service is a priority at Ride On, buses may be delayed dueq to traffic or weather.

There is NO Saturday or Sunday service on this route

36 | Potomac – Bradley Blvd – Bethesda M

Ride On
Montgomery County Transit





36 Loop

MONDAY THROUGH FRIDAY

SEE TIMEPOINT LOCATION ON ROUTE MAP

Bethesda M	Hillandale Rd & Little Falls Pkwy	Bradley Blvd & Wilson Lane	Bradley Blvd & Seven Locks Rd	Bradley Blvd & Seven Locks Rd	Bradley Blvd & Wilson Lane	Hillandale Rd & Little Falls Pkwy	Bethesda M
1	2	3	4	4	3	2	1
5:40		5:47	5:55	6:07	6:15		6:21
6:55		7:02	7:10	7:22	7:30	7:35	7:40
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1:10		**1:18**	**1:26**	**1:38**	**1:46**		**1:52**
2:25		**2:33**	**2:41**	**2:53**	**3:01**		**3:07**
3:40		**3:48**	**3:56**	**4:08**	**4:17**		**4:25**
4:55	**5:02**	**5:08**	**5:16**	**5:28**	**5:37**		**5:45**
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7:30		**7:37**	**7:45**	**7:57**	**8:04**		**8:10**

NOTES: AM PM

Please arrive at your stop several minutes ahead of your bus' scheduled arrival. Since safe service is a priority at Ride On, buses may be delayed dueq to traffic or weather.

There is NO Saturday or Sunday service on this route

HOW TO RIDE A BUS

Check schedule for timepoint nearest your location. Wait at the blue and white **RIDE ON** bus stop sign. Arrive several minutes before scheduled time. Have exact fare ready (drivers do not make change).

- Not all stops are listed on a public timetable.
- If you are unfamiliar with your stop, sit or stand behind the line near the front of the bus and ask the bus driver to notify you when your stop is approaching.
- Ask the bus driver if you are not sure if the bus goes to your stop.
- If you have internet access (at home or somewhere else, such as a public library), it may be easier for you to use an online trip planner rather than a paper timetable.
- Be mindful of changes in the schedule, for holidays or bad weather.
- Please observe the following rules for all patrons: No eating, drinking, or smoking.
- Electronic devices may be played with earphones set *at low level*.

HOW TO READ A TIMETABLE

- Find the schedule for the day of the week and the direction you wish to ride.
- Find the timepoints closest to your origin and destination. The timepoints are shown on the route map and indicate the time the bus is scheduled to be at the particular location. Your nearest bus stop may be between timepoints.
- Read down the column to see the times when a trip will be at the given timepoint. Read the times across to the right to see when the trip reaches other timepoints.

FARES Effective September 15, 2019

Regular Fare, Token, or SmarTrip®	**$2.00**
SmarTrip® Fare Transfer from MetroRail	**$1.50**
Seniors and persons with disability with valid ID (including attendant-eligible) except during free periods:	
Senior/Disabled SmarTrip® or Cash	**$1.00**
Senior/Disabled SmarTrip® Transfer from Metrorail	**$0.50**
Seniors age 65 years or older with a Senior SmarTrip® card or valid Metro Senior ID Card or with valid Medicare Card and Photo ID from 9:30 am – 3:00 pm Monday through Friday and Saturday from 8:30 am – 4:00 pm.	**FREE**
Person with disability with Metro Disabled ID Card from 9:30 am – 3:00 pm Monday through Friday and Saturday from 8:30 am – 4:00 pm.	
Person with disability with Metro Disability ID Card – Attendant Eligible from 9:30 am – 3:00 pm Mon. through Fri. and Sat. from 8:30 am – 4:00 pm. Attendant rides half fare or free depending on time.	
MetroAccess - Certified Customer with ID **MetroAccess** - Companion	
Children under age 5	**FREE**
Local Bus Transfer with SmarTrip®	
Children 5 to 18 with a Youth Cruiser SmarTrip® Card or student ID Anytime	

GUARANTEED RIDE HOME

When you take Metrobus, Metrorail and Ride On to work, you are eligible to participate in the free Commuter Connections Guaranteed Ride Home Program. To register and to receive program details call:
Commuter Services at **301-770-POOL(7665)**.

METROACCESS

Alternative paratransit service to this Ride On route for people with certified disabilities is available. Call MetroAccess at **301-562-5360**.

Ride On
Montgomery County Transit

WELCOME TO RIDE ON

RIDE ON is a community bus service operated by the Montgomery County Department of Transportation.

RIDE ON operates over 75 routes that serve all 13 Montgomery County Metrorail stations and 7 MARC stations.

For detailed information, or to have timetables mailed, call **311**.

Outside Montgomery County **240-777-0311**

Visit our web site at:
www.rideonbus.com

Real Time information is available at:
www.rideonrealtime.com

Regular Mailing Address:
Montgomery County DOT
Division of Transit Services
101 Monroe Street, 5th Floor Rockville, MD 20850

For more information, or to request this document in an alternate format or translated into another language, please call 311, or outside Montgomery County 240-777-0311.

Para más información o para pedir este documento en un formato diferente o traducido a otro idioma, por favor, llame al 311 o de fuera del Condado de Montgomery al 240-777-0311.

如需更多信息、需要以其它格式提供本文檔或需要將本文檔翻譯成其它語言，請撥打311。如果您不在蒙哥馬利郡，請撥打240–777–0311。

자세한 정보를 원하시거나 본 문서를 다른 형식 또는 다른 언어로의 번역본으로 원하실 경우, 전화번호 311, 또는 몽고메리 카운티 이외의 지역에서는 240-777-0311로 연락하시기 바랍니다.

ለተጨማሪ መረጃ፡ ወይም ይህንን ዶኩመንት በተለዋጭ መልክ ለመጠየቅ ወይም ወደሌላ ቋንቋ ለማስተርጎም፡ አባከዎትን በ 311 ወይም ከሞንትጎመሪ ካውንቲ ውጪ 240-777-0311 ይደውሉ።

Pour plus d'informations ou pour recevoir un exemplaire de ce document sous un format différent ou traduit dans une autre langue, veuillez composer le 311 ou le 240-777-0311, à l'extérieur du comté de Montgomery.

Để tìm hiểu thêm, hoặc để yêu cầu cung cấp tài liệu này theo định dạng khác hay chuyển ngữ sang ngôn ngữ khác, vui lòng gọi 311 hoặc số 240-777-0311 nếu gọi từ bên ngoài Quận Montgomery.

HOLIDAY SCHEDULE

Weekday Schedule operates on Indigenous Peoples' Day

Saturday Schedule operates on Independence Day

Sunday Schedule operates on New Year's Day, Memorial Day, Labor Day, Thanksgiving Day, Christmas Day

Special Schedule operates on MLK, Jr. Day, Presidents' Day, Veterans Day

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Thank You for Riding with Us!

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EFFECTIVE: FEBRUARY 28, 2021

Attachmend D

36

Approximate travel time between stops

- Bradley Blvd & Seven Locks Rd
- 7-9 mins
- Bradley Blvd & Wilson Lane
- 5-6 mins
- *Hillandale Rd & Little Falls Pkwy*
  DESIGNATED TRIPS
- 6-8 mins
- 5-7 mins
- Bethesda M

SERVICE DAYS

MONDAY - FRIDAY

Ride On
Montgomery County Transit

Telephone **311**
Online at **www.rideonbus.com**
Real Time Info at **www.rideonrealtime.com**