



BA Group

12861 DIXIE ROAD TOWN OF CALEDON URBAN TRANSPORTATION CONSIDERATIONS

Prepared For: QuadReal Property Group

July 2025



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1.0 INTRODUCTION

This Transportation Study has been prepared on behalf of the landowner, bcIMC Realty Corporation c/o QuadReal Property Group (“QuadReal”), in support of a Site Plan Approval (“SPA”) application for the lands municipally described as 12861 Dixie Road, in the Town of Caledon (the “Site”).

QuadReal intends to redevelop the Subject Property into a leading Class ‘A’ last-mile urban distribution and logistics facility (the “Proposed Development”). This report is provided in support of an Official Plan Amendment, Zoning By-Law Amendment, and Site Plan Application to permit the development of a three-building warehouse with associated ancillary office uses.

The Proposed Development consists of two industrial buildings with a total gross floor area of 188,718 square metres.

The Subject Property is located on the east side of Dixie Road, immediately south of Old School Road is used mainly as agricultural land. The Subject Property is bounded by adjacent parcels to the east and south, Old School Road to the North, and Dixie Road to the west. A variety of retail, commercial, restaurant and automotive uses are located along the south side of Mayfield Road and a residential subdivision comprised primarily of one- and two-storey single detached dwellings are located east of Dixie Road. Additionally, surrounding the Mayfield Road and Bramalea Road area to the east of the Site are retail and institutional buildings. The Subject Property is approximately 582,686 square metres (144 acres) in size with approximately 900 metres of frontage along Dixie Road and approximately 520 metres of frontage along Old School Road.

1.1 THE SITE

As outlined in **Section 1.0**, the Site is located on the east side of Dixie Road, immediately south of Old School Road. The Site is bounded by adjacent development parcels to east and south, Old School Road to the north, and Dixie Road to the west.

The Site location is shown in **Figure 1**.

1.2 THE PROPOSED DEVELOPMENT

The Proposed Development contemplates the construction of two new industrial buildings. The Proposed Development is being built speculatively and is intended to serve a variety of warehousing uses, including general warehousing, fulfilment centre warehousing, and other light industrial/commercial uses. The Proposed Development consists of two industrial buildings approximately sized at 100,758 square metres and 87,860 square metres with a combined floor area of approximately 188,718 square metres. Each building includes vehicle parking, truck loading docks, and in some cases, tractor-trailer parking spaces. A total of 1,972 car parking spaces are proposed across the Site, located at grade.

The expected occupancy of the buildings is 2028.

The western side of the property along Dixie Road proposes a right-in / right-out access, approximately 240 metres south of the Dixie Road / Old School Road intersection, exclusively for light vehicles.

The northern side of the property along Old School Road plans for two vehicular access points, also presented in **Figure 2**, and a functional design plan is attached in **Appendix C**:

- Site Access 1: Approximately 90 metres east of the Dixie Road / Old School Road intersection, the access is proposed to operate under right-in / right-out operations for all vehicles.
- Site Access 2: Approximately 460 metres east of the North West Access, proposed to operate full moves signalized operations.

The Site plan is shown in **Figure 2** and a reduced copy of the architectural plans (not to scale) are attached in **Appendix A**.

P:\78\43\21\Graphics\12861 Dixie Road (North)\Adobe\Ds\7843-21_12861 Dixie Road_July 2025.indd



Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 1 SITE LOCATION



FIGURE 2 SITE PLAN

2.0 TRANSPORTATION CONTEXT

2.1 EXISTING ROAD NETWORK

A brief description of the roads in the vicinity of the Site follows. Existing lane configurations and road network classifications in the vicinity of the Site are shown in **Figure 3** and **Figure 4** respectively.

2.1.1 Dixie Road

Dixie Road is an arterial road in the vicinity of the Site, operated by the Region of Peel. Dixie Road is generally aligned in a north-south direction with a two-lane cross-section (one lane per direction) and extends from Olde Base Line Road to Lakeshore Road East within Mississauga. The portion of Dixie Road north of Mayfield Road adjacent to the Site is classified as a Suburban Connector as per the 2013 Peel Region Road Characterization Study.

A posted speed limit of 80 kilometres per hour is in effect along Dixie Road in the vicinity of the Site.

The Dixie Road / Mayfield Road intersection is signalized. Localized widening allows for the provision of dedicated left turn lanes and right turn slip lanes on each approach.

2.1.2 Old School Road

Old School Road Road is a local collector road in the vicinity of the Site, operated by the Town of Caledon. Old School Road is generally aligned in an east-west direction with a two-lane cross-section (one lane per direction) and extends from Winston Churchill Boulevard within Mississauga to Airport within Caledon.

A posted speed limit of 60 kilometres per hour is in effect along Old School Road in the vicinity of the Site.

The Dixie Road / Old School Road intersection is signalized. Future widening is proposed to allow for the provision of dedicated left turn lanes and right turn slip lanes on each approach.

2.1.3 Mayfield Road

Mayfield Road is an arterial road in the vicinity of the Site, operated by the Region of Peel. Mayfield Road is generally aligned in an east-west direction with a six-lane cross-section (three lanes per direction) west of Dixie Road until approximately 275 metres west of Heart Lake Road, and a five-lane cross-section (three lanes eastbound, 2 lanes westbound) between Dixie Road and Bramalea Road. It extends from Winston Churchill Boulevard to Highway 50. The portion of Mayfield East of Dixie Road adjacent to the Site is classified as an Industrial Connector as per the 2013 Peel Region Road Characterization Study.

A sidewalk is provided along the south side of Mayfield Road.

A posted speed limit of 80 kilometres per hour is in effect along Mayfield Road in the vicinity of the Site. The Mayfield Road / Bramalea Road intersection is signalized. Localized widening allows for the provision of dedicated left turn lanes and right turn slip lanes on each approach.

2.1.4 Bramalea Road

Bramalea Road is a collector road operated by the Town of Caledon. Bramalea Road is generally aligned in a north-south direction and operates with a four-lane cross-section (two lanes per direction) within the study area. Bramalea Road extends from Olde Base Line Road to Derry Road East within Mississauga.

A posted speed limit of 60 kilometres per hour is in effect along Bramalea Road in the vicinity of the Site.

2.1.5 Abbotside Way

Abbotside Way is a local road operated by the Town of Caledon. The roadway operates with a two-lane cross-section (one lane per direction) and operates with an unposted speed limit of 50 kilometres per hour.

2.2 EXISTING TRANSIT NETWORK

Two bus services operate within 2 kilometres of the Site, as outlined in the following sections. The existing transit network in the vicinity of the Site is shown in **Figure 5**.

2.2.1 15 Bramalea

The 15 Bramalea bus route operates between the Smart Centres - Walmart Plaza near the Mayfield Road / Bramalea Road intersection and Telford Way at Tranmere Drive, generally in a north-south direction. The route operates at intervals of 10 minutes during the AM and PM peak hours. The nearest stop is located south of the Mayfield Road / Bramalea Road intersection, approximately 1 kilometre to the east of the Site.

2.2.2 18 Dixie

The 18 Dixie bus route operates between Meyerside Drive and Inspire Boulevard along Dixie Road, generally in a north-south direction at intervals of 10 minutes during the AM and PM peak hours. The nearest stop is located at the Inspire Boulevard / Dixie Road intersection, approximately 750 metres to the south of the Site.

2.3 EXISTING BICYCLE NETWORK

Existing bicycle infrastructure near the Site includes a multi-use path located along the south side of Mayfield Road, which subsequently provides connections to the wider bicycle network within the City of Brampton. The Active transportation network context in the vicinity of the Site is shown in **Figure 6**.

2.4 EXISTING PEDESTRIAN NETWORK

Due to the agricultural uses of surrounding lands, there is an absence of sidewalks in the area immediately surrounding the Site. A sidewalk is provided along the south side of Mayfield Road to facilitate residential uses. Despite the minimal pedestrian infrastructure, crosswalks are available at the signalized intersections of Dixie Road / Mayfield Road, Dixie Road / Old School Road, and Bramalea Road / Mayfield Road. The active

transportation network context in the vicinity of the Site is shown in **Figure 6**. Additionally, a pedestrian site circulation plan has been provided within **Appendix D**.

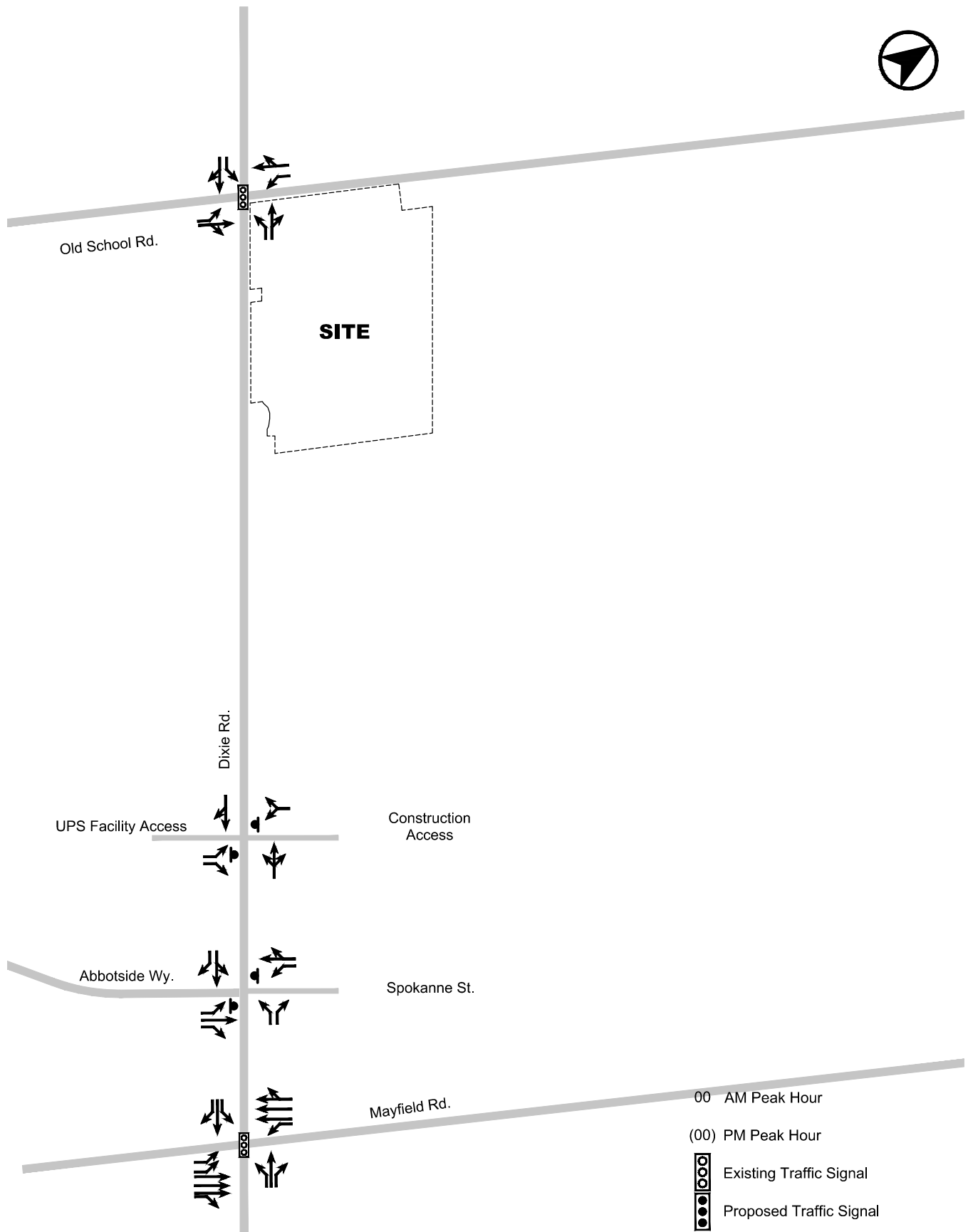


FIGURE 3 EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL



FIGURE 4 EXISTING STREET NETWORK

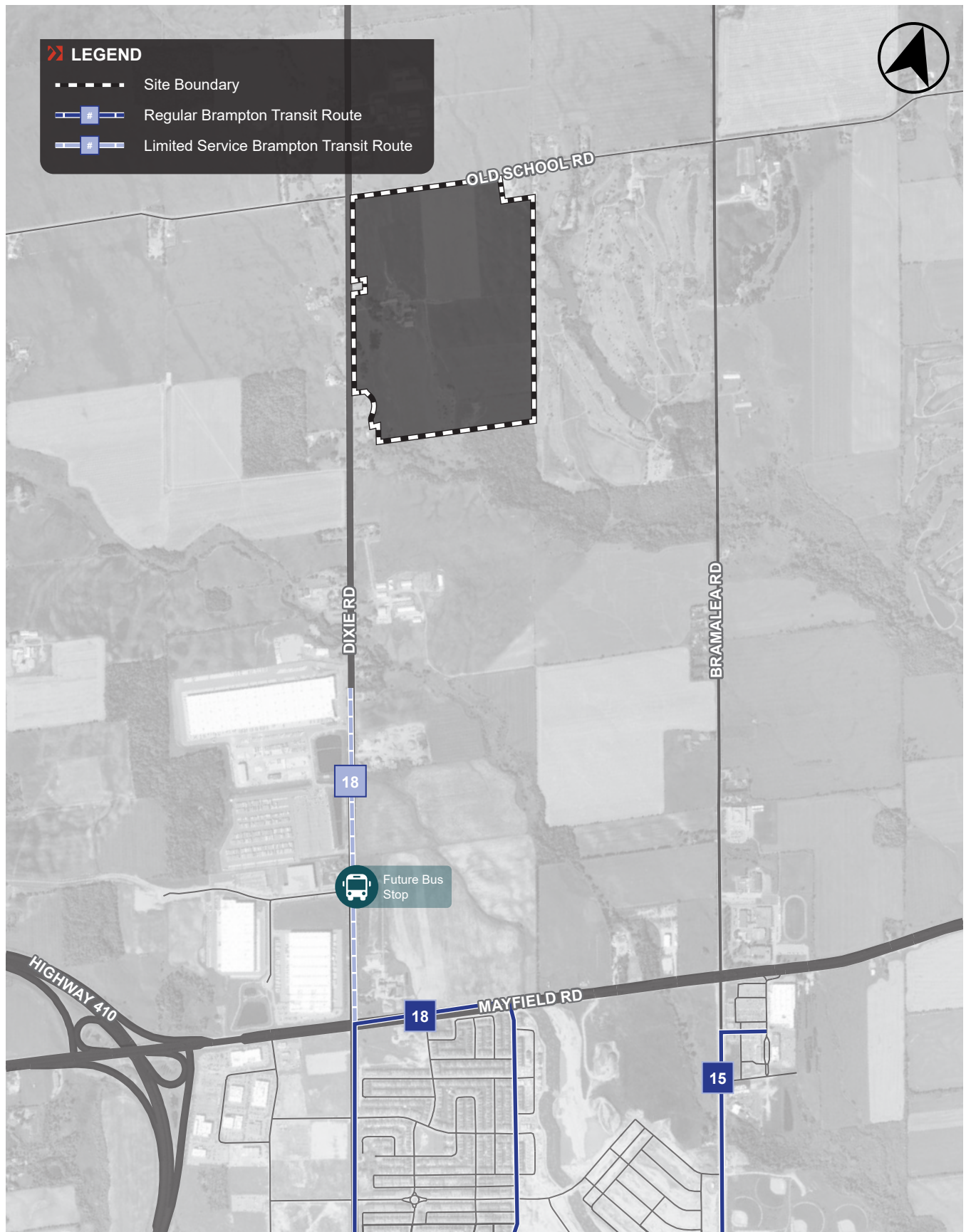


FIGURE 5 EXISTING AND FUTURE TRANSIT NETWORK

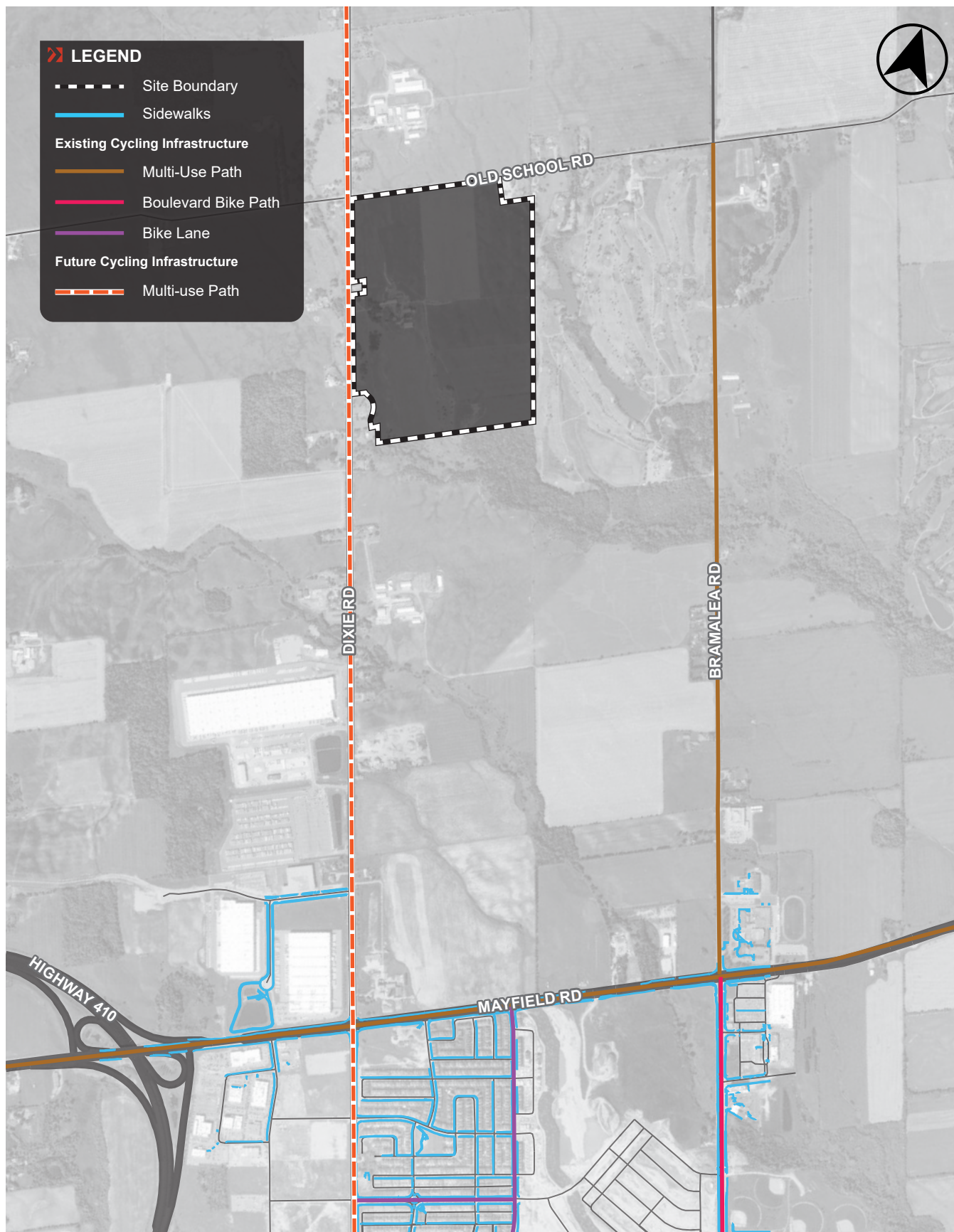


FIGURE 6 ACTIVE TRANSPORTATION CONTEXT

2.5 FUTURE INFRASTRUCTURE PROJECTS

2.5.1 Dixie Road Widening

The Region of Peel Environmental Study Report prepared by AECOM, dated August 2011 (herein referred to as the “ESR”) evaluates the need and feasibility of a widening and improvements on Dixie Road from Queen Street to two kilometres north of Mayfield Road, to help address the short- and long-term needs related to future planned growth, operational and service deficiencies, road and intersection geometrics, road link capacity, and storm drainage deficiencies.

The ESR includes a list of improvements that will begin construction ranging from Spring 2022 to 2027. The ESR recommends that Dixie Road is widened to 6 through lanes plus turning lanes from north of Queen Street to Countryside Drive and 4 through lanes plus turning lanes north of Countryside Drive to approximately two kilometres north of Mayfield Road. Construction for the Dixie Road widening was planned to start in the summer of 2023. Additionally, the ESR states that multi-use trails will be installed along Dixie Road, along with improvements in landscaping, streetscaping, traffic signals, and lighting.

Near the vicinity of the Site, north of Mayfield Road, Dixie Road is planned to be widened to four lanes, plus a centre turning lane, as part of an approved project by the Region of Peel in February 2011 (resolution 2011-38). The west side of Dixie Road will contain a multi-use path for pedestrians and cyclists. The intersection of Dixie Road and Mayfield Road will be configured to include channelized rights on all four legs, in addition to dual-left auxiliary lanes at the south, east, and west legs.

2.5.2 Mayfield Road Widening

The Region of Peel Long Range Transportation Plan (2019) was reviewed to identify any planned roadway improvements within the study area. It was identified that Mayfield Road is to be widened to 6 through lanes from Dixie Road to Bramalea Road plus turning lanes, to help address the short- and long-term needs related to future planned growth, operational and service deficiencies, and road link capacity. Construction for the Mayfield Road widening is planned to start in 2025.

The Region of Peel has additionally completed a Schedule “C” Environmental Assessment for the improvements to Mayfield Road from Heart Lake Road to Airport Road. The Environmental Study Report was published in May 2004. The need for improvements and additional roadway capacity in the Mayfield Road corridor had been previously identified in earlier studies, including the “*Mayfield Road Environmental Assessment and Preliminary Design Study (Hurontario to Heart Lake Road)*” and the Region of Peel Official Plan. The ESR identifies lands to be protected for an ultimate 6-lane cross-section between Hurontario Street and Heart Lake Road.

Within the Vicinity of the Site, Mayfield Road is planned to be widened to 3 through lanes plus turning lanes in both directions. The intersection of Dixie Road and Mayfield Road will be configured to include channelized rights on all four legs, in addition to dual-left auxiliary lanes at the south, east, and west legs.

3.0 CAR PARKING CONSIDERATIONS

3.1 CAR PARKING STANDARDS

3.1.1 Town of Caledon Zoning By-law 2006-50

The Site is subject to the car parking requirements of the Town of Caledon Zoning By-Law 2006-50. The parking requirements for the development are summarized in **Table 1**.

TABLE 1 TOWN OF CALEDON ZONING BY-LAW 2006-50

Use	GFA	Rate	Number of Parking Spaces
Warehouse (Building 1)	100,758 m ²	Over 20,000 m ² – 168 <i>parking spaces</i> , plus 1 <i>parking space</i> per 170 m ² of <i>net floor area</i> or portion thereof over 20,000 m ²	673
Warehouse (Building 2)	87,960 m ²		598
Total	188,718 m ²		1,271

Notes:

1. Building 1 office area: 2,406 m²
2. Building 2 office area: 2,468 m²

Based on the foregoing, under the Town of Caledon Zoning By-Law 2006-50, the development has a requirement to provide a total of 1,271 car spaces.

3.2 PROPOSED CAR PARKING PROVISION

A total of 1,972 car spaces are proposed, which exceeds the requirements and is therefore considered to be satisfactory.

3.3 ACCESSIBLE CAR PARKING

3.3.1 Accessible Car Parking Standards

3.3.1.1 Town of Caledon By-law 2015-058

Town of Caledon By-Law 2015-058, Schedule “K” outlines accessible car parking standards based on the total car parking supply, with the following standards relevant to the Proposed Development:

(8) Under section 80.36 of the Integrated Accessibility Standards Regulation, the minimum number of designated accessible parking spaces shall be provided in accordance with the following: Eleven parking spaces for the use of persons with disabilities and an additional one percent of parking spaces for the use of persons with disabilities, where there are more than 1,000 parking spaces.

(9) Where an even number of accessible parking spaces are required, an equal number of Type A and B accessible parking spaces shall be provided. Where an odd number of accessible parking spaces are required, an equal number of Type A and B accessible parking spaces shall be provided but the last accessible parking space may be Type B.

Application of the above rates to the proposed supply of 1,972 car spaces equates to a requirement to provide 29 accessible spaces, of which 14 should be Type A accessible spaces and 15 should be Type B accessible spaces.

3.3.2 Proposed Accessible Car Parking Provision

A total of 44 accessible spaces are proposed (including 22 Type A spaces and 22 Type B spaces), which meets the requirements of the Town of Caledon By-Law 2015-058 as outlined above.

4.0 BICYCLE PARKING CONSIDERATIONS

The Town of Caledon Zoning By-Law 2006-50 does not list any bicycle parking requirements for industrial or warehouse uses. Notwithstanding, 48 bicycle spaces have been provided adjacent to the locations of the office buildings within the site.

5.0 LOADING CONSIDERATIONS

5.1 LOADING STANDARDS

5.1.1 Town of Caledon Zoning By-Law 2006-50

The Town of Caledon Zoning By-Law 2006-50 loading requirements are applied to the Proposed Development in **Table 2**.

TABLE 2 TOWN OF CALEDON ZONING BY-LAW 2006-50

Use	GFA	Rate	Number of Loading Spaces
Warehouse (Building 1)	100,758 m ²	7,441 m ² or greater: 3 loading spaces plus 1 additional loading space for each 9,300 m ² GFA or part thereof in excess of 7,441 m ²	13
Warehouse (Building 2)	87,960 m ²		12
Total			25

Application of the Town of Caledon Zoning By-Law 2006-50 loading standards to the Proposed Development results in a minimum requirement of 25 loading spaces.

Loading spaces are required to be a minimum of 3.5 metres wide by 14 metres long, with a vertical clearance of 3.35 metres.

5.2 PROPOSED LOADING PROVISION

A total of 394 potential loading docks and two drive-in doors (at one end of each building) are proposed. The proposed potential loading supply exceeds the requirements of the Town of Caledon Zoning By-Law 2006-50. Given the proposed warehouse land use, the potential loading supply will be determined in part by the needs of future tenants. The proposed loading docks also exceed the dimensional requirements of the Town of Caledon Zoning By-Law 2006-50.

As noted previously, the potential loading spaces indicated on the Site Plan represent opportunities to provide direct access loading bays. The total number of loading docks and their specific locations will be determined in conjunction with the needs of the tenants, which will vary. The Site Plan illustrates the maximum potential number of spaces available to tenants, with the specific supply likely to vary over time, while consistently complying with the by-law minimum requirement.

Vehicle maneuvering diagrams have been provided within **Appendix E**.

6.0 SITE PLAN CONSIDERATIONS

6.1 SITE ACCESS

As mentioned in **Section 1.2**, vehicular access is proposed via three access points along Dixie Road and Old School Road.

The southwest side of the property along Dixie Road proposes a right-in / right-out access exclusive for light vehicle use. The northwest side of the property along Old School Road proposes a right-in / right-out for all vehicles. A signalized intersection for all vehicles is proposed by the northeast side of the property along Old School Road.

TABLE 3 SITE ACCESS SUMMARY

Site Access	Road Intersection	Configuration	Signalization
Site Access 1 (South West)	Dixie Road / Site Access 1	Right-in / Right-out	No
Site Access 2 (North West)	Old School Road / Site Access 2	Right-In / Right-Out	No
Site Access 3 (North East)	Old School Road / Site Access 3	Full-Moves	Yes

The proposed Site access points and spacing between each conform with the requirements laid out in the 2013 Peel Region Road Characterization Study (RCS) for a Suburban Connector (Dixie Road). As there are no consecutive full-move accesses along Dixie Road (the intersections alternate between full-moves and right-in / right-out), the required intersection spacing between each access is 75 metres as per the RCS. Therefore, the intersection spacing meets the requirements set out within the RCS.

6.2 SIGHT LINE ANALYSIS

Vehicular sight lines for the proposed site accesses were reviewed. The critical movements were reviewed for a design speed of 70km/hr for Old School Road and 80km/hr for Dixie Road. Sight line requirements for the site accesses are satisfied. The relevant figures are attached in **Appendix B**.

6.3 TRUCK ACCESS

Heavy vehicles are expected to enter and exit the Site via the two proposed access points along Old School Road:

- Old School Road / Site Access 2
- Old School Road / Site Access 3

The locations of the light vehicle parking spaces have been strategically laid out throughout the Site area, as can be observed in **Figure 2**, to minimise the potential for conflict between light and heavy vehicles. Light vehicles should be capable of accessing the parking lots for their respective buildings without the need to cross through the loading areas. Similarly, heavy vehicles may access the loading areas for their respective buildings without traversing through the designated light vehicle parking areas.

7.0 TRAFFIC VOLUME FORECASTING

The following section outlines the traffic volume forecasting scope of work as discussed and agreed upon with the Town of Caledon and the Region of Peel.

7.1 EXISTING TRAFFIC VOLUMES

Traffic analysis has been completed for the following scenarios during the AM and PM peak hour periods:

- Existing Traffic Conditions;
- Future Background Conditions at occupancy (2028);
- Future Total Conditions at occupancy (2028);
- Future Background Conditions at 5 years post occupancy (2033); and
- Future Total Conditions at 5 years post occupancy (2033).

7.2 EXISTING TRAFFIC CONDITIONS

Existing traffic volumes for vehicles, cyclists and pedestrians were established for the weekday morning and afternoon peak hour periods on the area street network based on intersection traffic information collected by the Town of Caledon and Spectrum Traffic Data Inc. on behalf of BA Group. The turning movement count dates and sources are summarized in **Table 4**.

The raw turning movement counts are attached in **Appendix F**.

TABLE 4 EXISTING TRAFFIC COUNT INFORMATION

Intersection	Date of Count	Source
Dixie Road / Mayfield Road	November 14, 2023	Spectrum Traffic Inc. 6:30 a.m. to 9:30 a.m. 4:00 p.m. to 7:00 p.m.
Dixie Road / Abbotside Way / Spokane St		
Dixie Road / UPS Facility / Existing Construction Access		
Dixie Road / Old School Road		
Bramalea Road / Old School Road		

The existing turning movement counts were reviewed in detail to ensure general consistency in the traffic volumes on roadways between intersections. Where necessary, minor adjustments were made to balance traffic volumes between intersections to create a representative traffic volume base for the traffic operations analyses undertaken as part of this study. Existing traffic volumes are shown in **Figure 7**.

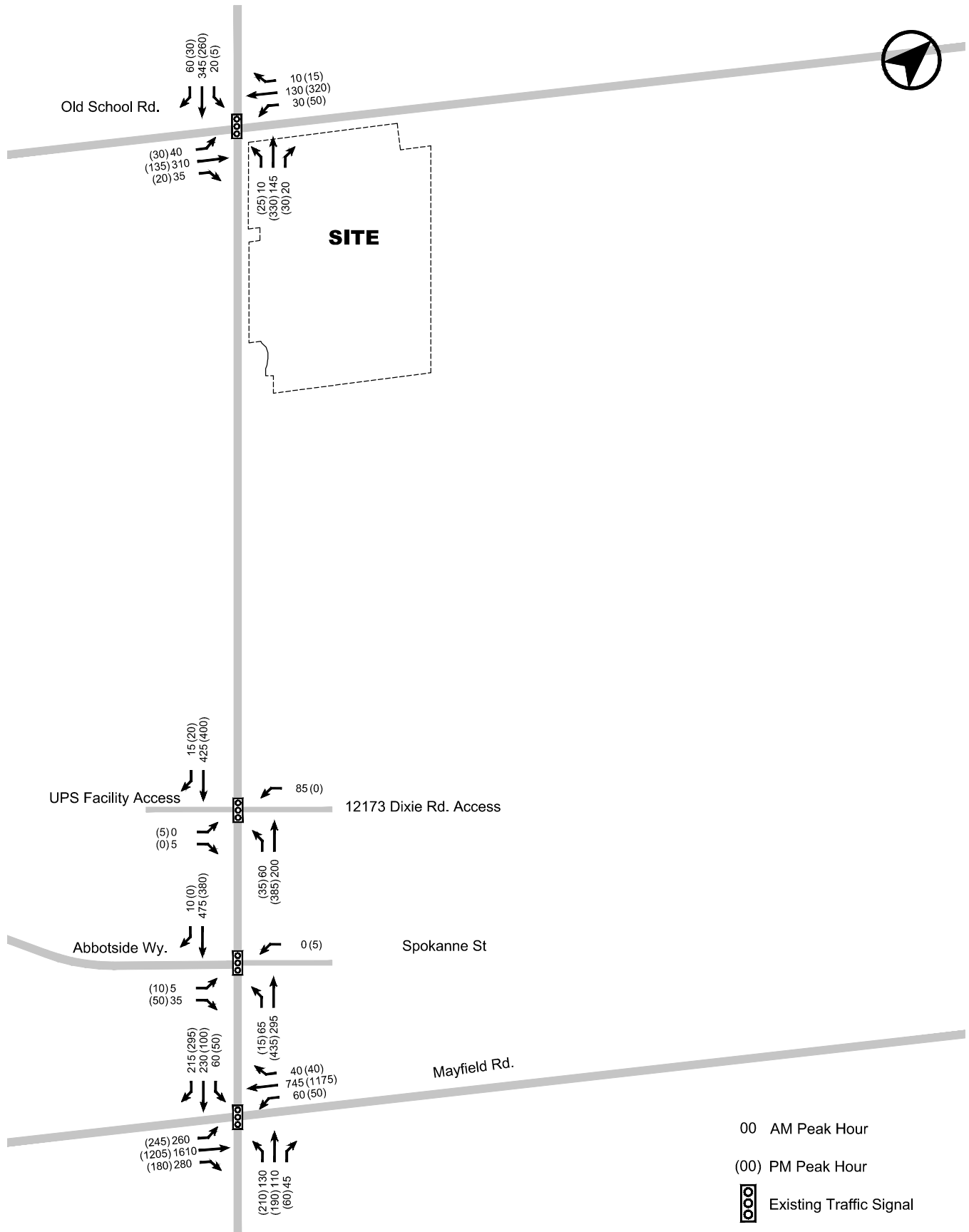


FIGURE 7 EXISTING TOTAL TRAFFIC VOLUMES

7.3 FUTURE BACKGROUND TRAFFIC VOLUMES

7.3.1 Background Development Growth

Future development traffic allowances in the 2028 and 2033 horizon years were made for proposed developments in the vicinity of the Site, as summarized in **Table 5**. Overall, proposed background developments include approximately 584,235 square meters of mixed-use development. As the phasing plans of the background developments are currently unknown, all developments are conservatively assumed to have the build-out year of 2028, along with the Site.

The location of the future background developments are illustrated in **Figure 8**.

TABLE 5 AREA BACKGROUND DEVELOPMENT

	Development Description	Traffic Study
12892 Dixie Road (Tribal Lands)	173,797 m ² industrial use	LEA, 2025
12490 Dixie Road (Tribal Lands)	136,576 m ² industrial use	BA Group, 2025
12173 Dixie Road (Tribal Lands)	190,824 m ² industrial use	BA Group, 2023
12434 Dixie Road	Truck Trailer Parking Facility	Nextrans, 2021
Parts of Lots 18,19,20 (NW Quadrant of Mayfield Road and Dixie Road)	--	No Study Available
Total	584,235 m² industrial use	

P:\78\43\21\Graphics\12861 Dixie Road (North)\Adobe\Ds\7843-21_12861 Dixie Road_July 2025.indd



Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 8 AREA BACKGROUND DEVELOPMENTS

7.3.2 Corridor Growth

To conservatively capture development progress outside of the study area for the horizon years of 2028 (occupancy), and 2033 (5 years post occupancy) the following growth rates were applied during both weekday morning and afternoon peak hours:

- Mayfield Road (2023 to 2033): 2.0% annual growth rate (Region's Traffic Model)
- Old School Road (2023 to 2033): 2.0% annual growth rate (Region's Traffic Model)

In addition to the region's model, the volumes generated by the background developments listed in **Table 5** were assumed to represent growth volumes along Dixie Road, as agreed upon within discussions with the Region of Peel. The background developments outlined within **Table 5** and their subsequent volumes encompass all the property along Dixie Road, north of Mayfield Road, that is currently planned to be redeveloped. The changes to the area's land use planning do not extend north of Old School road, and therefore there is no anticipated development further up the corridor that is expected to disproportionately increase traffic growth which is not otherwise represented within the listed background developments.

7.3.3 Background Traffic Volumes

Background traffic volumes, inclusive of volumes projected and assumed to be generated by background development traffic allowances and corridor growth.

7.3.4 Removal of Existing Traffic

Traffic generated by the existing construction site at 12173 Dixie Road has been removed in all future scenarios as it is expected to be replaced by the traffic generated by the future development at 12173 Dixie Road. The total volumes removed are summarized in **Table 6**.

No traffic has been removed from the 12861 Dixie Road (the Site) development as the land sits currently empty.

TABLE 6 SUMMARY OF REMOVAL OF EXISTING TRAFFIC

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Construction Site (12173 Dixie Road)	0	85	85	0	0	0
Total Traffic (To be Removed)	0	85	85	0	0	0

Notes:

1. Based on existing traffic surveys conducted on November 14th, 2023. All trucks turn south on Dixie Road from site access.

7.3.5 Future Background Traffic Volumes

Future background traffic volumes are determined by adding existing traffic volumes and background traffic volumes, for the horizon years of 2028 and 2033, and are shown in **Figure 9** and **Figure 10** respectively.

7.4 SITE TRAFFIC VOLUMES

7.4.1 Vehicle Trip Generation Data

As discussed in **Section 1.2**, the Proposed Development is speculative and could potentially serve a variety of warehousing uses, including general warehousing, fulfillment centre warehousing, and other light industrial/commercial uses. Vehicular trip generation associated with such uses can vary depending on several factors, such as staff density, operating hours, shift composition and timing, and the frequency of visitors to the Site.

To this end, trip generation rates for a variety of warehousing uses have been collected based on rates outlined in the ITE 11th Edition + Supplement and proxy data collected by BA Group and are summarized in **Table 7**.

TABLE 7 INDUSTRIAL FACILITY TRIP GENERATION

Location / Use	Time Period / Parameter	AM Peak Hour			PM Peak Hour			
		In	Out	2-Way	In	Out	2-Way	
Comparison Facilities– Trip Rates (Trips / 100 m² GFA)								
ITE LUC 150 – Warehousing Average Rates	--	Trip Rate	0.14	0.04	0.18	0.05	0.14	0.19
		HV%	8%	24%	12%	31%	11%	17%
ITE LUC 150 – Warehousing Fitted Curve Equation Rates¹	--	Trip Rate	0.15	0.04	0.19	0.05	0.14	0.19
		HV%	7%	25%	11%	18%	8%	11%
ITWAL Limited 440 Railside Drive, Brampton [23,007 m² GFA]	Wednesday, January 20, 2016	Trip Rate	0.06	0.02	0.08	0.01	0.03	0.04
		HV%	7%	50%	17%	33%	14%	20%
Prologis 8020 & 8030 Esquesing Line, Milton [74,900 m² GFA]	Thursday, August 16, 2018	Trip Rate	0.18	0.03	0.21	0.04	0.16	0.20
		HV%	9%	35%	13%	31%	5%	10%
Prologis 8020 & 8030 Esquesing Line, Milton [74,900 m² GFA]	Tuesday, February 2, 2016	Trip Rate	0.15	0.02	0.17	0.02	0.14	0.16
		HV%	10%	71%	17%	60%	10%	16%
Walmart 6800 Maritz Drive, Mississauga [108,125 m² GFA]	Thursday, November 21, 2013	Trip Rate	0.07	0.05	0.12	0.06	0.08	0.14
		HV%	30%	62%	43%	72%	48%	58%
Prologis 200 Courtney Park, Mississauga [98,780 m² GFA]	Thursday, November 21, 2013	Trip Rate	0.13	0.07	0.20	0.03	0.08	0.11
		HV%	13%	7%	11%	77%	36%	48%
Chisholm Drive / Industrial Drive, Milton [52,270 m² GFA]	Tuesday, October 6, 2015	Trip Rate	0.13	0.04	0.17	0.04	0.19	0.23
		HV%	17%	30%	21%	37%	8%	13%
Holgate Crescent / James Snow Pkwy, Milton [16,059 m² GFA]	Tuesday, October 6, 2015	Trip Rate	0.24	0.06	0.30	0.02	0.22	0.24
		HV%	36%	78%	44%	100%	14%	21%
Harrop Drive / Steeles Avenue, Milton [3,653 m² GFA]	Tuesday, October 6, 2015	Trip Rate	0.27	0.27	0.54	0.03	0.11	0.14
		HV%	20%	50%	35%	100%	50%	60%
Continued on Next Page								

Location / Use	Time Period / Parameter		AM Peak Hour			PM Peak Hour		
			In	Out	2-Way	In	Out	2-Way
8450 Boston Church Road (Ryder), Milton [123,826 m² GFA]	Thursday, January 28, 2016	Trip Rate	0.02	0.01	0.03	0.07	0.08	0.15
		HV%	28%	57%	41%	10%	6%	8%
Boston Church Road (Whirlpool), Milton [69,577 m² GFA]	Thursday, January 28, 2016	Trip Rate	0.02	0.01	0.03	0.02	0.04	0.06
		HV%	67%	71%	68%	82%	16%	36%
6 Cleve Court (Phase 1), Halton Hills [29,920 m² GFA]	Wednesday, March 6, 2019	Trip Rate	0.02	0.03	0.05	0.04	0.05	0.09
		HV%	0%	0%	0%	17%	25%	21%
UPS Facility (12424 Dixie Road) [78,774 m²]	Tuesday, November 14, 2023	Trip Rate	0.14	0.06	0.19	0.10	0.09	0.19
		HV%	19%	43%	63%	29%	24%	53%
Average of Trip Rates			0.12	0.05	0.18	0.04	0.11	0.15
Adopted Trip Rate			0.12	0.05	0.18	0.04	0.11	0.15
Weighted Average of Heavy Vehicle Percentages			18%	43%	28%	42%	17%	26%
Proposed Site Adopted Trip Rate			0.12	0.05	0.18	0.04	0.11	0.15
Proposed Site Heavy Vehicle Percentages			18%	43%	28%	42%	17%	26%

Notes:

1. Conservatively based on the smallest building's GFA.

7.4.2 Site Light Vehicle Trip Generation

Based on the above-selected rate, the traffic volumes projected to be generated by the proposed development in the AM and PM peak hours are summarized in **Table 8**.

TABLE 8 LIGHT VEHICLE TRIP GENERATION SUMMARY

	Size	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Adopted Vehicle Trip Rate (<i>vehicle trips per 100 m²</i>)		0.12	0.05	0.17	0.04	0.11	0.15
Site Trips							
Building 1	100,758 m²	100	30	130	25	90	115
Building 2	87,890 m²	85	25	110	20	80	100
Total Vehicle Trips	188,648 m²	185	55	240	45	170	215

Notes:

1. Trips rounded to the nearest 5 vehicles.
2. Based on statistics provided by Quadreal Property Group dated November 22, 2023.

On the basis of the above, it is estimated that the Proposed Development will generate in the order of 240 and 215 two-way light vehicle trips during the AM and PM peak hour periods, respectively.

7.4.3 Site Heavy Vehicle Trip Generation

Similar to trip generation rates, heavy vehicle profiles can also vary considerably between the varieties of warehousing uses discussed above.

As such, Site heavy vehicle percentages were determined by adopting the same methodology outlined above for the trip generation rates, as outlined in **Table 7**.

The average heavy vehicle percentage analysis and the resultant heavy vehicle percentage are summarized in **Table 9**.

TABLE 9 HEAVY VEHICLE TRIP GENERATION SUMMARY

	Size	AM Peak Hour			PM Peak Hour		
		In	Out	2-Way	In	Out	2-Way
Adopted Vehicle Trip Rate (<i>vehicle trips per 100 m²</i>)		0.12	0.05	0.18	0.04	0.11	0.15
Adopted Heavy Vehicle Percentages		18%	43%	28%	42%	17%	26%
Site Trips							
Building 1	42,365 m ²	20	20	40	15	20	35
Building 2	44,670 m ²	20	20	40	15	15	30
Total Vehicle Trips	190,824 m²	40	40	80	30	35	65

Notes:

1. Trips rounded to the nearest 5 vehicles.
2. Based on statistics provided by Quadreal Property Group dated November 22, 2023.

On the basis of the above, it is estimated that the Proposed Development will generate in the order of 80 and 65 two-way heavy vehicle trips during the AM and PM peak hour periods, respectively.

7.4.4 Heavy and Light Vehicle Volumes

Based on the above heavy vehicle percentages, the heavy and light vehicle volumes projected to be generated by the Proposed Development along with the total net-new traffic volumes in the AM and PM peak hours are summarized in **Table 10**.

TABLE 10 HEAVY AND LIGHT VEHICLE VOLUMES

	AM Peak Hour			PM Peak Hour		
	In	Out	2-Way	In	Out	2-Way
Heavy Vehicle Percentage	20%	45%	28%	50%	18%	26%
Heavy Vehicle Volumes						
Building 1 North	20	20	40	15	20	35
Building 1 South	20	20	40	15	15	30
Total Heavy Vehicle Trips	40	40	80	30	35	65
Light Vehicle Volumes						
Building 1 North	100	30	130	25	90	115
Building 1 South	85	25	110	20	80	100
Total Light Vehicle Trips	185	55	240	45	170	215
Total Net-New Site Volumes	225	95	320	75	205	280

Notes:

1. Trips rounded to the nearest 5 vehicles.

It is estimated that the Proposed Development will generate in the order of 310 and 280 two-way vehicle trips during the AM and PM peak hour periods, respectively.

7.4.5 Vehicle Trip Distribution

Site traffic for light vehicles was assigned onto the area road network based on the results of the 2016 Transportation Tomorrow Survey (TTS) for work-based trips, while heavy vehicle distribution was based on prevailing traffic patterns and area turn restrictions. The resulting inbound and outbound distribution for the AM and PM peak for light and heavy vehicles is summarized in **Table 11** and **Table 12**, respectively.

TABLE 11 TTS SITE TRAFFIC DISTRIBUTION

Street	Direction	Light Vehicles ¹	
		Inbound	Outbound
Dixie Road	North	20%	25%
	South	20%	15%
Mayfield Road	East	15%	10%
	West	30%	35%
Old School Road	East	15%	15%
	West	0%	0%
Total		100%	100%

Notes:

1. Based on TTS (2016) analysis for work-based trips for TTS zone 3012, 3013, 3014, 3015, 3439, 3438, 3191.

TABLE 12 EXISTING SURVEY SITE TRAFFIC DISTRIBUTION

Street	Direction	Heavy Vehicles ¹	
		Inbound	Outbound
AM Distribution			
Dixie Road	North	15%	10%
	South	15%	15%
Mayfield Road	East	5%	5%
	West	60%	65%
Old School Road	East	5%	5%
	West	0%	0%
Total		100%	100%
PM Distribution			
Dixie Road	North	35%	15%
	South	5%	5%
Mayfield Road	East	10%	10%
	West	50%	60%
Old School Road	East	0%	10%
	West	0%	0%
Total		100%	100%

Notes:

1. Based on observed heavy vehicle distributions within the turning movement count along Dixie Road and Mayfield Road.

7.4.6 Site Traffic Volumes

The projected Site light vehicle traffic volumes, Site heavy vehicle traffic volumes, and Site total traffic volumes are shown in **Figure 11**, **Figure 12**, and **Figure 13**, respectively.

7.4.7 Future Total Traffic Volumes

Future total traffic volumes are determined by adding the Site total traffic volumes and future background volumes, and are shown in **Figure 14** and **Figure 15** for the 2028 and 2033 horizons, respectively.

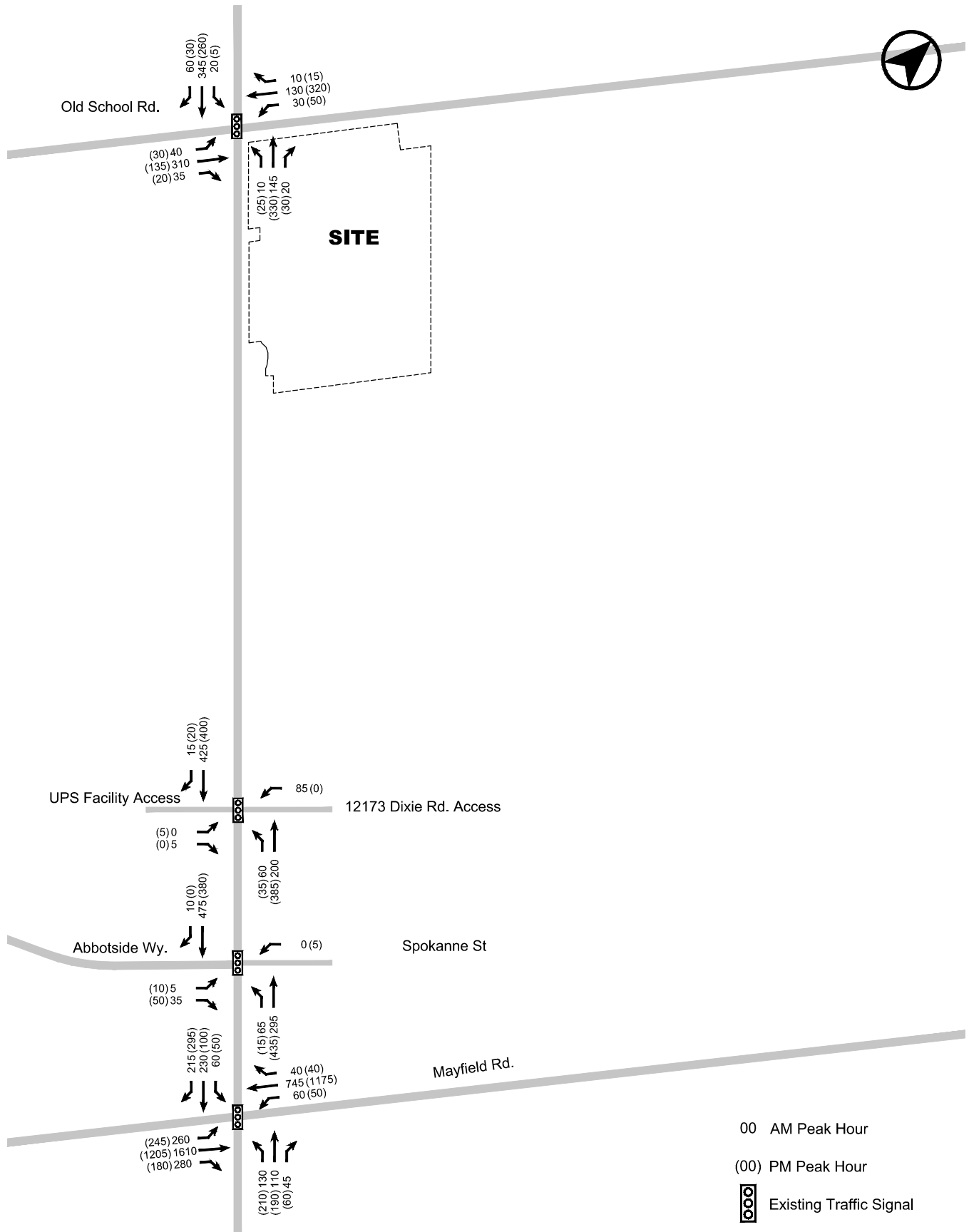


FIGURE 8 EXISTING TOTAL TRAFFIC VOLUMES

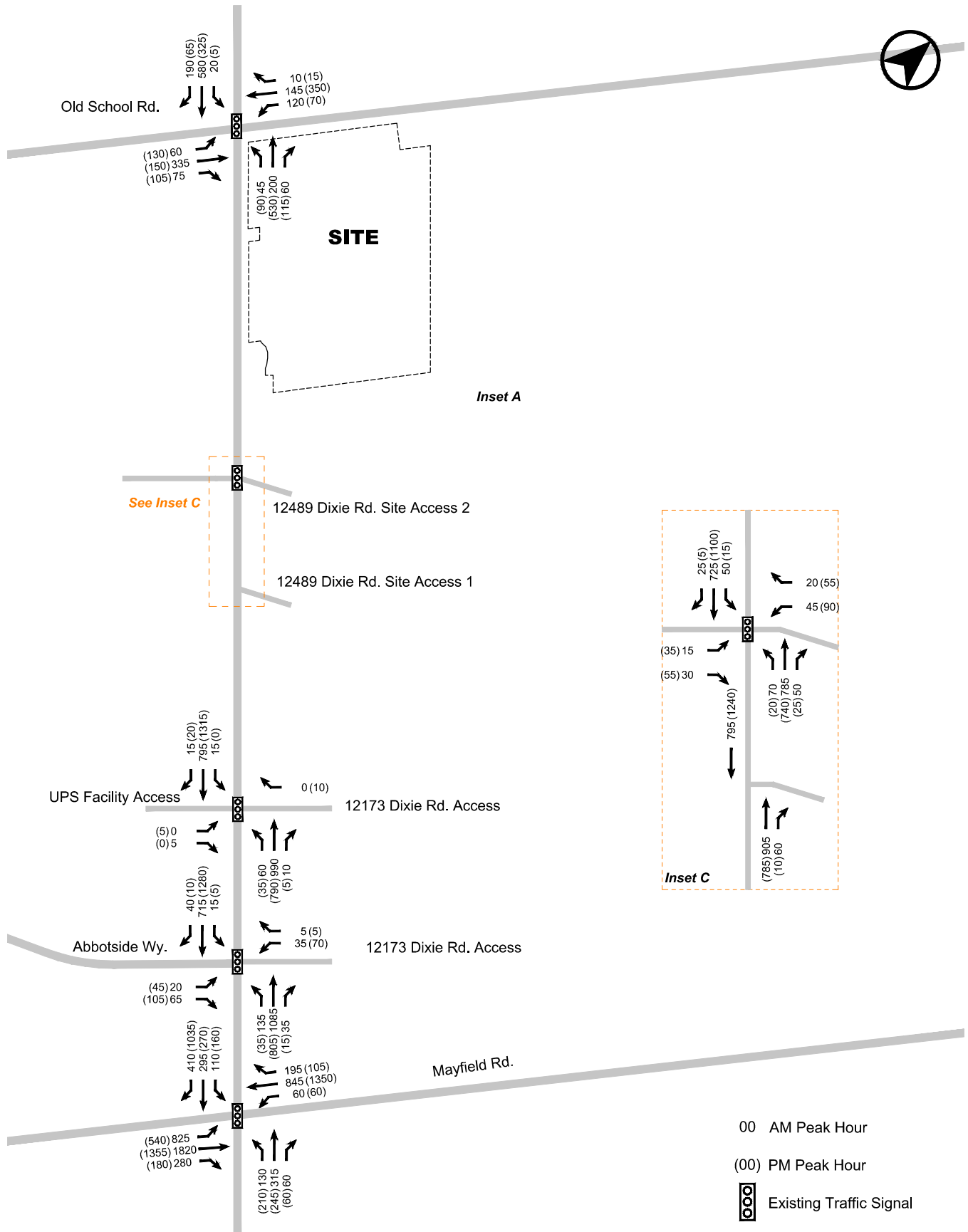


FIGURE 9 FUTURE BACKGROUND 2028 TOTAL TRAFFIC VOLUMES

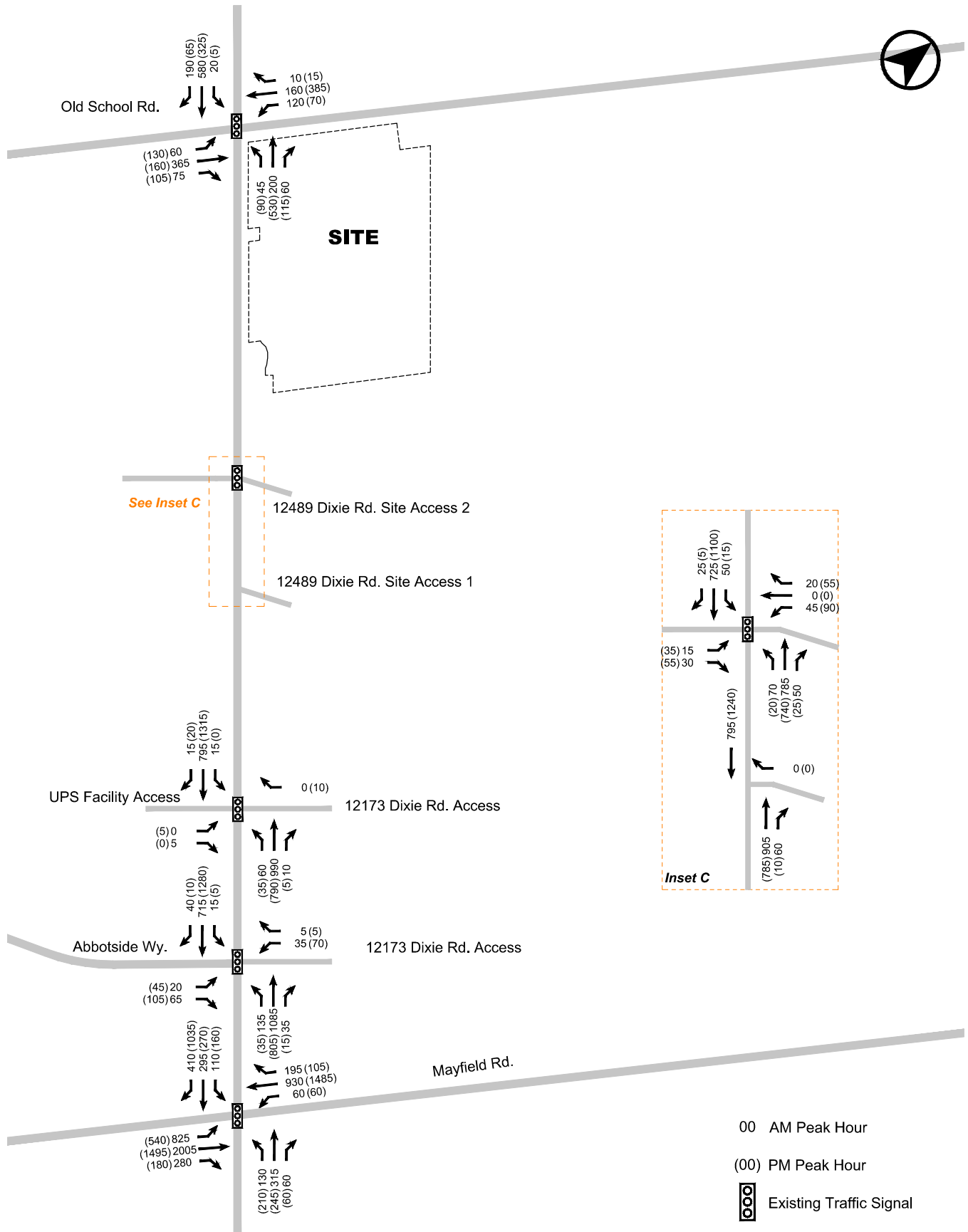


FIGURE 10 FUTURE BACKGROUND 2033 TOTAL TRAFFIC VOLUMES

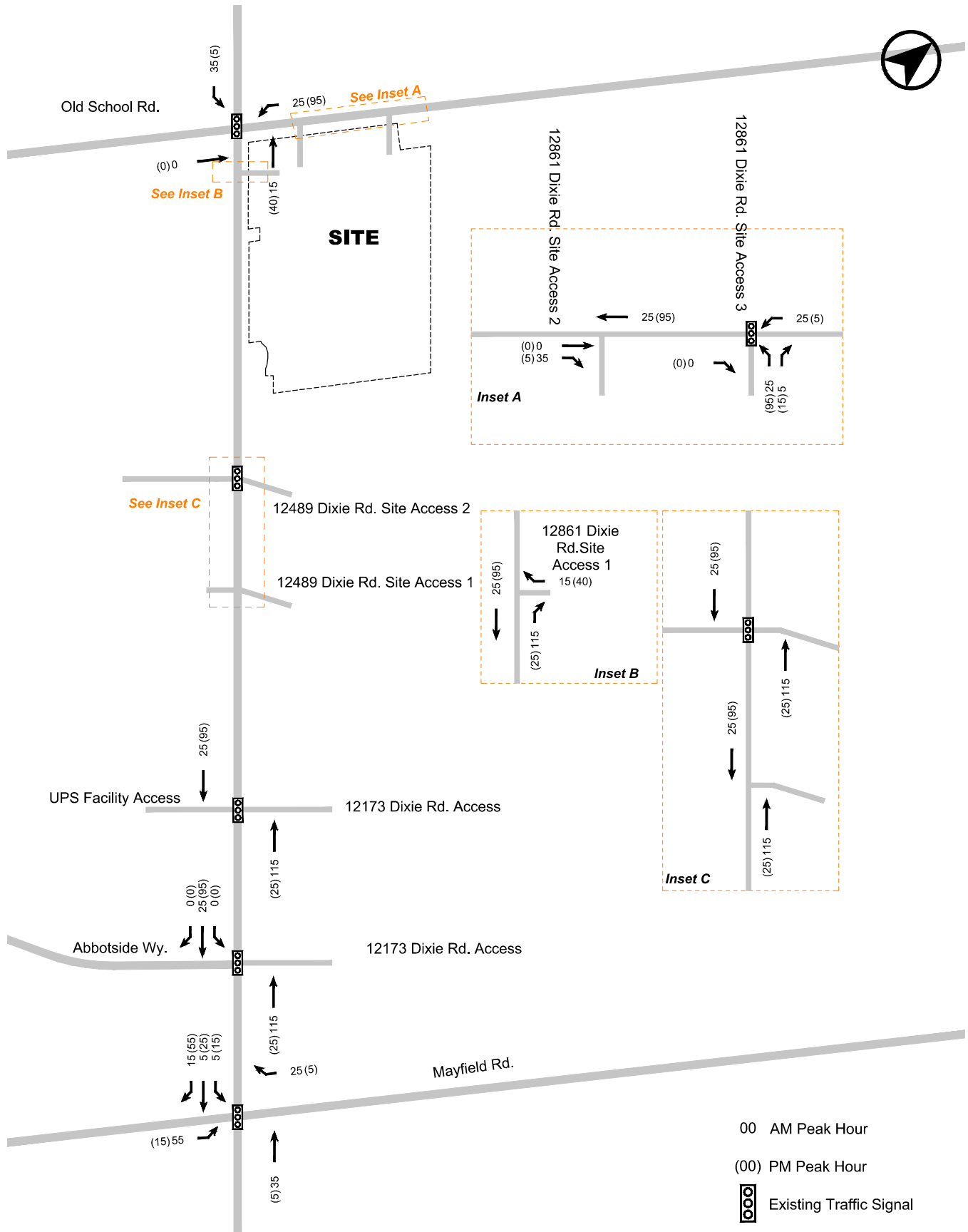


FIGURE 11 SITE LIGHT VEHICLE TRAFFIC VOLUMES

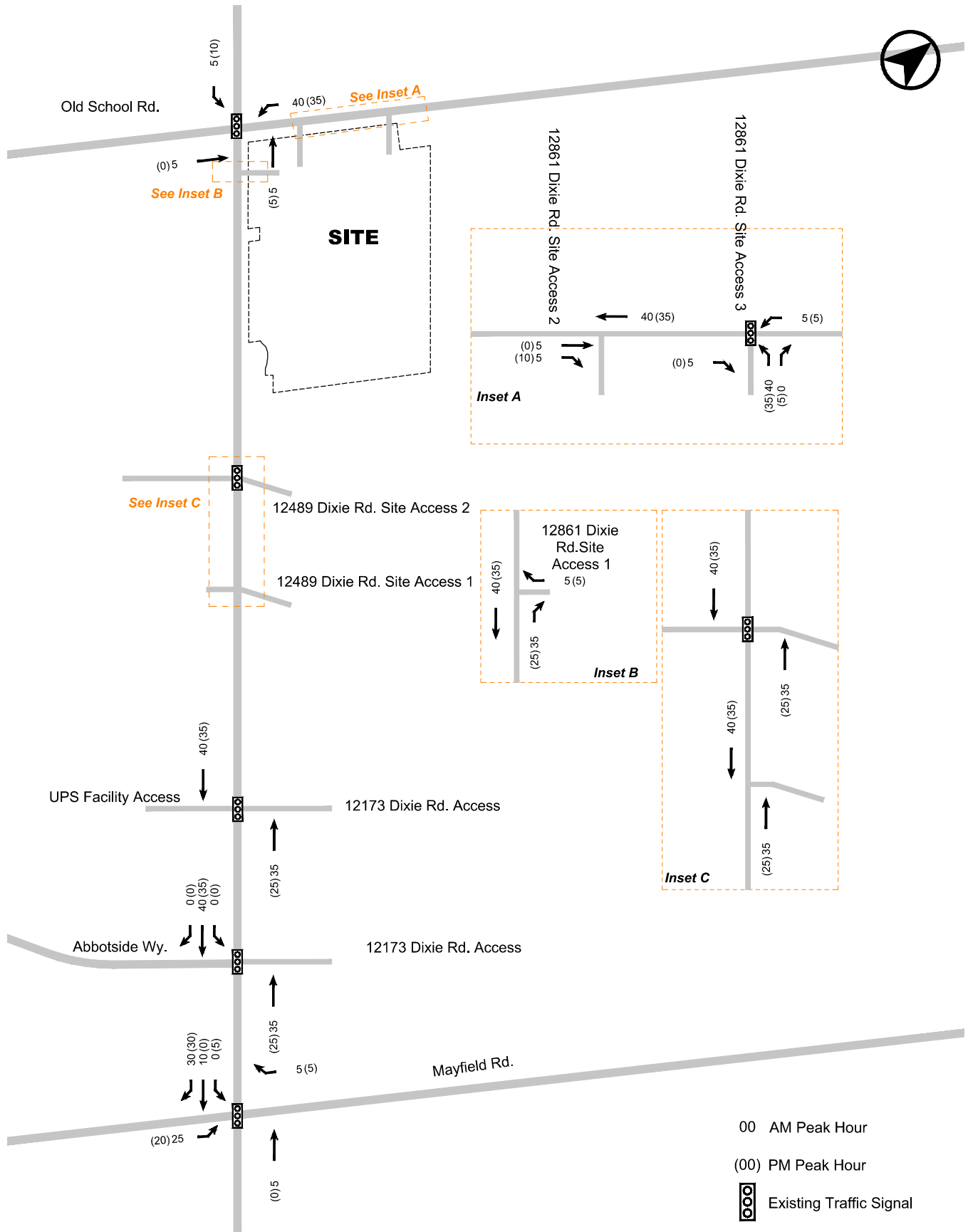


FIGURE 12 SITE HEAVY VEHICLE TRAFFIC VOLUMES

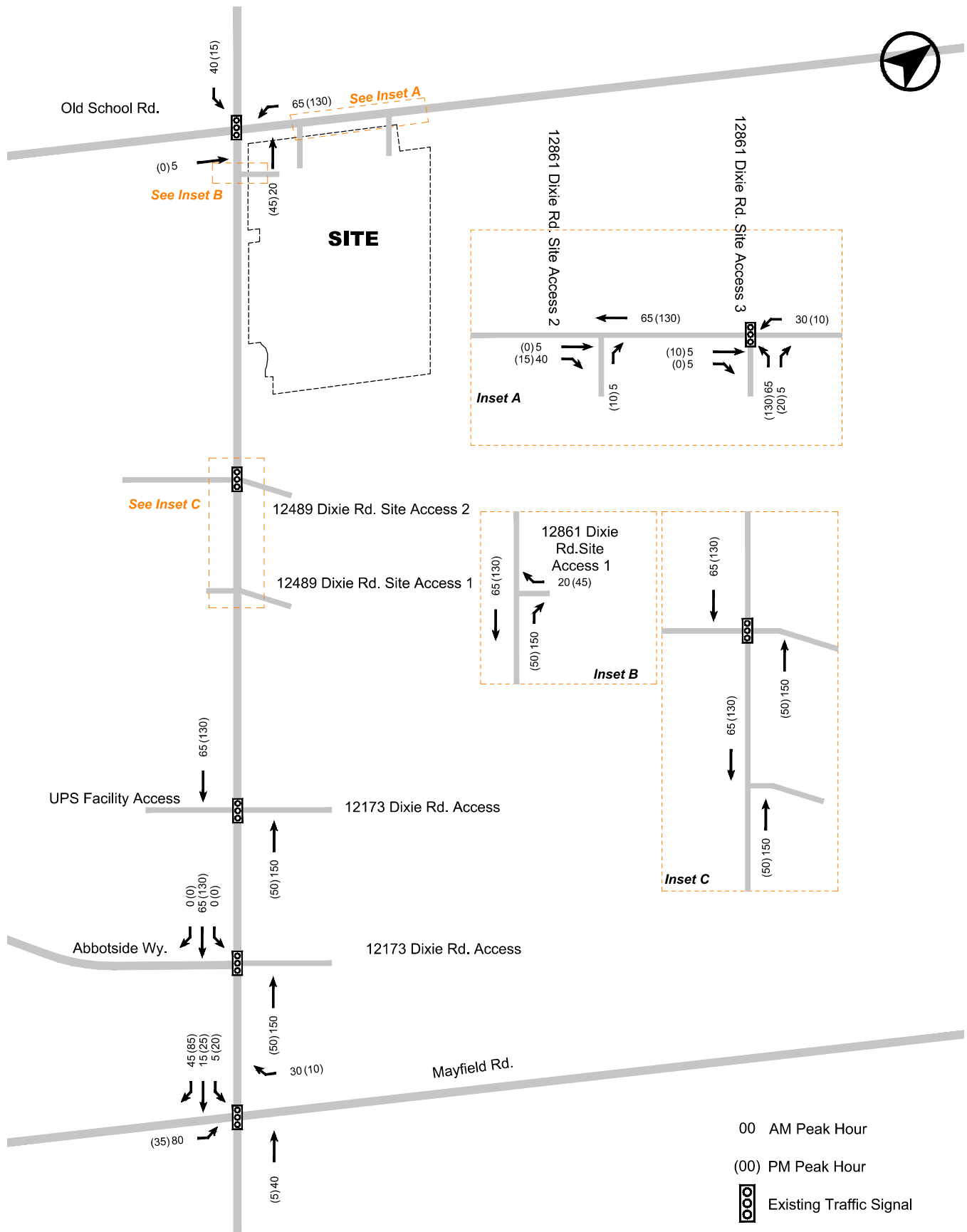


FIGURE 13 TOTAL SITE TRAFFIC VOLUMES

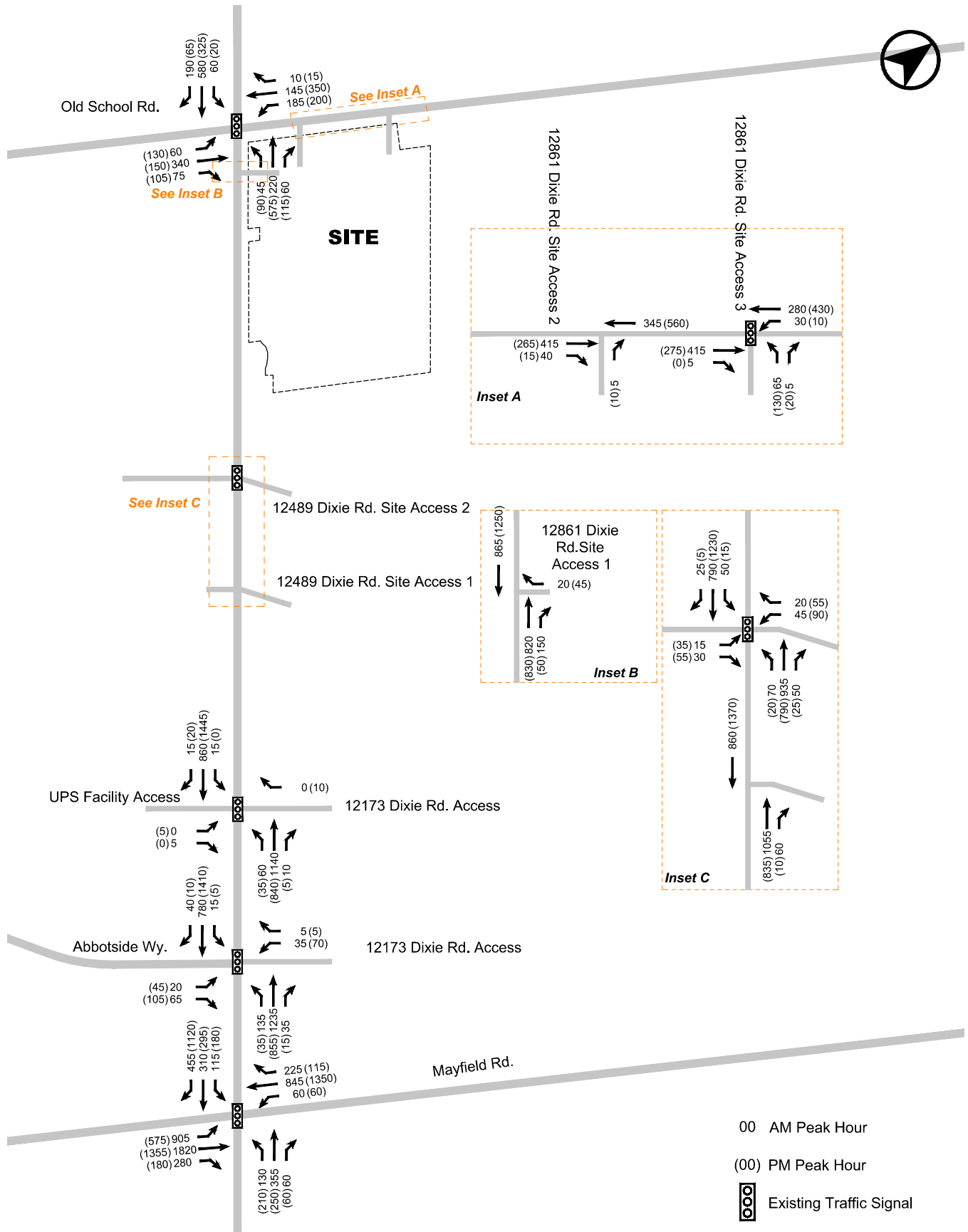


FIGURE 14 FUTURE TOTAL 2028 TOTAL TRAFFIC VOLUMES

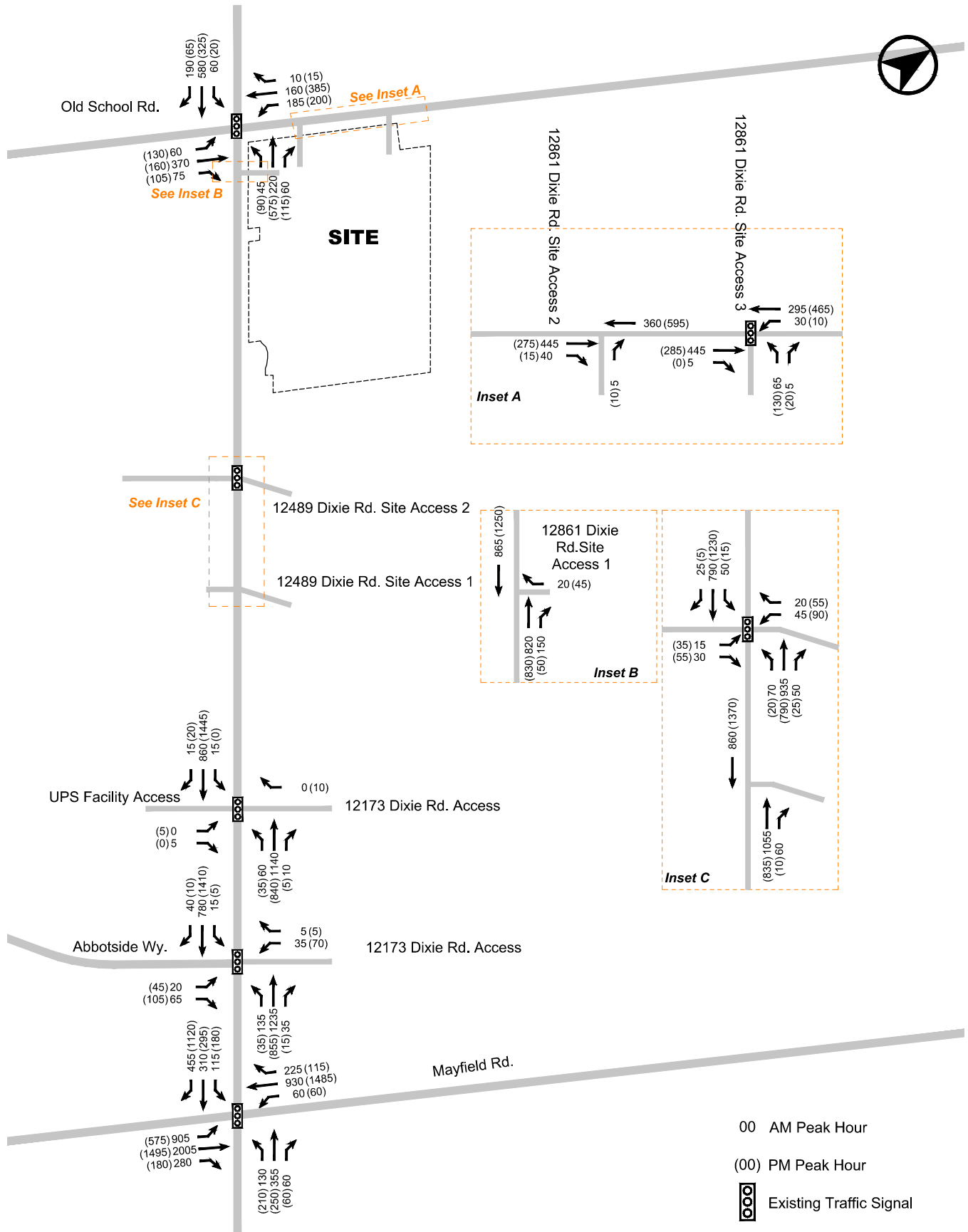


FIGURE 15 FUTURE TOTAL 2033 TOTAL TRAFFIC VOLUMES

8.0 TRAFFIC OPERATIONS ANALYSIS

8.1 TRAFFIC OPERATIONS SCENARIOS

A traffic operations analysis was completed for the following scenarios:

- Existing traffic conditions;
- Future background traffic conditions (2028 horizon year);
- Future total traffic conditions (2028 horizon year);
- Future background traffic conditions (2033 horizon year); and
- Future total traffic conditions (2033 horizon year).

8.2 ANALYSIS METHODOLOGY

The intersection capacity analysis was completed using Synchro Version 11 and the Highway Capacity Manual (HCM) methodology.

For signalized intersections, the volume-to-capacity ratio (v/c) is an indicator of the capacity utilization for the key movements in the intersection. A v/c of 1.00 indicates that certain governing traffic movements through the intersection are operating at or near maximum capacity. The primary overall level of service (LOS) indicator is delay, both on individual movements and expressed as an average for all vehicles processed.

For unsignalized intersections, LOS characterizes operational conditions for key movements in terms of delay within the traffic stream. LOS A represents a good level of service with short delays, and based on the Region of Peel's Synchro Guidelines, LOS E represents "an unacceptable LOS", and this implies long delays. The volume-to-capacity ratio (v/c) is an indicator of the capacity utilization for key movements at the intersection and the resultant residual capacity potential.

8.3 INPUT AND CALIBRATION PARAMETERS

Key parameters adopted in the analysis include:

Lane Configurations

Under all analysis scenarios, the existing lane configurations of the area road network were generally assumed as per existing conditions. Under the 2028 and 2033 horizons, it was assumed that Dixie Road would be widened to 4 lanes, as outlined in **Section 2.5.1** and Mayfield Road would be widened to 6 lanes, as outlined in **Section 2.5.2**. Future (2028 and 2033) lane configurations are shown in **Figure 16**.

Based on the Region of Peel's "Regional Guidelines for Using Synchro, Version 7.73 Rev 8" dated December 2010, lane widths have been adopted through auxiliary turn lanes as follows:

- 3.7 metres along through lanes on Regional Roads;
- 3.5 metres along turn lanes on Regional Roads; and
- 3.5 metres along through and turn lanes on City of Caledon Roads.

Traffic Signal Timings

Traffic signal timings have been obtained from the Region of Peel and are provided in **Appendix G**. The existing traffic signal timings have been adopted for existing conditions analysis.

Under future background and future total conditions, traffic signal timings have been optimized to best accommodate the forecasted future travel demands and patterns and to respond to evolving traffic conditions. Where traffic signal optimization is recommended, it has been noted in the subsequent sections discussing intersection operations.

It is noteworthy that the Dixie Road / Mayfield Road intersection's cycle length was extended from 120 seconds to 135 seconds, to maintain coordination with the other adjacent intersections such as at Bramalea Road / Mayfield Road. This cycle length coordination will also assist in reducing the queue lengths along the Mayfield Road corridor to prevent spill back into upstream intersections along the corridor.

Peak Hour Factors (PHF)

The Region of Peel's Synchro Guidelines states that the peak hour factor should be 1.00 for all movements on all approaches. This is applied to all intersections in all scenarios.

Pedestrian and Bicycle volumes

Pedestrian and bicycle volumes are based on those observed at the study area intersections under existing conditions.

Heavy Vehicle Percentages

Existing heavy vehicle percentages were derived from turning movement counts. For new site-related truck trips, percentages are calculated as referenced within **Section 7.4.3**.

Lost Time Adjustments

A lost time adjustment factor of -1.0 seconds was assumed for all left turn movements at the Dixie Road / Mayfield Road intersection as the proposed lane configuration and geometric design results in a wide cross-section, and therefore reduced headways expected of drivers as the intersection approaches capacity.

Synchro Defaults

Synchro defaults have been adopted for all other parameters.

SimTraffic Conditions

15-minute seeding was used for four (4 x 15) recordings (total analysis of 1 hour).

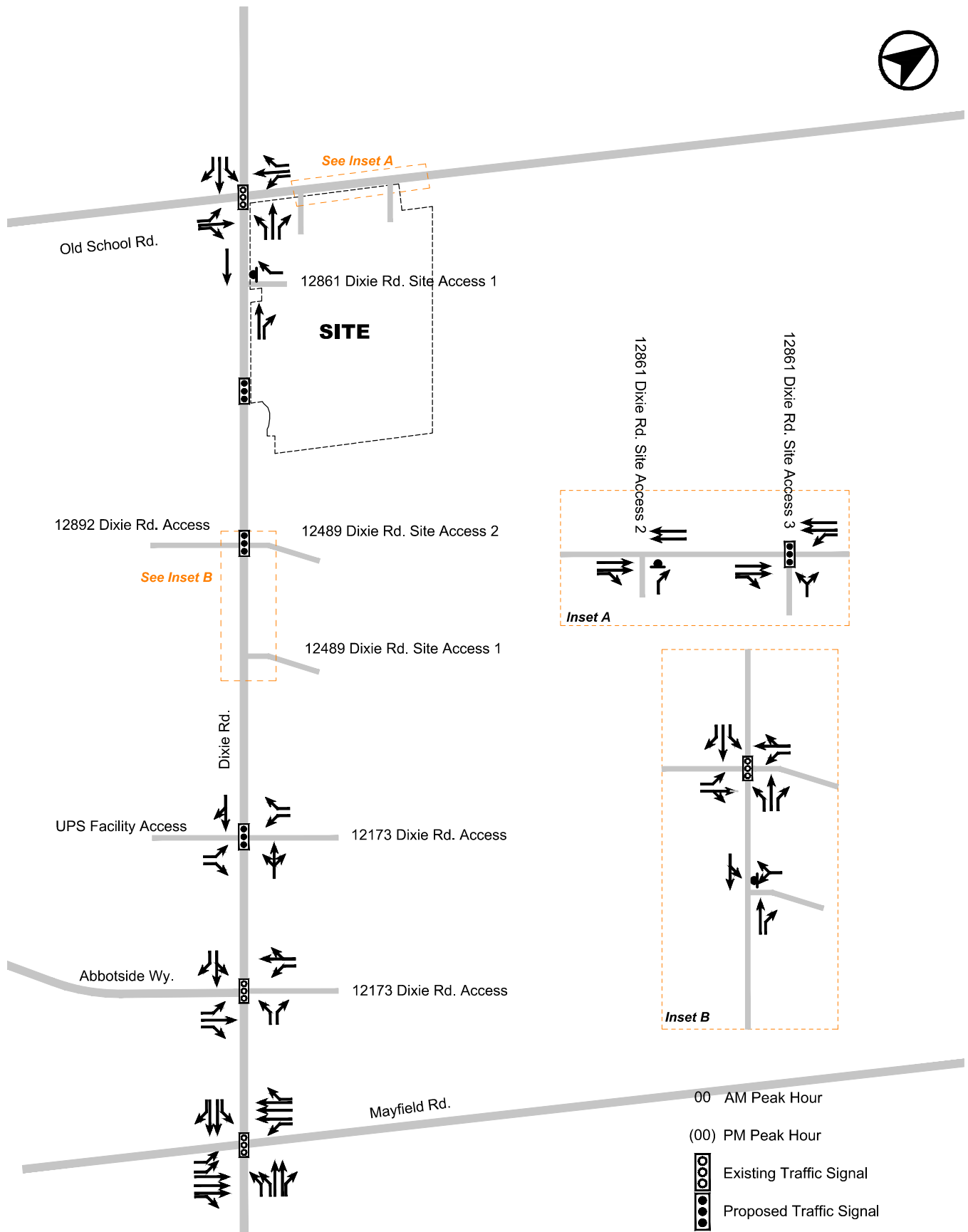


FIGURE 16 FUTURE (2028) LANE CONFIGURATION AND TRAFFIC CONTROL

8.4 STUDY AREA INTERSECTION OPERATIONS

The following sections discuss the operations of the study area intersections. Synchro reports are provided in **Appendix H**. Recommended network improvements are as follows.

It is recommended that in future analyses scenarios, the cycle length at the Dixie Road / Mayfield Road signalized intersection should be increased to 135 seconds during the weekday morning and afternoon peak periods, in order to maintain coordination with the other adjacent intersections such as at Bramalea Road / Mayfield Road. This cycle length coordination will also assist in reducing the queue lengths along the Mayfield Road corridor to prevent spill back into upstream intersections along the corridor.

Further recommendations include the signalization of the following site access intersections:

- Old School Road / Site Access 3

Signalization of the Site access would result in improved operations and improve the pedestrian experience by elevating the safety standards at the intersections. Signal warrant analyses in addition to additional discussion are provided within **Section 9.0**.

8.4.1 Signalized Intersections

8.4.1.1 Dixie Road / Mayfield Road

At Dixie Road / Mayfield Road, the intersection currently operates under traffic signal control with a cycle length of 120 seconds during both the weekday morning and afternoon peak hour periods. Under all future background and future total scenarios, signal phasings were optimized within the existing cycle length. It is recommended that in future analyses scenarios, the cycle length at the Dixie Road / Mayfield Road signalized intersection should be increased to 135 seconds during the weekday morning and afternoon peak periods, to maintain coordination with the other adjacent intersections such as at Bramalea Road / Mayfield Road. This cycle length coordination will also assist in reducing the queue lengths along the Mayfield Road corridor to prevent spill backs into upstream intersections along the corridor.

As mentioned in **Section 2.5.1**, Dixie Road is planned to be widened to 6 through lanes plus turning lanes from north of Queen Street to Countryside Drive and 4 through lanes plus turning lanes north of Countryside Drive to approximately two kilometres north of Mayfield Road.

The traffic signal analysis results are summarized in **Table 13**.

Under existing conditions, the intersection operates with overall v/c ratios of 0.78 and 0.67, in the weekday morning and afternoon peak hours, respectively.

Under future background (2028) conditions and a cycle length of 135 seconds, the intersection will operate with overall v/c ratios of 0.72 and 0.92, in the weekday morning and afternoon peak hours, respectively.

Under future total (2028) conditions and a cycle length of 135 seconds, as the proposed development is fully developed, the intersection will operate with overall v/c ratios of 0.78 and 1.02, in the weekday morning and afternoon peak hours, respectively. Although the intersection operates at an overall v/c ratio of 1.02 in the weekday afternoon peak hour period, all individual movements operate under a v/c ratio of 1.0.

Under future background (2033) conditions and a cycle length of 135 seconds, the intersection will operate with overall v/c ratios of 0.74 and 0.93, in the weekday morning and afternoon peak hours, respectively.

Under future total (2033) conditions and a cycle length of 135 seconds, as the proposed development is fully developed, the intersection will operate with overall v/c ratios of 0.80 and 1.01, in the weekday morning and afternoon peak hours, respectively. Although the intersection operates at an overall v/c ratio of 1.01 in the weekday afternoon peak hour period, all individual movements operate under a v/c ratio of 1.00.

Based on the foregoing, no further improvements or mitigation measures, aside from traffic signal timing optimization and cycle length extension to accommodate existing travel flows, are recommended at this intersection, as an increase of the cycle length of the Dixie Road / Mayfield Road intersection brought measurable operational improvements. Overall, it is projected that Site traffic can be accommodated at this intersection with minimal impacts.

TABLE 13 DIXIE ROAD / MAYFIELD ROAD CAPACITY ANALYSIS RESULTS

Key Movements	Existing		2028 Horizon Year				2033 Horizon Year			
			Future Background ²		Future Total		Future Background ²		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.67 (0.60)	B (B)	0.73 (0.66)	D (D)	0.86 (0.62)	D (D)	0.75 (0.62)	D (D)	0.88 (0.71)	D (D)
EBT	0.64 (0.45)	B (B)	0.64 (0.47)	C (B)	0.65 (0.47)	C (B)	0.70 (0.53)	C (B)	0.71 (0.53)	C (B)
EBR	0.21 (0.13)	B (B)	0.18 (0.12)	A (A)	0.18 (0.12)	A (A)	0.18 (0.12)	A (A)	0.18 (0.12)	A (A)
WBL	0.44 (0.21)	B (B)	0.45 (0.28)	D (C)	0.45 (0.31)	D (D)	0.45 (0.32)	D (C)	0.45 (0.32)	D (C)
WBTR	0.46 (0.59)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
WBT	-- (--)	-- (--)	0.77 (0.79)	D (D)	0.75 (0.96)	D (E)	0.79 (0.94)	D (E)	0.77 (0.94)	D (E)
WBR	-- (--)	-- (--)	0.13 (0.11)	C (B)	0.15 (0.14)	C (C)	0.13 (0.11)	C (B)	0.16 (0.13)	C (B)
NBL	1.01 (0.78)	F (E)	0.53 (0.97)	D (F)	0.52 (0.98)	D (F)	0.56 (0.92)	D (F)	0.56 (0.91)	D (F)
NBT	0.36 (0.47)	D (D)	0.62 (0.59)	E (E)	0.68 (0.56)	E (E)	0.62 (0.59)	E (E)	0.68 (0.56)	E (E)
NBR	0.04 (0.05)	D (D)	0.05 (0.05)	C (B)	0.05 (0.05)	C (C)	0.05 (0.05)	C (B)	0.05 (0.05)	C (B)
SBL	0.35 (0.31)	D (D)	0.60 (0.78)	D (E)	0.64 (0.88)	D (F)	0.64 (0.74)	D (E)	0.68 (0.83)	E (E)
SBT	0.72 (0.26)	D (D)	0.65 (0.65)	E (E)	0.66 (0.68)	E (E)	0.65 (0.65)	E (E)	0.66 (0.68)	E (E)
SBR	0.35 (0.65)	D (D)	0.29 (0.85)	A (B)	0.36 (0.96)	A (C)	0.29 (0.85)	A (B)	0.36 (0.97)	A (C)
Overall	0.78 (0.67)	C (C)	0.72 (0.92)	C (C)	0.78 (1.02)	C (D)	0.74 (0.93)	C (D)	0.80 (1.01)	C (D)

Notes:

1. XX (XX) – AM (PM)

8.4.1.2 Dixie Road / Abbotside Way / 12173 Site Access

The Dixie Road / Abbotside Way / 12173 Site Access intersection currently operates under unsignalized control and is proposed to be signalized as part of the 12173 Dixie Road site development, and therefore included within all future traffic scenarios.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.42 and 0.52, in the weekday morning and afternoon peak hours, respectively.

Under future total (2028) conditions, as the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.49 and 0.59, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.42 and 0.52, in the weekday morning and afternoon peak hours, respectively.

Under future total (2033) conditions, as the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.49 and 0.59, in the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no further improvements or mitigation measures are recommended at this intersection. Overall, it is projected that Site traffic can be accommodated at this intersection with minimal impacts.

TABLE 14 DIXIE ROAD / ABBOTSDIE WAY / 12173 SITE ACCESS ROAD CAPACITY ANALYSIS RESULTS

Key Movements	Existing		2028 Horizon Year				2033 Horizon Year			
			Future Background		Future Total		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
EBL	-- (--)	-- (--)	0.20 (0.30)	D (D)	0.20 (0.30)	D (D)	0.20 (0.30)	D (D)	0.20 (0.30)	D (D)
EBR	-- (--)	-- (--)	0.05 (0.30)	D (D)	0.05 (0.40)	D (D)	0.05 (0.30)	D (D)	0.05 (0.40)	D (D)
WBL	-- (--)	-- (--)	0.51 (0.59)	E (E)	0.51 (0.59)	E (E)	0.51 (0.59)	E (E)	0.51 (0.59)	E (E)
WBTR	-- (--)	-- (--)	0.00 (0.00)	D (D)	0.00 (0.00)	D (D)	0.00 (0.00)	D (D)	0.00 (0.00)	D (D)
NBL	-- (--)	-- (--)	0.25 (0.14)	A (A)	0.27 (0.16)	A (A)	0.25 (0.14)	A (A)	0.27 (0.16)	A (A)
NBT	-- (--)	-- (--)	0.41 (0.34)	A (A)	0.49 (0.38)	A (A)	0.41 (0.34)	A (A)	0.49 (0.38)	A (A)
SBT	-- (--)	-- (--)	0.30 (0.51)	A (A)	0.36 (0.59)	A (A)	0.30 (0.51)	A (A)	0.36 (0.59)	A (A)
SBR	-- (--)	-- (--)	0.03 (0.01)	A (A)	0.03 (0.01)	A (A)	0.03 (0.01)	A (A)	0.03 (0.01)	A (A)
Overall	-- (--)	-- (--)	0.42 (0.52)	A (A)	0.49 (0.59)	A (A)	0.42 (0.52)	A (A)	0.49 (0.59)	A (A)

8.4.1.3 Dixie Road / UPS Facility Access / 12173 Site Access

The Dixie Road / UPS Facility Access / 12173 Dixie Road Access currently operates under unsignalized control, and is proposed to be signalized as part of the 12173 Dixie Road site development. Therefore, signalization has been assumed for all future traffic scenarios.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.56 and 0.86, in the weekday morning and afternoon peak hours, respectively.

Under future total (2028) conditions, as the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.65 and 0.98, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.56 and 0.86, in the weekday morning and afternoon peak hours, respectively.

Under future total (2033) conditions, as the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.65 and 0.98, in the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no further improvements or mitigation measures are recommended at this intersection. Overall, it is projected that Site traffic can be accommodated at this intersection with minimal impacts.

TABLE 15 DIXIE ROAD / UPS FACILITY ACCESS / 12173 SITE ACCESS ROAD CAPACITY ANALYSIS RESULTS

Key Movements	Existing		2028 Horizon Year				2033 Horizon Year			
			Future Background		Future Total		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
EBL	-- (--)	-- (--)	-- (0.25)	-- (E)	-- (0.25)	-- (E)	-- (0.25)	-- (E)	-- (0.25)	-- (E)
EBR	-- (--)	-- (--)	0.01 (--)	E (--)	0.01 (--)	E (--)	0.01 (--)	E (--)	0.01 (--)	E (--)
WBR	-- (--)	-- (--)	-- (0.01)	-- (E)	-- (0.01)	-- (E)	-- (0.01)	-- (E)	-- (0.01)	-- (E)
NBTR	-- (--)	-- (--)	0.42 (0.38)	A (A)	0.50 (0.45)	A (A)	0.33 (0.30)	A (A)	0.41 (0.34)	A (A)
NBL	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	0.11 (0.14)	A (A)	0.11 (0.22)	A (A)
SBTR	-- (--)	-- (--)	0.57 (0.87)	A (B)	0.66 (0.99)	B (D)	0.56 (0.87)	A (B)	0.66 (0.99)	B (D)
Overall	-- (--)	-- (--)	0.56 (0.86)	A (A)	0.65 (0.98)	A (C)	0.56 (0.86)	A (A)	0.65 (0.98)	A (C)

8.4.1.4 Dixie Road / 12489 Dixie Road Site Access 2 / 12892 Dixie Road South Signal Access

The Dixie Road / Site Access 2 / 12489 Dixie Road Access intersection does not exist under existing conditions and is proposed as part of the 12173 Dixie Road site development. Therefore, it has been included in all future traffic scenarios.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.54 and 0.77, in the weekday morning and afternoon peak hours, respectively.

Under future total (2028) conditions, as the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.67 and 0.89, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.54 and 0.77, in the weekday morning and afternoon peak hours, respectively.

Under future total (2033) conditions, as the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.67 and 0.89, in the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no further improvements or mitigation measures are recommended at this intersection. Overall, it is projected that Site traffic can be accommodated at this intersection with minimal impacts.

TABLE 16 DIXIE ROAD / 12489 DIXIE ROAD SITE ACCESS 2 / 12892 DIXIE ROAD SOUTH SIGNAL ACCESS

Key Movements	Existing		2028 Horizon Year				2033 Horizon Year			
			Future Background		Future Total		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
EBL	-- (--)	-- (--)	0.15 (0.23)	D (D)	0.16 (0.23)	D (D)	0.15 (0.23)	D (D)	0.16 (0.23)	D (D)
EBTR	-- (--)	-- (--)	0.02 (0.03)	D (D)	0.03 (0.04)	D (D)	0.02 (0.03)	D (D)	0.03 (0.04)	D (D)
WBL	-- (--)	-- (--)	0.49 (0.61)	E (E)	0.60 (0.66)	E (E)	0.49 (0.61)	E (E)	0.60 (0.66)	E (E)
WBTR	-- (--)	-- (--)	0.01 (0.03)	D (D)	0.02 (0.04)	D (D)	0.01 (0.03)	D (D)	0.02 (0.04)	D (D)
NBL	-- (--)	-- (--)	0.13 (0.08)	A (A)	0.19 (0.21)	A (A)	0.13 (0.08)	A (A)	0.19 (0.21)	A (A)
NBT	-- (--)	-- (--)	0.54 (0.60)	B (B)	0.68 (0.67)	B (B)	0.54 (0.60)	B (B)	0.68 (0.67)	B (B)
NBR	-- (--)	-- (--)	0.03 (0.02)	A (A)	0.05 (0.03)	A (A)	0.03 (0.02)	A (A)	0.05 (0.03)	A (A)
SBL	-- (--)	-- (--)	0.10 (0.03)	A (A)	0.14 (0.06)	A (A)	0.10 (0.03)	A (A)	0.14 (0.06)	A (A)
SBT	-- (--)	-- (--)	0.52 (0.79)	A (B)	0.61 (0.93)	B (C)	0.52 (0.79)	A (B)	0.61 (0.93)	B (C)
SBR	-- (--)	-- (--)	0.02 (0.00)	A (A)	0.02 (0.00)	A (A)	0.02 (0.00)	A (A)	0.02 (0.00)	A (A)
Overall	-- (--)	-- (--)	0.54 (0.77)	B (B)	0.67 (0.89)	B (B)	0.54 (0.77)	B (B)	0.67 (0.89)	B (C)

8.4.1.5 Old School Road / Site Access 3

The Old School Road / Site Access 3 intersection does not exist under existing conditions and is proposed to be signalized as part of the Site development. Therefore, it has been included in all future traffic scenarios.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.13 and 0.13, in the weekday morning and afternoon peak hours, respectively.

Under future total (2028) conditions, as the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.20 and 0.25, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.14 and 0.14, in the weekday morning and afternoon peak hours, respectively.

Under future total (2033) conditions, as the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.21 and 0.26, in the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no further improvements or mitigation measures are recommended at this intersection. Overall, it is projected that Site traffic can be accommodated at this intersection with minimal impacts.

TABLE 17 OLD SCHOOL ROAD / SITE ACCESS 3 ROAD CAPACITY ANALYSIS RESULTS

Key Movements	Existing		2028 Horizon Year				2033 Horizon Year			
			Future Background		Future Total		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
EBT	-- (--)	-- (--)	0.70 (0.44)	D (D)	0.71 (0.46)	D (D)	0.72 (0.43)	D (D)	0.72 (0.44)	C (D)
EBR	-- (--)	-- (--)	-- (--)	-- (--)	0.01 (--)	B (--)	-- (--)	-- (--)	0.01 (--)	B (--)
WBTL	-- (--)	-- (--)	-- (--)	-- (--)	0.36 (0.09)	D (D)	-- (--)	-- (--)	0.37 (0.09)	D (D)
WBL	-- (--)	-- (--)	0.48 (0.71)	D (D)	0.47 (0.71)	D (D)	0.48 (0.73)	D (D)	0.47 (0.73)	D (D)
WBT	-- (--)	-- (--)	-- (--)	-- (--)	0.08 (0.15)	A (A)	-- (--)	-- (--)	0.08 (0.15)	A (A)
Overall	-- (--)	-- (--)	0.13 (0.13)	D (D)	0.20 (0.25)	D (D)	0.14 (0.14)	D (D)	0.21 (0.26)	D (D)

8.4.1.6 Dixie Road / Old School Road

The Dixie Road / Old School Road currently operates under signalized control.

Under existing conditions, the intersection will operate with overall v/c ratios of 0.58 and 0.49, in the weekday morning and afternoon peak hours, respectively.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.62 and 0.60, in the weekday morning and afternoon peak hours, respectively.

Under future total (2028) conditions, as the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.69 and 0.64, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.69 and 0.64, in the weekday morning and afternoon peak hours, respectively.

Under future total (2033) conditions, as the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.71 and 0.66, in the weekday morning and afternoon peak hours, respectively.

Based on the foregoing, no further improvements or mitigation measures are recommended at this intersection. Overall, it is projected that Site traffic can be accommodated at this intersection with minimal impacts.

TABLE 18 DIXIE ROAD / OLD SCHOOL ROAD CAPACITY ANALYSIS RESULTS

Key Movements	Existing		2028 Horizon Year				2033 Horizon Year			
			Future Background		Future Total		Future Background		Future Total	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.13 (0.16)	B (B)	0.23 (0.54)	D (C)	0.23 (0.53)	D (C)	0.22 (0.55)	D (C)	0.22 (0.56)	D (C)
EBTR	0.75 (0.32)	C (B)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
EBT	-- (--)	-- (--)	0.80 (0.23)	D (C)	0.82 (0.23)	E (C)	0.82 (0.23)	E (C)	0.85 (0.24)	E (C)
EBR	-- (--)	-- (--)	0.05 (0.07)	D (C)	0.05 (0.07)	D (C)	0.05 (0.07)	D (C)	0.05 (0.07)	D (C)
WBL	0.19 (0.16)	B (B)	0.47 (0.24)	C (C)	0.71 (0.80)	D (D)	0.48 (0.22)	C (C)	0.74 (0.77)	D (D)
WBTR	0.31 (0.71)	C (C)	0.25 (0.81)	A (D)	0.23 (0.79)	A (D)	0.27 (0.83)	A (D)	0.24 (0.83)	A (D)
NBL	0.03 (0.04)	A (A)	0.24 (0.30)	B (C)	0.28 (0.30)	B (B)	0.26 (0.31)	B (C)	0.29 (0.31)	B (B)
NBTR	0.21 (0.39)	A (B)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
NBT	-- (--)	-- (--)	0.20 (0.51)	B (C)	0.25 (0.58)	B (C)	0.21 (0.53)	B (C)	0.25 (0.59)	B (C)
NBR	-- (--)	-- (--)	0.04 (0.09)	C (C)	0.04 (0.10)	C (B)	0.04 (0.09)	C (C)	0.04 (0.10)	C (B)
SBL	0.04 (0.01)	A (A)	0.03 (0.01)	B (B)	0.11 (0.10)	B (B)	0.03 (0.02)	B (B)	0.12 (0.10)	B (B)
SBTR	0.49 (0.33)	B (A)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
SBT	-- (--)	-- (--)	0.57 (0.34)	C (B)	0.62 (0.35)	C (B)	0.58 (0.35)	C (B)	0.63 (0.36)	C (B)
SBR	-- (--)	-- (--)	0.12 (0.04)	B (B)	0.12 (0.04)	B (B)	0.12 (0.04)	B (B)	0.12 (0.04)	B (B)
Overall	0.58 (0.49)	B (B)	0.62 (0.60)	C (C)	0.69 (0.64)	C (C)	0.64 (0.62)	C (C)	0.71 (0.66)	C (C)

8.4.2 Unsignalized Intersections

Unsignalized intersection capacity results have been summarized in **Table 19**. The area unsignalized intersections all operate at an LOS of A or better under all future total scenarios. Therefore, site traffic can be readily accommodated at the network unsignalized intersections.

TABLE 19 UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS RESULTS

Key Movements	2028 Horizon Year		2033 Horizon Year	
	Future Total		Future Total	
	LOS	Delay (s)	LOS	Delay (s)
Old School Road / 12861 Dixie Road Site Access 2				
NBR	A (A)	9.6 (9.1)	A (A)	9.7 (9.1)
Bramalea Road / Old School Road				
EBTLR	A (A)	16.6 (14.5)	A (A)	20.0 (15.8)
WBTLR	A (A)	12.2 (17.1)	A (A)	13.3 (20.7)
NBTLR	A (A)	11.2 (14.8)	A (A)	11.9 (16.7)
SBTLR	A (A)	12.2 (11.0)	A (A)	13.3 (11.6)

Notes:

1. XX (XX) – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour).

8.5 QUEUING ANALYSIS

To determine the queueing impacts of the proposed development on the study area intersections, a queueing analysis was undertaken using SimTraffic 11 for all study scenarios.

For these analyses, a 15-minute seeding was used for 4 (4) x 15-minute recordings (total analysis of 1 hour). The analysis determined 95th percentile queue lengths for all intersection movements during the weekday morning and afternoon peak hours.

Queueing issues for all turning movements are expected to be minimal. While some 95th percentile queues extend beyond the assumed storage length, they typically do so within the effective taper lengths, allowing passengers to queue without obstructing the through lanes.

Critically, all movements operate at v/c ratios below 1.0, confirming that even when queues spill into the taper, they will full clear within each signal cycle.

Table 20 summarizes the 95th percentile reported queueing lengths for key movements in both the weekday morning and weekday afternoon peak hours. Full SimTraffic results are shown in **Appendix I**. Assumed storage lengths have been added to each intersection movement. Storage lengths for all turning movements have been included within the table.

TABLE 20 95TH PERCENTILE SIMTRAFFIC QUEUE LENGTHS

Movement	Storage Length (m)	95 th Percentile Queue Lengths (metres)				
		Existing	2028 Future Background	2028 Future Total	2033 Future Background	2033 Future Total
Dixie Road / Mayfield Road						
EBL	140	132.3 (84.8)	137.4 (123.5)	137.4 (136.3)	137.4 (133.2)	137.4 (137.5)
EBT	--	124.3 (81.9)	434.3 (81.4)	434.3 (88.8)	434.3 (107.6)	434.3 (112.4)
EBR	105	86.5 (23.3)	79.8 (44.4)	44.4 (12.8)	42.1 (16.6)	49.3 (25.4)
WBL	140	25.9 (22.5)	22.6 (28.7)	22.6 (25.1)	22.6 (25.1)	22.6 (97)
WBT	--	92.8 (118.3)	102 (126.4)	102 (149.3)	102 (126.1)	102 (159.2)
WBR	45	42.1 (12.8)	42.1 (60)	42.1 (12.8)	42.1 (14.7)	42.1 (25.4)
NBL	115	66.1 (72.5)	40 (75.7)	40 (75.7)	40 (87.7)	40 (103.7)
NBT	--	47.5 (54.1)	56.5 (40.4)	56.5 (40.4)	56.5 (30.5)	56.5 (38.1)
NBR	65	16 (5.6)	12.8 (7.5)	10.3 (7.5)	10.7 (8.1)	16 (39.1)

Movement	Storage Length (m)	95 th Percentile Queue Lengths (metres)				
		Existing	2028 Future Background	2028 Future Total	2033 Future Background	2033 Future Total
SBL	115	30.3 (28.8)	55.3 (71.8)	55.3 (91.1)	55.3 (49.9)	55.3 (105.2)
SBT	--	68 (30.3)	75.6 (429.2)	71.7 (403.9)	75.6 (403.9)	75.6 (403.9)
SBR	135	37.8 (56.8)	49.3 (205)	44.3 (201.1)	49.3 (205)	49.3 (205)
Dixie Road / Old School Road						
EBL	75	40.9 (13.5)	29.9 (46.5)	32.4 (32)	22.9 (49.8)	30 (40.3)
EBT	--	80.1 (39.2)	101.8 (46.1)	97 (39.1)	101.8 (46.1)	126.1 (40.4)
EBR	75	19.6 (16.7)	22.6 (14)	28.1 (16.7)	21.2 (14)	26.1 (17.3)
WBL	65	15.4 (18.1)	18.8 (46.5)	37 (51.4)	13.1 (49.3)	40.6 (52.7)
WBTR	--	29.6 (53.4)	12.9 (77.7)	22.6 (76.7)	12.9 (79)	30.8 (70.4)
NBL	75	12 (58.1)	17.7 (47)	28.6 (58.1)	20 (74.8)	29.1 (69.3)
NBT	--	31.2 (61.3)	43.8 (130.7)	51.4 (144.6)	36.8 (106.5)	45.9 (113.9)
NBR	50	9.2 (9.6)	14.8 (20.6)	12.8 (79.7)	10.6 (15)	11.1 (17.5)
SBL	75	12.5 (28.8)	14.2 (13.3)	27.2 (20.8)	11.1 (30.2)	16.8 (25.1)
SBT	--	55.8 (44)	76 (80)	130.2 (72.7)	103.6 (61.9)	128.1 (71.3)
SBR	75	9.6 (9.6)	17.2 (20.6)	14.6 (9.6)	19 (12.6)	19.6 (15.1)
Old School Road / Site Access 3						
EBT	--	-- (--)	-- (--)	16.6 (48.3)	-- (--)	25.7 (40.8)
WBL	20	-- (--)	-- (--)	20.4 (20.4)	-- (--)	15.7 (20.4)
WBT	--	-- (--)	-- (--)	179.4 (85)	-- (--)	171.8 (69.6)
Bramalea Road / Old School Road						
EBLTR	--	28.2 (16.9)	37.3 (25.3)	40 (32.3)	49.3 (36.9)	43.6 (30.6)
WBLTR	--	17.3 (32.1)	25.7 (31.8)	22.8 (48.1)	36.1 (42.6)	26.6 (38.5)
NBLTR	--	19.3 (24.1)	22.4 (29.6)	16.9 (25.5)	29.9 (30.9)	20.9 (25.5)
SBLTR	--	18.3 (13.7)	19.5 (16.6)	22.9 (16.9)	20.7 (21.7)	30.2 (16.9)

9.0 SIGNAL WARRANT

A signal warrant analysis was completed for the proposed new intersections within the study network. Specifically, the warrants reviewed the Site driveway intersection on Dixie Road. Warrants were conducted based on the methodologies outlined in Ontario Traffic Manual (OTM) Book 12. Signal warrant calculation sheets are attached in **Appendix J**.

The 8-hour vehicular traffic for the proposed intersections was projected based on existing peak 8-hour temporal vehicular data, collected by Spectrum Traffic Data Inc. on November 14th, 2023 at the Dixie Road / UPS Facility Access, and forecasted future total traffic for each horizon year. Site vehicular traffic was forecasted based on 24-hour temporal data collected by BA Group at Industrial proxy sites.

The following intersections were assessed as part of the signal warrant analysis:

- Old School Road / Site Access 3

The signal warrant analysis was undertaken using the free flow criteria outlined in the OTM.

9.1 SIGNAL WARRANT RESULTS

The proposed signalized intersection has been assessed based on Justifications 1, 2, 3, and 7 of the OTM signal warrant procedure.

A summary of the outcomes of the signal justification analysis for the 2033 horizon year is summarized in **Table 21**.

TABLE 21 FREE FLOW SIGNAL WARRANT ANALYSIS – 2033 FUTURE TOTAL TRAFFIC

Intersection	Justification 1 – Min. Vehicular Volume		Justification 2 – Delay to Cross Traffic		Justification 3 – Combination		Justification 7 – Projected Volumes			Justified?
Old School Road / Site Access 3	1A	80%	2A	70%	1	55%	1	100%	53%	NO
	1B	55%	2B	95%	2	70%	2	97%	100%	
	Not Warranted		Not Warranted		Not Warranted		Not Warranted			

9.2 SIGNAL WARRANT ANALYSIS SUMMARY

The signal warrant analysis indicates that a traffic signal along Old School Road / Site Access 3 is not warranted under future total conditions by the 2033 horizon year according to the free flow warrant procedure. Signalization at Old School Road / Site Access 3 is not required as per the warrant criteria, however, a traffic signal is desirable to improve the multiple existing and anticipated concerns within the network.

As the area network is proposed to be an industrial corridor, it is expected to experience unique traffic patterns characterized by the movement of large vehicles, such as trucks and industrial equipment, which may not align with signal warrant threshold criteria. In such cases, a signal can enhance safety by regulating the flow of both vehicular and pedestrian traffic, minimizing the risk of collisions and facilitating the smooth movement of traffic. Implementing a signal at this intersection can optimize traffic management, reduce delays, and enhance overall accessibility. Ultimately, prioritizing safety and efficiency in such an industrial corridor, even when signal warrants are not met, reflects a proactive approach to traffic management.

As such, it is recommended that the traffic signal at the intersection be installed before the full build-out of the Site to accommodate the vehicular demand and reduce conflicts between vehicles and other modes of travel, accommodate anticipated vehicular delays associated with all future development, and further improve site circulation safety due to better regulate access to Old School Road to and from the Site.

10.0 LEFT TURNING LANE WARRANTS

Turning lane warrants have been undertaken by BA Group to confirm the need for left turn lanes at the Site accesses intersecting with Old School Road.

Old School Road / Site Access 3

In both the 2028 and 2033 scenarios (after full-build out of the development), the Old School Road / Site Access 3 intersection is projected to handle peak hour traffic volumes of up to 30 vehicles per hour making a left turn from the east into the site.

Additionally, up to 5 inbound vehicles per hour are expected to complete a right turn into the site from the west during both the morning and afternoon peak hour periods.

A left lane warrant analysis was undertaken using the MTO Geometric Design Standards for Ontario Highways. These volumes represent a percentage of the traffic stream that a westbound left turn at Old School Road would not result in a dedicated left turn lane being warranted or required under both future total horizons.

In order to optimize traffic flow and safety, a dedicated left-turn lane should be incorporated into the future road network. This improvement will mitigate delays across all horizon years by separating turning movements, particularly for heavy vehicles, from through traffic. By providing trucks with direct access to the signalized intersection (the development's primary entry point), congestion for through vehicles will be reduced, enhancing both network efficiency and safety for all users.

Left turn warrant sheets are attached in **Appendix K**.

11.0 TRANSPORTATION DEMAND MANAGEMENT (TDM)

11.1 TDM PLAN OBJECTIVES

The Transportation Demand Management (TDM) Plan strives to reduce automobile use as a part of the design and construction of the development, as well as after construction as an ongoing strategy by supporting and promoting the use of non-auto travel modes.

The key objective of the TDM Plan is to reduce peak-hour single-occupant automobile traffic by focusing on four specific policy areas:

1. encourage the use of alternate travel modes (transit, cycling, walking);
2. increase vehicle occupancy;
3. shift travel to off-peak periods; and
4. reduce vehicle kilometres travelled.

11.2 SITE TRANSPORTATION CONTEXT AND USE CHARACTERISTICS

The Site is served by transit services operated by Brampton Transit, with bus routes 15 and 18 stops located within a 3-kilometre radius at the Mayfield Road / Bramalea and Inspire Boulevard / Dixie Road intersections, respectively. An additional bus stop is planned to be added to the local transit network, on the southeast side of the Dixie Road / Abbotside Avenue intersection. Opportunities for additional stops, further north on Dixie Road, are available as a result of the Region of Peel's planned widening of Dixie Road, subject to Brampton Transit's future planning.

Bicycle infrastructure in the vicinity of the Site includes a multi-use path located along the south side of Mayfield Road, in addition to a planned multi-use path on the west side of Dixie Road, which subsequently provides connections to the wider bicycle network within the City of Brampton.

A sidewalk is proposed along Dixie Road and Old School Road to facilitate pedestrian movement. Despite the minimal pedestrian infrastructure, further improvements to the active transportation realm are being proposed with the development of the Site. Pedestrian connections through sidewalks are planned along the east side of Dixie Road, to improve connections to the multi-use path and pedestrian network along Mayfield Road and the south side of Dixie Road. Furthermore, the addition of three signals, as referenced within **Sections 8.4**, and **9.0**, would further improve pedestrian and cyclist connectivity to the external active transportation networks.

11.3 TDM PLAN STRATEGIES

11.3.1 Overview

Based upon the Site context and proposed land uses, recommended TDM strategies are summarized in **Table 22**.

TABLE 22 RECOMMENDED SITE TDM MEASURES

Measure	Description	Cost Estimate	Implementation Strategy
Carpool	Encourage tenants to create and promote internal carpool program	TBD	Owner to encourage tenant upon occupancy
	Encourage tenants to include Emergency Ride Home (provide taxi chit up to a dollar amount for employees when carpool plans fall through due to an emergency)	TBD	Owner to encourage tenant upon occupancy
	Encourage tenants to run carpool promotional campaigns	TBD	Owner to encourage tenant upon occupancy
	Include designated signed carpool spots within the Site parking facilities.	TBD	Owner to encourage tenant upon occupancy
Transit Incentives	Building management to provide transit information package to new employees	TBD	Upon occupancy
	Provide convenient, high-quality and accessible pedestrian connections oriented towards adjacent transit stop facilities.	Integrated into overall development cost	Construct as part of development
Walking Incentives	Provide safe pedestrian-scale connections from the Site to the surrounding public street network, such as the proposed signalization of the Site access driveways along Old School Road	Integrated into overall development cost	Construct as part of development
	Maintain on-site pedestrian facilities to enable year-round pedestrian access and usage	TBD	Upon occupancy
	Enhance the quality of the public realm through provision of pedestrian-scale landscaping and appropriate sidewalk widths	Integrated into overall development cost	Construct as part of development

11.3.2 Carpool Incentives

In an effort to increase the viability and attractiveness of carpooling, a number of carpool incentives are recommended as outlined below.

- Internal carpool program:** The implementation and promotion of an internal carpool program would increase the visibility of carpooling as an alternative, whilst also facilitating and improving the viability of carpooling by assisting with carpool matching. Tenants will be encouraged to establish an internal carpool program in accordance with the above.

- **Emergency Ride Home:** The implementation of an emergency ride home program increases the attractiveness of carpooling as a mode by addressing one of the potential issues that can arise when carpooling. Tenants will be encouraged to have taxi chits be made available (up to a dollar amount) for employees when carpool plans fall through due to an emergency.
- **Promotional Campaign:** The implementation of promotional carpool campaigns such as carpool to work weeks with reward incentives, will encourage the tenants of the building to explore carpooling as an alternative. Tenants will be encouraged to establish promotional carpool campaigns in accordance with the above. Carpool signs would be additionally placed on 10 parking spaces to further encourage employee carpooling.

11.3.3 Transit Incentives

In an effort to increase the viability and attractiveness of transit, a number of transit incentives are recommended as outlined below.

- **Transit information package:** The provision of a transit information package to new employees will educate them on the available services in the area and increase the visibility of transit as an alternative. Building management to provide a transit information package to employees upon occupation.
- **Pedestrian connections to transit:** Convenient, high quality and accessible pedestrian connections towards adjacent transit stop facilities improve the ease of using transit and supplements transit as a viable mode.
- **Transit-oriented signalization:** Installing signals at intersections in proximity to transit stops to safeguard pedestrians, particularly during peak commuter arrivals and departures, ensures safe crossing to access the site or transit facilities.
- **Active-transportation oriented signalization:** Signalization of the Old School Road site access intersection improves pedestrian and cycling safety and connectivity to the multi-use paths on Dixie Road and Mayfield Road.

11.3.4 Walking Incentives

To increase the viability and attractiveness of walking as a mode, several walking incentives are recommended as outlined below.

- **Pedestrian connections to street network:** Providing safe pedestrian-scale connections from the Site to the surrounding public street network increases the attractiveness and viability of walking as a transportation mode.
- **Maintenance of on-site pedestrian facilities:** On-site pedestrian facilities will be maintained year-round to enable year-round pedestrian access and usage.
- **Pedestrian-scale landscaping and sidewalk widths:** It is proposed to enhance the quality of the public realm through the provision of pedestrian-scale landscaping and appropriate sidewalk widths, increasing the attractiveness of walking as a transportation mode.
- **Signalization of high-activity intersections:** Signalization of several site access intersections within proximity of transit stops to increase pedestrian safety and connectivity to the external sidewalk network.

12.0 SUMMARY AND CONCLUSIONS

General

1. The Proposed Development contemplates the development of the Site for the purpose of two new industrial buildings with an overall floor area of 188,718 square metres.
2. A total of 1,972 car parking spaces (including 29 accessible parking spaces) are proposed across the Site, located at grade. The proposed parking provision also includes provision of 24 electric vehicle (EV) spaces.
3. A loading zone is proposed at the rear of the building, comprising a total of up to 252 potential loading docks
4. Barrier-free/accessible pedestrian access is proposed to Dixie Road.

Car Parking

5. Application of the comprehensive Town of Caledon Zoning By-Law 2006-50 industrial car parking standards results in a requirement to provide a minimum of 1,271 parking spaces.
6. The proposed provision of 1,982 car parking spaces exceeds the requirements of the Town of Caledon Zoning By-Law 2006-50.
7. A total of 44 accessible car parking spaces are proposed, which meets the requirements of the Town of Caledon By-Law 2015-058.
8. Whilst not a requirement, the proposed car parking supply also includes a provision of 24 electric vehicle (EV) spaces.

Loading and Servicing

9. Application of Zoning By-Law 2006-50 loading standards to the Proposed Development requires a total of 25 loading spaces.
10. A total of 394 potential loading docks and are proposed at the rear of the building. The proposed provision exceeds the requirements of the Town of Caledon Zoning By-Law 2006-50. Given the proposed warehouse land use, the potential loading provision is based upon meeting market requirements for typical warehouse tenants.

Vehicle Traffic

11. The overall development programme is anticipated to generate approximately 320 and 280 two-way vehicle trips during the AM and PM peak hours respectively.

Traffic Operations

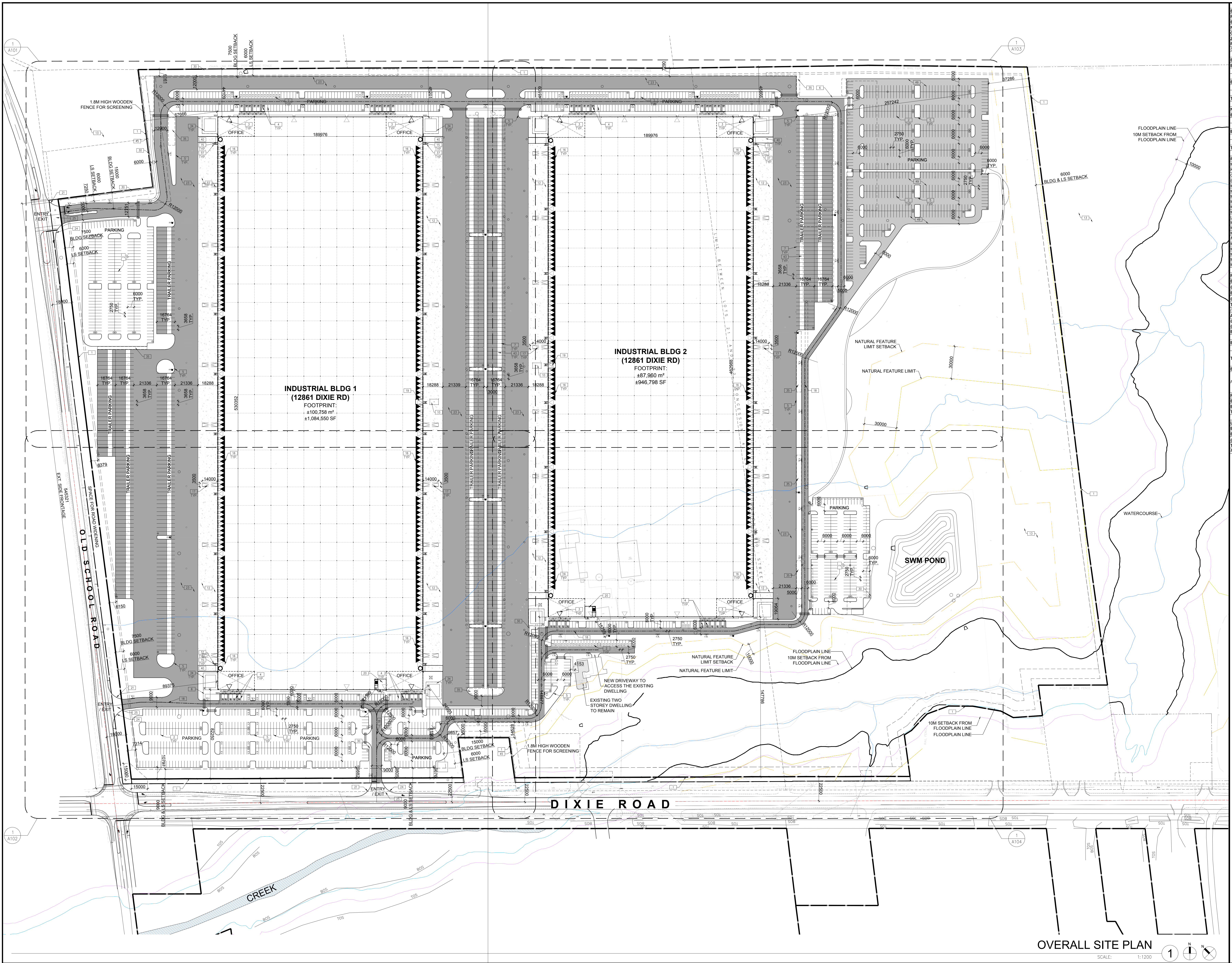
12. Under existing conditions, all area signalized intersections currently operate acceptably during the weekday morning and afternoon peak hours.
13. With the addition of background traffic, for the horizon years of 2028 and 2033, the area signalized intersections continue to operate acceptably during the weekday morning and afternoon peak hours.
14. With the build-out of the Proposed Development, under the future horizon years of 2028 and 2033, the area signalized intersections will continue to operate acceptably during the weekday morning and afternoon peak hours.
15. Analysis results are an improvement over the forecasted 2033 (with improvements) scenario outlined within the Mayfield Road Environmental Assessment, which forecast an overall v/c ratio of 1.39, with multiple individual movements above 1.0.
16. Queuing analysis was undertaken using SimTraffic for all study intersections. Queueing issues for all turning movements are expected to be minimal. While some 95th percentile queues extend beyond the assumed storage length, they typically do so within the effective taper lengths, allowing passengers to queue without obstructing the through lanes. Critically, all movements operate at v/c ratios below 1.0, confirming that even when queues spill into the taper, they will full clear within each signal cycle.
17. It is recommended that the traffic signals at the Old School Road / Site Access 3 intersection be installed before the full build-out of the Site to accommodate the vehicular demand and reduce conflicts between vehicles and other modes of travel, accommodate anticipated vehicular delays associated with all future development, and further improve site circulation safety by better regulating access to Dixie Road to and from the Site.

Transportation Demand Management

18. A Transportation Demand Management (TDM) Plan has been prepared which strives to reduce automobile use.
19. Recommended TDM measures include the following:
 - Encourage tenant to create and promote an internal carpool program;
 - Encourage tenant to create Emergency Ride Home program;
 - Encourage tenant to create carpool promotional campaigns;
 - Building management to provide transit information packages;
 - Provide pedestrian connections to sidewalks;
 - Signalization of one intersection to improve pedestrian and cycling safety and operations;
 - Provide pedestrian connections to the surrounding road network;
 - Maintain on-site pedestrian facilities year-round; and
 - Enhance public realm through provision of pedestrian scale landscaping.

APPENDIX A:

Reduced Architectural Drawings (Not to Scale) and Signage Plans



SITE STATISTICS		
Existing Zoning Category	A1	
Proposed Zoning Category	MP	
Building Classification	Group F3 (O.B.C. A-3.1.2.1.11)	
NET DEVELOPABLE AREA	4,899,303 SF	455,160.62m ²
GROSS SITE AREA	6,271,978 SF	582,686.42m ²
Zone Permitted Use (Town of Caledon Zoning By-law 2006-50)		
Proposed Use	Industrial	
Section 8.3 - Zoning Standards - MP Zone		
BUILDING AREA:		
BUILDING 1	1,084,549 SF	100,757.98 m ²
Warehouse Area	1,084,549 SF	98,351.68 m ²
Office Area	23,991 SF	2,406.27 m ²
BUILDING 2	945,731 SF	87,861.36 m ²
Warehouse Area	945,731 SF	85,492.13 m ²
Office Area	23,991 SF	2,406.27 m ²
TOTAL BUILDING AREA	2,030,280 SF	188,619.37 m ²
NET FLOOR AREA:		
BUILDING 1	1,083,400 SF	100,651.28 m ²
Floor Area	1,083,400 SF	100,651.28 m ²
Building Area under services, M&E rooms etc:	1,148 SF	106.68 m ²
BUILDING 2	945,731 SF	87,861.36 m ²
Floor Area	945,731 SF	87,861.42 m ²
Building Area under services, M&E rooms etc:	1,066 SF	99.06 m ²
TOTAL NET AREA	2,029,131 SF	188,512.63 m ²
Requirements		
Min. Lot Area	Proposed	Required
Net Floor Area	188,512.63m ²	925.00m ²
Gross Floor Area	188,718.37m ²	
Building Area	32.30%	50.00%
Min. Lot Frontage (m)	91.81	30.00
Min. Front Yard Building Setback (m)	81.50	9.00
Min. East Side Yard Building Set back (m)	89.38	7.50
Min. Int. Side Yard Building Setback (m)	257.24	6.00
Min. Int. Side Yard Building Setback (m) - Abutting Residential	54.69	15.00
Min. Rear Yard Building Setback (m)	44.11	7.50
Lot Coverage	32.30%	50.00%
Maximum Building Height (m) - Building 1	16.01	18.00
Maximum Building Height (m) - Building 2	16.01	18.00
Min. Landscape Area (% of Lot Area)	30.00%	10.00%
Min. Landscape Area (m ²)	172,257.76m ²	58,268.64m ²
Min. Front Landscape Buffer (m)	14.18	9.00
Min. East Side Landscape Buffer (m)	6.15	6.00
Min. Int. Side Landscape Buffer (m)	6.00	6.00
Min. Rear Landscape Buffer (m)	6.16	6.00
Min. Landscape Buffer (m) - Abutting EPA > 6m width	37.29	-
Parking Calculations		
BUILDING 1	Proposed	Required
@ 139 + 11707m ² of Net Floor Area over 10,000 m ²	915	672
BUILDING 2		
@ 139 + 11707m ² of Net Floor Area over 10,000 m ²	1067	597
Total no. of Parking Spaces (Including Accessible Parking Spaces)	1982	1269
Accessible Parking Spaces		
@ 201 to 1000 parking spaces is 2 plus 2% of total spaces		
@ More than 1000 parking spaces is 11 plus 1% of total spaces		
BUILDING 1	22	15
BUILDING 2	22	14
Total no. of Accessible Parking Spaces	44	29
EV Parking Spaces		
BUILDING 1	22	14
BUILDING 2	22	14
Total no. of EV Parking Spaces	44	28
EV Parking Spaces		
BUILDING 1	22	14
BUILDING 2	22	14
Total no. of EV Parking Spaces	44	28
Loading Space Calculations		
BUILDING 1	Proposed	Required
@ 211 + 13.1m ² of Loading Spaces	211	13
BUILDING 2	193	12
Total no. of Loading Spaces	394	25
Min. Loading Space Dimensions		
BUILDING 1	3.5m(W) X 14.0m(L) X 3.35m(H)	
BUILDING 2	3.5m(W) X 14.0m(L) X 3.35m(H)	

- ### GENERAL NOTES

 - PROPERTY LINE
 - 2750x6000 PARKING STALL, PAINTED PARKING STRIPING PER CITY STANDARDS, WITH 6M WIDE DOUBLE LOADED AISLE
 - PRINCIPLE ENTRY - TENANT FIT-UP SUBJECT TO INTERIOR ALTERATION PERMIT
 - TYPICAL SHARED ACCESSIBLE PARKING STALLS, PAINTED PARKING STRIPING PER CITY STANDARDS, TO HAVE (2) TYPE B (2750x6000), (2) TYPE A STALLS (3400x6000), OR ONE OF EACH WITH 1500mm PATH STRIP BETWEEN - REFER TO TOWN OF CALEDON'S ACCESSIBLE PARKING STANDARDS
 - 150mm WIDE CURB TYPICAL
 - MIN. 1500mm WIDE SIDEWALK TYPICAL U.N.O
 - TRAILER PARKING STALL - 12'-0" X 55'-0"
 - ACCESSIBLE CURB RAMP AS PER DETAIL
 - FIRE DEPARTMENT CONNECTION / SIAMSE
 - PROPOSED LOCATION OF TRANSFORMER C/W/ CONCRETE PAD 1.8m HIGH BLACK VINYL CHAIN LINK FENCING OR APPROVED EQUAL, ALONG DEVELOPMENT LIMIT BOUNDARY
 - CONCRETE APRON
 - LANDSCAPE AREA - SEE LANDSCAPE DWGS.
 - PEDESTRIAN RAIL (1070mm HIGH) SET INTO RETAINING WALL WHERE GRADE CHANGE GREATER THAN 600mm. PROVIDE CONCRETE-FILLED STEEL BOLLARD AT END OF RETAINING WALL - SEE CIVIL DWGS.
 - EXTERIOR STEEL STAIRS W/ TUBE STEEL GUARDRAIL, TYP.
 - TRUCK LOADING DOCK (TYPICAL)
 - LOADING SPACE - L.S. (MIN. 3.5m x 14.0m)
 - FIRE ACCESS ROUTE W/ 12M TURNING RADIUS
 - PROPOSED ELECTRICAL ROOM
 - PROPOSED MECHANICAL ROOM
 - CURB RADI AT ENTRANCES WITHIN MUNICIPAL SIDEWALK LIMITS TO CONFORM TO OPSD 350.010 - SEE CIVIL DWGS.
 - 1.8M WIDE PAINTED PEDESTRIAN PATHWAY
 - HATCHED AREA DENOTES HEAVY DUTY ASPHALT, TYPICAL FOR ALL AREAS REQUIRING FIRE TRUCK OR TRACTOR TRUCK ACCESS.
 - 15.0m CENTERLINE RADIUS DISTANCE TO FIRE ACCESS ROAD
 - ROAD CURB AND SIDEWALK TO BE CONTINUOUS THROUGH THE DRIVEWAY. DRIVEWAY GRADE TO BE COMPATIBLE WITH EXIST. SIDEWALK AND A CURB DEPRESSION WILL BE PROVIDED FOR AT EACH ENTRANCE
 - INVERTED U-SHAPE GALVANIZED BICYCLE RACKS
 - MIN. 1.8Mx0.6M PER SPACE
 - PROPOSED AMENITY AREA
 - PRESSED PATTERNED ASPHALT PEDESTRIAN PATHWAY
 - YELLOW PAINTED LINES
 - RETAINING WALL
 - PRECAST SCREEN WALL TO BE INSTALLED ON TOP OF RETAINING WALL - REFER TO STRUC. DWGS
 - PROPOSED FIRE ROUTE SIGN LOCATION
 - RESERVED
 - PROPOSED AMENITY AREA
 - SNOW STORAGE, ON SITE AT 2% TOTAL SITE AREA
 - PROPOSED CHAIN-LINK FENCE
 - CONCRETE/STEEL SAFETY BOLLARD
 - SCREEN WALL
 - PROPOSED PYLON SIGNAGE
 - DRIVE-IN RAMP WITH GALVANIZED GUARDRAIL ON EACH SIDE. SEE CIVIL DWGS FOR SLOPE %
 - RESERVED
 - DETECTIBLE TACTILE WARNING SURFACE, CONFORMING TO 2012 O.B.C.
 - MIN. 3m WIDE CONCRETE DOLLY PAD AT TRAILER STALLS
 - ACCESSIBLE PARKING GRADE SLOPING UP TO MEET PROPOSED CURB LEVEL
 - PROPOSED 1.8M HIGH WOODEN FENCE. REFER LANDSCAPE DWGS.
 - WASTE COLLECTION STAGING AREA. TO BE USED TO TEMPORARILY PLACE BINS FOR GARBAGE COLLECTION
 - TRUCK WHEEL STOP. REFER TO DETAIL #14/A105
 - BIKE REPAIR STATION - REFER LANDSCAPE
 - LIGHT COLOURED PAVEMENT TO HAVE INITIAL SOLAR REFLECTANCE OF AT LEAST 0.33 OR AN SRV OF 29
- ### SITE LEGEND

NEW HEAVY DUTY PAVEMENT (HATCHED)

LIGHT COLOURED PAVEMENT TO HAVE INITIAL SOLAR REFLECTANCE OF AT LEAST 0.33 OR AN SRV OF 29

LANDSCAPE AREA

DETECTABLE TACTILE WARNING SURFACE, CONFORMING TO 2012 O.B.C.

FIRE ACCESS ROUTE WITH 12.5M TURNING RADIUS

TRUCK LOADING DOCK DOOR

KNOCK OUT PANEL

MIN. DOOR EIGHT

EXIT DOOR LOCATION

FIRE DEPT CONNECTION (VERIFY LOCATION WITH CIVIL DRAWINGS)

TH FIRE DEPT FIRE HYDRANT (VERIFY LOCATION WITH CIVIL DRAWINGS)

EXISTING FIRE HYDRANT (VERIFY LOCATION WITH CIVIL DRAWINGS)

D.C. 1500mm WIDE DEPRESSION CURB FOR ACCESSIBLE PARKING AND PEDESTRIAN ACCESS - REFER TO DETAIL #4/A12

PROPOSED CATCHBASIN

CP

BP/PSV

BP/PSV

STOP

DRIVE-IN DOOR

NEW STOP SIGN

NEW FIRE ROUTE SIGN

GAS METER & PRESSURE REGULATING STATION BY GAS COMPANY

LIGHT FIXTURES, REFER ELECTRICAL DWG FOR DETAILS

LIGHT POLES, REFER ELECTRICAL DWG FOR DETAILS

DENOTES MANHOLE

EXISTING HYDRO POLE

WARE MALCOMB

6220 Highway 7, Suite 300
Vaughan, ON L4V 1V1
P 905.760.1221

ARCHITECTURE CIVIL ENGINEERING
INTERIORS BUILDING MEASUREMENT

QUADREAL PROPERTY GROUP

TOWN OF CALEDON DIXIE ROAD
12861 DIXIE ROAD
CALEDON, ONTARIO CANADA

OVERALL SITE PLAN	
DATE	REVISIONS
2022-02-02	ISSUED FOR COORDINATION
2022-02-02	ISSUED FOR COORDINATION
2022-02-02	ISSUED FOR COORDINATION
2022-02-02	ISSUED FOR COORDINATION
2022-02-02	ISSUED FOR COORDINATION

PA/PM:	SK
DRAWN BY:	JS
JOB NO.:	TOR22-0060-01

SHEET

A100

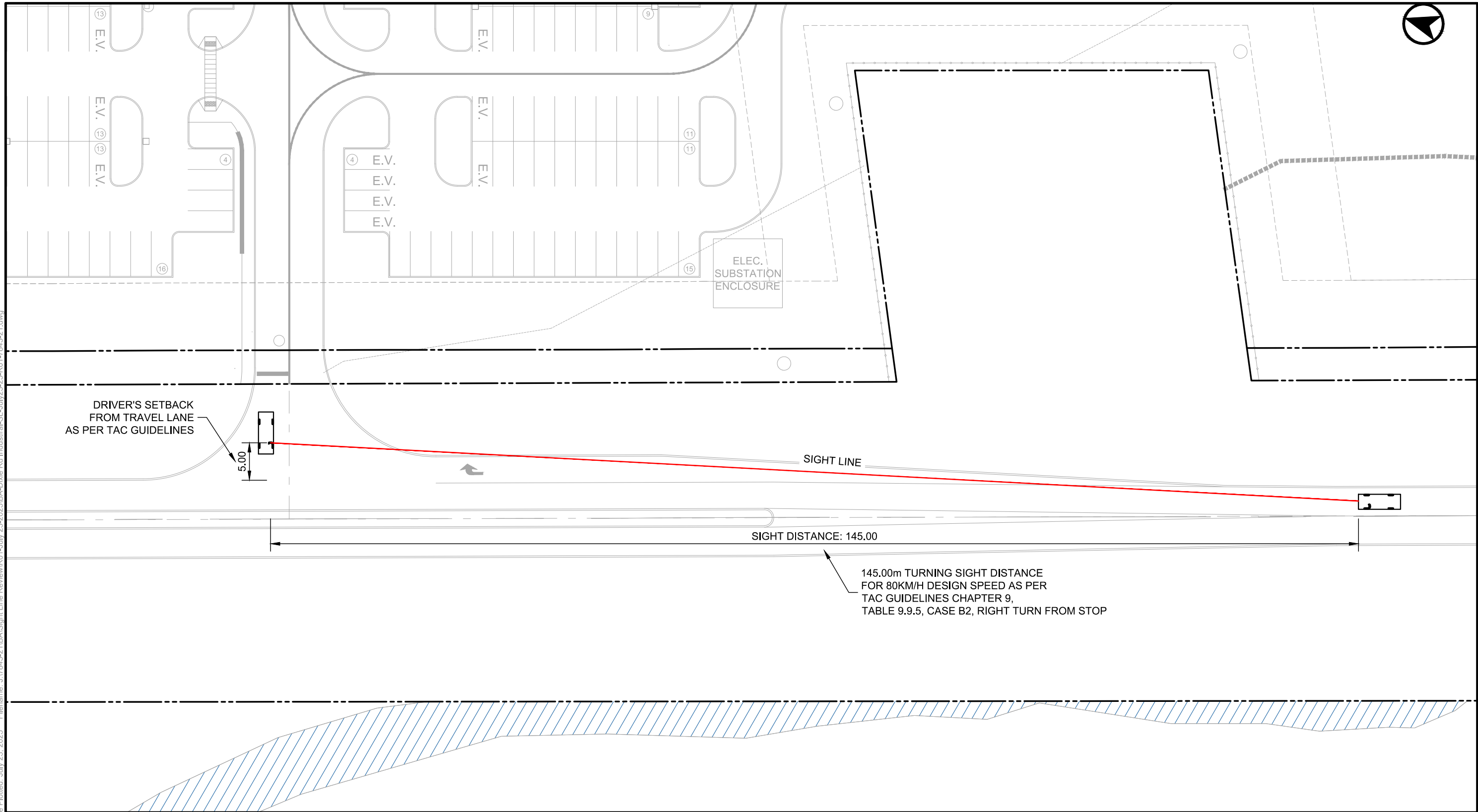
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ISSUED FOR COORDINATION

APPENDIX B:

Sight Line Requirements

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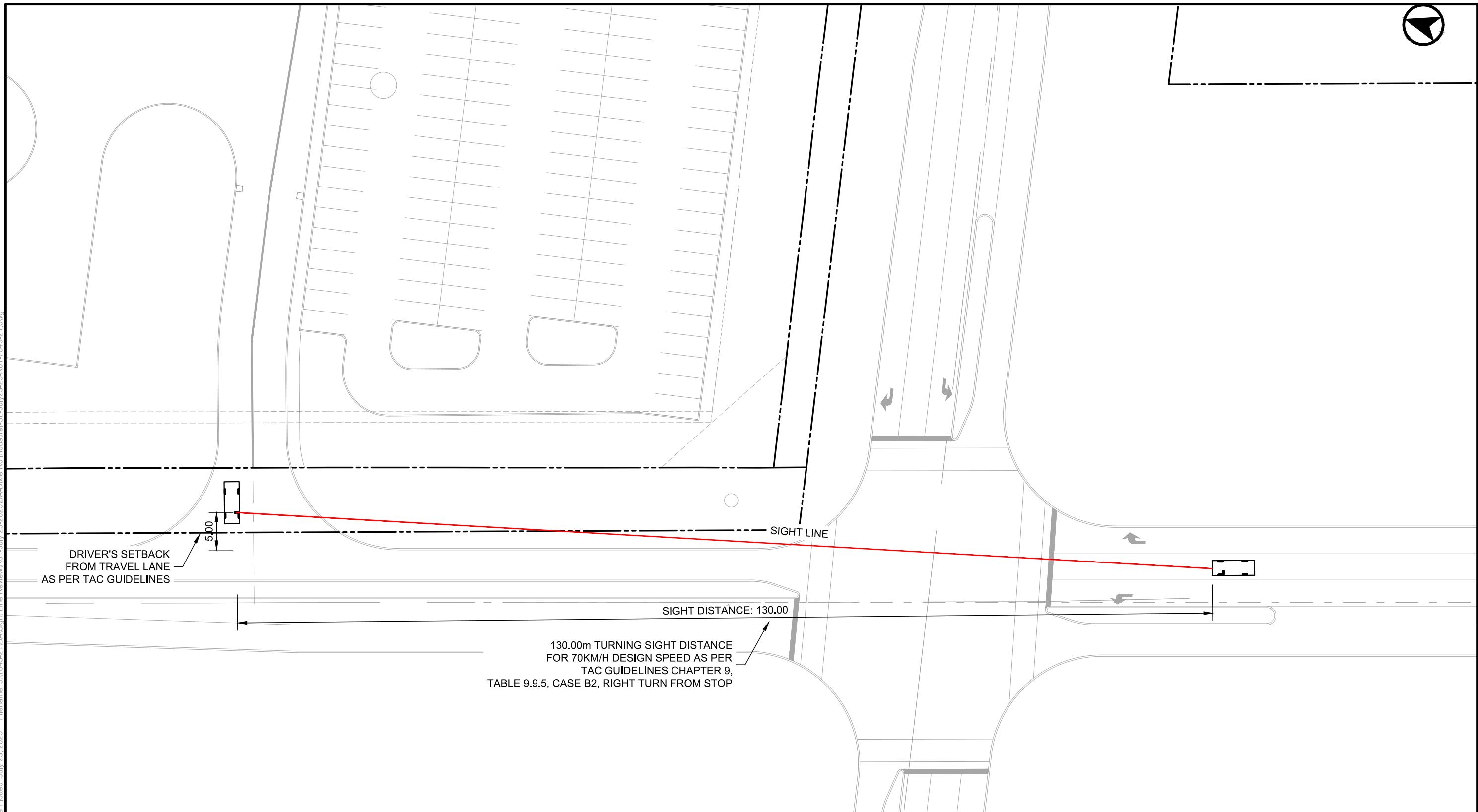


12861 DIXIE ROAD
SIGHT LINE REVIEW
DIXIE ROAD RIGHT-IN/RIGHT-OUT DRIVEWAY

Project: DIXIE INDUSTRIAL
Project No. 7843-21
Date: DECEMBER 4, 2024
Revised: JULY 23, 2025

Scale	0 5 10 15 20m
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Drawing No.	SL-03

Date Plotted: July 23, 2025 Filename: J:\7843-21\BAS\Sight Line Review\R01-July-23-2025\BA-Dixie Rd Industrial-SL-July23-25-R01-7843-21.dwg

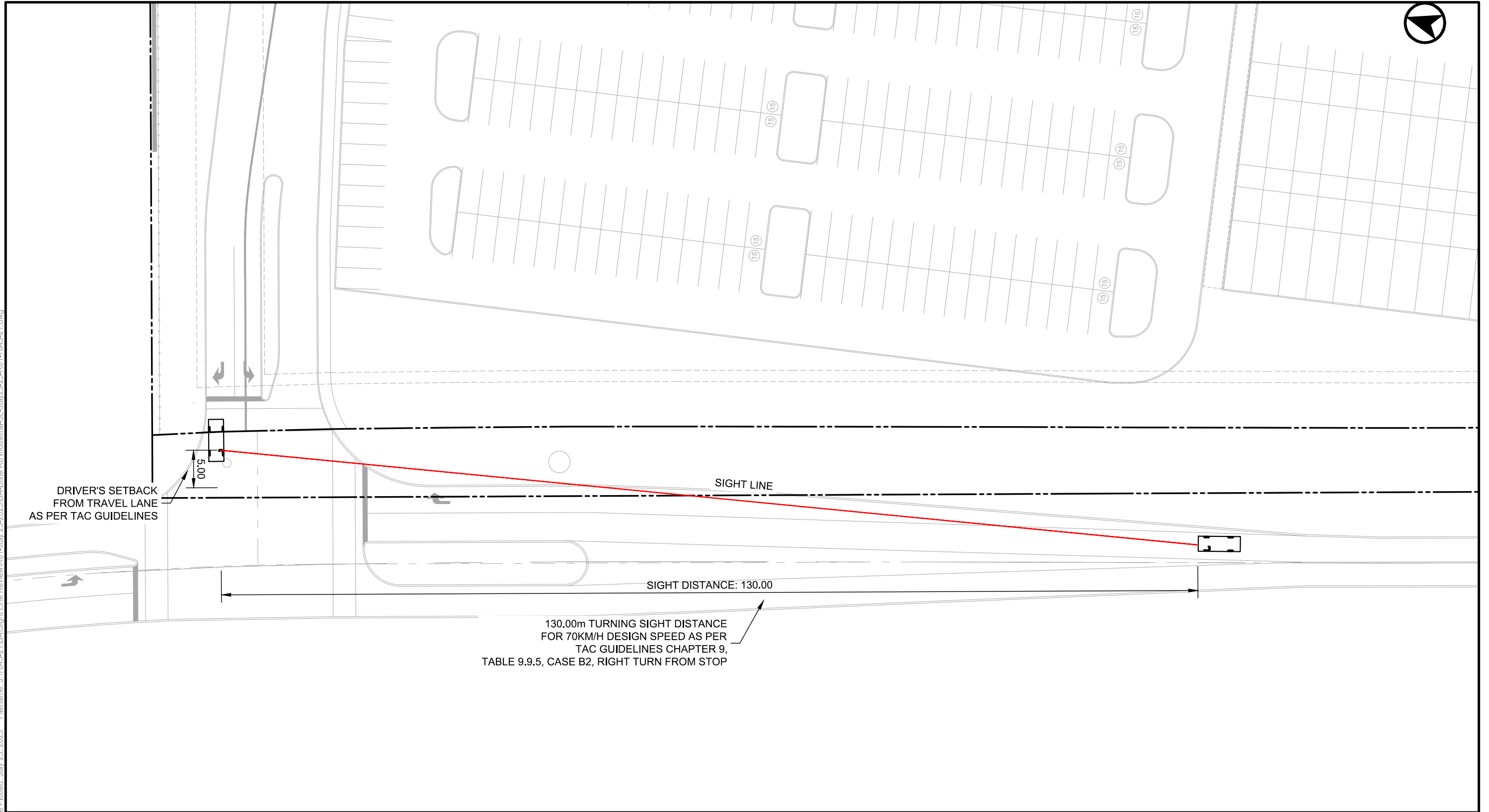


12861 DIXIE ROAD
SIGHT LINE REVIEW
OLD SCHOOL ROAD RIGHT-IN/RIGHT-OUT DRIVEWAY

Project: DIXIE INDUSTRIAL
Project No. 7843-21
Date: DECEMBER 4, 2024
Revised: JULY 23, 2025

Scale 1:500
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Drawing No. SL-04

Date Plotted: July 23, 2025 Filename: J:\7843-21\BAS\Sight Line Review\R01-July 23-2025\BA-Dixie Rd Industrial SL-July 23-25-R01-7843-21.dwg



12861 DIXIE ROAD
SIGHT LINE REVIEW
OLD SCHOOL ROAD ALL MOVES DRIVEWAY

Project: DIXIE INDUSTRIAL
Project No. 7843-21
Date: DECEMBER 4, 2024
Revised: JULY 23, 2025

Scale 1:500
0 5 10 15 20m
Drawing No. SL-05

APPENDIX C:

Functional Design Plans



 **BA Group**

BA Consulting Group Ltd.
300 - 45 St. Clair Ave. W.
Toronto ON M4V 1K9
tel. 416 961 7110
www.bagroup@bagroup.com

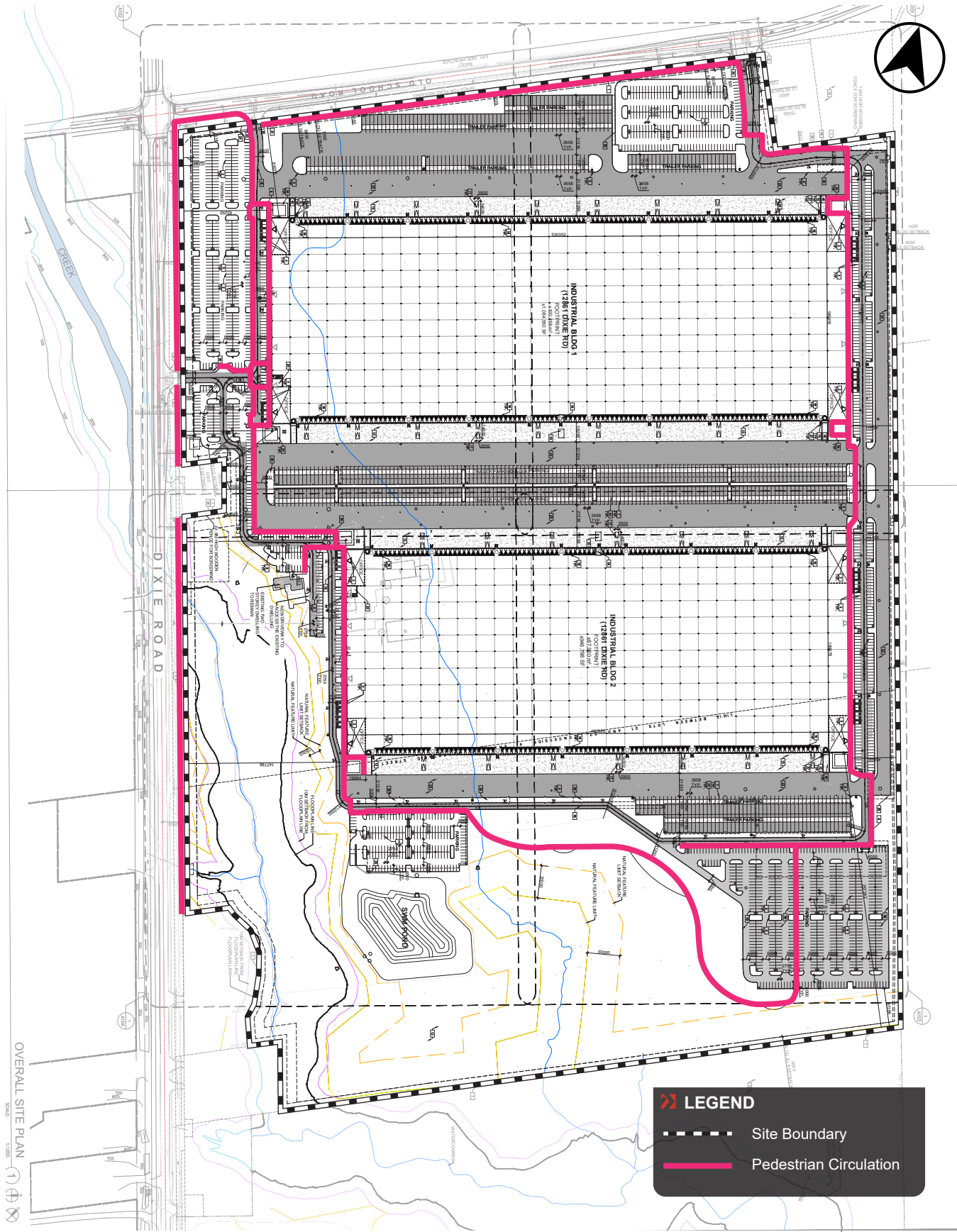
**MOVEMENT
IN URBAN
ENVIRONMENT**
BAGROUP.COM

FUNCTIONAL ROAD PLAN

OLD SCHOOL ROAD - INTERIM
CONDITION

FD03

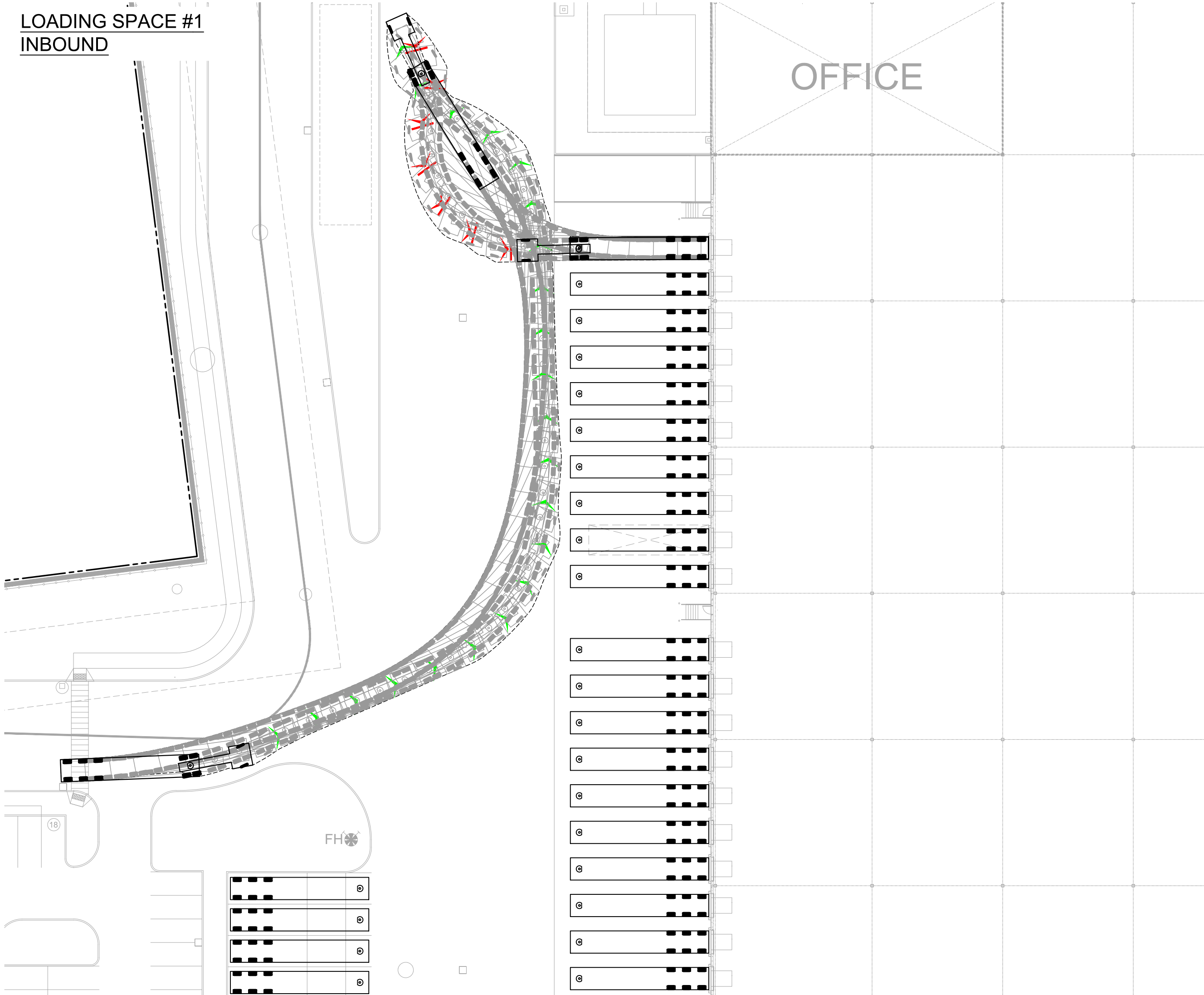
APPENDIX D: Pedestrian Circulation Map



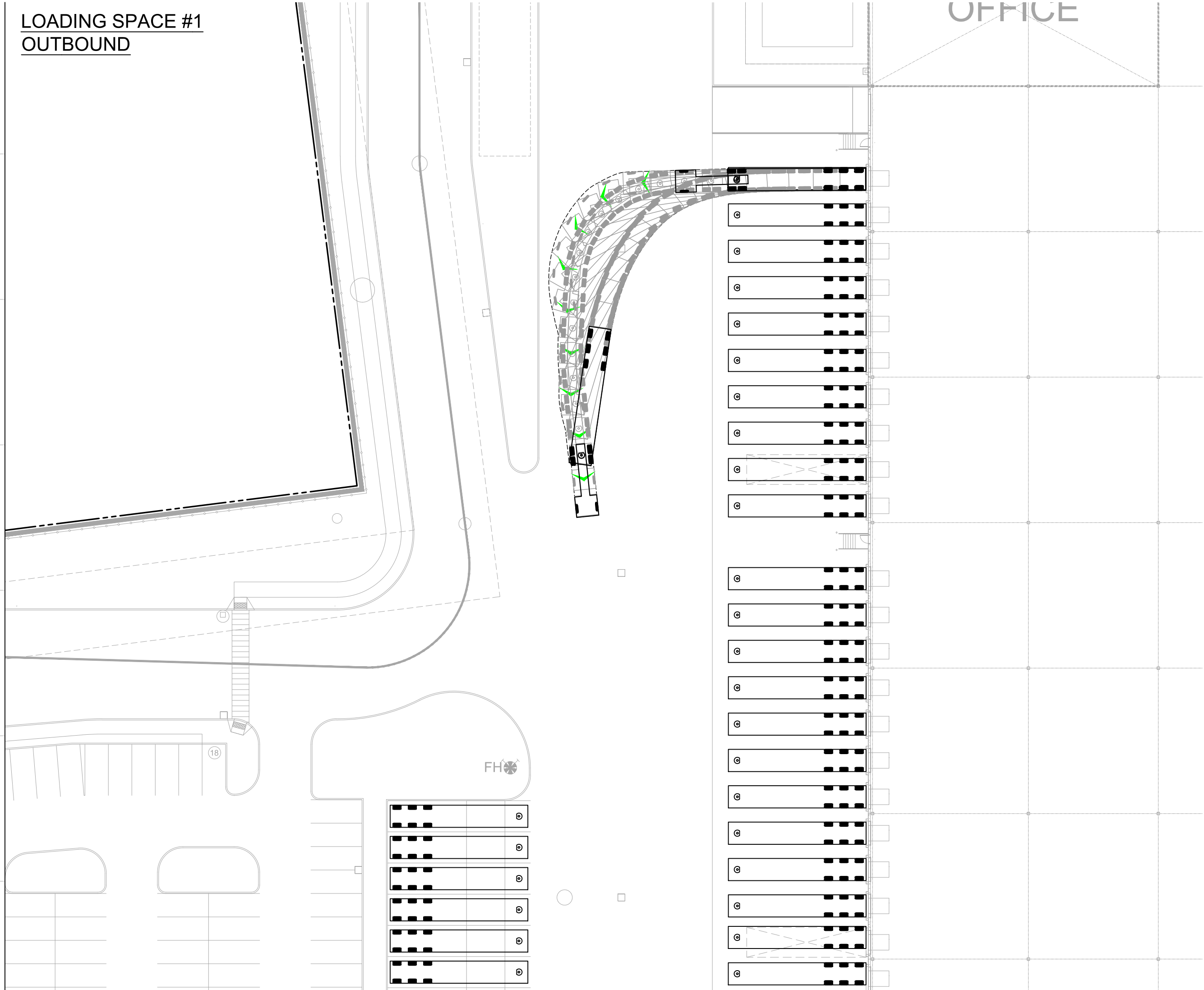
PEDESTRIAN CIRCULATION

Appendix E: Vehicle Maneuvering Diagrams

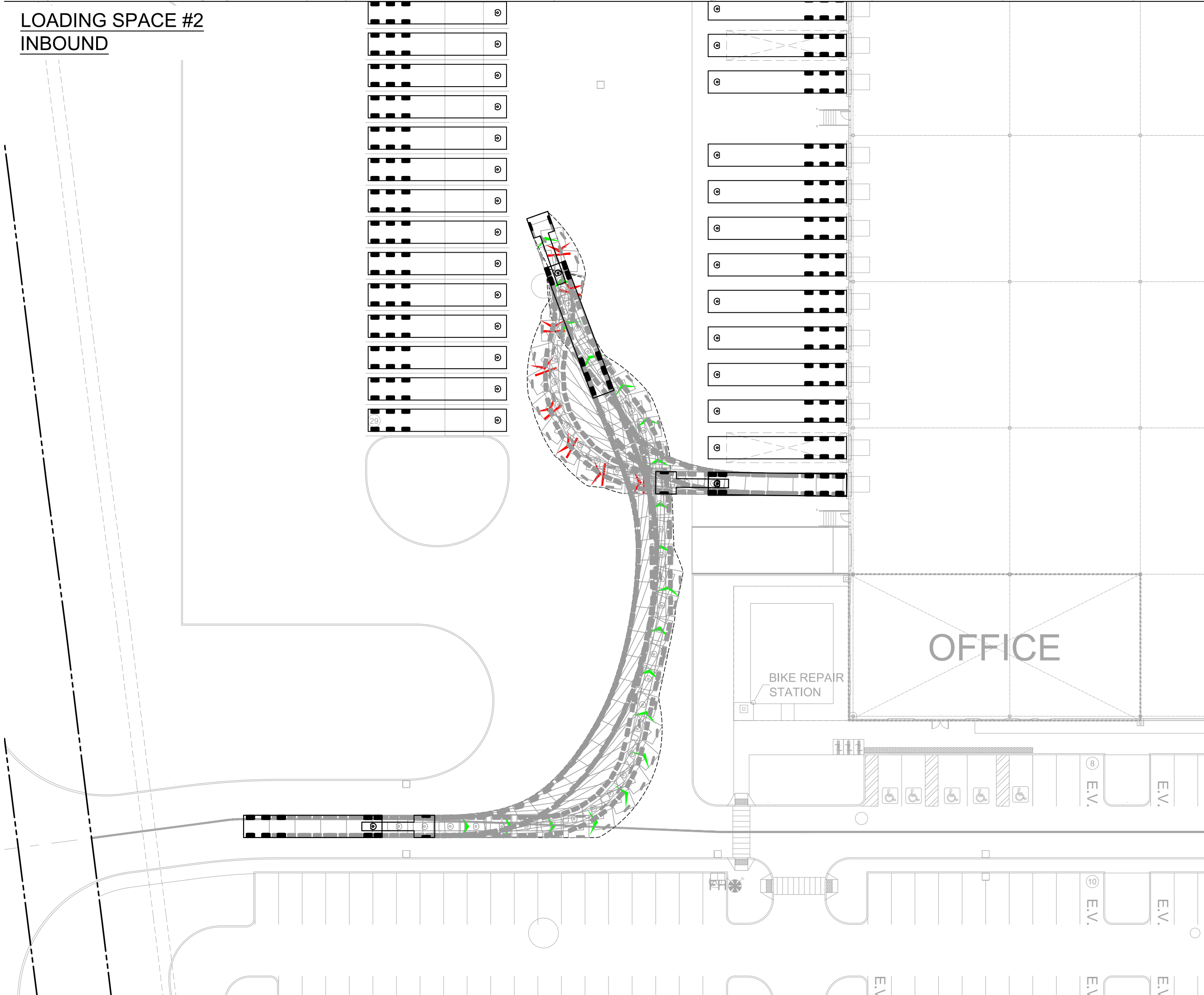
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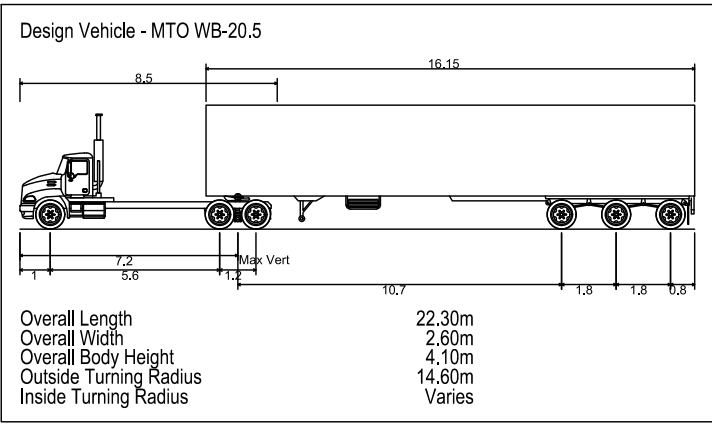
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OUTBOUND



LOADING SPACE #2
INBOUND



LOADING SPACE #2
OUTBOUND



00	07-23-25	MSB	ISSUED FOR SUBMISSION
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MOVEMENT
IN URBAN
ENVIRONMENTS
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12861 DIXIE ROAD

VEHICLE MANOEUVRING DIAGRAM
MTO WB-20.5 WITH A 53' TRAILER

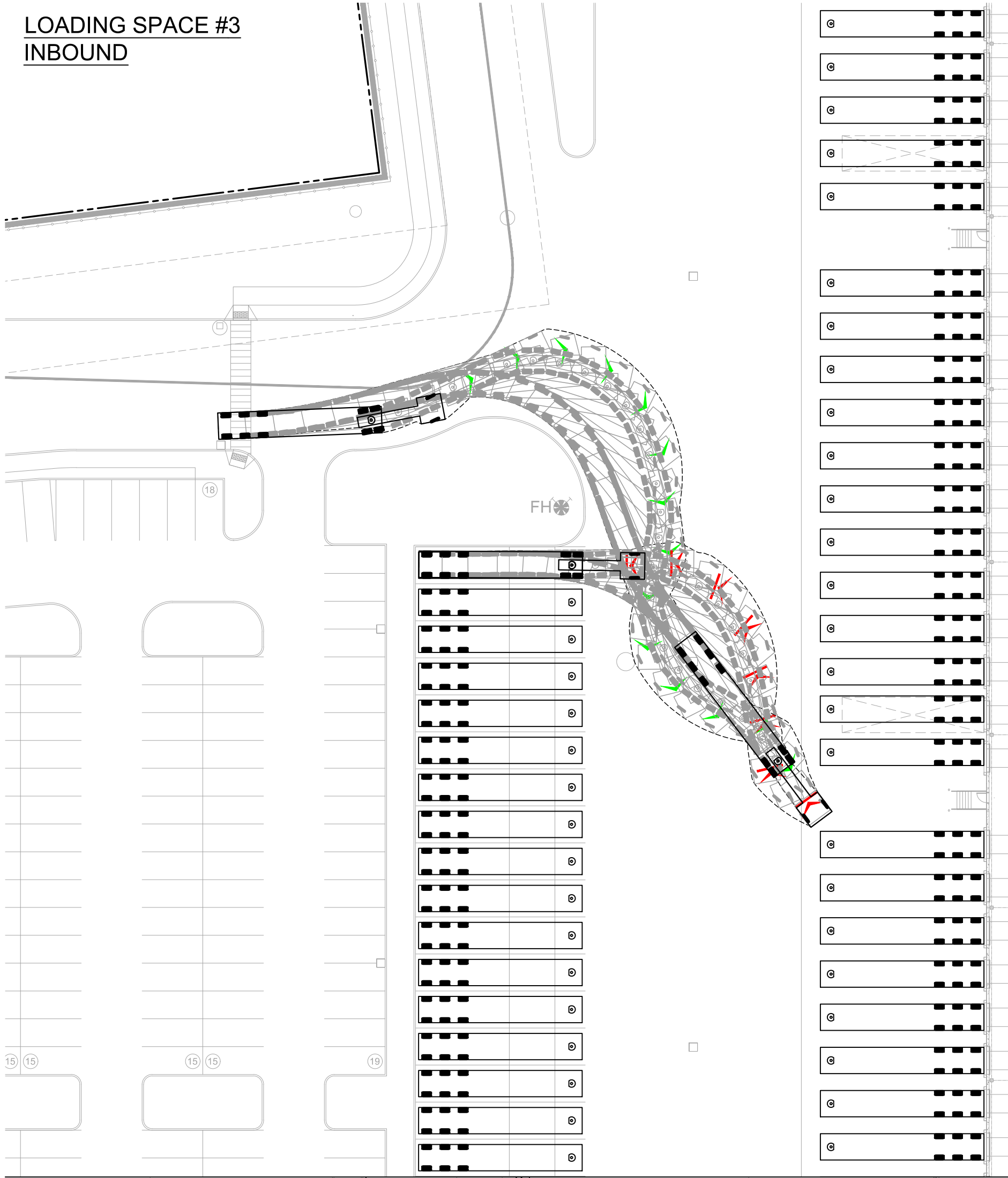
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Project No.: 7843-21

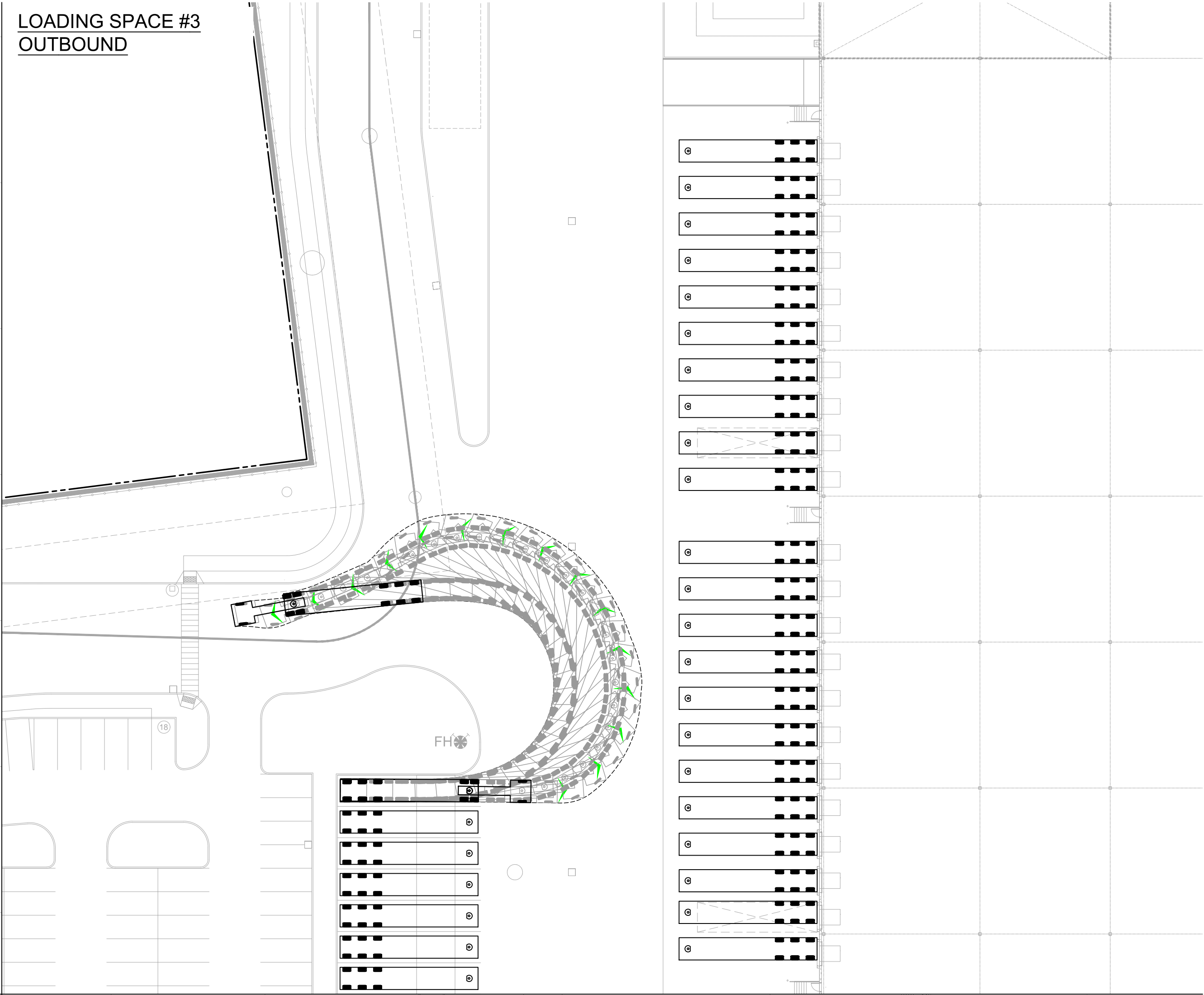
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VMD01

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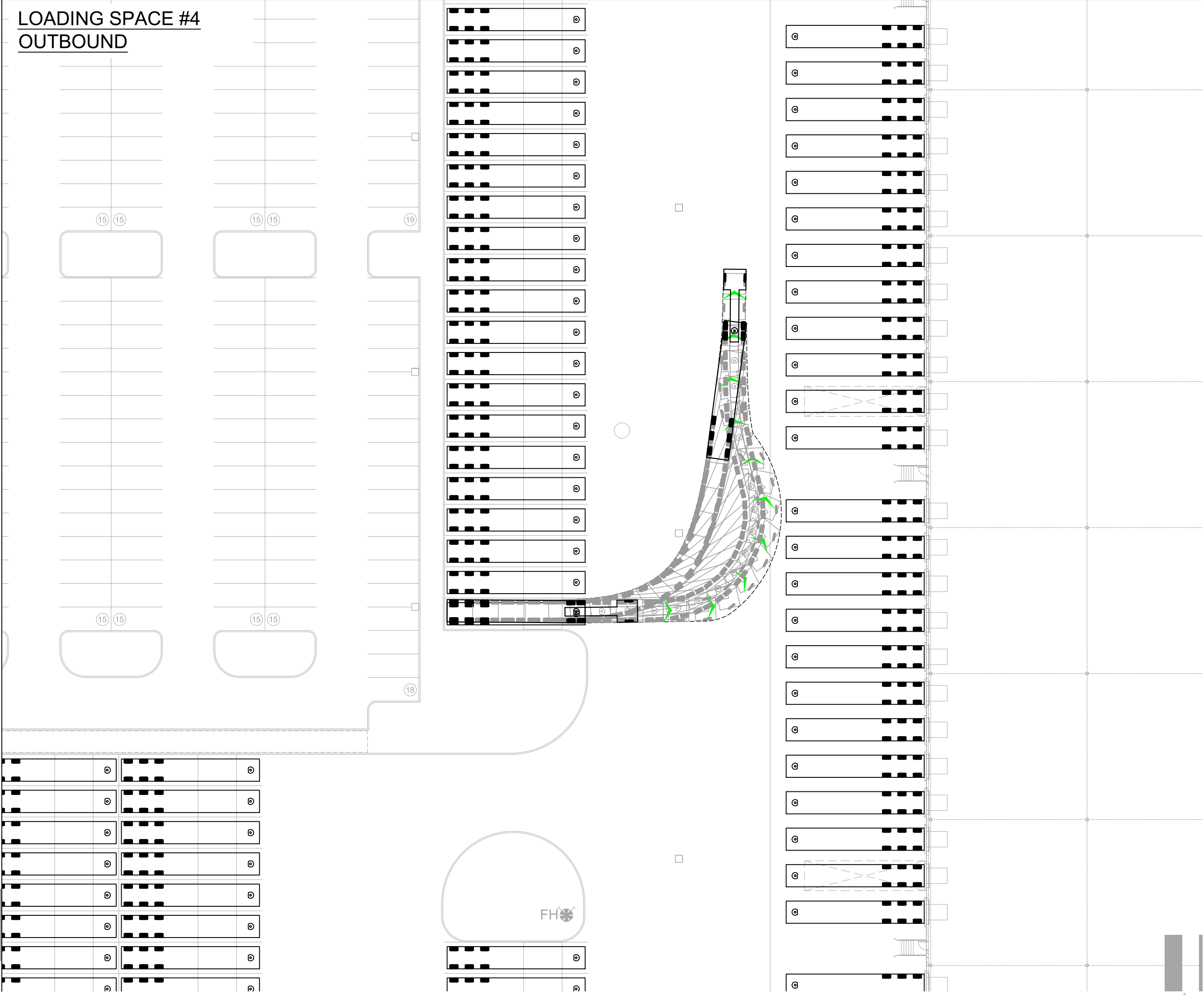
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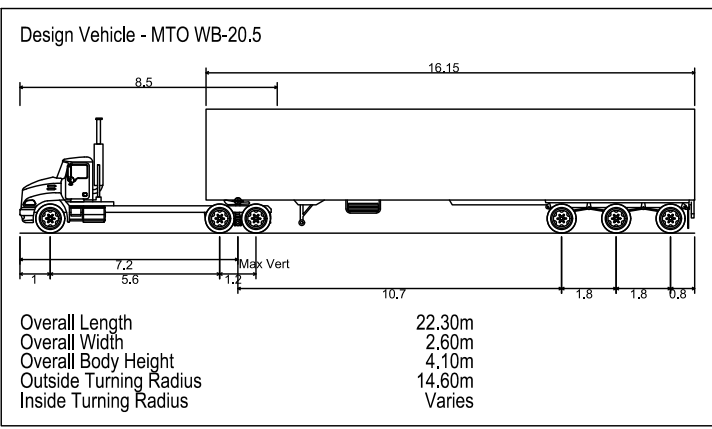
LOADING SPACE #4
INBOUND



LOADING SPACE #4
OUTBOUND



IND



00 07-23-25 MSB ISSUED FOR SUBMISSION

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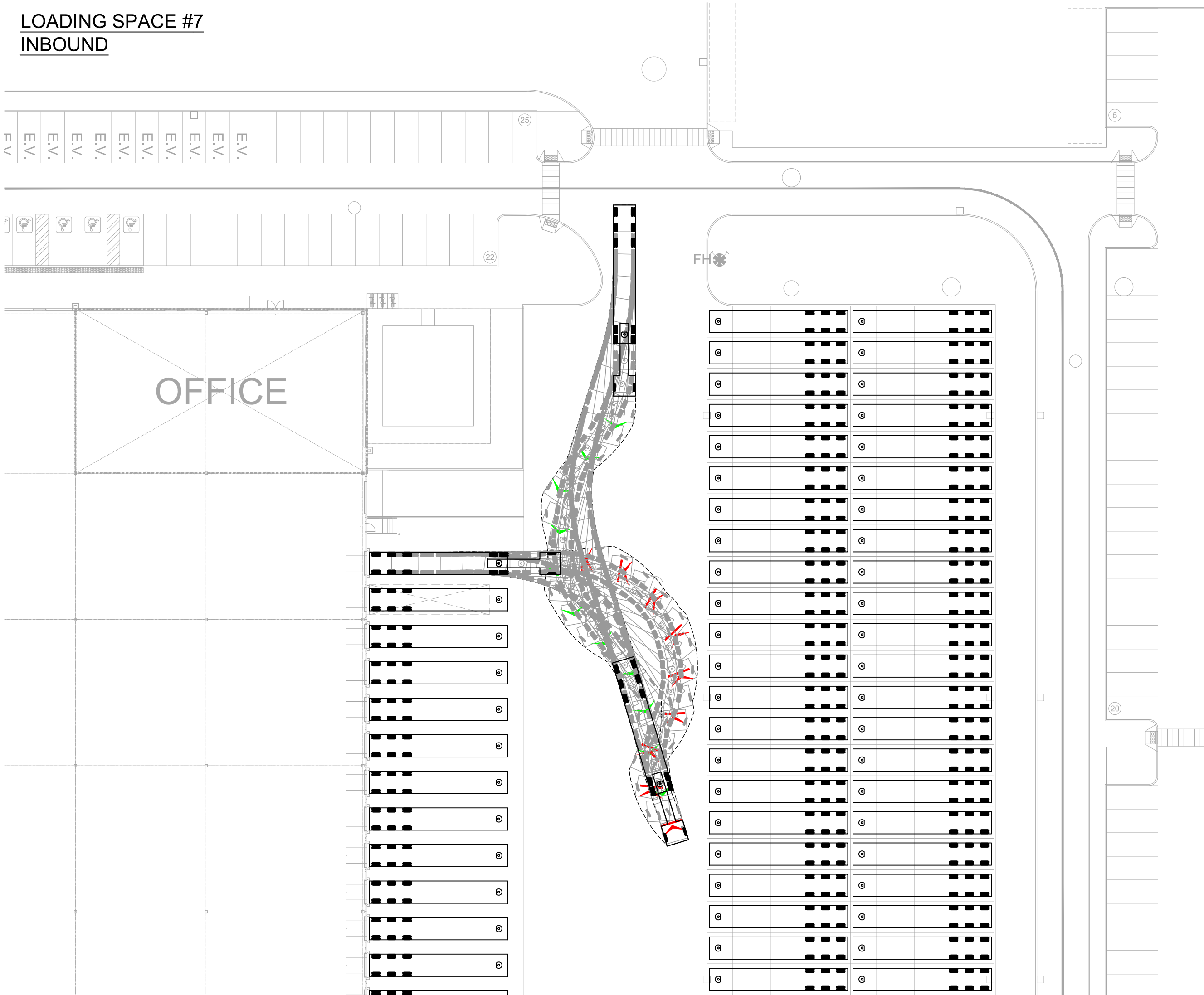
12861 DIXIE ROAD

VEHICLE MANOEUVRING DIAGRAM
MTO WB-20.5 WITH A 53' TRAILER

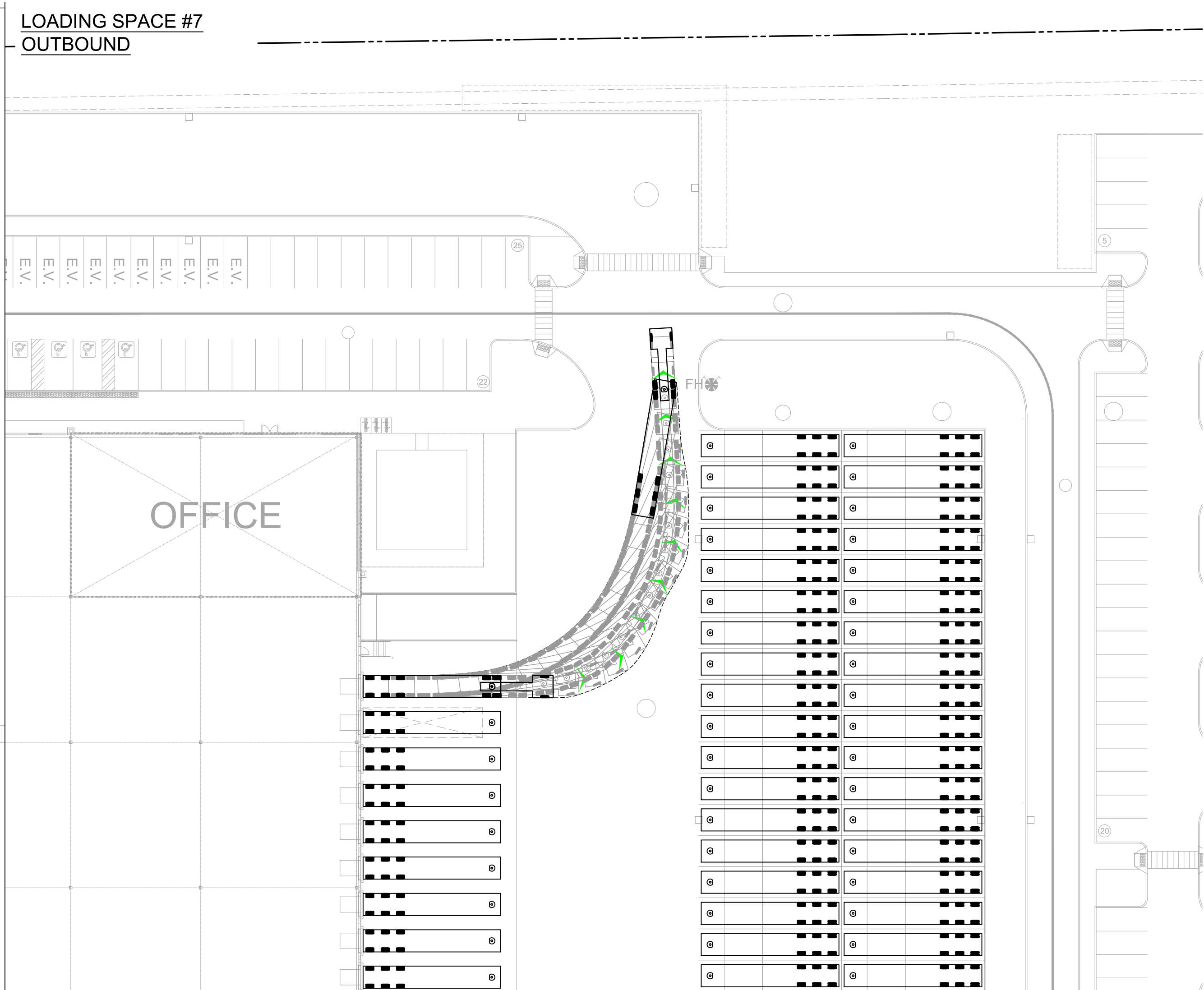
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Project No.: 7843-21
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VMD02

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INBOUND



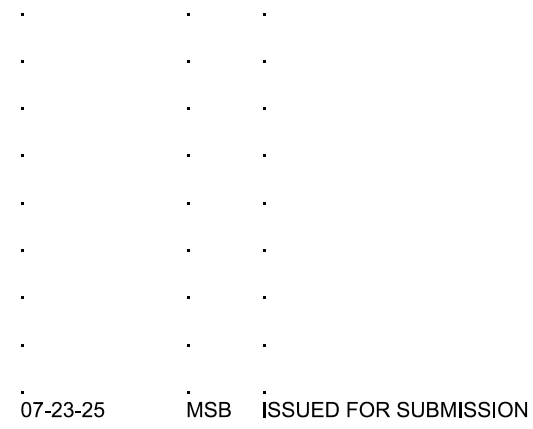
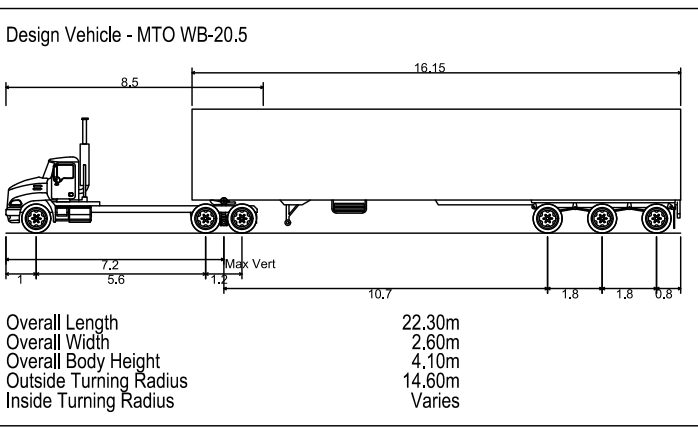
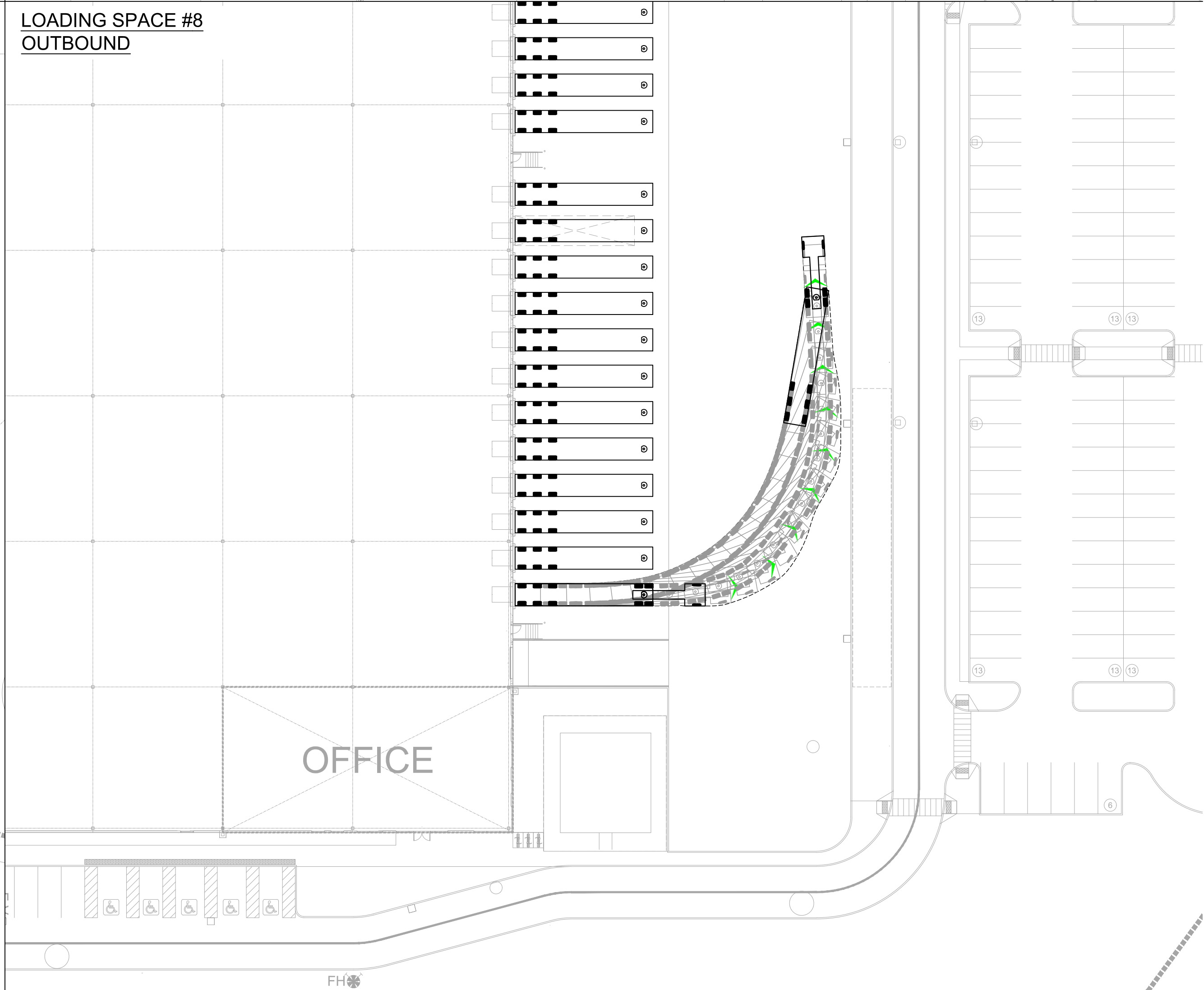
LOADING SPACE #7
OUTBOUND



LOADING SPACE #8
INBOUND



LOADING SPACE #8
OUTBOUND





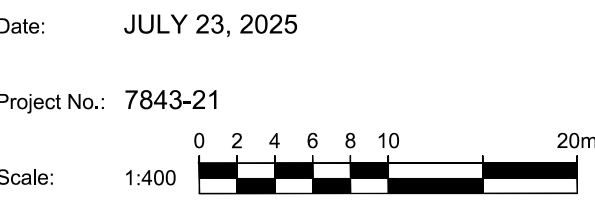
BA Group

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MOVEMENT
IN URBAN
ENVIRONMENTS
BAGROUP.COM

12861 DIXIE ROAD

VEHICLE MANOEUVRING DIAGRAM
MTO WB-20.5 WITH A 53' TRAILER



VMD04

APPENDIX F: Turning Movement Counts



Turning Movement Count (5 . DIXIE RD & 12424 DIXIE RD)

Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach 12424 DIXIE RD (UPS SOUTH ACCESS)					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	107	0	0	107	65	0	0	0	65	4	0	0	0	4	176	
07:15:00	0	90	0	0	90	53	0	0	0	53	1	0	0	0	1	144	
07:30:00	0	96	0	0	96	75	0	0	0	75	1	0	0	0	1	172	
07:45:00	0	124	0	0	124	58	1	0	0	59	4	0	0	0	4	187	679
08:00:00	0	96	0	0	96	45	1	0	0	46	8	0	0	0	8	150	653
08:15:00	0	105	0	0	105	47	0	0	0	47	8	1	0	0	9	161	670
08:30:00	0	83	0	0	83	46	1	0	0	47	10	2	0	0	12	142	640
08:45:00	0	67	0	0	67	59	0	0	0	59	15	0	0	0	15	141	594
BREAK																	
16:00:00	0	92	0	0	92	114	1	0	0	115	5	0	0	0	5	212	
16:15:00	0	87	0	0	87	104	1	0	0	105	1	0	0	0	1	193	
16:30:00	0	77	0	0	77	108	1	0	0	109	3	0	0	0	3	189	
16:45:00	0	87	0	0	87	107	0	0	0	107	6	0	0	0	6	200	794
17:00:00	0	93	0	0	93	108	0	0	0	108	2	0	0	0	2	203	785
17:15:00	0	71	0	0	71	106	1	0	0	107	6	0	0	0	6	184	776
17:30:00	0	99	0	0	99	97	1	0	0	98	11	0	0	1	11	208	795
17:45:00	0	112	0	1	112	81	0	0	1	81	20	1	0	0	21	214	809
Grand Total	0	1486	0	1	1486	1273	8	0	1	1281	105	4	0	1	109	2876	-
Approach%	0%	100%	0%		-	99.4%	0.6%	0%		-	96.3%	3.7%	0%		-	-	-
Totals %	0%	51.7%	0%		51.7%	44.3%	0.3%	0%		44.5%	3.7%	0.1%	0%		3.8%	-	-
Heavy	0	163	0		-	147	0	0		-	1	0	0		-	-	-
Heavy %	0%	11%	0%		-	11.5%	0%	0%		-	1%	0%	0%		-	-	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	-	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	-	-



Peak Hour: 07:00 AM - 08:00 AM Weather: Broken Clouds (4.48 °C)

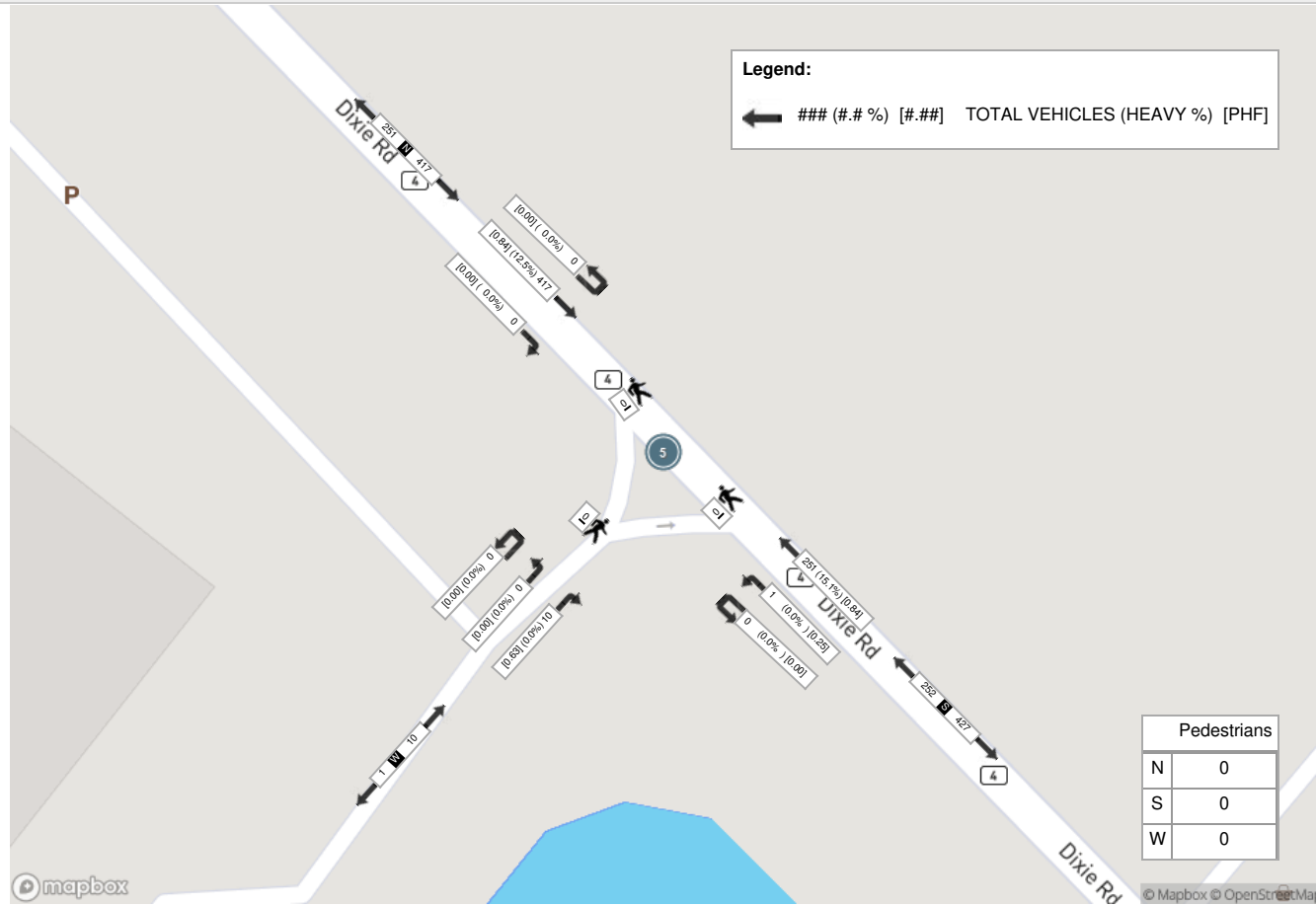
Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach 12424 DIXIE RD (UPS SOUTH ACCESS)					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
07:00:00	0	107	0	0	107	65	0	0	0	65	4	0	0	0	4	176
07:15:00	0	90	0	0	90	53	0	0	0	53	1	0	0	0	1	144
07:30:00	0	96	0	0	96	75	0	0	0	75	1	0	0	0	1	172
07:45:00	0	124	0	0	124	58	1	0	0	59	4	0	0	0	4	187
Grand Total	0	417	0	0	417	251	1	0	0	252	10	0	0	0	10	679
Approach%	0%	100%	0%		-	99.6%	0.4%	0%		-	100%	0%	0%		-	-
Totals %	0%	61.4%	0%		61.4%	37%	0.1%	0%		37.1%	1.5%	0%	0%		1.5%	-
PHF	0	0.84	0		0.84	0.84	0.25	0		0.84	0.63	0	0		0.63	-
Heavy	0	52	0		52	38	0	0		38	0	0	0		0	-
Heavy %	0%	12.5%	0%		12.5%	15.1%	0%	0%		15.1%	0%	0%	0%		0%	-
Lights	0	365	0		365	213	1	0		214	10	0	0		10	-
Lights %	0%	87.5%	0%		87.5%	84.9%	100%	0%		84.9%	100%	0%	0%		100%	-
Single-Unit Trucks	0	22	0		22	22	0	0		22	0	0	0		0	-
Single-Unit Trucks %	0%	5.3%	0%		5.3%	8.8%	0%	0%		8.7%	0%	0%	0%		0%	-
Buses	0	16	0		16	3	0	0		3	0	0	0		0	-
Buses %	0%	3.8%	0%		3.8%	1.2%	0%	0%		1.2%	0%	0%	0%		0%	-
Articulated Trucks	0	14	0		14	13	0	0		13	0	0	0		0	-
Articulated Trucks %	0%	3.4%	0%		3.4%	5.2%	0%	0%		5.2%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-



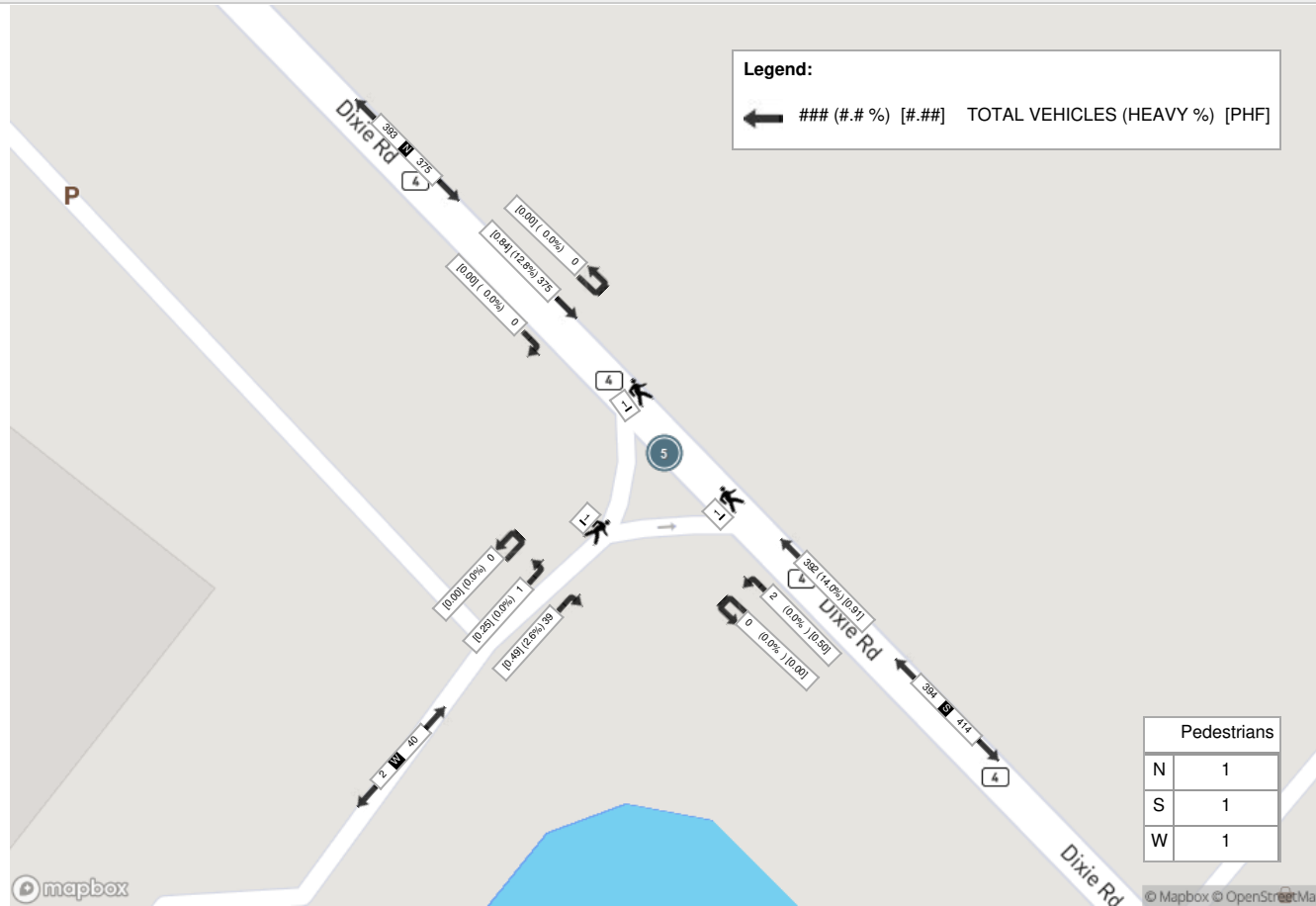
Peak Hour: 05:00 PM - 06:00 PM Weather: Few Clouds (7.51 °C)

Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach 12424 DIXIE RD (UPS SOUTH ACCESS)					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
17:00:00	0	93	0	0	93	108	0	0	0	108	2	0	0	0	2	203
17:15:00	0	71	0	0	71	106	1	0	0	107	6	0	0	0	6	184
17:30:00	0	99	0	0	99	97	1	0	0	98	11	0	0	1	11	208
17:45:00	0	112	0	1	112	81	0	0	1	81	20	1	0	0	21	214
Grand Total	0	375	0	1	375	392	2	0	1	394	39	1	0	1	40	809
Approach%	0%	100%	0%		-	99.5%	0.5%	0%		-	97.5%	2.5%	0%		-	-
Totals %	0%	46.4%	0%		46.4%	48.5%	0.2%	0%		48.7%	4.8%	0.1%	0%		4.9%	-
PHF	0	0.84	0		0.84	0.91	0.5	0		0.91	0.49	0.25	0		0.48	-
Heavy	0	48	0		48	55	0	0		55	1	0	0		1	-
Heavy %	0%	12.8%	0%		12.8%	14%	0%	0%		14%	2.6%	0%	0%		2.5%	-
Lights	0	327	0		327	337	2	0		339	38	1	0		39	-
Lights %	0%	87.2%	0%		87.2%	86%	100%	0%		86%	97.4%	100%	0%		97.5%	-
Single-Unit Trucks	0	22	0		22	35	0	0		35	1	0	0		1	-
Single-Unit Trucks %	0%	5.9%	0%		5.9%	8.9%	0%	0%		8.9%	2.6%	0%	0%		2.5%	-
Buses	0	0	0		0	0	0	0		0	0	0	0		0	-
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Articulated Trucks	0	26	0		26	20	0	0		20	0	0	0		0	-
Articulated Trucks %	0%	6.9%	0%		6.9%	5.1%	0%	0%		5.1%	0%	0%	0%		0%	-
Pedestrians	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-
Pedestrians%	-	-	-	33.3%	-	-	-	-	33.3%	-	-	-	-	33.3%	-	-

Peak Hour: 07:00 AM - 08:00 AM Weather: Broken Clouds (4.48 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Few Clouds (7.51 °C)





Turning Movement Count (6 . DIXIE RD & 12424 DIXIE ROAD (UPS NORTH ACCESS))

Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS MAIN INTERSECTION (12424 DIXIE RD)					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	1	101	0	0	102	57	6	0	0	63	6	1	0	0	7	172	
07:15:00	1	86	0	0	87	49	6	0	0	55	4	0	0	0	4	146	
07:30:00	1	96	0	0	97	64	6	0	0	70	1	0	0	0	1	168	
07:45:00	0	119	0	0	119	54	10	0	0	64	4	0	0	0	4	187	673
08:00:00	3	90	0	0	93	32	9	1	0	42	4	0	0	0	4	139	640
08:15:00	2	102	0	0	104	41	9	0	0	50	2	0	0	0	2	156	650
08:30:00	3	78	0	0	81	38	9	0	0	47	4	0	0	0	4	132	614
08:45:00	6	62	0	0	68	44	15	1	0	60	4	2	0	0	6	134	561
BREAK																	
16:00:00	1	84	0	0	85	110	6	0	0	116	7	0	0	0	7	208	
16:15:00	0	81	0	0	81	94	8	0	0	102	6	1	0	0	7	190	
16:30:00	2	70	0	0	72	101	9	0	0	110	7	0	0	0	7	189	
16:45:00	2	84	0	0	86	94	13	0	0	107	3	0	0	0	3	196	783
17:00:00	1	89	0	0	90	87	20	0	0	107	4	1	0	0	5	202	777
17:15:00	1	67	0	0	68	91	16	0	0	107	3	0	0	1	3	178	765
17:30:00	1	88	0	0	89	70	23	0	0	93	13	0	0	0	13	195	771
17:45:00	1	102	0	0	103	55	26	0	0	81	9	1	0	0	10	194	769
Grand Total	26	1399	0	0	1425	1081	191	2	0	1274	81	6	0	1	87	2786	-
Approach%	1.8%	98.2%	0%		-	84.9%	15%	0.2%		-	93.1%	6.9%	0%		-	-	-
Totals %	0.9%	50.2%	0%		51.1%	38.8%	6.9%	0.1%		45.7%	2.9%	0.2%	0%		3.1%	-	-
Heavy	5	105	0		-	58	87	0		-	57	1	0		-	-	-
Heavy %	19.2%	7.5%	0%		-	5.4%	45.5%	0%		-	70.4%	16.7%	0%		-	-	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	-	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	-	-



Peak Hour: 07:00 AM - 08:00 AM Weather: Broken Clouds (4.48 °C)

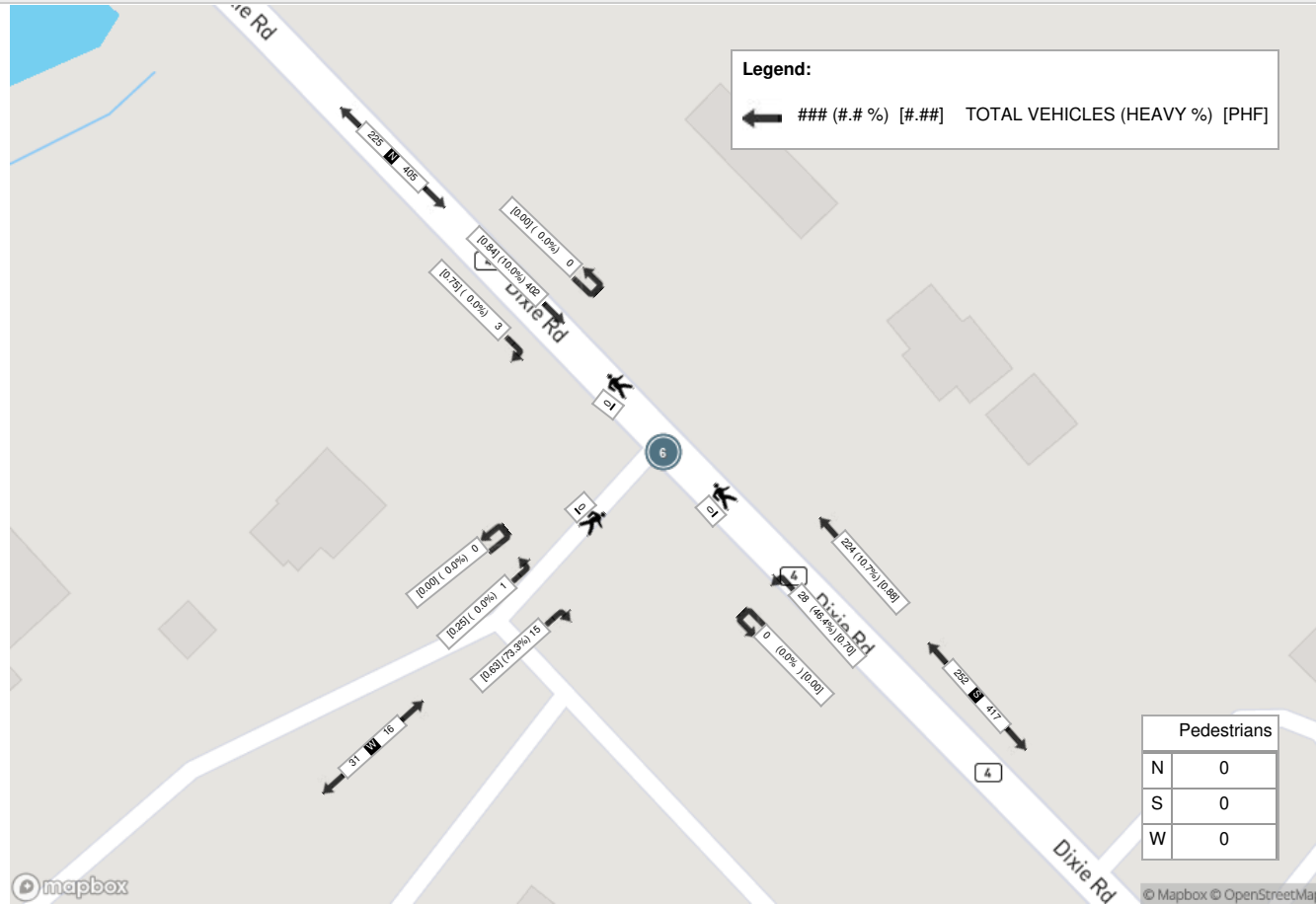
Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS MAIN INTERSECTION (12424 DIXIE RD)					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
07:00:00	1	101	0	0	102	57	6	0	0	63	6	1	0	0	7	172
07:15:00	1	86	0	0	87	49	6	0	0	55	4	0	0	0	4	146
07:30:00	1	96	0	0	97	64	6	0	0	70	1	0	0	0	1	168
07:45:00	0	119	0	0	119	54	10	0	0	64	4	0	0	0	4	187
Grand Total	3	402	0	0	405	224	28	0	0	252	15	1	0	0	16	673
Approach%	0.7%	99.3%	0%		-	88.9%	11.1%	0%		-	93.8%	6.3%	0%		-	-
Totals %	0.4%	59.7%	0%		60.2%	33.3%	4.2%	0%		37.4%	2.2%	0.1%	0%		2.4%	-
PHF	0.75	0.84	0		0.85	0.88	0.7	0		0.9	0.63	0.25	0		0.57	-
Heavy	0	40	0		40	24	13	0		37	11	0	0		11	-
Heavy %	0%	10%	0%		9.9%	10.7%	46.4%	0%		14.7%	73.3%	0%	0%		68.8%	-
Lights	3	362	0		365	200	15	0		215	4	1	0		5	-
Lights %	100%	90%	0%		90.1%	89.3%	53.6%	0%		85.3%	26.7%	100%	0%		31.3%	-
Single-Unit Trucks	0	18	0		18	18	3	0		21	5	0	0		5	-
Single-Unit Trucks %	0%	4.5%	0%		4.4%	8%	10.7%	0%		8.3%	33.3%	0%	0%		31.3%	-
Buses	0	17	0		17	3	0	0		3	0	0	0		0	-
Buses %	0%	4.2%	0%		4.2%	1.3%	0%	0%		1.2%	0%	0%	0%		0%	-
Articulated Trucks	0	5	0		5	3	10	0		13	6	0	0		6	-
Articulated Trucks %	0%	1.2%	0%		1.2%	1.3%	35.7%	0%		5.2%	40%	0%	0%		37.5%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-



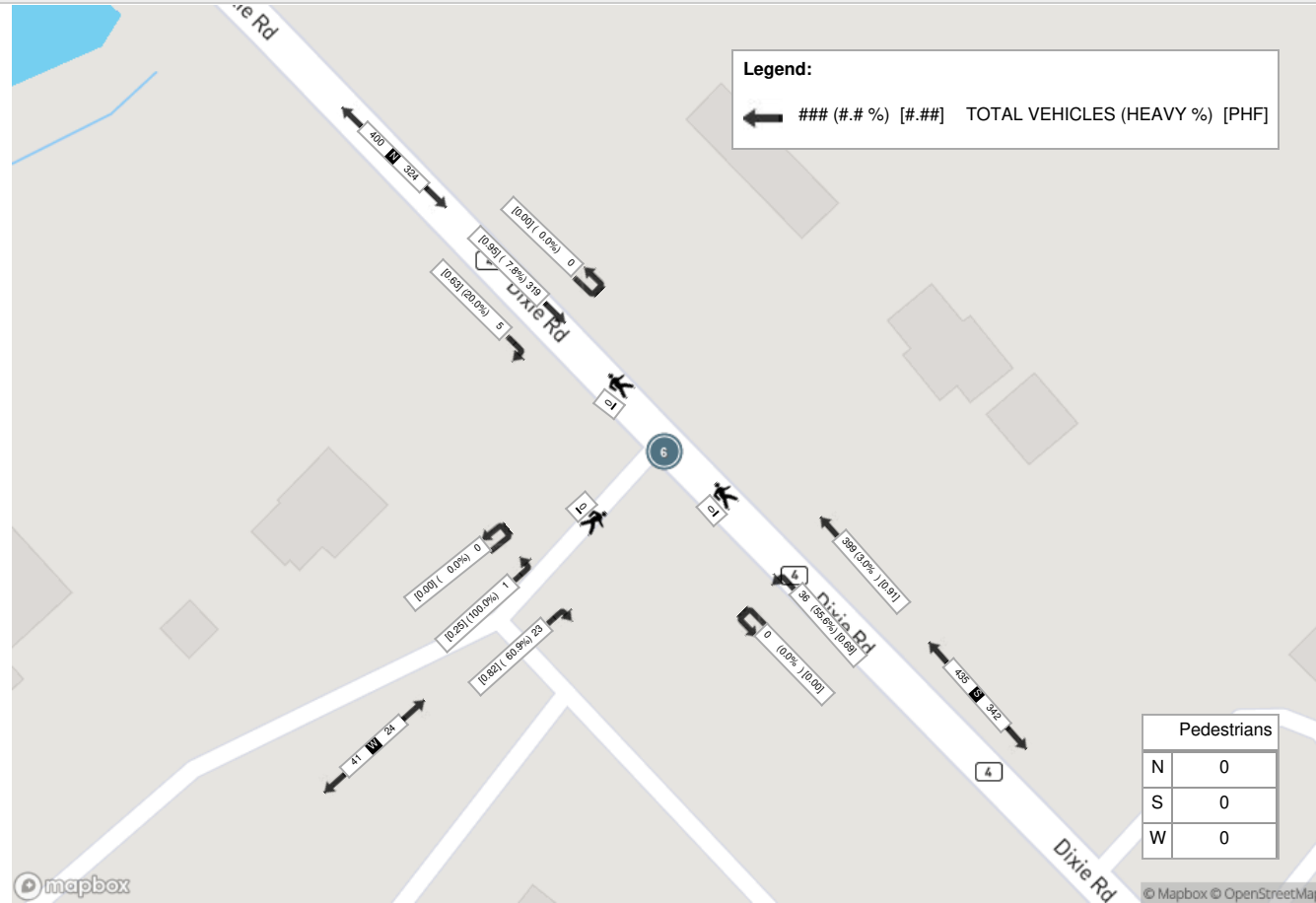
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS MAIN INTERSECTION (12424 DIXIE RD)					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
16:00:00	1	84	0	0	85	110	6	0	0	116	7	0	0	0	7	208
16:15:00	0	81	0	0	81	94	8	0	0	102	6	1	0	0	7	190
16:30:00	2	70	0	0	72	101	9	0	0	110	7	0	0	0	7	189
16:45:00	2	84	0	0	86	94	13	0	0	107	3	0	0	0	3	196
Grand Total	5	319	0	0	324	399	36	0	0	435	23	1	0	0	24	783
Approach%	1.5%	98.5%	0%		-	91.7%	8.3%	0%		-	95.8%	4.2%	0%		-	-
Totals %	0.6%	40.7%	0%		41.4%	51%	4.6%	0%		55.6%	2.9%	0.1%	0%		3.1%	-
PHF	0.63	0.95	0		0.94	0.91	0.69	0		0.94	0.82	0.25	0		0.86	-
Heavy	1	25	0		26	12	20	0		32	14	1	0		15	-
Heavy %	20%	7.8%	0%		8%	3%	55.6%	0%		7.4%	60.9%	100%	0%		62.5%	-
Lights	4	294	0		298	387	16	0		403	9	0	0		9	-
Lights %	80%	92.2%	0%		92%	97%	44.4%	0%		92.6%	39.1%	0%	0%		37.5%	-
Single-Unit Trucks	1	17	0		18	8	6	0		14	7	0	0		7	-
Single-Unit Trucks %	20%	5.3%	0%		5.6%	2%	16.7%	0%		3.2%	30.4%	0%	0%		29.2%	-
Buses	0	3	0		3	1	0	0		1	0	0	0		0	-
Buses %	0%	0.9%	0%		0.9%	0.3%	0%	0%		0.2%	0%	0%	0%		0%	-
Articulated Trucks	0	5	0		5	3	14	0		17	7	1	0		8	-
Articulated Trucks %	0%	1.6%	0%		1.5%	0.8%	38.9%	0%		3.9%	30.4%	100%	0%		33.3%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

Peak Hour: 07:00 AM - 08:00 AM Weather: Broken Clouds (4.48 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)





Turning Movement Count (2 . DIXIE RD & ABBOTSDIE WAY)

Start Time	N Approach DIXIE RD						E Approach SPOKANE ST						S Approach						W Approach						Int. Total (15 min)	Int. Total (1 hr)	
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total			
07:00:00	1	109	0	0	0	110	0	0	0	0	1	0	4	72	10	0	0	86	25	0	1	0	0	26	222		
07:15:00	0	92	0	0	0	92	0	0	0	0	0	0	1	52	18	0	0	71	7	0	0	0	2	7	170		
07:30:00	2	106	0	0	0	108	0	0	1	0	0	1	1	85	15	0	0	101	7	0	1	0	0	8	218		
07:45:00	6	138	0	0	0	144	0	0	0	0	1	0	0	59	19	0	0	78	4	0	0	0	0	4	226	836	
08:00:00	3	113	0	0	0	116	0	0	0	0	0	0	0	54	14	0	0	68	10	0	0	0	0	10	194	808	
08:15:00	3	137	0	0	0	140	0	0	0	0	0	0	0	63	10	0	0	73	8	0	1	0	0	9	222	860	
08:30:00	3	109	0	0	0	112	0	0	0	0	2	0	0	89	16	0	0	105	8	0	2	0	0	10	227	869	
08:45:00	3	116	0	0	0	119	1	0	0	0	2	1	1	87	23	0	0	111	9	0	0	0	0	9	240	883	
BREAK																											
16:00:00	0	112	0	0	0	112	0	0	1	0	2	1	0	118	3	0	0	121	11	0	1	0	0	12	246		
16:15:00	0	98	0	0	0	98	0	0	1	0	0	1	0	98	7	0	0	105	10	0	2	0	0	12	216		
16:30:00	1	80	0	0	0	81	0	0	0	0	0	0	0	115	2	0	0	117	24	0	6	0	0	30	228		
16:45:00	1	92	0	0	0	93	2	0	4	0	0	6	0	106	1	0	0	107	4	0	1	0	5	5	211	901	
17:00:00	0	98	0	0	0	98	4	0	5	0	0	9	0	111	0	0	0	111	8	0	0	0	3	8	226	881	
17:15:00	0	82	0	0	0	82	1	0	3	0	1	4	0	106	4	0	0	110	7	0	1	0	1	8	204	869	
17:30:00	0	100	0	0	0	100	1	0	3	0	2	4	0	106	5	0	0	111	11	0	0	0	8	11	226	867	
17:45:00	1	133	0	0	0	134	0	0	0	0	3	0	0	92	3	0	0	95	6	0	0	0	8	6	235	891	
Grand Total	24	1715	0	0	0	1739	9	0	18	0	14	27	7	1413	150	0	0	1570	159	0	16	0	27	175	3511	-	
Approach%	1.4%	98.6%	0%	0%		-	33.3%	0%	66.7%	0%		-	0.4%	90%	9.6%	0%		-	90.9%	0%	9.1%	0%		-	-	-	
Totals %	0.7%	48.8%	0%	0%		49.5%	0.3%	0%	0.5%	0%		0.8%	0.2%	40.2%	4.3%	0%		44.7%	4.5%	0%	0.5%	0%		5%	-	-	
Heavy	2	317	0	0		-	0	0	0	0		-	1	145	25	0		-	24	0	2	0		-	-	-	
Heavy %	8.3%	18.5%	0%	0%		-	0%	0%	0%	0%		-	14.3%	10.3%	16.7%	0%		-	15.1%	0%	12.5%	0%		-	-	-	
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	



Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (4.48 °C)

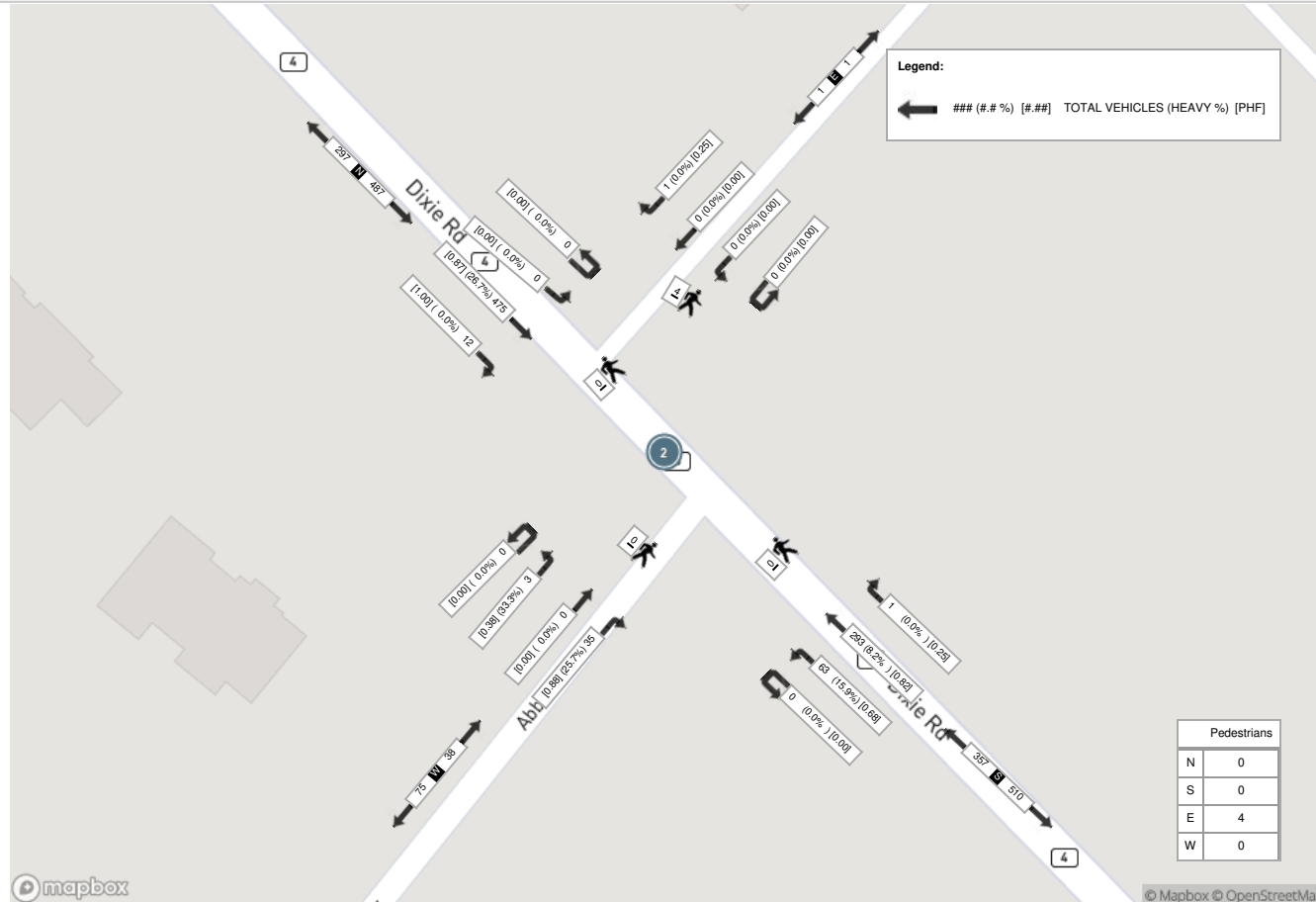
Start Time	N Approach DIXIE RD						E Approach SPOKANE ST						S Approach						W Approach						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	3	113	0	0	0	116	0	0	0	0	0	0	0	54	14	0	0	68	10	0	0	0	0	10	194
08:15:00	3	137	0	0	0	140	0	0	0	0	0	0	0	63	10	0	0	73	8	0	1	0	0	9	222
08:30:00	3	109	0	0	0	112	0	0	0	0	2	0	0	89	16	0	0	105	8	0	2	0	0	10	227
08:45:00	3	116	0	0	0	119	1	0	0	0	2	1	1	87	23	0	0	111	9	0	0	0	0	9	240
Grand Total	12	475	0	0	0	487	1	0	0	0	4	1	1	293	63	0	0	357	35	0	3	0	0	38	883
Approach%	2.5%	97.5%	0%	0%		-	100%	0%	0%	0%		-	0.3%	82.1%	17.6%	0%		-	92.1%	0%	7.9%	0%		-	-
Totals %	1.4%	53.8%	0%	0%		55.2%	0.1%	0%	0%	0%		0.1%	0.1%	33.2%	7.1%	0%		40.4%	4%	0%	0.3%	0%		4.3%	-
PHF	1	0.87	0	0		0.87	0.25	0	0	0		0.25	0.25	0.82	0.68	0		0.8	0.88	0	0.38	0		0.95	-
Heavy	0	127	0	0		127	0	0	0	0		0	0	24	10	0		34	9	0	1	0		10	-
Heavy %	0%	26.7%	0%	0%		26.1%	0%	0%	0%	0%		0%	0%	8.2%	15.9%	0%		9.5%	25.7%	0%	33.3%	0%		26.3%	-
Lights	12	348	0	0		360	1	0	0	0		1	1	269	53	0		323	26	0	2	0		28	-
Lights %	100%	73.3%	0%	0%		73.9%	100%	0%	0%	0%		100%	100%	91.8%	84.1%	0%		90.5%	74.3%	0%	66.7%	0%		73.7%	-
Single-Unit Trucks	0	114	0	0		114	0	0	0	0		0	0	12	7	0		19	6	0	1	0		7	-
Single-Unit Trucks %	0%	24%	0%	0%		23.4%	0%	0%	0%	0%		0%	0%	4.1%	11.1%	0%		5.3%	17.1%	0%	33.3%	0%		18.4%	-
Buses	0	1	0	0		1	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	-
Buses %	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.6%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	12	0	0		12	0	0	0	0		0	0	10	3	0		13	3	0	0	0		3	-
Articulated Trucks %	0%	2.5%	0%	0%		2.5%	0%	0%	0%	0%		0%	0%	3.4%	4.8%	0%		3.6%	8.6%	0%	0%	0%		7.9%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	-	100%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-



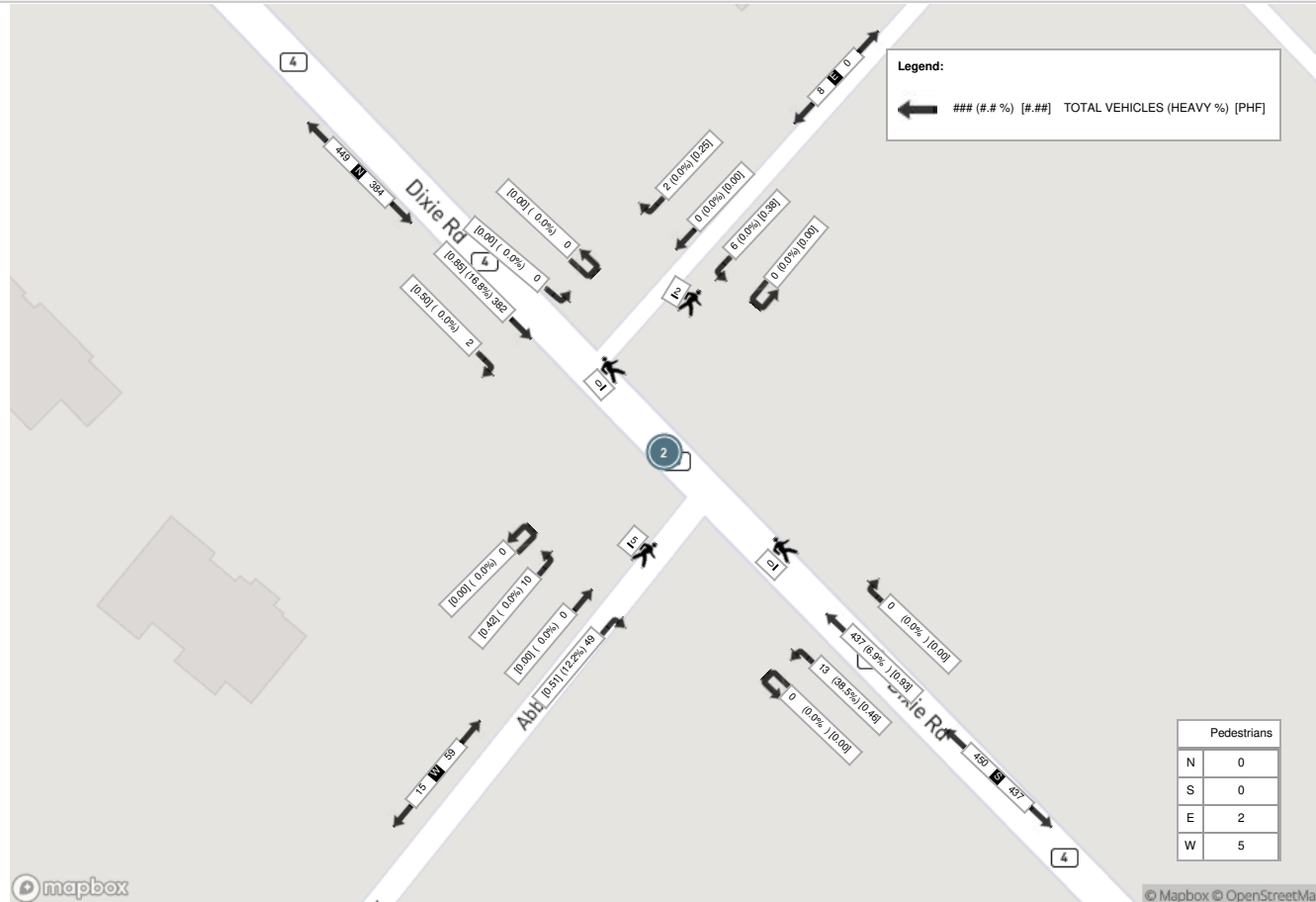
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

Start Time	N Approach DIXIE RD						E Approach SPOKANE ST						S Approach						W Approach						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	0	112	0	0	0	112	0	0	1	0	2	1	0	118	3	0	0	121	11	0	1	0	0	12	246
16:15:00	0	98	0	0	0	98	0	0	1	0	0	1	0	98	7	0	0	105	10	0	2	0	0	12	216
16:30:00	1	80	0	0	0	81	0	0	0	0	0	0	0	115	2	0	0	117	24	0	6	0	0	30	228
16:45:00	1	92	0	0	0	93	2	0	4	0	0	6	0	106	1	0	0	107	4	0	1	0	5	5	211
Grand Total	2	382	0	0	0	384	2	0	6	0	2	8	0	437	13	0	0	450	49	0	10	0	5	59	901
Approach%	0.5%	99.5%	0%	0%		-	25%	0%	75%	0%		-	0%	97.1%	2.9%	0%		-	83.1%	0%	16.9%	0%		-	-
Totals %	0.2%	42.4%	0%	0%		42.6%	0.2%	0%	0.7%	0%		0.9%	0%	48.5%	1.4%	0%		49.9%	5.4%	0%	1.1%	0%		6.5%	-
PHF	0.5	0.85	0	0		0.86	0.25	0	0.38	0		0.33	0	0.93	0.46	0		0.93	0.51	0	0.42	0		0.49	-
Heavy	0	64	0	0		64	0	0	0	0		0	0	30	5	0		35	6	0	0	0		6	-
Heavy %	0%	16.8%	0%	0%		16.7%	0%	0%	0%	0%		0%	0%	6.9%	38.5%	0%		7.8%	12.2%	0%	0%	0%		10.2%	-
Lights	2	318	0	0		320	2	0	6	0		8	0	407	8	0		415	43	0	10	0		53	-
Lights %	100%	83.2%	0%	0%		83.3%	100%	0%	100%	0%		100%	0%	93.1%	61.5%	0%		92.2%	87.8%	0%	100%	0%		89.8%	-
Single-Unit Trucks	0	49	0	0		49	0	0	0	0		0	0	10	3	0		13	4	0	0	0		4	-
Single-Unit Trucks %	0%	12.8%	0%	0%		12.8%	0%	0%	0%	0%		0%	0%	2.3%	23.1%	0%		2.9%	8.2%	0%	0%	0%		6.8%	-
Buses	0	4	0	0		4	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	-
Buses %	0%	1%	0%	0%		1%	0%	0%	0%	0%		0%	0%	0.5%	0%	0%		0.4%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	11	0	0		11	0	0	0	0		0	0	18	2	0		20	2	0	0	0		2	-
Articulated Trucks %	0%	2.9%	0%	0%		2.9%	0%	0%	0%	0%		0%	0%	4.1%	15.4%	0%		4.4%	4.1%	0%	0%	0%		3.4%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	5	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	-	28.6%	-	-	-	-	-	0%	-	-	-	-	-	71.4%	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (4.48 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)





Turning Movement Count (1 . DIXIE RD & MAYFIELD RD) CustID: 00427526

Start Time	N Approach DIXIE RD						E Approach MAYFIELD RD						S Approach DIXIE RD						W Approach MAYFIELD RD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	56	48	20	0	1	124	5	132	10	0	1	147	9	9	11	0	2	29	35	279	82	0	3	396	696	
07:15:00	54	47	10	0	1	111	8	180	20	0	6	208	9	18	23	0	0	50	47	305	57	0	0	409	778	
07:30:00	46	45	13	0	0	104	10	144	14	0	0	168	10	21	24	0	3	55	67	417	80	0	3	564	891	
07:45:00	52	73	18	0	1	143	9	222	15	0	3	246	13	30	33	0	1	76	79	471	62	0	0	612	1077	3442
08:00:00	53	60	12	0	0	125	9	197	18	0	0	224	10	30	30	1	2	71	64	403	59	0	1	526	946	3692
08:15:00	64	54	16	0	0	134	11	181	15	0	0	207	10	31	45	0	0	86	68	321	61	0	1	450	877	3791
08:30:00	73	49	12	0	1	134	24	152	10	1	2	187	13	32	44	0	0	89	79	331	70	0	0	480	890	3790
08:45:00	60	46	12	0	0	118	14	143	10	0	1	167	17	39	36	0	1	92	59	316	75	0	0	450	827	3540
BREAK																										
16:00:00	77	22	17	0	0	116	10	291	14	0	3	315	16	57	48	0	0	121	49	296	65	0	0	410	962	
16:15:00	72	32	14	0	0	118	13	280	14	0	0	307	18	36	61	0	0	115	43	300	63	0	0	406	946	
16:30:00	67	24	12	0	1	103	8	295	14	0	1	317	14	51	47	1	7	113	49	331	67	0	4	447	980	
16:45:00	79	20	5	0	0	104	11	311	7	1	0	330	14	46	55	0	2	115	40	279	49	1	2	369	918	3806
17:00:00	71	29	6	0	0	106	12	313	16	0	0	341	18	37	54	0	3	109	36	304	56	0	3	396	952	3796
17:15:00	72	19	11	0	1	102	9	299	13	1	2	322	13	46	60	0	3	119	53	273	63	0	2	389	932	3782
17:30:00	70	27	12	0	2	109	5	305	11	0	9	321	24	33	55	0	11	112	49	292	70	0	9	411	953	3755
17:45:00	91	35	15	0	0	141	14	322	14	0	2	350	13	39	38	0	2	90	47	250	40	1	2	338	919	3756
Grand Total	1057	630	205	0	8	1892	172	3767	215	3	30	4157	221	555	664	2	37	1442	864	5168	1019	2	30	7053	14544	-
Approach%	55.9%	33.3%	10.8%	0%	-	-	4.1%	90.6%	5.2%	0.1%	-	-	15.3%	38.5%	46%	0.1%	-	-	12.3%	73.3%	14.4%	0%	-	-	-	-
Totals %	7.3%	4.3%	1.4%	0%	-	13%	1.2%	25.9%	1.5%	0%	-	28.6%	1.5%	3.8%	4.6%	0%	-	9.9%	5.9%	35.5%	7%	0%	-	48.5%	-	-
Heavy	214	63	64	0	-	-	32	406	22	0	-	-	45	44	23	0	-	-	23	485	248	0	-	-	-	-
Heavy %	20.2%	10%	31.2%	0%	-	-	18.6%	10.8%	10.2%	0%	-	-	20.4%	7.9%	3.5%	0%	-	-	2.7%	9.4%	24.3%	0%	-	-	-	-
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (4.48 °C)

Start Time	N Approach DIXIE RD						E Approach MAYFIELD RD						S Approach DIXIE RD						W Approach MAYFIELD RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
07:30:00	46	45	13	0	0	104	10	144	14	0	0	168	10	21	24	0	3	55	67	417	80	0	3	564	891
07:45:00	52	73	18	0	1	143	9	222	15	0	3	246	13	30	33	0	1	76	79	471	62	0	0	612	1077
08:00:00	53	60	12	0	0	125	9	197	18	0	0	224	10	30	30	1	2	71	64	403	59	0	1	526	946
08:15:00	64	54	16	0	0	134	11	181	15	0	0	207	10	31	45	0	0	86	68	321	61	0	1	450	877
Grand Total	215	232	59	0	1	506	39	744	62	0	3	845	43	112	132	1	6	288	278	1612	262	0	5	2152	3791
Approach%	42.5%	45.8%	11.7%	0%		-	4.6%	88%	7.3%	0%		-	14.9%	38.9%	45.8%	0.3%		-	12.9%	74.9%	12.2%	0%		-	-
Totals %	5.7%	6.1%	1.6%	0%		13.3%	1%	19.6%	1.6%	0%		22.3%	1.1%	3%	3.5%	0%		7.6%	7.3%	42.5%	6.9%	0%		56.8%	-
PHF	0.84	0.79	0.82	0		0.88	0.89	0.84	0.86	0		0.86	0.83	0.9	0.73	0.25		0.84	0.88	0.86	0.82	0		0.88	-
Heavy	61	35	24	0		120	8	118	10	0		136	11	22	10	0		43	3	130	93	0		226	-
Heavy %	28.4%	15.1%	40.7%	0%		23.7%	20.5%	15.9%	16.1%	0%		16.1%	25.6%	19.6%	7.6%	0%		14.9%	1.1%	8.1%	35.5%	0%		10.5%	-
Lights	154	197	35	0		386	31	626	52	0		709	32	90	122	1		245	275	1482	169	0		1926	-
Lights %	71.6%	84.9%	59.3%	0%		76.3%	79.5%	84.1%	83.9%	0%		83.9%	74.4%	80.4%	92.4%	100%		85.1%	98.9%	91.9%	64.5%	0%		89.5%	-
Single-Unit Trucks	45	28	12	0		85	6	31	5	0		42	1	20	2	0		23	2	47	84	0		133	-
Single-Unit Trucks %	20.9%	12.1%	20.3%	0%		16.8%	15.4%	4.2%	8.1%	0%		5%	2.3%	17.9%	1.5%	0%		8%	0.7%	2.9%	32.1%	0%		6.2%	-
Buses	0	5	10	0		15	1	20	3	0		24	9	2	8	0		19	1	28	0	0		29	-
Buses %	0%	2.2%	16.9%	0%		3%	2.6%	2.7%	4.8%	0%		2.8%	20.9%	1.8%	6.1%	0%		6.6%	0.4%	1.7%	0%	0%		1.3%	-
Articulated Trucks	16	2	2	0		20	1	67	2	0		70	1	0	0	0		1	0	55	9	0		64	-
Articulated Trucks %	7.4%	0.9%	3.4%	0%		4%	2.6%	9%	3.2%	0%		8.3%	2.3%	0%	0%	0%		0.3%	0%	3.4%	3.4%	0%		3%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	6	-	-	-	-	-	5	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	-	13.3%	-	-	-	-	-	40%	-	-	-	-	-	33.3%	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	6.7%	-	-	-	-	-	6.7%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-



Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

Start Time	N Approach DIXIE RD						E Approach MAYFIELD RD						S Approach DIXIE RD						W Approach MAYFIELD RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	77	22	17	0	0	116	10	291	14	0	3	315	16	57	48	0	0	121	49	296	65	0	0	410	962
16:15:00	72	32	14	0	0	118	13	280	14	0	0	307	18	36	61	0	0	115	43	300	63	0	0	406	946
16:30:00	67	24	12	0	1	103	8	295	14	0	1	317	14	51	47	1	7	113	49	331	67	0	4	447	980
16:45:00	79	20	5	0	0	104	11	311	7	1	0	330	14	46	55	0	2	115	40	279	49	1	2	369	918
Grand Total	295	98	48	0	1	441	42	1177	49	1	4	1269	62	190	211	1	9	464	181	1206	244	1	6	1632	3806
Approach%	66.9%	22.2%	10.9%	0%		-	3.3%	92.8%	3.9%	0.1%		-	13.4%	40.9%	45.5%	0.2%		-	11.1%	73.9%	15%	0.1%		-	-
Totals %	7.8%	2.6%	1.3%	0%		11.6%	1.1%	30.9%	1.3%	0%		33.3%	1.6%	5%	5.5%	0%		12.2%	4.8%	31.7%	6.4%	0%		42.9%	-
PHF	0.93	0.77	0.71	0		0.93	0.81	0.95	0.88	0.25		0.96	0.86	0.83	0.86	0.25		0.96	0.92	0.91	0.91	0.25		0.91	-
Heavy	48	8	13	0		69	8	86	1	0		95	14	3	7	0		24	11	155	41	0		207	-
Heavy %	16.3%	8.2%	27.1%	0%		15.6%	19%	7.3%	2%	0%		7.5%	22.6%	1.6%	3.3%	0%		5.2%	6.1%	12.9%	16.8%	0%		12.7%	-
Lights	247	90	35	0		372	34	1091	48	1		1174	48	187	204	1		440	170	1051	203	1		1425	-
Lights %	83.7%	91.8%	72.9%	0%		84.4%	81%	92.7%	98%	100%		92.5%	77.4%	98.4%	96.7%	100%		94.8%	93.9%	87.1%	83.2%	100%		87.3%	-
Single-Unit Trucks	35	5	13	0		53	2	41	0	0		43	3	2	0	0		5	1	61	26	0		88	-
Single-Unit Trucks %	11.9%	5.1%	27.1%	0%		12%	4.8%	3.5%	0%	0%		3.4%	4.8%	1.1%	0%	0%		1.1%	0.6%	5.1%	10.7%	0%		5.4%	-
Buses	2	1	0	0		3	1	7	1	0		9	8	1	6	0		15	10	31	0	0		41	-
Buses %	0.7%	1%	0%	0%		0.7%	2.4%	0.6%	2%	0%		0.7%	12.9%	0.5%	2.8%	0%		3.2%	5.5%	2.6%	0%	0%		2.5%	-
Articulated Trucks	11	2	0	0		13	5	38	0	0		43	3	0	1	0		4	0	63	15	0		78	-
Articulated Trucks %	3.7%	2%	0%	0%		2.9%	11.9%	3.2%	0%	0%		3.4%	4.8%	0%	0.5%	0%		0.9%	0%	5.2%	6.1%	0%		4.8%	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	8	-	-	-	-	-	6	-	-
Pedestrians%	-	-	-	-	5%	-	-	-	-	-	20%	-	-	-	-	-	40%	-	-	-	-	-	30%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	5%	-	-	-	-	-	0%	-	-

Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (4.48 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)





Turning Movement Count (7 . DIXIE RD & OLD SCHOOL RD) CustID: 00430603

Start Time	N Approach DIXIE RD						E Approach OLD SCHOOL RD						S Approach DIXIE RD						W Approach OLD SCHOOL RD						Int. Total (15 min)	Int. Total (1 hr)	
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total			
07:00:00	5	88	0	0	0	93	0	18	6	0	0	24	8	54	2	0	0	64	5	52	10	0	0	67	248		
07:15:00	6	78	0	0	0	84	0	19	7	0	0	26	6	39	1	0	0	46	5	63	9	0	0	77	233		
07:30:00	12	92	7	0	0	111	0	30	5	0	0	35	6	49	3	0	0	58	13	77	5	0	0	95	299		
07:45:00	16	91	11	0	0	118	2	27	16	0	0	45	4	33	6	0	0	43	8	103	11	0	1	122	328	1108	
08:00:00	18	81	1	0	0	100	6	39	5	0	0	50	5	22	0	0	0	27	5	58	9	0	0	72	249	1109	
08:15:00	14	82	0	0	0	96	2	35	4	0	0	41	4	41	3	0	0	48	10	72	13	0	0	95	280	1156	
08:30:00	11	60	1	0	0	72	1	16	3	0	0	20	3	33	2	0	0	38	12	70	4	0	0	86	216	1073	
08:45:00	6	59	3	0	0	68	0	15	6	0	0	21	2	43	2	0	0	47	6	64	4	0	0	74	210	955	
BREAK																											
16:00:00	11	54	1	0	0	66	1	80	16	0	0	97	2	91	13	0	1	106	4	28	7	0	1	39	308		
16:15:00	6	63	2	0	0	71	6	97	16	0	0	119	8	85	7	0	0	100	4	27	8	0	0	39	329		
16:30:00	7	54	3	0	0	64	0	65	11	0	0	76	12	87	7	0	0	106	6	37	9	0	0	52	298		
16:45:00	8	69	1	0	0	78	1	78	12	0	0	91	3	80	6	0	0	89	5	39	9	0	0	53	311	1246	
17:00:00	11	73	1	0	0	85	6	82	10	0	0	98	5	76	5	0	0	86	3	32	6	0	0	41	310	1248	
17:15:00	8	56	0	0	0	64	5	87	10	0	0	102	6	77	6	0	0	89	3	33	7	0	0	43	298	1217	
17:30:00	8	68	1	0	0	77	0	70	14	0	0	84	8	57	7	0	0	72	4	47	4	0	0	55	288	1207	
17:45:00	11	88	1	0	0	100	2	64	12	0	0	78	5	45	8	0	0	58	6	36	2	0	0	44	280	1176	
Grand Total	158	1156	33	0	0	1347	32	822	153	0	0	1007	87	912	78	0	1	1077	99	838	117	0	2	1054	4485	-	
Approach%	11.7%	85.8%	2.4%	0%		-	3.2%	81.6%	15.2%	0%		-	8.1%	84.7%	7.2%	0%		-	9.4%	79.5%	11.1%	0%		-	-	-	
Totals %	3.5%	25.8%	0.7%	0%		30%	0.7%	18.3%	3.4%	0%		22.5%	1.9%	20.3%	1.7%	0%		24%	2.2%	18.7%	2.6%	0%		23.5%	-	-	
Heavy	9	107	4	0		-	3	25	1	0		-	12	48	2	0		-	12	16	7	0		-	-	-	
Heavy %	5.7%	9.3%	12.1%	0%		-	9.4%	3%	0.7%	0%		-	13.8%	5.3%	2.6%	0%		-	12.1%	1.9%	6%	0%		-	-	-	
Bicycles	0	0	0	0		-	0	1	0	0		-	0	0	0	0		-	0	0	0	0		-	-	-	
Bicycle %	0%	0%	0%	0%		-	0%	0.1%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	-	-	



Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (4.48 °C)

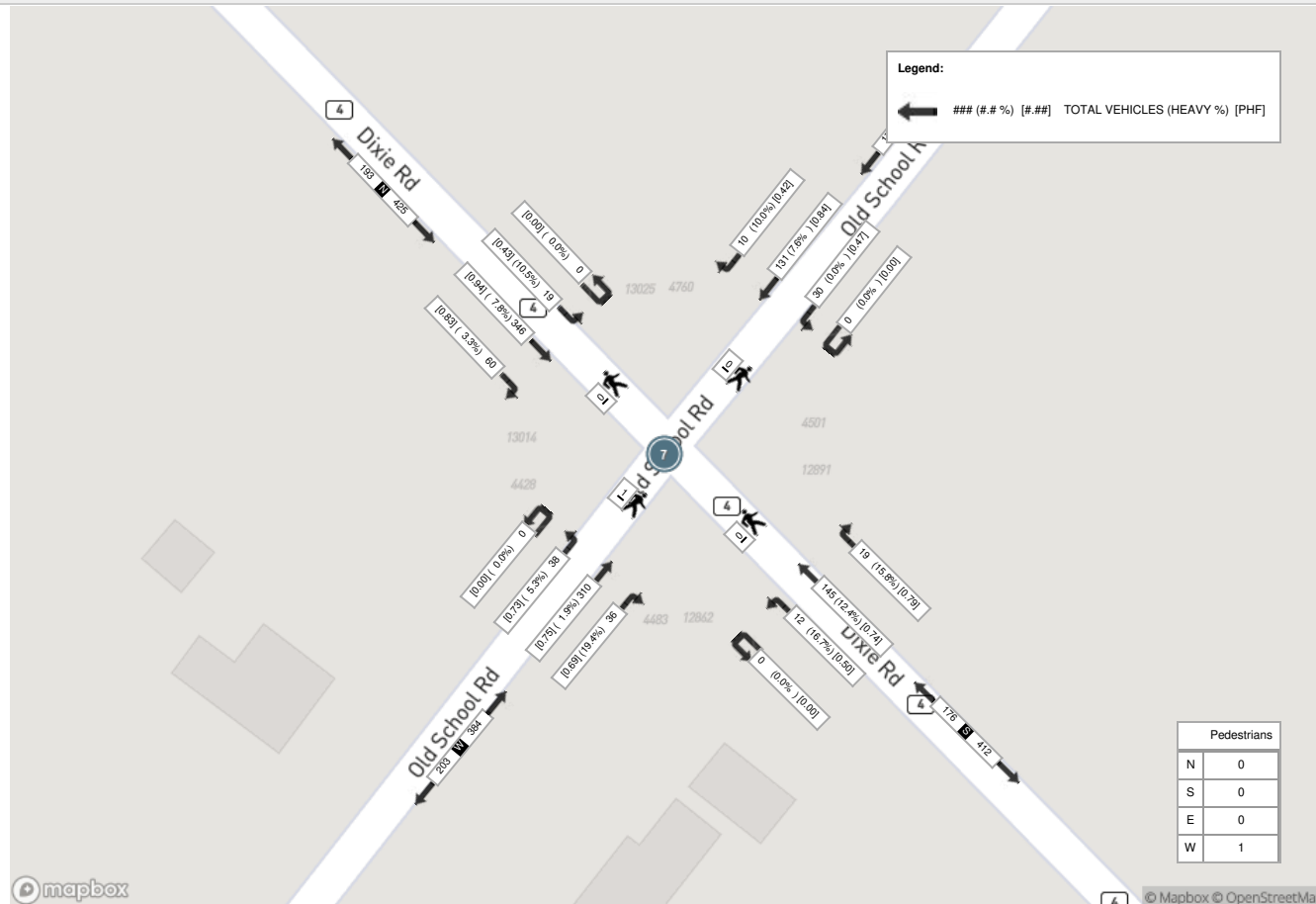
Start Time	N Approach DIXIE RD						E Approach OLD SCHOOL RD						S Approach DIXIE RD						W Approach OLD SCHOOL RD						Int. Total (15 min)	
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
07:30:00	12	92	7	0	0	111	0	30	5	0	0	35	6	49	3	0	0	58	13	77	5	0	0	95	299	
07:45:00	16	91	11	0	0	118	2	27	16	0	0	45	4	33	6	0	0	43	8	103	11	0	1	122	328	
08:00:00	18	81	1	0	0	100	6	39	5	0	0	50	5	22	0	0	0	27	5	58	9	0	0	72	249	
08:15:00	14	82	0	0	0	96	2	35	4	0	0	41	4	41	3	0	0	48	10	72	13	0	0	95	280	
Grand Total	60	346	19	0	0	425	10	131	30	0	0	171	19	145	12	0	0	176	36	310	38	0	1	384	1156	
Approach%	14.1%	81.4%	4.5%	0%		-	5.8%	76.6%	17.5%	0%		-	10.8%	82.4%	6.8%	0%		-	9.4%	80.7%	9.9%	0%		-	-	
Totals %	5.2%	29.9%	1.6%	0%		36.8%	0.9%	11.3%	2.6%	0%		14.8%	1.6%	12.5%	1%	0%		15.2%	3.1%	26.8%	3.3%	0%		33.2%	-	
PHF	0.83	0.94	0.43	0		0.9	0.42	0.84	0.47	0		0.86	0.79	0.74	0.5	0		0.76	0.69	0.75	0.73	0		0.79	-	
Heavy	2	27	2	0		31	1	10	0	0		11	3	18	2	0		23	7	6	2	0		15	-	
Heavy %	3.3%	7.8%	10.5%	0%		7.3%	10%	7.6%	0%	0%		6.4%	15.8%	12.4%	16.7%	0%		13.1%	19.4%	1.9%	5.3%	0%		3.9%	-	
Lights	58	319	17	0		394	9	121	30	0		160	16	127	10	0		153	29	304	36	0		369	-	
Lights %	96.7%	92.2%	89.5%	0%		92.7%	90%	92.4%	100%	0%		93.6%	84.2%	87.6%	83.3%	0%		86.9%	80.6%	98.1%	94.7%	0%		96.1%	-	
Single-Unit Trucks	0	12	0	0		12	1	2	0	0		3	1	16	0	0		17	1	1	0	0		2	-	
Single-Unit Trucks %	0%	3.5%	0%	0%		2.8%	10%	1.5%	0%	0%		1.8%	5.3%	11%	0%	0%		9.7%	2.8%	0.3%	0%	0%		0.5%	-	
Buses	2	8	2	0		12	0	8	0	0		8	1	1	2	0		4	6	5	1	0		12	-	
Buses %	3.3%	2.3%	10.5%	0%		2.8%	0%	6.1%	0%	0%		4.7%	5.3%	0.7%	16.7%	0%		2.3%	16.7%	1.6%	2.6%	0%		3.1%	-	
Articulated Trucks	0	7	0	0		7	0	0	0	0		0	1	1	0	0		2	0	0	1	0		1	-	
Articulated Trucks %	0%	2%	0%	0%		1.6%	0%	0%	0%	0%		0%	5.3%	0.7%	0%	0%		1.1%	0%	0%	2.6%	0%		0.3%	-	
Pedestrians	-	-	-	-	0	-	-	-	-	0		-	-	-	-	-	0		-	-	-	-	1		-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	0%		-	-	-	-	-	0%		-	-	-	-	100%		-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%		-	-	-	-	-	0%		-	-	-	-	0%		-	-



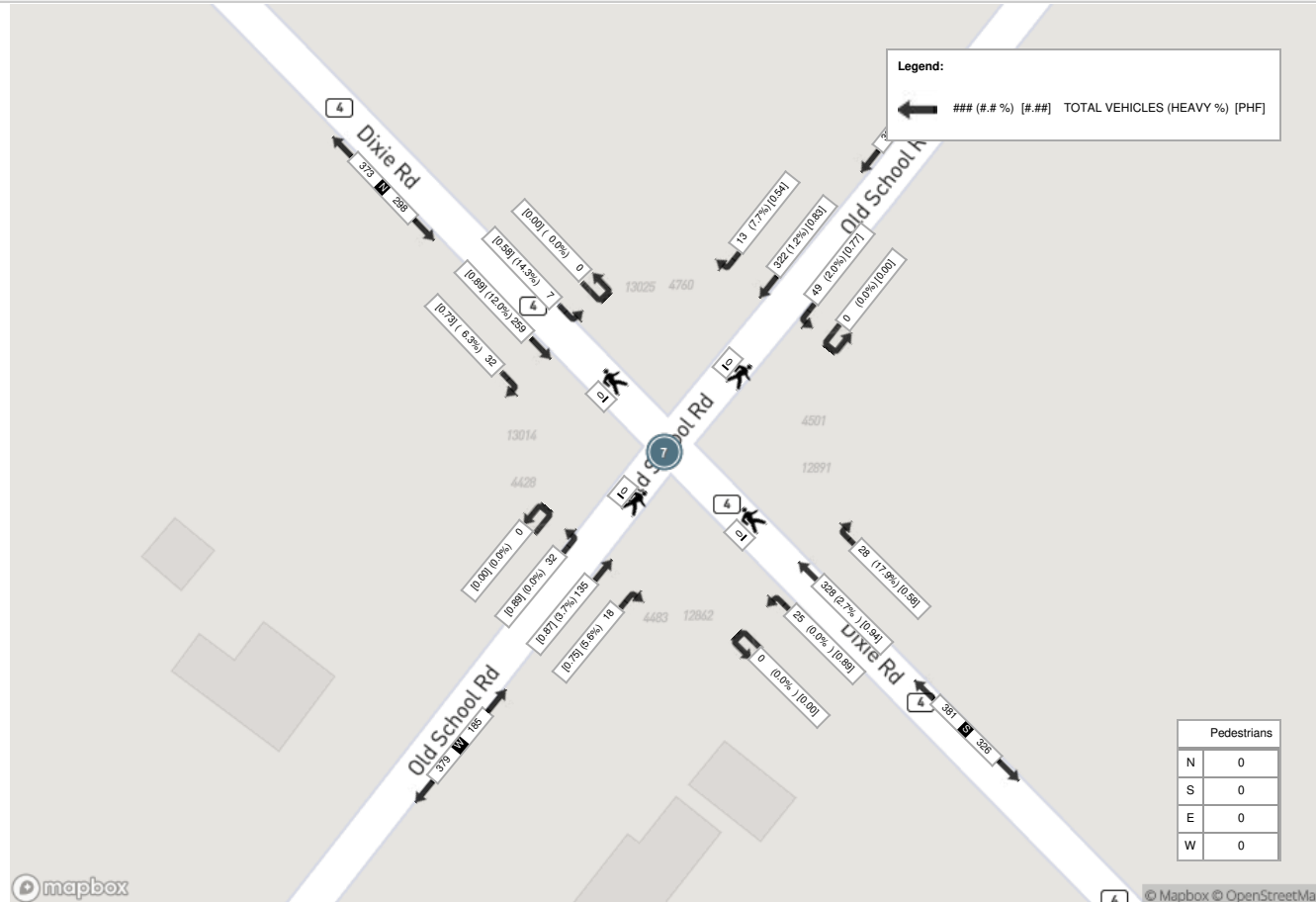
Peak Hour: 04:15 PM - 05:15 PM Weather: Few Clouds (7.51 °C)

Start Time	N Approach DIXIE RD						E Approach OLD SCHOOL RD						S Approach DIXIE RD						W Approach OLD SCHOOL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:15:00	6	63	2	0	0	71	6	97	16	0	0	119	8	85	7	0	0	100	4	27	8	0	0	39	329
16:30:00	7	54	3	0	0	64	0	65	11	0	0	76	12	87	7	0	0	106	6	37	9	0	0	52	298
16:45:00	8	69	1	0	0	78	1	78	12	0	0	91	3	80	6	0	0	89	5	39	9	0	0	53	311
17:00:00	11	73	1	0	0	85	6	82	10	0	0	98	5	76	5	0	0	86	3	32	6	0	0	41	310
Grand Total	32	259	7	0	0	298	13	322	49	0	0	384	28	328	25	0	0	381	18	135	32	0	0	185	1248
Approach%	10.7%	86.9%	2.3%	0%		-	3.4%	83.9%	12.8%	0%		-	7.3%	86.1%	6.6%	0%		-	9.7%	73%	17.3%	0%		-	-
Totals %	2.6%	20.8%	0.6%	0%		23.9%	1%	25.8%	3.9%	0%		30.8%	2.2%	26.3%	2%	0%		30.5%	1.4%	10.8%	2.6%	0%		14.8%	-
PHF	0.73	0.89	0.58	0		0.88	0.54	0.83	0.77	0		0.81	0.58	0.94	0.89	0		0.9	0.75	0.87	0.89	0		0.87	-
Heavy	2	31	1	0		34	1	4	1	0		6	5	9	0	0		14	1	5	0	0		6	-
Heavy %	6.3%	12%	14.3%	0%		11.4%	7.7%	1.2%	2%	0%		1.6%	17.9%	2.7%	0%	0%		3.7%	5.6%	3.7%	0%	0%		3.2%	-
Lights	30	228	6	0		264	12	318	48	0		378	23	319	25	0		367	17	130	32	0		179	-
Lights %	93.8%	88%	85.7%	0%		88.6%	92.3%	98.8%	98%	0%		98.4%	82.1%	97.3%	100%	0%		96.3%	94.4%	96.3%	100%	0%		96.8%	-
Single-Unit Trucks	1	20	0	0		21	1	3	0	0		4	2	5	0	0		7	1	1	0	0		2	-
Single-Unit Trucks %	3.1%	7.7%	0%	0%		7%	7.7%	0.9%	0%	0%		1%	7.1%	1.5%	0%	0%		1.8%	5.6%	0.7%	0%	0%		1.1%	-
Buses	1	2	1	0		4	0	1	1	0		2	1	0	0	0		1	0	4	0	0		4	-
Buses %	3.1%	0.8%	14.3%	0%		1.3%	0%	0.3%	2%	0%		0.5%	3.6%	0%	0%	0%		0.3%	0%	3%	0%	0%		2.2%	-
Articulated Trucks	0	9	0	0		9	0	0	0	0		0	2	4	0	0		6	0	0	0	0		0	-
Articulated Trucks %	0%	3.5%	0%	0%		3%	0%	0%	0%	0%		0%	7.1%	1.2%	0%	0%		1.6%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (4.48 °C)



Peak Hour: 04:15 PM - 05:15 PM Weather: Few Clouds (7.51 °C)





Turning Movement Count (4 . DIXIE RD & PARKING LOT NORTH ACCESS / CONSTRUCTION SITE)

Start Time	N Approach DIXIE RD						E Approach CONSTRUCTION ACCESS						S Approach DIXIE RD						W Approach PARKING LOT NORTH ACCESS						Int. Total (15 min)	Int. Total (1 hr)	
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total			
07:00:00	1	108	0	0	0	109	0	0	0	0	0	0	0	65	2	0	0	67	0	0	0	0	3	0	176		
07:15:00	1	92	0	0	0	93	0	0	2	0	0	2	0	50	5	0	0	55	0	0	0	0	0	0	150		
07:30:00	2	95	0	0	0	97	0	0	14	0	0	14	0	77	4	0	0	81	0	0	0	0	0	0	192		
07:45:00	1	130	0	0	0	131	0	0	9	0	0	9	0	56	5	0	0	61	0	0	1	0	0	1	202	720	
08:00:00	4	100	0	0	0	104	0	0	19	0	0	19	0	45	7	1	0	53	0	0	1	0	0	1	177	721	
08:15:00	4	110	0	0	0	114	0	0	29	0	0	29	0	48	19	0	0	67	3	0	0	0	0	3	213	784	
08:30:00	6	84	0	0	0	90	0	0	29	0	1	29	0	50	29	0	0	79	2	0	0	0	0	2	200	792	
08:45:00	6	79	0	0	0	85	0	0	25	0	1	25	1	55	29	1	0	86	2	0	0	0	5	2	198	788	
BREAK																											
16:00:00	2	99	0	0	0	101	1	0	15	0	0	16	2	115	1	0	0	118	0	0	0	0	0	0	235		
16:15:00	0	88	0	0	0	88	2	0	6	0	0	8	0	101	1	0	0	102	0	0	1	0	0	1	199		
16:30:00	3	75	0	0	0	78	0	0	4	0	0	4	0	113	6	0	0	119	1	0	1	0	0	2	203		
16:45:00	3	88	0	0	0	91	0	0	2	0	0	2	0	101	7	0	0	108	0	0	1	0	2	1	202	839	
17:00:00	1	94	0	0	0	95	1	0	0	0	0	1	1	106	9	0	0	116	0	0	1	0	0	1	213	817	
17:15:00	2	78	0	0	0	80	0	0	0	0	0	0	0	106	1	0	0	107	1	0	2	0	6	3	190	808	
17:30:00	8	101	0	0	0	109	0	0	0	0	0	0	0	97	10	0	0	107	0	0	0	0	3	0	216	821	
17:45:00	7	125	0	0	0	132	0	0	0	0	3	0	0	78	13	0	0	91	1	0	1	0	1	2	225	844	
Grand Total	51	1546	0	0	0	1597	4	0	154	0	5	158	4	1263	148	2	0	1417	10	0	9	0	20	19	3191	-	
Approach%	3.2%	96.8%	0%	0%		-	2.5%	0%	97.5%	0%		-	0.3%	89.1%	10.4%	0.1%		-	52.6%	0%	47.4%	0%		-	-	-	
Totals %	1.6%	48.4%	0%	0%		50%	0.1%	0%	4.8%	0%		5%	0.1%	39.6%	4.6%	0.1%		44.4%	0.3%	0%	0.3%	0%		0.6%	-	-	
Heavy	0	166	0	0		-	3	0	150	0		-	1	144	7	2		-	3	0	0	0		-	-	-	
Heavy %	0%	10.7%	0%	0%		-	75%	0%	97.4%	0%		-	25%	11.4%	4.7%	100%		-	30%	0%	0%	0%		-	-	-	
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	



Peak Hour: 07:45 AM - 08:45 AM Weather: Broken Clouds (4.48 °C)

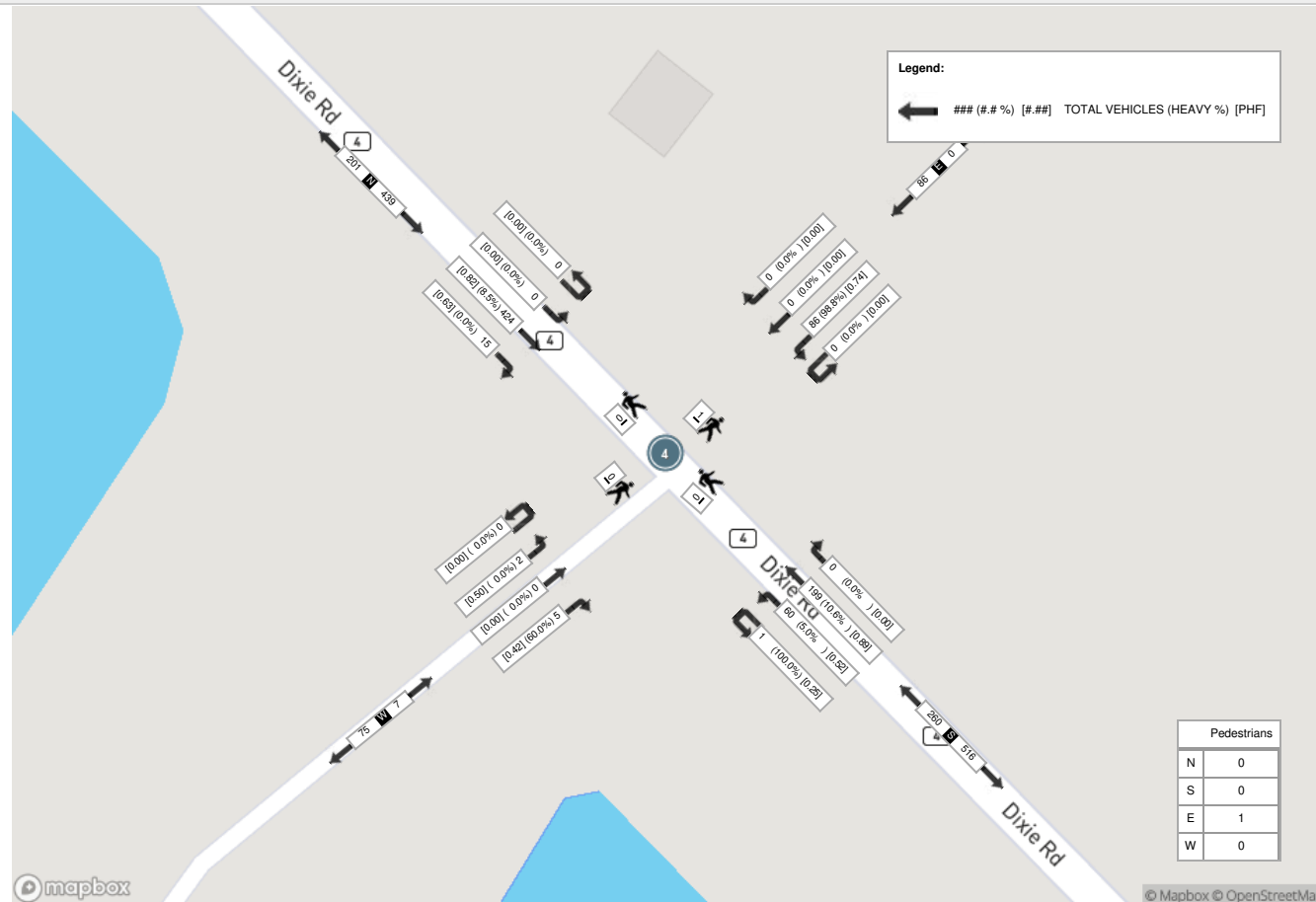
Start Time	N Approach DIXIE RD						E Approach CONSTRUCTION ACCESS						S Approach DIXIE RD						W Approach PARKING LOT NORTH ACCESS						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
07:45:00	1	130	0	0	0	131	0	0	9	0	0	9	0	56	5	0	0	61	0	0	1	0	0	1	202
08:00:00	4	100	0	0	0	104	0	0	19	0	0	19	0	45	7	1	0	53	0	0	1	0	0	1	177
08:15:00	4	110	0	0	0	114	0	0	29	0	0	29	0	48	19	0	0	67	3	0	0	0	0	3	213
08:30:00	6	84	0	0	0	90	0	0	29	0	1	29	0	50	29	0	0	79	2	0	0	0	0	2	200
Grand Total	15	424	0	0	0	439	0	0	86	0	1	86	0	199	60	1	0	260	5	0	2	0	0	7	792
Approach%	3.4%	96.6%	0%	0%		-	0%	0%	100%	0%		-	0%	76.5%	23.1%	0.4%		-	71.4%	0%	28.6%	0%		-	-
Totals %	1.9%	53.5%	0%	0%		55.4%	0%	0%	10.9%	0%		10.9%	0%	25.1%	7.6%	0.1%		32.8%	0.6%	0%	0.3%	0%		0.9%	-
PHF	0.63	0.82	0	0		0.84	0	0	0.74	0		0.74	0	0.89	0.52	0.25		0.82	0.42	0	0.5	0		0.58	-
Heavy	0	36	0	0		36	0	0	85	0		85	0	21	3	1		25	3	0	0	0		3	-
Heavy %	0%	8.5%	0%	0%		8.2%	0%	0%	98.8%	0%		98.8%	0%	10.6%	5%	100%		9.6%	60%	0%	0%	0%		42.9%	-
Lights	15	388	0	0		403	0	0	1	0		1	0	178	57	0		235	2	0	2	0		4	-
Lights %	100%	91.5%	0%	0%		91.8%	0%	0%	1.2%	0%		1.2%	0%	89.4%	95%	0%		90.4%	40%	0%	100%	0%		57.1%	-
Single-Unit Trucks	0	15	0	0		15	0	0	85	0		85	0	11	3	1		15	3	0	0	0		3	-
Single-Unit Trucks %	0%	3.5%	0%	0%		3.4%	0%	0%	98.8%	0%		98.8%	0%	5.5%	5%	100%		5.8%	60%	0%	0%	0%		42.9%	-
Buses	0	4	0	0		4	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	-
Buses %	0%	0.9%	0%	0%		0.9%	0%	0%	0%	0%		0%	0%	1.5%	0%	0%		1.2%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	17	0	0		17	0	0	0	0		0	0	7	0	0		7	0	0	0	0		0	-
Articulated Trucks %	0%	4%	0%	0%		3.9%	0%	0%	0%	0%		0%	0%	3.5%	0%	0%		2.7%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	-	100%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-



Peak Hour: 05:00 PM - 06:00 PM Weather: Few Clouds (7.51 °C)

Start Time	N Approach DIXIE RD						E Approach CONSTRUCTION ACCESS						S Approach DIXIE RD						W Approach PARKING LOT NORTH ACCESS						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
17:00:00	1	94	0	0	0	95	1	0	0	0	0	1	1	106	9	0	0	116	0	0	1	0	0	1	213
17:15:00	2	78	0	0	0	80	0	0	0	0	0	0	0	106	1	0	0	107	1	0	2	0	6	3	190
17:30:00	8	101	0	0	0	109	0	0	0	0	0	0	0	97	10	0	0	107	0	0	0	0	3	0	216
17:45:00	7	125	0	0	0	132	0	0	0	0	3	0	0	78	13	0	0	91	1	0	1	0	1	2	225
Grand Total	18	398	0	0	0	416	1	0	0	0	3	1	1	387	33	0	0	421	2	0	4	0	10	6	844
Approach%	4.3%	95.7%	0%	0%		-	100%	0%	0%	0%		-	0.2%	91.9%	7.8%	0%		-	33.3%	0%	66.7%	0%		-	-
Totals %	2.1%	47.2%	0%	0%		49.3%	0.1%	0%	0%	0%		0.1%	0.1%	45.9%	3.9%	0%		49.9%	0.2%	0%	0.5%	0%		0.7%	-
PHF	0.56	0.8	0	0		0.79	0.25	0	0	0		0.25	0.25	0.91	0.63	0		0.91	0.5	0	0.5	0		0.5	-
Heavy	0	49	0	0		49	0	0	0	0		0	0	54	1	0		55	0	0	0	0		0	-
Heavy %	0%	12.3%	0%	0%		11.8%	0%	0%	0%	0%		0%	0%	14%	3%	0%		13.1%	0%	0%	0%	0%		0%	-
Lights	18	349	0	0		367	1	0	0	0		1	1	333	32	0		366	2	0	4	0		6	-
Lights %	100%	87.7%	0%	0%		88.2%	100%	0%	0%	0%		100%	100%	86%	97%	0%		86.9%	100%	0%	100%	0%		100%	-
Single-Unit Trucks	0	23	0	0		23	0	0	0	0		0	0	34	0	0		34	0	0	0	0		0	-
Single-Unit Trucks %	0%	5.8%	0%	0%		5.5%	0%	0%	0%	0%		0%	0%	8.8%	0%	0%		8.1%	0%	0%	0%	0%		0%	-
Buses	0	0	0	0		0	0	0	0	0		0	0	0	1	0		1	0	0	0	0		0	-
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	3%	0%		0.2%	0%	0%	0%	0%		0%	-
Articulated Trucks	0	26	0	0		26	0	0	0	0		0	0	20	0	0		20	0	0	0	0		0	-
Articulated Trucks %	0%	6.5%	0%	0%		6.3%	0%	0%	0%	0%		0%	0%	5.2%	0%	0%		4.8%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	10	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	-	23.1%	-	-	-	-	-	0%	-	-	-	-	-	76.9%	-	-

Peak Hour: 07:45 AM - 08:45 AM Weather: Broken Clouds (4.48 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Few Clouds (7.51 °C)





Turning Movement Count (3 . DIXIE RD & PARKING LOT SOUTH ACCESS)

Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS PARKING LOT SOUTH ACCESS					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	107	0	0	107	70	0	0	0	70	1	0	0	1	1	178	
07:15:00	0	91	0	0	91	55	0	0	0	55	0	0	0	1	0	146	
07:30:00	1	107	0	0	108	81	1	0	0	82	0	0	0	0	0	190	
07:45:00	0	143	0	0	143	60	0	0	0	60	0	0	0	0	0	203	717
08:00:00	2	116	0	0	118	54	0	0	0	54	0	1	0	0	1	173	712
08:15:00	3	141	0	0	144	63	0	0	0	63	0	2	0	0	2	209	775
08:30:00	0	111	0	0	111	84	5	0	0	89	2	0	0	0	2	202	787
08:45:00	2	111	0	0	113	86	4	0	0	90	4	2	0	5	6	209	793
BREAK																	
16:00:00	2	111	0	0	113	119	0	0	0	119	1	0	0	0	1	233	
16:15:00	0	96	0	0	96	100	0	0	0	100	1	0	0	0	1	197	
16:30:00	0	77	0	0	77	120	0	0	0	120	2	0	0	0	2	199	
16:45:00	0	92	0	0	92	107	0	0	0	107	1	0	0	2	1	200	829
17:00:00	0	95	0	0	95	115	0	0	0	115	3	0	0	0	3	213	809
17:15:00	0	79	0	0	79	108	0	0	0	108	3	0	0	4	3	190	802
17:30:00	0	97	0	2	97	109	0	0	0	109	4	0	0	3	4	210	813
17:45:00	0	130	0	0	130	90	0	0	2	90	5	0	0	0	5	225	838
Grand Total	10	1704	0	2	1714	1421	10	0	2	1431	27	5	0	16	32	3177	-
Approach%	0.6%	99.4%	0%		-	99.3%	0.7%	0%		-	84.4%	15.6%	0%		-	-	-
Totals %	0.3%	53.6%	0%		54%	44.7%	0.3%	0%		45%	0.8%	0.2%	0%		1%	-	-
Heavy	6	316	0		-	145	0	0		-	2	5	0		-	-	-
Heavy %	60%	18.5%	0%		-	10.2%	0%	0%		-	7.4%	100%	0%		-	-	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	-	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	-	-



Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (4.48 °C)

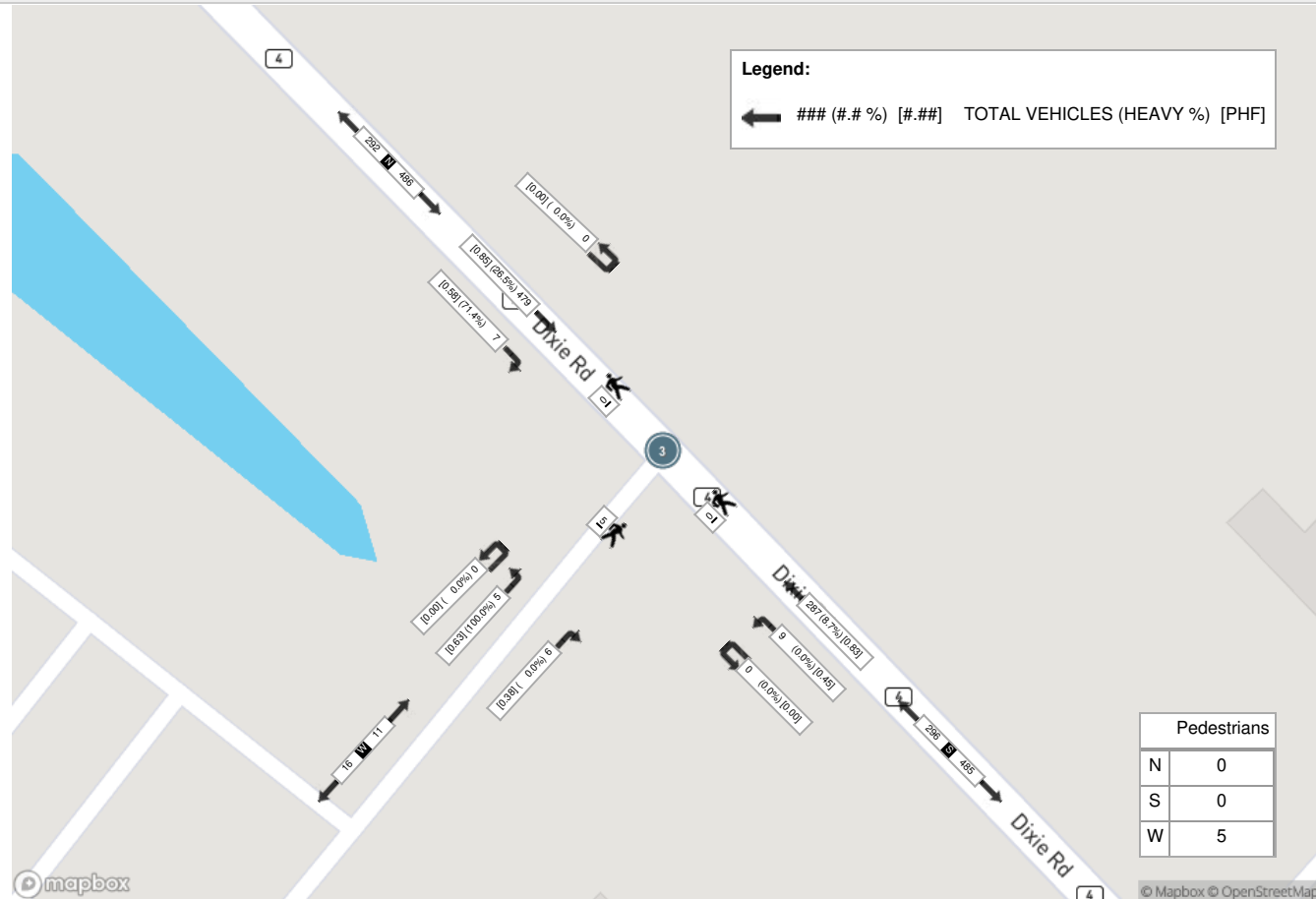
Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS PARKING LOT SOUTH ACCESS					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:00:00	2	116	0	0	118	54	0	0	0	54	0	1	0	0	1	173
08:15:00	3	141	0	0	144	63	0	0	0	63	0	2	0	0	2	209
08:30:00	0	111	0	0	111	84	5	0	0	89	2	0	0	0	2	202
08:45:00	2	111	0	0	113	86	4	0	0	90	4	2	0	5	6	209
Grand Total	7	479	0	0	486	287	9	0	0	296	6	5	0	5	11	793
Approach%	1.4%	98.6%	0%		-	97%	3%	0%		-	54.5%	45.5%	0%		-	-
Totals %	0.9%	60.4%	0%		61.3%	36.2%	1.1%	0%		37.3%	0.8%	0.6%	0%		1.4%	-
PHF	0.58	0.85	0		0.84	0.83	0.45	0		0.82	0.38	0.63	0		0.46	-
Heavy	5	127	0		132	25	0	0		25	0	5	0		5	-
Heavy %	71.4%	26.5%	0%		27.2%	8.7%	0%	0%		8.4%	0%	100%	0%		45.5%	-
Lights	2	352	0		354	262	9	0		271	6	0	0		6	-
Lights %	28.6%	73.5%	0%		72.8%	91.3%	100%	0%		91.6%	100%	0%	0%		54.5%	-
Single-Unit Trucks	5	114	0		119	13	0	0		13	0	5	0		5	-
Single-Unit Trucks %	71.4%	23.8%	0%		24.5%	4.5%	0%	0%		4.4%	0%	100%	0%		45.5%	-
Buses	0	1	0		1	2	0	0		2	0	0	0		0	-
Buses %	0%	0.2%	0%		0.2%	0.7%	0%	0%		0.7%	0%	0%	0%		0%	-
Articulated Trucks	0	12	0		12	10	0	0		10	0	0	0		0	-
Articulated Trucks %	0%	2.5%	0%		2.5%	3.5%	0%	0%		3.4%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	5	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	100%	-	-



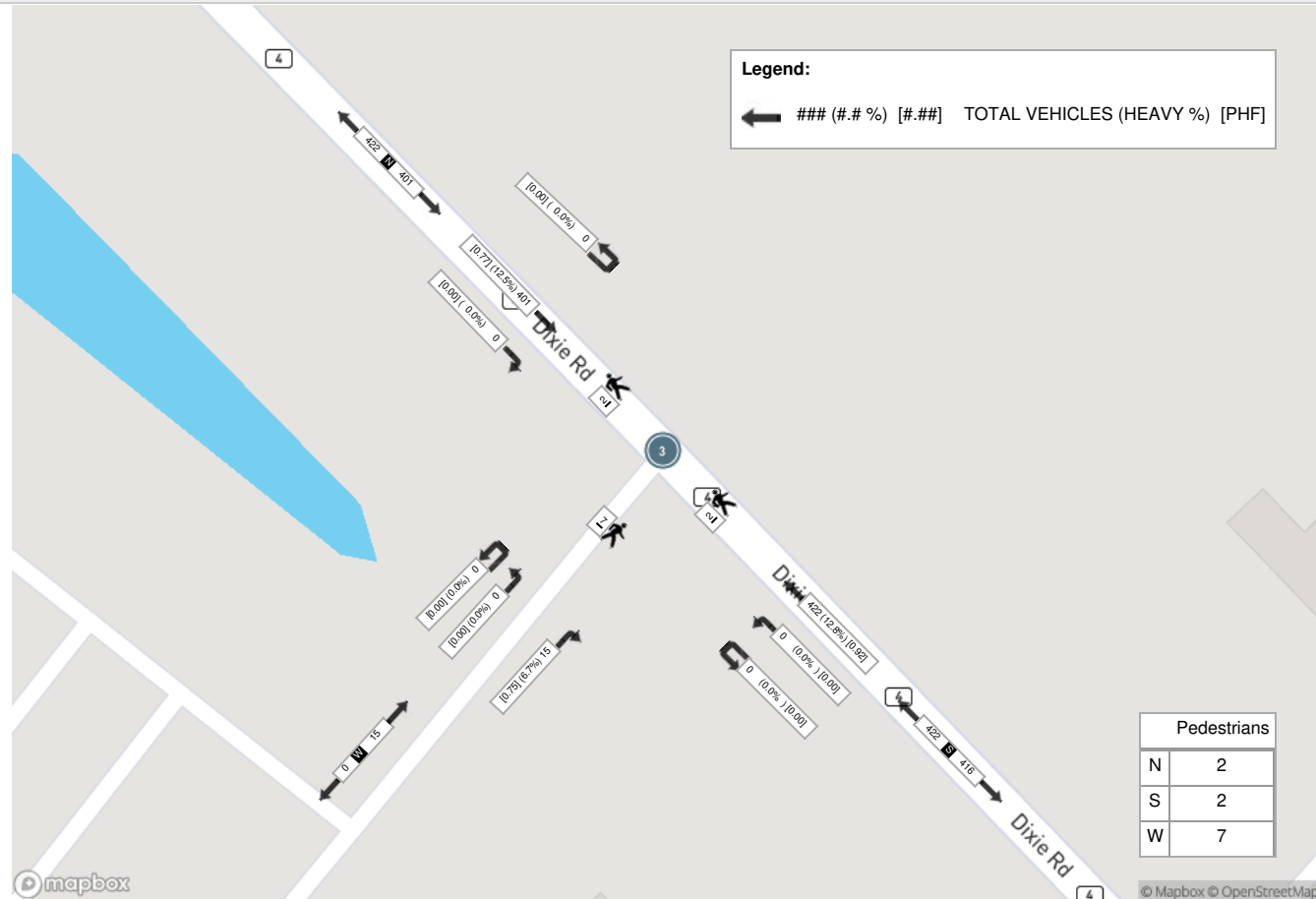
Peak Hour: 05:00 PM - 06:00 PM Weather: Few Clouds (7.51 °C)

Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS PARKING LOT SOUTH ACCESS					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
17:00:00	0	95	0	0	95	115	0	0	0	115	3	0	0	0	3	213
17:15:00	0	79	0	0	79	108	0	0	0	108	3	0	0	4	3	190
17:30:00	0	97	0	2	97	109	0	0	0	109	4	0	0	3	4	210
17:45:00	0	130	0	0	130	90	0	0	2	90	5	0	0	0	5	225
Grand Total	0	401	0	2	401	422	0	0	2	422	15	0	0	7	15	838
Approach%	0%	100%	0%		-	100%	0%	0%		-	100%	0%	0%		-	-
Totals %	0%	47.9%	0%		47.9%	50.4%	0%	0%		50.4%	1.8%	0%	0%		1.8%	-
PHF	0	0.77	0		0.77	0.92	0	0		0.92	0.75	0	0		0.75	-
Heavy	0	50	0		50	54	0	0		54	1	0	0		1	-
Heavy %	0%	12.5%	0%		12.5%	12.8%	0%	0%		12.8%	6.7%	0%	0%		6.7%	-
Lights	0	351	0		351	368	0	0		368	14	0	0		14	-
Lights %	0%	87.5%	0%		87.5%	87.2%	0%	0%		87.2%	93.3%	0%	0%		93.3%	-
Single-Unit Trucks	0	24	0		24	34	0	0		34	0	0	0		0	-
Single-Unit Trucks %	0%	6%	0%		6%	8.1%	0%	0%		8.1%	0%	0%	0%		0%	-
Buses	0	0	0		0	1	0	0		1	1	0	0		1	-
Buses %	0%	0%	0%		0%	0.2%	0%	0%		0.2%	6.7%	0%	0%		6.7%	-
Articulated Trucks	0	26	0		26	19	0	0		19	0	0	0		0	-
Articulated Trucks %	0%	6.5%	0%		6.5%	4.5%	0%	0%		4.5%	0%	0%	0%		0%	-
Pedestrians	-	-	-	2	-	-	-	-	2	-	-	-	-	7	-	-
Pedestrians%	-	-	-	18.2%		-	-	-	18.2%		-	-	-	63.6%		-

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (4.48 °C)



Peak Hour: 05:00 PM - 06:00 PM Weather: Few Clouds (7.51 °C)





Turning Movement Count (143 . MAYFIELD RD & BRAMALEA ROAD) CustID: 01411004 MIdID:

Start Time	N Approach BRAMALEA RD						E Approach MAYFIELD RD						S Approach BRAMALEA RD						W Approach MAYFIELD RD						Int. Total (15 min)	Int. Total (1 hr)	
	Left N:E	Thru N:S	Right N:W	UTurn N:N	Peds N:	Approach Total	Left E:S	Thru E:W	Right E:N	UTurn E:E	Peds E:	Approach Total	Left S:W	Thru S:N	Right S:E	UTurn S:S	Peds S:	Approach Total	Left W:N	Thru W:E	Right W:S	UTurn W:W	Peds W:	Approach Total			
07:00:00	1	7	5	0	0	13	5	146	0	0	0	151	26	6	11	0	2	43	9	217	43	0	0	269	476		
07:15:00	2	15	6	0	0	23	11	135	0	1	0	147	18	7	9	0	0	34	16	212	48	0	0	276	480		
07:30:00	7	18	17	0	0	42	12	137	4	0	0	153	21	16	10	0	2	47	65	307	33	0	0	405	647		
07:45:00	8	44	58	0	0	110	17	155	17	0	0	189	32	63	12	0	1	107	107	270	54	0	0	431	837	2440	
08:00:00	20	49	69	0	0	138	35	172	8	2	0	217	30	34	17	0	0	81	88	258	48	0	0	394	830	2794	
08:15:00	6	25	15	0	0	46	17	151	5	0	0	173	32	20	12	0	0	64	29	271	44	0	0	344	627	2941	
08:30:00	3	16	9	0	0	28	13	177	6	0	0	196	29	15	13	0	0	57	31	236	56	0	0	323	604	2898	
08:45:00	5	10	12	0	0	27	5	126	3	1	3	135	35	21	14	1	0	71	32	237	46	0	0	315	548	2609	
BREAK																											
11:00:00	6	12	10	0	0	28	11	97	5	0	2	113	40	18	6	0	0	64	16	136	35	0	0	187	392		
11:15:00	2	13	14	0	0	29	13	120	1	1	0	135	36	13	10	0	2	59	16	130	31	0	0	177	400		
11:30:00	1	12	8	0	0	21	13	99	4	0	1	116	36	22	8	0	0	66	13	133	30	0	0	176	379		
11:45:00	6	12	13	0	0	31	9	121	5	0	5	135	34	17	10	0	0	61	12	152	40	0	4	204	431	1602	
12:00:00	3	6	13	0	1	22	17	99	0	1	2	117	47	18	15	0	2	80	10	153	30	0	0	193	412	1622	
12:15:00	4	14	14	0	0	32	16	102	1	0	0	119	40	14	8	0	4	62	13	148	43	0	0	204	417	1639	
12:30:00	2	11	6	0	0	19	11	129	0	0	0	140	30	7	11	0	2	48	8	142	38	0	0	188	395	1655	
12:45:00	4	12	10	0	0	26	13	111	4	1	1	129	24	17	9	0	0	50	11	177	31	0	0	219	424	1648	
13:00:00	1	14	7	0	0	22	11	118	1	2	0	132	35	22	9	0	0	66	12	147	42	0	0	201	421	1657	
13:15:00	4	13	14	0	0	31	20	140	3	3	0	166	38	13	9	0	0	60	16	128	36	0	3	180	437	1677	
13:30:00	6	8	19	0	0	33	13	129	0	0	0	142	35	13	10	1	0	59	13	144	30	0	0	187	421	1703	
13:45:00	1	10	8	0	0	19	21	143	1	0	1	165	40	5	12	0	0	57	11	138	44	0	0	193	434	1713	
BREAK																											
15:00:00	7	17	38	0	0	62	19	161	2	0	1	182	69	35	13	0	2	117	30	214	46	0	0	290	651		
15:15:00	3	15	26	0	0	44	29	199	5	0	0	233	63	36	21	0	1	120	27	218	39	0	0	284	681		
15:30:00	8	12	34	0	0	54	21	197	8	0	1	226	72	28	11	0	2	111	27	215	39	0	0	281	672		
15:45:00	8	11	26	0	0	45	16	227	4	1	0	248	62	26	10	0	1	98	42	183	55	0	0	280	671	2675	
16:00:00	3	15	39	0	0	57	23	216	9	0	2	248	72	28	11	0	0	111	37	191	50	1	0	279	695	2719	
16:15:00	10	14	14	0	0	38	31	270	6	4	0	311	73	24	16	0	0	113	14	200	45	0	0	259	721	2759	
16:30:00	4	15	6	0	0	25	38	254	2	2	0	296	63	21	18	0	0	102	26	196	49	1	0	272	695	2782	
16:45:00	6	15	14	0	0	35	20	244	3	2	0	269	83	36	15	0	0	134	24	231	65	1	0	321	759	2870	
17:00:00	0	21	16	0	0	37	29	291	3	2	0	325	60	41	16	0	1	117	37	223	61	0	0	321	800	2975	
17:15:00	4	26	20	0	0	50	31	256	1	3	0	291	85	36	12	0	5	133	28	244	55	0	0	327	801	3055	
17:30:00	2	17	18	0	0	37	32	246	4	1	0	283	81	31	12	0	3	124	20	250	50	0	0	320	764	3124	
17:45:00	2	15	19	0	0	36	28	244	2	0	1	274	77	20	17	0	3	114	31	199	52	0	0	282	706	3071	
Grand Total	149	514	597	0	1	1260	600	5412	117	27	20	6156	1518	723	387	2	33	2630	871	6300	1408	3	7	8582	18628	-	
Approach%	11.8%	40.8%	47.4%	0%	-	-	9.7%	87.9%	1.9%	0.4%	-	-	57.7%	27.5%	14.7%	0.1%	-	-	10.1%	73.4%	16.4%	0%	-	-	-	-	
Totals %	0.8%	2.8%	3.2%	0%	6.8%	33%	3.2%	29.1%	0.6%	0.1%	33%	8.1%	3.9%	2.1%	0%	14.1%	4.7%	33.8%	7.6%	0%	46.1%	-	-	-	-		
Heavy	7	12	28	0	-	23	1018	8	0	-	40	14	19	0	-	19	1113	55	0	-	-	-	-	-	-		
Heavy %	4.7%	2.3%	4.7%	0%	-	3.8%	18.8%	6.8%	0%	-	2.6%	1.9%	4.9%	0%	-	2.2%	17.7%	3.9%	0%	-	-	-	-	-	-		
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		



Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (23.15 °C)

Start Time	N Approach BRAMALEA RD						E Approach MAYFIELD RD						S Approach BRAMALEA RD						W Approach MAYFIELD RD						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
07:30:00	7	18	17	0	0	42	12	137	4	0	0	153	21	16	10	0	2	47	65	307	33	0	0	405	647
07:45:00	8	44	58	0	0	110	17	155	17	0	0	189	32	63	12	0	1	107	107	270	54	0	0	431	837
08:00:00	20	49	69	0	0	138	35	172	8	2	0	217	30	34	17	0	0	81	88	258	48	0	0	394	830
08:15:00	6	25	15	0	0	46	17	151	5	0	0	173	32	20	12	0	0	64	29	271	44	0	0	344	627
Grand Total	41	136	159	0	0	336	81	615	34	2	0	732	115	133	51	0	3	299	289	1106	179	0	0	1574	2941
Approach%	12.2%	40.5%	47.3%	0%		-	11.1%	84%	4.6%	0.3%		-	38.5%	44.5%	17.1%	0%		-	18.4%	70.3%	11.4%	0%		-	-
Totals %	1.4%	4.6%	5.4%	0%		11.4%	2.8%	20.9%	1.2%	0.1%		24.9%	3.9%	4.5%	1.7%	0%		10.2%	9.8%	37.6%	6.1%	0%		53.5%	-
PHF	0.51	0.69	0.58	0		0.61	0.58	0.89	0.5	0.25		0.84	0.9	0.53	0.75	0		0.7	0.68	0.9	0.83	0		0.91	-
Heavy	4	5	2	0		11	7	164	2	0		173	4	3	2	0		9	3	134	4	0		141	-
Heavy %	9.8%	3.7%	1.3%	0%		3.3%	8.6%	26.7%	5.9%	0%		23.6%	3.5%	2.3%	3.9%	0%		3%	1%	12.1%	2.2%	0%		9%	-
Lights	37	131	157	0		325	74	451	32	2		559	111	130	49	0		290	286	972	175	0		1433	-
Lights %	90.2%	96.3%	98.7%	0%		96.7%	91.4%	73.3%	94.1%	100%		76.4%	96.5%	97.7%	96.1%	0%		97%	99%	87.9%	97.8%	0%		91%	-
Single-Unit Trucks	0	2	0	0		2	0	65	0	0		65	2	0	0	0		2	2	55	2	0		59	-
Single-Unit Trucks %	0%	1.5%	0%	0%		0.6%	0%	10.6%	0%	0%		8.9%	1.7%	0%	0%	0%		0.7%	0.7%	5%	1.1%	0%		3.7%	-
Buses	4	3	1	0		8	6	30	2	0		38	2	3	2	0		7	1	42	1	0		44	-
Buses %	9.8%	2.2%	0.6%	0%		2.4%	7.4%	4.9%	5.9%	0%		5.2%	1.7%	2.3%	3.9%	0%		2.3%	0.3%	3.8%	0.6%	0%		2.8%	-
Articulated Trucks	0	0	1	0		1	1	69	0	0		70	0	0	0	0		0	0	37	1	0		38	-
Articulated Trucks %	0%	0%	0.6%	0%		0.3%	1.2%	11.2%	0%	0%		9.6%	0%	0%	0%	0%		0%	0%	3.3%	0.6%	0%		2.4%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	66.7%	-	-	-	-	-	0%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	33.3%	-	-	-	-	-	0%	-	-



Turning Movement Count
Location Name: MAYFIELD RD & BRAMALEA ROAD
Date: Wed, Jun 01, 2022 Deployment Lead: Tasos Issaakidis

Peak Hour: 01:00 PM - 02:00 PM Weather: Light Rain (18.78 °C)

Start Time	N Approach BRAMALEA RD						E Approach MAYFIELD RD						S Approach BRAMALEA RD						W Approach MAYFIELD RD						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
13:00:00	1	14	7	0	0	22	11	118	1	2	0	132	35	22	9	0	0	66	12	147	42	0	0	201	421
13:15:00	4	13	14	0	0	31	20	140	3	3	0	166	38	13	9	0	0	60	16	128	36	0	3	180	437
13:30:00	6	8	19	0	0	33	13	129	0	0	0	142	35	13	10	1	0	59	13	144	30	0	0	187	421
13:45:00	1	10	8	0	0	19	21	143	1	0	1	165	40	5	12	0	0	57	11	138	44	0	0	193	434
Grand Total	12	45	48	0	0	105	65	530	5	5	1	605	148	53	40	1	0	242	52	557	152	0	3	761	1713
Approach%	11.4%	42.9%	45.7%	0%		-	10.7%	87.6%	0.8%	0.8%		-	61.2%	21.9%	16.5%	0.4%		-	6.8%	73.2%	20%	0%		-	-
Totals %	0.7%	2.6%	2.8%	0%		6.1%	3.8%	30.9%	0.3%	0.3%		35.3%	8.6%	3.1%	2.3%	0.1%		14.1%	3%	32.5%	8.9%	0%		44.4%	-
PHF	0.5	0.8	0.63	0		0.8	0.77	0.93	0.42	0.42		0.91	0.93	0.6	0.83	0.25		0.92	0.81	0.95	0.86	0		0.95	-
Heavy	0	0	1	0		1	5	150	0	0		155	7	2	1	0		10	2	127	11	0		140	-
Heavy %	0%	0%	2.1%	0%		1%	7.7%	28.3%	0%	0%		25.6%	4.7%	3.8%	2.5%	0%		4.1%	3.8%	22.8%	7.2%	0%		18.4%	-
Lights	12	45	47	0		104	60	380	5	5		450	141	51	39	1		232	50	430	141	0		621	-
Lights %	100%	100%	97.9%	0%		99%	92.3%	71.7%	100%	100%		74.4%	95.3%	96.2%	97.5%	100%		95.9%	96.2%	77.2%	92.8%	0%		81.6%	-
Single-Unit Trucks	0	0	0	0		0	4	60	0	0		64	5	1	0	0		6	1	39	7	0		47	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	6.2%	11.3%	0%	0%		10.6%	3.4%	1.9%	0%	0%		2.5%	1.9%	7%	4.6%	0%		6.2%	-
Buses	0	0	1	0		1	0	16	0	0		16	0	0	1	0		1	0	4	3	0		7	-
Buses %	0%	0%	2.1%	0%		1%	0%	3%	0%	0%		2.6%	0%	0%	2.5%	0%		0.4%	0%	0.7%	2%	0%		0.9%	-
Articulated Trucks	0	0	0	0		0	1	74	0	0		75	2	1	0	0		3	1	84	1	0		86	-
Articulated Trucks %	0%	0%	0%	0%		0%	1.5%	14%	0%	0%		12.4%	1.4%	1.9%	0%	0%		1.2%	1.9%	15.1%	0.7%	0%		11.3%	-
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	3	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	25%	-	-	-	-	-	0%	-	-	-	-	-	-	75%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-

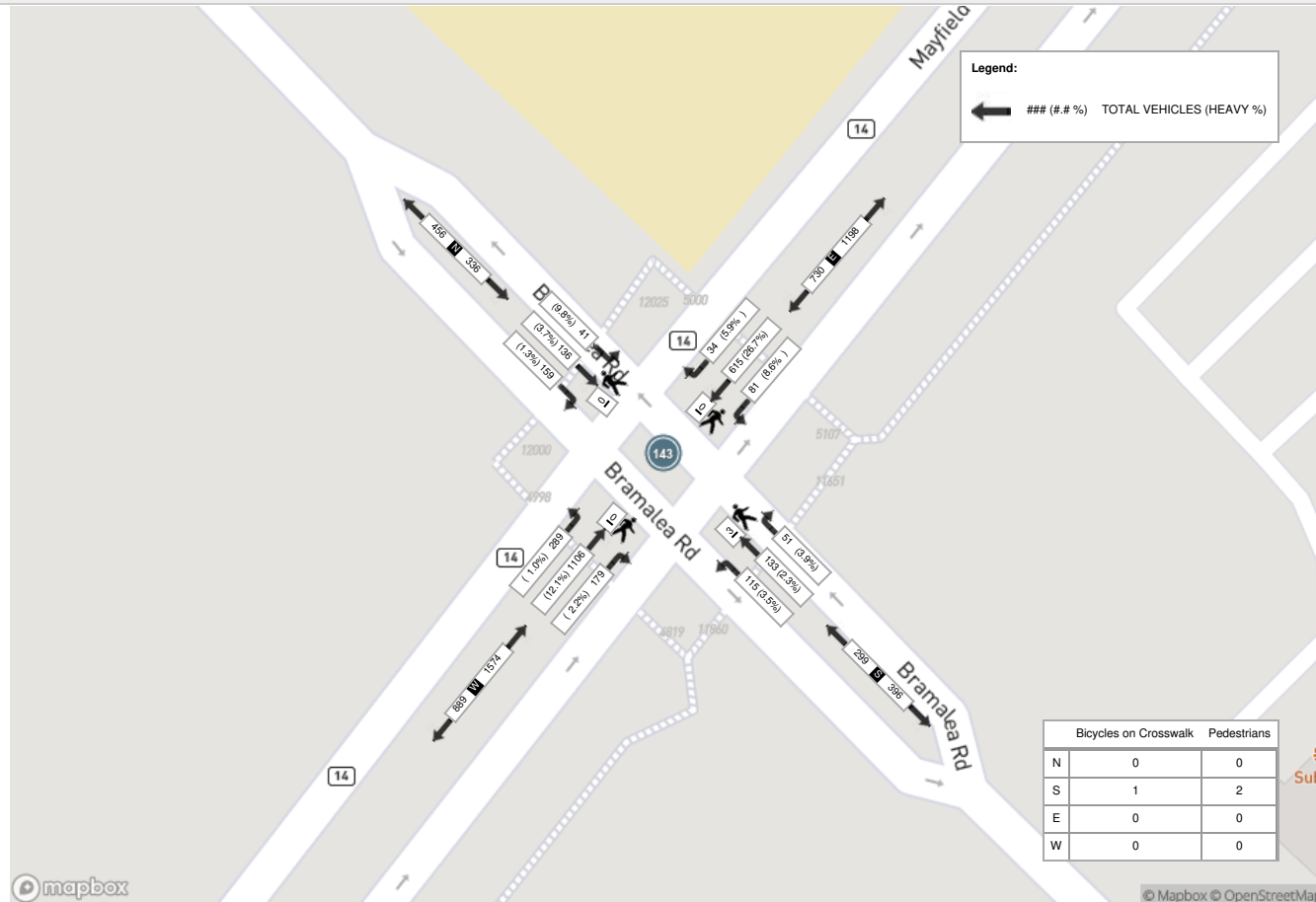


Turning Movement Count
Location Name: MAYFIELD RD & BRAMALEA ROAD
Date: Wed, Jun 01, 2022 Deployment Lead: Tasos Issaakidis

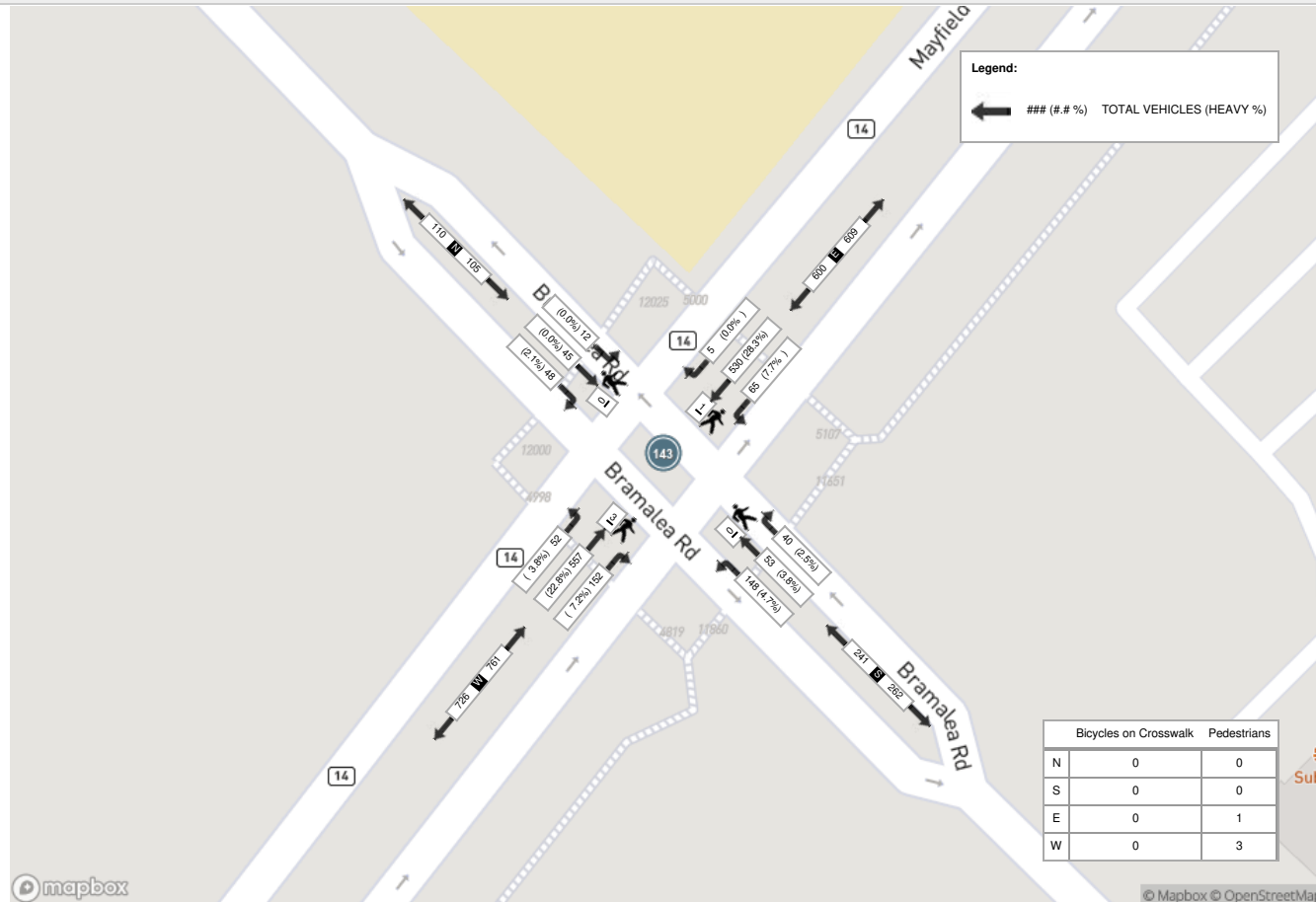
Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (24.05 °C)

Start Time	N Approach BRAMALEA RD						E Approach MAYFIELD RD						S Approach BRAMALEA RD						W Approach MAYFIELD RD						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
16:45:00	6	15	14	0	0	35	20	244	3	2	0	269	83	36	15	0	0	134	24	231	65	1	0	321	759
17:00:00	0	21	16	0	0	37	29	291	3	2	0	325	60	41	16	0	1	117	37	223	61	0	0	321	800
17:15:00	4	26	20	0	0	50	31	256	1	3	0	291	85	36	12	0	5	133	28	244	55	0	0	327	801
17:30:00	2	17	18	0	0	37	32	246	4	1	0	283	81	31	12	0	3	124	20	250	50	0	0	320	764
Grand Total	12	79	68	0	0	159	112	1037	11	8	0	1168	309	144	55	0	9	508	109	948	231	1	0	1289	3124
Approach%	7.5%	49.7%	42.8%	0%		-	9.6%	88.8%	0.9%	0.7%		-	60.8%	28.3%	10.8%	0%		-	8.5%	73.5%	17.9%	0.1%		-	-
Totals %	0.4%	2.5%	2.2%	0%		5.1%	3.6%	33.2%	0.4%	0.3%		37.4%	9.9%	4.6%	1.8%	0%		16.3%	3.5%	30.3%	7.4%	0%		41.3%	-
PHF	0.5	0.76	0.85	0		0.8	0.88	0.89	0.69	0.67		0.9	0.91	0.88	0.86	0		0.95	0.74	0.95	0.89	0.25		0.99	-
Heavy	0	0	1	0		1	0	92	0	0		92	6	0	1	0		7	3	152	2	0		157	-
Heavy %	0%	0%	1.5%	0%		0.6%	0%	8.9%	0%	0%		7.9%	1.9%	0%	1.8%	0%		1.4%	2.8%	16%	0.9%	0%		12.2%	-
Lights	12	79	67	0		158	112	945	11	8		1076	303	144	54	0		501	106	796	229	1		1132	-
Lights %	100%	100%	98.5%	0%		99.4%	100%	91.1%	100%	100%		92.1%	98.1%	100%	98.2%	0%		98.6%	97.2%	84%	99.1%	100%		87.8%	-
Single-Unit Trucks	0	0	0	0		0	0	44	0	0		44	5	0	0	0		5	0	61	1	0		62	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	4.2%	0%	0%		3.8%	1.6%	0%	0%	0%		1%	0%	6.4%	0.4%	0%		4.8%	-
Buses	0	0	1	0		1	0	4	0	0		4	0	0	0	0		0	2	7	1	0		10	-
Buses %	0%	0%	1.5%	0%		0.6%	0%	0.4%	0%	0%		0.3%	0%	0%	0%	0%		0%	1.8%	0.7%	0.4%	0%		0.8%	-
Articulated Trucks	0	0	0	0		0	0	44	0	0		44	1	0	1	0		2	1	84	0	0		85	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	4.2%	0%	0%		3.8%	0.3%	0%	1.8%	0%		0.4%	0.9%	8.9%	0%	0%		6.6%	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	8	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	88.9%	-	-	-	-	-	0%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	11.1%	-	-	-	-	-	0%	-	-

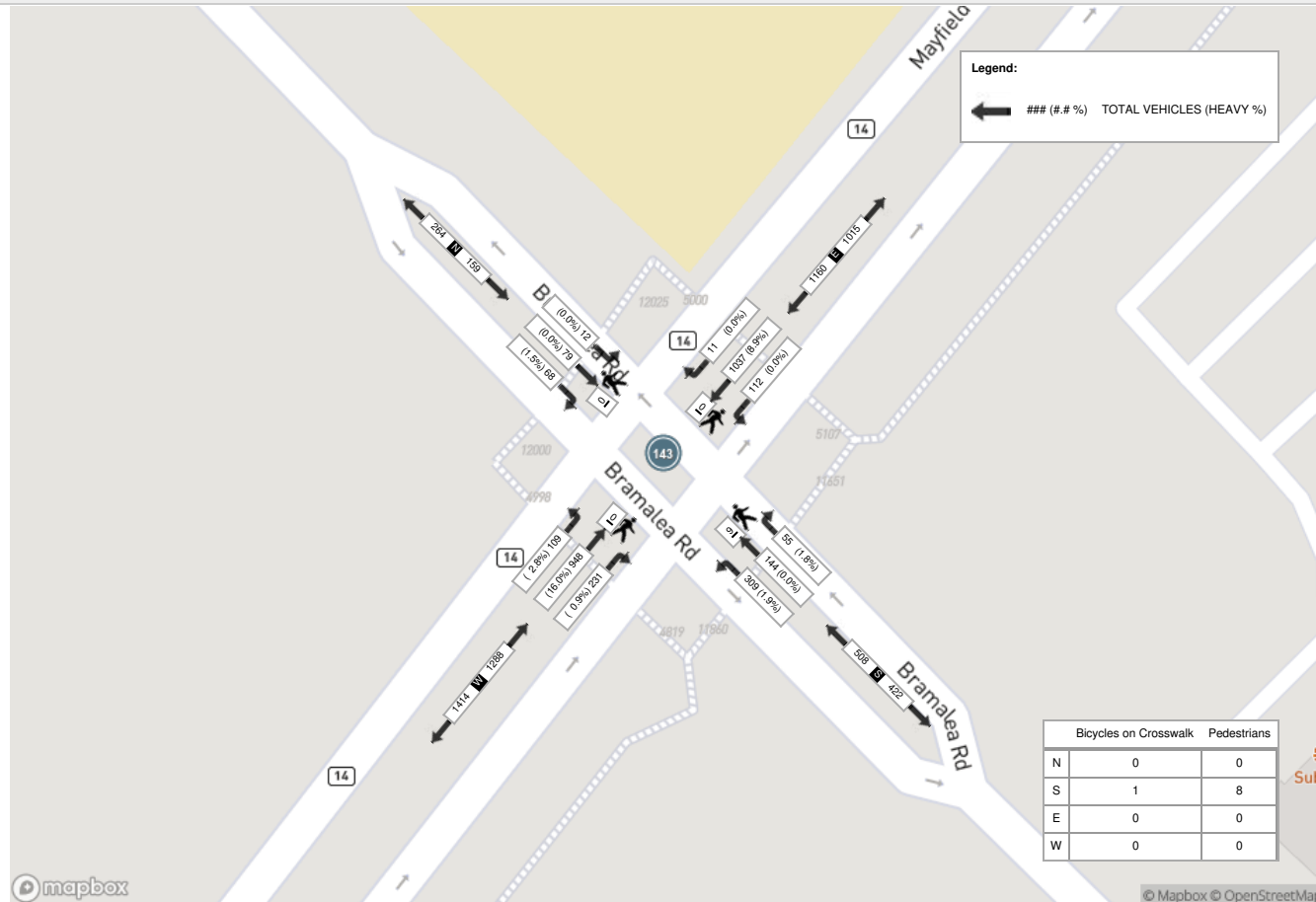
Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (23.15 °C)



Peak Hour: 01:00 PM - 02:00 PM Weather: Light Rain (18.78 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (24.05 °C)





Turning Movement Count (8 . OLD SCHOOL RD & BRAMALEA RD)

Start Time	N Approach BRAMALEA RD						E Approach OLD SCHOOL RD						S Approach BRAMALEA RD						W Approach OLD SCHOOL RD						Int. Total (15 min)	Int. Total (1 hr)	
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total			
07:00:00	4	8	2	0	0	14	0	24	2	0	0	26	5	6	1	0	0	12	3	53	7	0	0	63	115		
07:15:00	1	15	2	0	0	18	2	18	3	0	0	23	0	7	0	0	0	7	8	56	6	0	0	70	118		
07:30:00	4	49	2	0	0	55	1	32	8	0	0	41	4	16	1	0	0	21	17	68	3	0	0	88	205		
07:45:00	16	58	1	0	0	75	0	27	8	0	0	35	5	23	6	0	0	34	46	72	0	0	0	118	262	700	
08:00:00	6	21	1	0	0	28	1	20	4	0	0	25	5	19	24	0	0	48	14	47	1	0	0	62	163	748	
08:15:00	6	14	0	0	0	20	0	24	3	0	0	27	5	10	7	0	0	22	10	64	2	0	0	76	145	775	
08:30:00	2	14	4	0	0	20	2	18	2	0	0	22	1	12	2	0	0	15	13	64	2	0	0	79	136	706	
08:45:00	6	16	0	0	0	22	1	17	6	0	0	24	3	16	0	0	0	19	6	64	1	0	0	71	136	580	
BREAK																											
16:00:00	0	15	3	0	0	18	0	79	3	0	0	82	10	50	21	0	0	81	5	25	2	0	0	32	213		
16:15:00	4	12	2	0	0	18	3	89	3	0	0	95	6	43	12	0	0	61	5	30	4	0	0	39	213		
16:30:00	6	14	2	0	0	22	1	57	7	0	0	65	10	48	16	0	0	74	9	36	3	0	0	48	209		
16:45:00	5	10	1	0	0	16	5	78	4	0	0	87	9	41	13	0	0	63	5	35	4	0	0	44	210	845	
17:00:00	1	15	0	0	0	16	4	82	4	0	0	90	7	43	11	0	0	61	3	31	2	0	0	36	203	835	
17:15:00	4	12	1	0	0	17	1	82	0	0	0	83	2	34	10	0	0	46	3	29	5	0	0	37	183	805	
17:30:00	10	14	2	0	0	26	0	65	9	0	0	74	4	26	11	0	0	41	7	46	0	0	0	53	194	790	
17:45:00	2	7	3	0	0	12	1	61	5	0	0	67	2	17	7	0	0	26	4	42	3	0	0	49	154	734	
Grand Total	77	294	26	0	0	397	22	773	71	0	0	866	78	411	142	0	0	631	158	762	45	0	0	965	2859	-	
Approach%	19.4%	74.1%	6.5%	0%		-	2.5%	89.3%	8.2%	0%		-	12.4%	65.1%	22.5%	0%		-	16.4%	79%	4.7%	0%		-	-	-	
Totals %	2.7%	10.3%	0.9%	0%		13.9%	0.8%	27%	2.5%	0%		30.3%	2.7%	14.4%	5%	0%		22.1%	5.5%	26.7%	1.6%	0%		33.8%	-	-	
Heavy	4	7	1	0		-	3	25	5	0		-	2	10	3	0		-	10	13	8	0		-	-	-	
Heavy %	5.2%	2.4%	3.8%	0%		-	13.6%	3.2%	7%	0%		-	2.6%	2.4%	2.1%	0%		-	6.3%	1.7%	17.8%	0%		-	-	-	
Bicycles	0	0	0	0		-	0	0	0	0		-	0	1	1	0		-	0	0	0	0		-	-	-	
Bicycle %	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0.2%	0.7%	0%		-	0%	0%	0%	0%		-	-	-	



Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (4.48 °C)

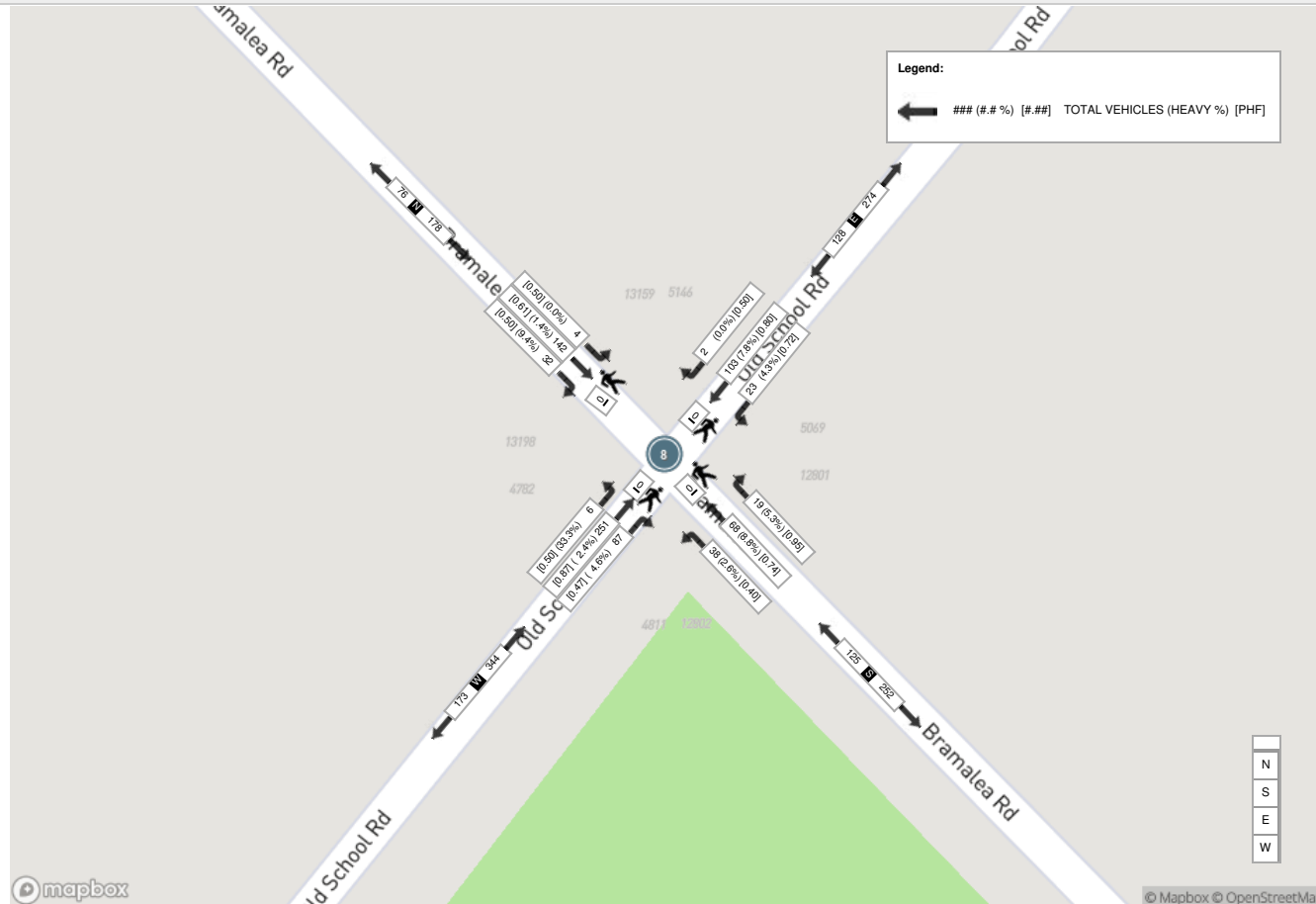
Start Time	N Approach BRAMALEA RD						E Approach OLD SCHOOL RD						S Approach BRAMALEA RD						W Approach OLD SCHOOL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
07:30:00	4	49	2	0	0	55	1	32	8	0	0	41	4	16	1	0	0	21	17	68	3	0	0	88	205
07:45:00	16	58	1	0	0	75	0	27	8	0	0	35	5	23	6	0	0	34	46	72	0	0	0	118	262
08:00:00	6	21	1	0	0	28	1	20	4	0	0	25	5	19	24	0	0	48	14	47	1	0	0	62	163
08:15:00	6	14	0	0	0	20	0	24	3	0	0	27	5	10	7	0	0	22	10	64	2	0	0	76	145
Grand Total	32	142	4	0	0	178	2	103	23	0	0	128	19	68	38	0	0	125	87	251	6	0	0	344	775
Approach%	18%	79.8%	2.2%	0%		-	1.6%	80.5%	18%	0%		-	15.2%	54.4%	30.4%	0%		-	25.3%	73%	1.7%	0%		-	-
Totals %	4.1%	18.3%	0.5%	0%		23%	0.3%	13.3%	3%	0%		16.5%	2.5%	8.8%	4.9%	0%		16.1%	11.2%	32.4%	0.8%	0%		44.4%	-
PHF	0.5	0.61	0.5	0		0.59	0.5	0.8	0.72	0		0.78	0.95	0.74	0.4	0		0.65	0.47	0.87	0.5	0		0.73	-
Heavy	3	2	0	0		5	0	8	1	0		9	1	6	1	0		8	4	6	2	0		12	-
Heavy %	9.4%	1.4%	0%	0%		2.8%	0%	7.8%	4.3%	0%		7%	5.3%	8.8%	2.6%	0%		6.4%	4.6%	2.4%	33.3%	0%		3.5%	-
Lights	29	140	4	0		173	2	95	22	0		119	18	62	37	0		117	83	245	4	0		332	-
Lights %	90.6%	98.6%	100%	0%		97.2%	100%	92.2%	95.7%	0%		93%	94.7%	91.2%	97.4%	0%		93.6%	95.4%	97.6%	66.7%	0%		96.5%	-
Single-Unit Trucks	0	0	0	0		0	0	2	0	0		2	0	0	1	0		1	1	1	0	0		2	-
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	1.9%	0%	0%		1.6%	0%	0%	2.6%	0%		0.8%	1.1%	0.4%	0%	0%		0.6%	-
Buses	3	1	0	0		4	0	6	1	0		7	1	6	0	0		7	2	5	2	0		9	-
Buses %	9.4%	0.7%	0%	0%		2.2%	0%	5.8%	4.3%	0%		5.5%	5.3%	8.8%	0%	0%		5.6%	2.3%	2%	33.3%	0%		2.6%	-
Articulated Trucks	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	1	0	0	0		1	-
Articulated Trucks %	0%	0.7%	0%	0%		0.6%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	1.1%	0%	0%	0%		0.3%	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	%	-	-	-	-	-	%	-	-	-	-	-	%	-	-	-	-	-	%	-	-



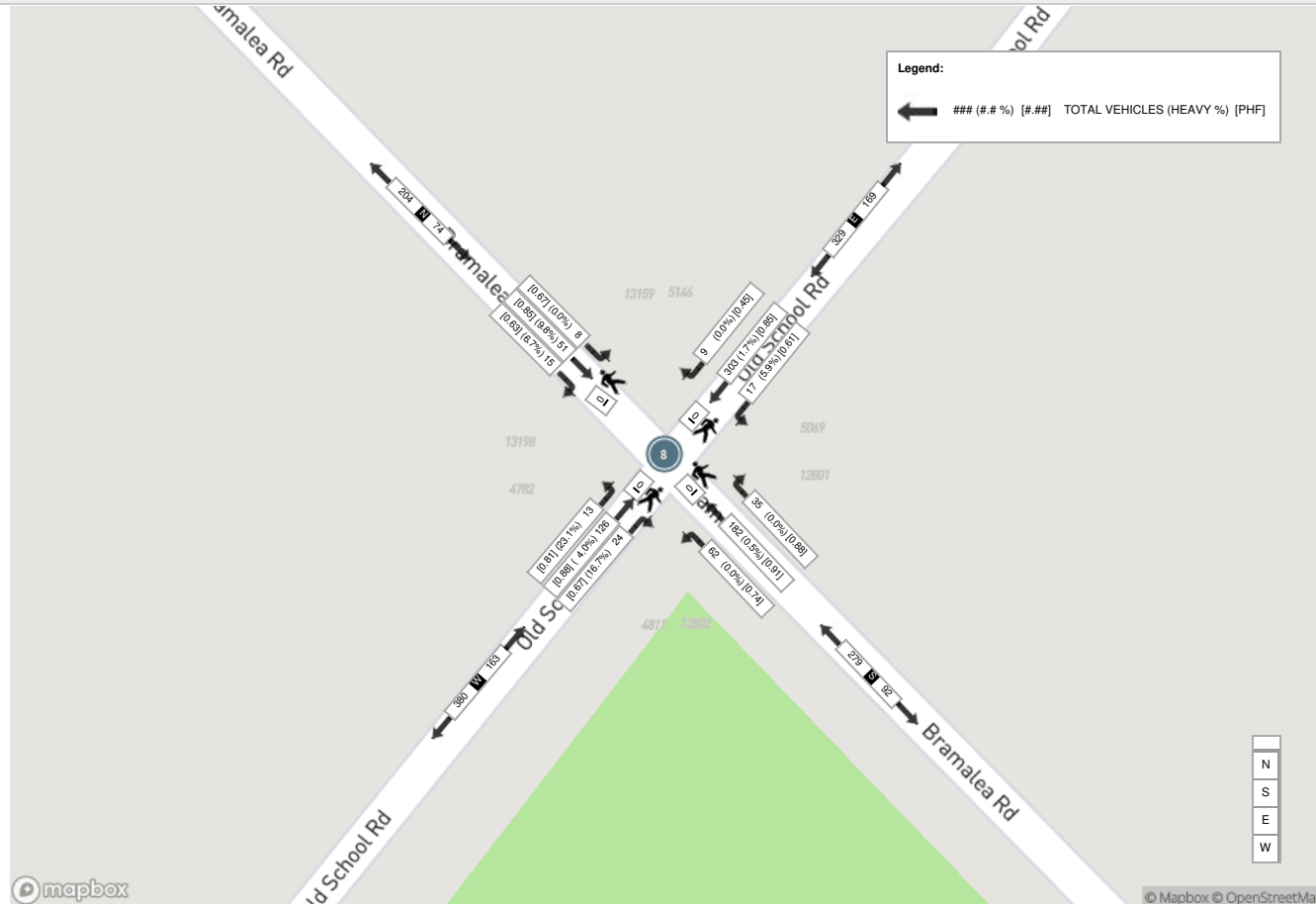
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

Start Time	N Approach BRAMALEA RD						E Approach OLD SCHOOL RD						S Approach BRAMALEA RD						W Approach OLD SCHOOL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	0	15	3	0	0	18	0	79	3	0	0	82	10	50	21	0	0	81	5	25	2	0	0	32	213
16:15:00	4	12	2	0	0	18	3	89	3	0	0	95	6	43	12	0	0	61	5	30	4	0	0	39	213
16:30:00	6	14	2	0	0	22	1	57	7	0	0	65	10	48	16	0	0	74	9	36	3	0	0	48	209
16:45:00	5	10	1	0	0	16	5	78	4	0	0	87	9	41	13	0	0	63	5	35	4	0	0	44	210
Grand Total	15	51	8	0	0	74	9	303	17	0	0	329	35	182	62	0	0	279	24	126	13	0	0	163	845
Approach%	20.3%	68.9%	10.8%	0%		-	2.7%	92.1%	5.2%	0%		-	12.5%	65.2%	22.2%	0%		-	14.7%	77.3%	8%	0%		-	-
Totals %	1.8%	6%	0.9%	0%		8.8%	1.1%	35.9%	2%	0%		38.9%	4.1%	21.5%	7.3%	0%		33%	2.8%	14.9%	1.5%	0%		19.3%	-
PHF	0.63	0.85	0.67	0		0.84	0.45	0.85	0.61	0		0.87	0.88	0.91	0.74	0		0.86	0.67	0.88	0.81	0		0.85	-
Heavy	1	5	0	0		6	0	5	1	0		6	0	1	0	0		1	4	5	3	0		12	-
Heavy %	6.7%	9.8%	0%	0%		8.1%	0%	1.7%	5.9%	0%		1.8%	0%	0.5%	0%	0%		0.4%	16.7%	4%	23.1%	0%		7.4%	-
Lights	14	46	8	0		68	9	298	16	0		323	35	181	62	0		278	20	121	10	0		151	-
Lights %	93.3%	90.2%	100%	0%		91.9%	100%	98.3%	94.1%	0%		98.2%	100%	99.5%	100%	0%		99.6%	83.3%	96%	76.9%	0%		92.6%	-
Single-Unit Trucks	0	2	0	0		2	0	3	1	0		4	0	0	0	0		0	2	1	0	0		3	-
Single-Unit Trucks %	0%	3.9%	0%	0%		2.7%	0%	1%	5.9%	0%		1.2%	0%	0%	0%	0%		0%	8.3%	0.8%	0%	0%		1.8%	-
Buses	1	3	0	0		4	0	2	0	0		2	0	0	0	0		0	1	3	3	0		7	-
Buses %	6.7%	5.9%	0%	0%		5.4%	0%	0.7%	0%	0%		0.6%	0%	0%	0%	0%		0%	4.2%	2.4%	23.1%	0%		4.3%	-
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	1	1	0	0		2	-
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.5%	0%	0%		0.4%	4.2%	0.8%	0%	0%		1.2%	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	%	-	-	-	-	%		-	-	-	-	%		-	-	-	-	%		-	-

Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (4.48 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)



APPENDIX G

Signal Timing Plans

Project Number:	Dixie Road Industrial
Project Name:	7843-21
Study Location:	Dixie Road and Old School Road
Municipality:	Caledon
Study Date:	Tuesday November 14, 2023
Study Time:	7:30 - 8:00, 16:15 - 16:45

AM Signal Timing

[illegible]

PM Signal Timing

[illegible]

Project Number:	Dixie Road Industrial
Project Name:	7843-21
Study Location:	Dixie Road and Old School Road
Municipality:	Caledon
Study Date:	Tuesday November 14, 2023
Study Time:	7:30 - 8:00, 16:15 - 16:45

AM Signal Timing

[illegible]

PM Signal Timing

[illegible]

REGIONAL MUNICIPALITY OF PEEL

Traffic Signal Timing Parameters

Database Date	January 8, 2018		Prepared Date	December 8, 2020
Database Rev	27		Completed By	JP
Timing Card / Field rev			Checked By	SJ

Location	Dixie Road at Mayfield Road								
Phase #	Street Name - Direction	Vehicle Minimum (s)	Pedestrian Minimum (s)		Amber (s)	All Red (s)	TIME PERIOD (s) (Green+Amber+All Red)		
			WALK	FDWALK			AM SPLITS	OFF MAX	PM SPLITS
1	Mayfield Road - WB P.P. LT	5	0	0	30	0	10	13	10
2	Mayfield Road - EB	8	8	30	46	23	60	16.9	60
3	Not in use	-	-	-	-	-	-	-	-
4	Dixie Road - NB	8	8	33	46	23	50	46.9	50
5	Mayfield Road - EB P.P. LT	5	0	0	30	0	10	13	10
6	Mayfield Road - WB	8	8	30	46	23	60	16.9	60
7	Not in use	-	-	-	-	-	-	-	-
8	Dixie Road - SB	8	8	33	46	23	50	46.9	50

System Control No Semi-Actuated Mode Yes	TIME (M-F)	PEAK	CYCLE LENGTH (s)	OFFSET (s)
	07:00 - 09:00	AM	120	44
	FREE	OFF	0	0
	15:00 - 18:00	PM	120	32

REGIONAL MUNICIPALITY OF PEEL

Traffic Signal Timing Parameters

Database Date	June 5, 2015		Prepared Date	December 8, 2020
Database Rev	26		Completed By	JP
Timing Card / Field rev	-		Checked By	SJ

Location	Mayfield Road at Bramalea Road								
Phase #	Street Name - Direction	Vehicle Minimum (s)	Pedestrian Minimum (s)		Amber (s)	All Red (s)	TIME PERIOD (s) (Green+Amber+All Red)		
			WALK	FDWALK			AM SPLITS	OFF SPLITS	PM SPLITS
1	Not in use	-	-	-	-	-	-	-	-
2	Mayfield Road - EB	12	8	40	4	3.2	70	59	70
3	Bramalea Road - SB PP LT	5	0	0	3	0	9	0	9
4	Bramalea Road - NB	8	8	39	4	3.1	56	56	56
5	Mayfield Road - EB PP LT	5	0	0	3	0	13	0	12
6	Mayfield Road - WB	12	8	40	4	3.2	57	59	58
7	Not in use	-	-	-	-	-	-	-	-
8	Bramalea Road - SB	8	8	39	4	3.1	65	56	65

System Control No Semi-Actuated Mode Yes	TIME (M-F)	PEAK	CYCLE LENGTH (s)	OFFSET (s)
	06:00 - 09:00	AM	135	0
	09:00 - 14:30	OFF	115	0
	14:30 - 19:00	PM	135	16

APPENDIX H: **Synchro Worksheets**

Queues

1: Dixie Road & Mayfield Road

Existing AM Peak Hour

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						
Traffic Volume (vph)	260	1610	280	60	745	130	110	45	60	230	215
Future Volume (vph)	260	1610	280	60	745	130	110	45	60	230	215
Lane Group Flow (vph)	295	1830	318	68	892	148	125	51	68	261	244
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		4			8	
Permitted Phases	2		2	6		4		4	8		8
Detector Phase	5	2	2	1	6	4	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	9.5	44.9	44.9	9.5	44.9	47.9	47.9	47.9	47.9	47.9	47.9
Total Split (s)	10.0	60.0	60.0	10.0	60.0	50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	8.3%	50.0%	50.0%	8.3%	50.0%	41.7%	41.7%	41.7%	41.7%	41.7%	41.7%
Yellow Time (s)	3.0	4.6	4.6	3.5	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	0.0	2.3	2.3	0.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
v/c Ratio	0.66	0.64	0.31	0.39	0.46	1.01	0.36	0.16	0.35	0.72	0.59
Control Delay	19.0	19.5	2.7	15.9	24.9	122.7	40.9	5.7	42.5	54.4	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	19.5	2.7	15.9	24.9	122.7	40.9	5.7	42.5	54.4	14.9
Queue Length 50th (m)	24.8	104.9	0.0	4.7	55.6	~39.0	26.7	0.0	14.5	60.8	10.1
Queue Length 95th (m)	#78.1	155.3	14.5	12.4	64.9	#63.4	39.0	6.0	24.9	78.3	30.6
Internal Link Dist (m)		980.1			554.7		844.0			481.5	
Turn Bay Length (m)	155.0		115.0	150.0		140.0		65.0	100.0		170.0
Base Capacity (vph)	450	2876	1040	177	2002	244	579	494	323	600	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.64	0.31	0.38	0.45	0.61	0.22	0.10	0.21	0.43	0.43

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 9.5 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

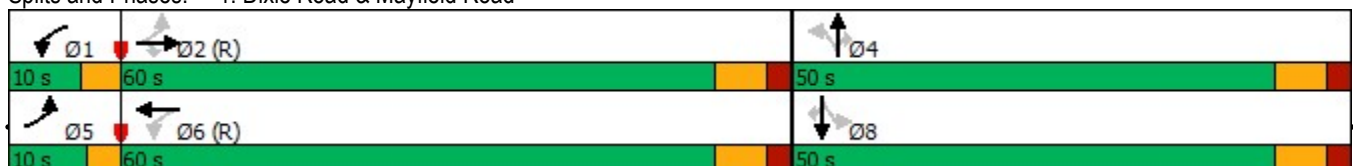
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Dixie Road & Mayfield Road



EX.syn

HCM Signalized Intersection Capacity Analysis

1: Dixie Road & Mayfield Road

Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (vph)	260	1610	280	60	745	40	130	110	45	60	230	215
Future Volume (vph)	260	1610	280	60	745	40	130	110	45	60	230	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	3.0	6.9	6.9	3.5	6.9		6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1322	4856	1537	1539	4516		1664	1614	1257	1270	1671	1227
Flt Permitted	0.24	1.00	1.00	0.11	1.00		0.39	1.00	1.00	0.67	1.00	1.00
Satd. Flow (perm)	338	4856	1537	172	4516		681	1614	1257	901	1671	1227
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	295	1830	318	68	847	45	148	125	51	68	261	244
RTOR Reduction (vph)	0	0	131	0	5	0	0	0	40	0	0	153
Lane Group Flow (vph)	295	1830	187	68	887	0	148	125	11	68	261	91
Confl. Peds. (#/hr)			5	5			5		5	5		5
Heavy Vehicles (%)	35%	8%	1%	16%	15%	20%	7%	19%	25%	40%	15%	28%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	80.3	70.4	70.4	57.7	51.3		25.9	25.9	25.9	25.9	25.9	25.9
Effective Green, g (s)	80.3	70.4	70.4	57.7	51.3		25.9	25.9	25.9	25.9	25.9	25.9
Actuated g/C Ratio	0.67	0.59	0.59	0.48	0.43		0.22	0.22	0.22	0.22	0.22	0.22
Clearance Time (s)	3.0	6.9	6.9	3.5	6.9		6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	439	2848	901	155	1930		146	348	271	194	360	264
v/s Ratio Prot	c0.15	0.38		0.02	0.20			0.08			0.16	
v/s Ratio Perm	c0.30		0.12	0.19			c0.22		0.01	0.08		0.07
v/c Ratio	0.67	0.64	0.21	0.44	0.46		1.01	0.36	0.04	0.35	0.72	0.35
Uniform Delay, d1	10.2	16.5	11.7	17.0	24.5		47.0	40.0	37.2	39.9	43.7	39.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	1.1	0.5	2.0	0.8		78.1	0.6	0.1	1.1	7.1	0.8
Delay (s)	14.2	17.6	12.2	19.0	25.3		125.2	40.6	37.3	41.0	50.8	40.7
Level of Service	B	B	B	B	C		F	D	D	D	D	D
Approach Delay (s)		16.5			24.8			78.7			45.3	
Approach LOS		B			C			E			D	
Intersection Summary												
HCM 2000 Control Delay			26.9			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			17.3			
Intersection Capacity Utilization			79.1%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

5: Dixie Road & Abbotside Wy. /Spokane St

Existing AM Peak Hour

																									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR													
Lane Configurations																									
Traffic Volume (veh/h)	5	0	35	0	0	0	65	295	0	0	475	10													
Future Volume (Veh/h)	5	0	35	0	0	0	65	295	0	0	475	10													
Sign Control	Stop			Stop			Free			Free															
Grade	0%			0%			0%			0%															
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92													
Hourly flow rate (vph)	5	0	38	0	0	0	71	321	0	0	516	11													
Pedestrians																									
Lane Width (m)																									
Walking Speed (m/s)																									
Percent Blockage																									
Right turn flare (veh)																									
Median type							None			None															
Median storage veh																									
Upstream signal (m)																									
pX, platoon unblocked																									
vC, conflicting volume	979	979	516	1017	990	321	527				321														
vC1, stage 1 conf vol																									
vC2, stage 2 conf vol																									
vCu, unblocked vol	979	979	516	1017	990	321	527				321														
tC, single (s)	7.4	6.5	6.5	7.1	6.5	6.2	4.2				4.1														
tC, 2 stage (s)																									
tF (s)	3.8	4.0	3.5	3.5	4.0	3.3	2.3				2.2														
p0 queue free %	97	100	93	100	100	100	93				100														
cM capacity (veh/h)	190	232	516	189	229	720	977				1239														
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2																			
Volume Total	43	0	71	321	516	11																			
Volume Left	5	0	71	0	0	0																			
Volume Right	38	0	0	0	0	11																			
cSH	430	1700	977	1700	1700	1700																			
Volume to Capacity	0.10	0.00	0.07	0.19	0.30	0.01																			
Queue Length 95th (m)	2.6	0.0	1.9	0.0	0.0	0.0																			
Control Delay (s)	14.3	0.0	9.0	0.0	0.0	0.0																			
Lane LOS	B	A	A																						
Approach Delay (s)	14.3	0.0	1.6	0.0																					
Approach LOS	B	A																							
Intersection Summary																									
Average Delay				1.3																					
Intersection Capacity Utilization				41.9%	ICU Level of Service					A															
Analysis Period (min)				15																					

HCM Unsignalized Intersection Capacity Analysis

7: Dixie Road & UPS Facility Access/Construction Access

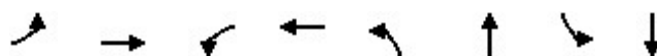
Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	0	0	0	60	200	0	0	425	15
Future Volume (Veh/h)	0	0	5	0	0	0	60	200	0	0	425	15
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	5	0	0	0	65	215	0	0	457	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	810	810	465	815	818	215	473				215	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	810	810	465	815	818	215	473				215	
tC, single (s)	7.1	6.5	6.8	7.1	6.5	6.2	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.8	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	100	100	99	100	100	100	94				100	
cM capacity (veh/h)	287	295	494	280	292	825	1073				1355	
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1							
Volume Total	0	5	0	280	473							
Volume Left	0	0	0	65	0							
Volume Right	0	5	0	0	16							
cSH	1700	494	1700	1073	1700							
Volume to Capacity	0.00	0.01	0.00	0.06	0.28							
Queue Length 95th (m)	0.0	0.2	0.0	1.5	0.0							
Control Delay (s)	0.0	12.4	0.0	2.4	0.0							
Lane LOS	A	B	A	A								
Approach Delay (s)	12.4		0.0	2.4	0.0							
Approach LOS	B		A									
Intersection Summary												
Average Delay	1.0											
Intersection Capacity Utilization	43.8%			ICU Level of Service					A			
Analysis Period (min)	15											

Queues

12: Dixie Road

Existing AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	310	30	130	10	145	20	345
Future Volume (vph)	40	310	30	130	10	145	20	345
Lane Group Flow (vph)	45	392	34	159	11	188	23	460
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	30.0	30.0	30.0	30.0	40.0	40.0	40.0	40.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.13	0.76	0.19	0.32	0.03	0.21	0.04	0.49
Control Delay	17.8	31.7	19.9	19.6	10.3	10.0	10.1	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.8	31.7	19.9	19.6	10.3	10.0	10.1	13.4
Queue Length 50th (m)	4.6	47.8	3.5	16.4	0.7	11.6	1.4	35.7
Queue Length 95th (m)	10.4	66.9	9.2	27.0	3.4	25.6	5.4	67.9
Internal Link Dist (m)		118.0		135.5		2407.1		261.5
Turn Bay Length (m)	65.0		65.0		65.0		65.0	
Base Capacity (vph)	404	625	212	601	382	899	593	946
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.63	0.16	0.26	0.03	0.21	0.04	0.49

Intersection Summary

Cycle Length: 70

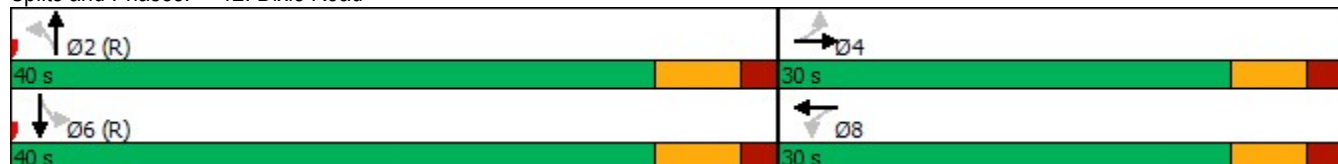
Actuated Cycle Length: 70

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Splits and Phases: 12: Dixie Road



HCM Signalized Intersection Capacity Analysis

12: Dixie Road

Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	310	35	30	130	10	10	145	20	20	345	60
Future Volume (vph)	40	310	35	30	130	10	10	145	20	20	345	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1819		1805	1754		1556	1660		1641	1746	
Flt Permitted	0.66	1.00		0.33	1.00		0.44	1.00		0.64	1.00	
Satd. Flow (perm)	1187	1819		624	1754		713	1660		1104	1746	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	45	352	40	34	148	11	11	165	23	23	392	68
RTOR Reduction (vph)	0	6	0	0	4	0	0	7	0	0	8	0
Lane Group Flow (vph)	45	386	0	34	155	0	11	181	0	23	452	0
Heavy Vehicles (%)	5%	1%	19%	0%	7%	10%	16%	12%	15%	10%	7%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	19.7	19.7		19.7	19.7		37.3	37.3		37.3	37.3	
Effective Green, g (s)	19.7	19.7		19.7	19.7		37.3	37.3		37.3	37.3	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.53	0.53		0.53	0.53	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	334	511		175	493		379	884		588	930	
v/s Ratio Prot		c0.21			0.09			0.11			c0.26	
v/s Ratio Perm	0.04			0.05			0.02			0.02		
v/c Ratio	0.13	0.75		0.19	0.31		0.03	0.21		0.04	0.49	
Uniform Delay, d1	18.8	22.9		19.1	19.8		7.8	8.6		7.8	10.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	6.2		0.5	0.4		0.1	0.5		0.1	1.8	
Delay (s)	19.0	29.2		19.7	20.2		7.9	9.1		7.9	12.1	
Level of Service	B	C		B	C		A	A		A	B	
Approach Delay (s)		28.1			20.1			9.0			11.9	
Approach LOS		C			C			A			B	
Intersection Summary												
HCM 2000 Control Delay			18.1			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			13.0			
Intersection Capacity Utilization			60.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	5	250	85	25	105	0	40	70	20	5	140	30
Future Volume (vph)	5	250	85	25	105	0	40	70	20	5	140	30
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	7	338	115	34	142	0	54	95	27	7	189	41
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	460	176	176	237								
Volume Left (vph)	7	34	54	7								
Volume Right (vph)	115	0	27	41								
Hadj (s)	-0.15	0.04	-0.03	-0.10								
Departure Headway (s)	5.4	6.0	6.2	6.0								
Degree Utilization, x	0.69	0.30	0.30	0.39								
Capacity (veh/h)	642	522	506	540								
Control Delay (s)	19.2	11.5	11.8	12.8								
Approach Delay (s)	19.2	11.5	11.8	12.8								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay				15.3								
Level of Service				C								
Intersection Capacity Utilization				47.8%	ICU Level of Service	A						
Analysis Period (min)				15								

Queues

1: Dixie Road & Mayfield Road

Existing PM Peak Hour

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	245	1205	180	50	1175	210	190	60	50	100	295
Future Volume (vph)	245	1205	180	50	1175	210	190	60	50	100	295
Lane Group Flow (vph)	253	1242	186	52	1252	216	196	62	52	103	304
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		4			8	
Permitted Phases	2		2	6		4		4	8		8
Detector Phase	5	2	2	1	6	4	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	9.5	44.9	44.9	9.5	44.9	47.9	47.9	47.9	47.9	47.9	47.9
Total Split (s)	10.0	60.0	60.0	10.0	60.0	50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	8.3%	50.0%	50.0%	8.3%	50.0%	41.7%	41.7%	41.7%	41.7%	41.7%	41.7%
Yellow Time (s)	3.0	4.6	4.6	3.5	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	0.0	2.3	2.3	0.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None
v/c Ratio	0.59	0.45	0.20	0.19	0.60	0.78	0.47	0.19	0.31	0.26	0.74
Control Delay	21.8	15.8	2.8	10.7	27.9	62.5	42.9	8.0	41.1	38.2	33.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.8	15.8	2.8	10.7	27.9	62.5	42.9	8.0	41.1	38.2	33.0
Queue Length 50th (m)	25.9	61.0	0.0	3.7	80.1	50.8	42.5	0.0	10.9	21.3	38.0
Queue Length 95th (m)	62.3	92.1	12.3	10.2	111.6	71.6	58.7	9.5	20.9	33.3	64.6
Internal Link Dist (m)		980.1			554.7		844.0			481.5	
Turn Bay Length (m)	155.0		115.0	150.0		140.0		65.0	100.0		170.0
Base Capacity (vph)	426	2783	939	285	2198	450	683	505	277	638	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.45	0.20	0.18	0.57	0.48	0.29	0.12	0.19	0.16	0.53

Intersection Summary

Cycle Length: 120

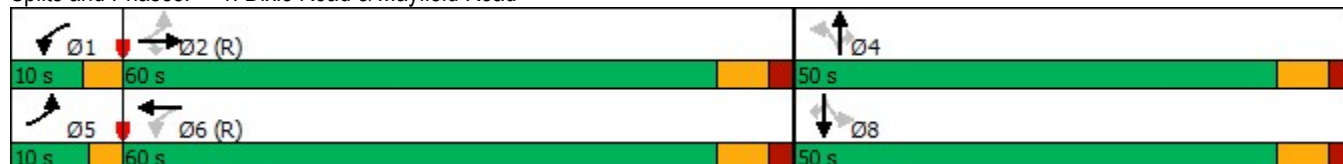
Actuated Cycle Length: 120

Offset: 9.5 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Splits and Phases: 1: Dixie Road & Mayfield Road



HCM Signalized Intersection Capacity Analysis

1: Dixie Road & Mayfield Road

Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (vph)	245	1205	180	50	1175	40	210	190	60	50	100	295
Future Volume (vph)	245	1205	180	50	1175	40	210	190	60	50	100	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	3.0	6.9	6.9	3.5	6.9		6.9	6.9	6.9	6.9	6.9	6.9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1539	4683	1453	1766	4861		1726	1902	1288	1401	1779	1354
Flt Permitted	0.14	1.00	1.00	0.21	1.00		0.69	1.00	1.00	0.53	1.00	1.00
Satd. Flow (perm)	221	4683	1453	396	4861		1255	1902	1288	775	1779	1354
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)	253	1242	186	52	1211	41	216	196	62	52	103	304
RTOR Reduction (vph)	0	0	76	0	3	0	0	0	48	0	0	112
Lane Group Flow (vph)	253	1242	110	52	1249	0	216	196	14	52	103	192
Confl. Peds. (#/hr)			10	10			5		5	5		5
Heavy Vehicles (%)	16%	12%	6%	1%	7%	18%	3%	1%	22%	27%	8%	16%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	79.8	70.7	70.7	57.5	51.9		26.4	26.4	26.4	26.4	26.4	26.4
Effective Green, g (s)	79.8	70.7	70.7	57.5	51.9		26.4	26.4	26.4	26.4	26.4	26.4
Actuated g/C Ratio	0.66	0.59	0.59	0.48	0.43		0.22	0.22	0.22	0.22	0.22	0.22
Clearance Time (s)	3.0	6.9	6.9	3.5	6.9		6.9	6.9	6.9	6.9	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	420	2759	856	253	2102		276	418	283	170	391	297
v/s Ratio Prot	c0.12	0.27		0.01	0.26			0.10			0.06	
v/s Ratio Perm	c0.28		0.08	0.09			c0.17		0.01	0.07		0.14
v/c Ratio	0.60	0.45	0.13	0.21	0.59		0.78	0.47	0.05	0.31	0.26	0.65
Uniform Delay, d1	16.4	13.8	11.0	16.8	26.0		44.1	40.7	36.9	39.1	38.7	42.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	0.5	0.3	0.4	1.2		13.5	0.8	0.1	1.0	0.4	4.8
Delay (s)	18.8	14.3	11.3	17.2	27.3		57.6	41.5	37.0	40.2	39.1	47.4
Level of Service	B	B	B	B	C		E	D	D	D	D	D
Approach Delay (s)		14.7			26.9			48.2			44.7	
Approach LOS		B			C			D			D	
Intersection Summary												
HCM 2000 Control Delay			26.3			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			17.3			
Intersection Capacity Utilization			80.3%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

5: Dixie Road & Abbotside Wy. /Spokane St

Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	50	0	0	0	15	435	0	0	380	0
Future Volume (Veh/h)	10	0	50	0	0	0	15	435	0	0	380	0
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	0	54	0	0	0	16	473	0	0	413	0
Pedestrians	5											
Lane Width (m)	3.6											
Walking Speed (m/s)	1.2											
Percent Blockage	0											
Right turn flare (veh)												
Median type	None						None					
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	923	923	418	972	923	473	418				473	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	923	923	418	972	923	473	418				473	
tC, single (s)	7.1	6.5	6.3	7.1	6.5	6.2	4.5				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.5				2.2	
p0 queue free %	96	100	91	100	100	100	98				100	
cM capacity (veh/h)	247	264	611	208	264	591	968				1089	
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	65	0	16	473	413	0						
Volume Left	11	0	16	0	0	0						
Volume Right	54	0	0	0	0	0						
cSH	490	1700	968	1700	1700	1700						
Volume to Capacity	0.13	0.00	0.02	0.28	0.24	0.01						
Queue Length 95th (m)	3.6	0.0	0.4	0.0	0.0	0.0						
Control Delay (s)	13.5	0.0	8.8	0.0	0.0	0.0						
Lane LOS	B	A	A									
Approach Delay (s)	13.5	0.0	0.3	0.0								
Approach LOS	B	A										
Intersection Summary												
Average Delay	1.1											
Intersection Capacity Utilization	33.2%			ICU Level of Service				A				
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

7: Dixie Road & UPS Facility Access/Construction Access

Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	0	0	0	0	35	385	0	0	400	20
Future Volume (Veh/h)	5	0	0	0	0	0	35	385	0	0	400	20
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	5	0	0	0	0	0	37	410	0	0	426	21
Pedestrians	10											
Lane Width (m)	3.6											
Walking Speed (m/s)	1.2											
Percent Blockage	1											
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	930	930	446	920	941	410	457				410	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	930	930	446	920	941	410	457				410	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	98	100	100	100	100	100	97				100	
cM capacity (veh/h)	239	256	611	243	252	642	1095				1149	
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1							
Volume Total	5	0	0	447	447							
Volume Left	5	0	0	37	0							
Volume Right	0	0	0	0	21							
cSH	239	1700	1700	1095	1700							
Volume to Capacity	0.02	0.01	0.00	0.03	0.26							
Queue Length 95th (m)	0.5	0.0	0.0	0.8	0.0							
Control Delay (s)	20.4	0.0	0.0	1.0	0.0							
Lane LOS	C	A	A	A								
Approach Delay (s)	20.4		0.0	1.0	0.0							
Approach LOS	C		A									
Intersection Summary												
Average Delay				0.6								
Intersection Capacity Utilization				57.8%	ICU Level of Service				B			
Analysis Period (min)				15								

Queues

12: Dixie Road

Existing PM Peak Hour

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	30	135	50	320	25	330	5	260
Future Volume (vph)	30	135	50	320	25	330	5	260
Lane Group Flow (vph)	32	163	53	353	26	379	5	306
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	26.5	26.5	24.5	24.5
Total Split (s)	30.0	30.0	30.0	30.0	35.0	35.0	35.0	35.0
Total Split (%)	46.2%	46.2%	46.2%	46.2%	53.8%	53.8%	53.8%	53.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.16	0.33	0.16	0.71	0.04	0.39	0.01	0.34
Control Delay	18.3	18.2	17.6	28.9	9.5	11.4	9.4	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	18.2	17.6	28.9	9.5	11.4	9.4	10.7
Queue Length 50th (m)	3.1	15.1	5.1	39.8	1.5	25.2	0.3	19.3
Queue Length 95th (m)	8.3	25.8	11.4	57.9	5.7	52.5	2.0	41.9
Internal Link Dist (m)		118.0		135.5		2407.1		261.5
Turn Bay Length (m)	65.0		65.0		65.0		65.0	
Base Capacity (vph)	265	660	444	676	582	973	455	908
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.25	0.12	0.52	0.04	0.39	0.01	0.34

Intersection Summary

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 12: Dixie Road



HCM Signalized Intersection Capacity Analysis

12: Dixie Road

Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	135	20	50	320	15	25	330	30	5	260	30
Future Volume (vph)	30	135	20	50	320	15	25	330	30	5	260	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1804		1787	1863		1805	1817		1583	1693	
Flt Permitted	0.39	1.00		0.65	1.00		0.57	1.00		0.51	1.00	
Satd. Flow (perm)	734	1804		1230	1863		1090	1817		854	1693	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	142	21	53	337	16	26	347	32	5	274	32
RTOR Reduction (vph)	0	10	0	0	3	0	0	4	0	0	6	0
Lane Group Flow (vph)	32	153	0	53	350	0	26	375	0	5	300	0
Heavy Vehicles (%)	0%	3%	5%	1%	1%	7%	0%	2%	17%	14%	11%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.3	17.3		17.3	17.3		34.7	34.7		34.7	34.7	
Effective Green, g (s)	17.3	17.3		17.3	17.3		34.7	34.7		34.7	34.7	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.53	0.53		0.53	0.53	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	195	480		327	495		581	969		455	903	
v/s Ratio Prot		0.09			c0.19			c0.21			0.18	
v/s Ratio Perm	0.04			0.04			0.02			0.01		
v/c Ratio	0.16	0.32		0.16	0.71		0.04	0.39		0.01	0.33	
Uniform Delay, d1	18.3	19.1		18.3	21.6		7.2	8.9		7.1	8.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.4		0.2	4.6		0.1	1.2		0.0	1.0	
Delay (s)	18.7	19.5		18.5	26.1		7.4	10.1		7.1	9.6	
Level of Service	B	B		B	C		A	B		A	A	
Approach Delay (s)		19.4			25.1			9.9			9.5	
Approach LOS		B			C			A			A	
Intersection Summary												
HCM 2000 Control Delay			15.9			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)				13.0		
Intersection Capacity Utilization			58.9%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	125	25	15	305	10	60	180	35	10	50	15
Future Volume (vph)	15	125	25	15	305	10	60	180	35	10	50	15
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	15	126	25	15	308	10	61	182	35	10	51	15
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	166	333	278	76								
Volume Left (vph)	15	15	61	10								
Volume Right (vph)	25	10	35	15								
Hadj (s)	-0.07	-0.01	-0.03	-0.09								
Departure Headway (s)	5.3	5.2	5.3	5.6								
Degree Utilization, x	0.25	0.48	0.41	0.12								
Capacity (veh/h)	614	660	623	555								
Control Delay (s)	10.1	12.8	12.0	9.4								
Approach Delay (s)	10.1	12.8	12.0	9.4								
Approach LOS	B	B	B	A								
Intersection Summary												
Delay				11.7								
Level of Service				B								
Intersection Capacity Utilization				48.3%	ICU Level of Service	A						
Analysis Period (min)				15								

Queues

1: Dixie Road & Mayfield Road

Future Background 2028 (12861) AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  			 			 	
Traffic Volume (vph)	825	1820	280	60	845	195	130	315	60	110	295	410
Future Volume (vph)	825	1820	280	60	845	195	130	315	60	110	295	410
Lane Group Flow (vph)	825	1820	280	60	845	195	130	315	60	110	295	410
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Detector Phase	5	2	2 4	1	6	6 8	7	4	4 6	3	8	8 2
Switch Phase												
Minimum Initial (s)	5.0	8.0		5.0	8.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	9.5	44.9		9.5	44.9		9.5	47.0		9.5	47.9	
Total Split (s)	31.0	66.4		9.6	45.0		11.1	47.9		11.1	47.9	
Total Split (%)	23.0%	49.2%		7.1%	33.3%		8.2%	35.5%		8.2%	35.5%	
Yellow Time (s)	3.5	4.6		3.5	4.6		3.5	4.0		3.5	4.6	
All-Red Time (s)	1.0	2.3		1.0	2.3		1.0	2.0		1.0	2.3	
Lost Time Adjust (s)	-1.0	0.0		-1.0	0.0		-1.0	0.0		-1.0	0.0	
Total Lost Time (s)	3.5	6.9		3.5	6.9		3.5	6.0		3.5	6.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
v/c Ratio	0.73	0.64	0.23	0.40	0.77	0.29	0.51	0.63	0.11	0.56	0.65	0.36
Control Delay	41.0	21.0	0.8	27.7	52.7	2.8	47.7	59.3	1.4	52.6	61.3	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	21.0	0.8	27.7	52.7	2.8	47.7	59.3	1.4	52.6	61.3	1.2
Queue Length 50th (m)	104.3	126.5	0.0	5.5	80.5	0.0	28.7	44.4	0.0	24.4	41.8	0.0
Queue Length 95th (m)	#148.6	156.5	3.8	12.3	92.7	10.0	46.4	57.6	3.0	41.1	55.0	4.4
Internal Link Dist (m)		980.1			272.1			844.0			481.5	
Turn Bay Length (m)	115.0		75.0	115.0		110.0	115.0		65.0	115.0		135.0
Base Capacity (vph)	1134	2862	1351	149	1287	947	255	1068	824	195	998	1243
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.64	0.21	0.40	0.66	0.21	0.51	0.29	0.07	0.56	0.30	0.33

Intersection Summary

Cycle Length: 135

Actuated Cycle Length: 135

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Dixie Road & Mayfield Road

									
Ø1	Ø2 (R)		Ø3	Ø4		Ø5	Ø6 (R)	Ø7	Ø8
9.6 s	66.4 s		11.1 s	47.9 s		31 s	45 s	11.1 s	47.9 s

HCM Signalized Intersection Capacity Analysis

1: Dixie Road & Mayfield Road

Future Background 2028 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	825	1820	280	60	845	195	130	315	60	110	295	410
Future Volume (vph)	825	1820	280	60	845	195	130	315	60	110	295	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	3.5	6.9	6.9	3.5	6.9	6.9	3.5	6.0	6.0	3.5	6.9	6.9
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2886	4902	1554	1539	4561	1479	1666	3444	1319	1361	3288	1402
Flt Permitted	0.95	1.00	1.00	0.12	1.00	1.00	0.45	1.00	1.00	0.40	1.00	1.00
Satd. Flow (perm)	2886	4902	1554	194	4561	1479	796	3444	1319	579	3288	1402
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	825	1820	280	60	845	195	130	315	60	110	295	410
RTOR Reduction (vph)	0	0	77	0	0	121	0	0	37	0	0	117
Lane Group Flow (vph)	825	1820	203	60	845	74	130	315	23	110	295	293
Confl. Peds. (#/hr)			5	5			5		5	5		5
Heavy Vehicles (%)	20%	7%	1%	16%	15%	8%	7%	6%	19%	31%	11%	12%
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Actuated Green, G (s)	52.0	77.9	97.7	38.9	32.4	51.1	28.9	19.8	52.2	27.6	18.7	96.6
Effective Green, g (s)	53.0	77.9	97.7	40.9	32.4	51.1	30.9	19.8	52.2	29.6	18.7	96.6
Actuated g/C Ratio	0.39	0.58	0.72	0.30	0.24	0.38	0.23	0.15	0.39	0.22	0.14	0.72
Clearance Time (s)	4.5	6.9		4.5	6.9		4.5	6.0		4.5	6.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1133	2828	1124	133	1094	559	247	505	510	184	455	1003
v/s Ratio Prot	c0.29	0.37		0.02	c0.19		0.04	c0.09		c0.04	0.09	
v/s Ratio Perm			0.13	0.11		0.05	0.08		0.02	0.09		0.21
v/c Ratio	0.73	0.64	0.18	0.45	0.77	0.13	0.53	0.62	0.05	0.60	0.65	0.29
Uniform Delay, d1	34.9	19.2	5.9	44.6	47.9	27.4	43.6	54.1	25.8	44.9	55.0	6.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	1.1	0.1	2.4	5.3	0.1	2.0	2.4	0.0	5.1	3.2	0.2
Delay (s)	37.2	20.4	6.0	47.0	53.2	27.6	45.6	56.5	25.9	50.0	58.2	7.1
Level of Service	D	C	A	D	D	C	D	E	C	D	E	A
Approach Delay (s)		23.7			48.3			50.1			31.4	
Approach LOS		C			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			32.4									
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			135.0									
Intersection Capacity Utilization			77.4%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Future Background 2028 (12861) AM Peak Hour



Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	20	65	35	0	135	1085	15	715	40
Future Volume (vph)	20	65	35	0	135	1085	15	715	40
Lane Group Flow (vph)	20	65	35	5	135	1120	0	730	40
Turn Type	Perm	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases				8		2		6	
Permitted Phases	4	4	8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.0	31.0	31.0	31.0	31.0
Total Split (s)	42.0	42.0	42.0	42.0	78.0	78.0	78.0	78.0	78.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.18	0.20	0.45	0.02	0.24	0.40		0.30	0.03
Control Delay	52.5	1.3	69.4	0.2	4.2	3.6		1.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	52.5	1.3	69.4	0.2	4.2	3.6		1.4	0.2
Queue Length 50th (m)	4.7	0.0	8.4	0.0	6.1	31.3		6.8	0.2
Queue Length 95th (m)	12.3	0.0	18.9	0.0	15.5	52.1		8.6	m0.1
Internal Link Dist (m)				96.6		481.5		358.1	
Turn Bay Length (m)	15.0	15.0	15.0		70.0				65.0
Base Capacity (vph)	393	584	271	557	554	2819		2470	1353
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.11	0.13	0.01	0.24	0.40		0.30	0.03

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3



HCM Signalized Intersection Capacity Analysis

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Future Background 2028 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	0	65	35	0	5	135	1085	35	15	715	40
Future Volume (vph)	20	0	65	35	0	5	135	1085	35	15	715	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00		0.85	1.00	0.85		1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1653		1413	1137	1633		1668	3341			3179	1597
Flt Permitted	0.75		1.00	0.76	1.00		0.37	1.00			0.92	1.00
Satd. Flow (perm)	1313		1413	906	1633		657	3341			2927	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	65	35	0	5	135	1085	35	15	715	40
RTOR Reduction (vph)	0	0	60	0	5	0	0	1	0	0	0	7
Lane Group Flow (vph)	20	0	5	35	0	0	135	1119	0	0	730	33
Confl. Peds. (#/hr)									5	5		
Heavy Vehicles (%)	8%	0%	13%	57%	0%	0%	7%	8%	28%	0%	15%	0%
Turn Type	Perm		Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		6			6
Actuated Green, G (s)	9.1		9.1	9.1	9.1		98.9	98.9			98.9	98.9
Effective Green, g (s)	9.1		9.1	9.1	9.1		98.9	98.9			98.9	98.9
Actuated g/C Ratio	0.08		0.08	0.08	0.08		0.82	0.82			0.82	0.82
Clearance Time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	99		107	68	123		541	2753			2412	1316
v/s Ratio Prot					0.00			c0.33				
v/s Ratio Perm	0.02		0.00	c0.04			0.21				0.25	0.02
v/c Ratio	0.20		0.05	0.51	0.00		0.25	0.41			0.30	0.03
Uniform Delay, d1	52.0		51.4	53.3	51.3		2.3	2.8			2.5	1.9
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00			0.41	0.17
Incremental Delay, d2	1.0		0.2	6.4	0.0		1.1	0.4			0.3	0.0
Delay (s)	53.1		51.6	59.8	51.3		3.4	3.2			1.3	0.3
Level of Service	D		D	E	D		A	A			A	A
Approach Delay (s)		51.9			58.7			3.3			1.2	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			5.5				HCM 2000 Level of Service			A		
HCM 2000 Volume to Capacity ratio			0.42									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			74.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background 2028 (12861) AM Peak Hour

						
Lane Group	EBR	NBL	NBT	SBL	SBT	Ø8
Lane Configurations						
Traffic Volume (vph)	5	60	990	15	795	
Future Volume (vph)	5	60	990	15	795	
Lane Group Flow (vph)	5	0	1060	0	825	
Turn Type	Perm	Perm	NA	Perm	NA	
Protected Phases			2		6	8
Permitted Phases	4	2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	31.0	31.0	31.0	31.0	39.0
Total Split (s)	39.0	81.0	81.0	81.0	81.0	39.0
Total Split (%)	32.5%	67.5%	67.5%	67.5%	67.5%	33%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	6.0		6.0		6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
v/c Ratio	0.02		0.67		0.52	
Control Delay	0.2		7.1		5.0	
Queue Delay	0.0		0.0		0.0	
Total Delay	0.2		7.1		5.0	
Queue Length 50th (m)	0.0		61.3		5.3	
Queue Length 95th (m)	0.0		147.1		193.8	
Internal Link Dist (m)			358.1		696.2	
Turn Bay Length (m)						
Base Capacity (vph)	424		1580		1591	
Starvation Cap Reductn	0		0		0	
Spillback Cap Reductn	0		0		0	
Storage Cap Reductn	0		0		0	
Reduced v/c Ratio	0.01		0.67		0.52	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1



HCM Signalized Intersection Capacity Analysis

7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background 2028 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	0	0	0	60	990	10	15	795	15
Future Volume (vph)	0	0	5	0	0	0	60	990	10	15	795	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.7	3.5	3.5
Total Lost time (s)			6.0					6.0			6.0	
Lane Util. Factor			1.00					1.00			1.00	
Frt			0.85					1.00			1.00	
Flt Protected			1.00					1.00			1.00	
Satd. Flow (prot)			998					1776			1678	
Flt Permitted			1.00					0.91			0.98	
Satd. Flow (perm)			998					1627			1639	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	5	0	0	0	60	990	10	15	795	15
RTOR Reduction (vph)	0	0	5	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	1060	0	0	825	0
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	8%	0%	0%	12%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)			1.1					106.9			106.9	
Effective Green, g (s)			1.1					106.9			106.9	
Actuated g/C Ratio			0.01					0.89			0.89	
Clearance Time (s)			6.0					6.0			6.0	
Vehicle Extension (s)			3.0					3.0			3.0	
Lane Grp Cap (vph)			9					1449			1460	
v/s Ratio Prot												
v/s Ratio Perm			c0.00					c0.65			0.50	
v/c Ratio			0.01					0.73			0.56	
Uniform Delay, d1			58.9					2.1			1.4	
Progression Factor			1.00					3.31			4.63	
Incremental Delay, d2			0.2					3.1			1.4	
Delay (s)			59.1					9.9			8.1	
Level of Service			E					A			A	
Approach Delay (s)		59.1			0.0			9.9			8.1	
Approach LOS		E			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.2					HCM 2000 Level of Service			A	
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			120.0					Sum of lost time (s)		12.0		
Intersection Capacity Utilization			90.2%					ICU Level of Service		E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Future Background 2028 (12861) AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	905	60	0	795
Future Volume (Veh/h)	0	0	905	60	0	795
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	905	60	0	795
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						394
pX, platoon unblocked	0.87					
vC, conflicting volume	1700	905			965	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1731	905			965	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	85	338			722	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	905	60	795		
Volume Left	0	0	0	0		
Volume Right	0	0	60	0		
cSH	1700	1700	1700	722		
Volume to Capacity	0.00	0.53	0.04	0.00		
Queue Length 95th (m)	0.0	0.0	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			52.2%		ICU Level of Service	A
Analysis Period (min)			15			

Queues

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Future Background 2028 (12861) AM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	15	0	45	0	70	785	50	50	725	25
Future Volume (vph)	15	0	45	0	70	785	50	50	725	25
Lane Group Flow (vph)	15	30	45	20	70	785	50	50	725	25
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.5	30.5	30.5	30.5	28.5	28.5	28.5	28.5	28.5	28.5
Total Split (s)	30.5	30.5	30.5	30.5	89.5	89.5	89.5	89.5	89.5	89.5
Total Split (%)	25.4%	25.4%	25.4%	25.4%	74.6%	74.6%	74.6%	74.6%	74.6%	74.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.14	0.08	0.43	0.06	0.12	0.53	0.04	0.10	0.51	0.02
Control Delay	52.3	0.4	64.4	0.3	3.9	8.4	1.4	4.9	8.3	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	0.4	64.4	0.3	3.9	8.4	1.4	4.9	8.3	2.1
Queue Length 50th (m)	3.5	0.0	10.8	0.0	4.7	114.4	1.0	1.7	35.0	0.0
Queue Length 95th (m)	10.4	0.0	22.8	0.0	m6.0	130.3	m1.7	m10.9	192.7	m2.9
Internal Link Dist (m)		161.0		124.2		369.7			813.5	
Turn Bay Length (m)	20.0		20.0		60.0		60.0	60.0		60.0
Base Capacity (vph)	279	549	261	525	567	1485	1354	524	1433	1351
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.05	0.17	0.04	0.12	0.53	0.04	0.10	0.51	0.02

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

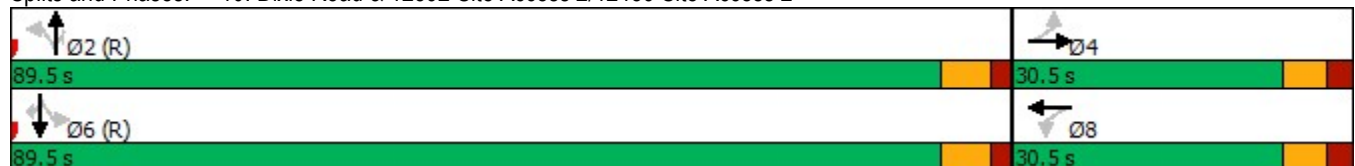
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2



HCM Signalized Intersection Capacity Analysis

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Future Background 2028 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	30	45	0	20	70	785	50	50	725	25
Future Volume (vph)	15	0	30	45	0	20	70	785	50	50	725	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	1633		1685	1633		1785	1762	1597	1785	1700	1597
Flt Permitted	0.74	1.00		0.74	1.00		0.36	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	1399	1633		1308	1633		673	1762	1597	622	1700	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	0	30	45	0	20	70	785	50	50	725	25
RTOR Reduction (vph)	0	28	0	0	19	0	0	0	9	0	0	4
Lane Group Flow (vph)	15	2	0	45	1	0	70	785	41	50	725	21
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	13%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	8.4	8.4		8.4	8.4		98.6	98.6	98.6	98.6	98.6	98.6
Effective Green, g (s)	8.4	8.4		8.4	8.4		98.6	98.6	98.6	98.6	98.6	98.6
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.82	0.82	0.82	0.82	0.82	0.82
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	97	114		91	114		552	1447	1312	511	1396	1312
v/s Ratio Prot		0.00			0.00			c0.45			0.43	
v/s Ratio Perm	0.01			c0.03			0.10		0.03	0.08		0.01
v/c Ratio	0.15	0.02		0.49	0.01		0.13	0.54	0.03	0.10	0.52	0.02
Uniform Delay, d1	52.5	52.0		53.8	51.9		2.1	3.4	2.0	2.1	3.3	1.9
Progression Factor	1.00	1.00		1.00	1.00		1.26	1.83	1.69	1.61	1.84	2.78
Incremental Delay, d2	0.7	0.1		4.2	0.0		0.3	1.1	0.0	0.3	1.2	0.0
Delay (s)	53.2	52.0		57.9	52.0		3.0	7.4	3.3	3.7	7.4	5.4
Level of Service	D	D		E	D		A	A	A	A	A	A
Approach Delay (s)		52.4			56.1			6.8			7.1	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM 2000 Control Delay		9.8					HCM 2000 Level of Service		A			
HCM 2000 Volume to Capacity ratio		0.54										
Actuated Cycle Length (s)		120.0					Sum of lost time (s)		13.0			
Intersection Capacity Utilization		70.9%					ICU Level of Service		C			
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Background 2028 (12861) AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	820	0	0	800
Future Volume (Veh/h)	0	0	820	0	0	800
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	820	0	0	800
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						240
pX, platoon unblocked	0.76					
vC, conflicting volume	1620	820			820	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1657	820			820	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	83	378			818	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	820	800			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.06	0.48	0.47			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	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		46.5%		ICU Level of Service		A
Analysis Period (min)		15				

Queues

12: Dixie Road & Old School Road

Future Background 2028 (12861) AM Peak Hour

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	60	335	75	120	145	45	200	60	20	580	190
Future Volume (vph)	60	335	75	120	145	45	200	60	20	580	190
Lane Group Flow (vph)	60	335	75	120	155	45	200	60	20	580	190
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		3	8		2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	3	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.5	31.5	31.5	9.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	39.0	39.0	39.0	20.0	59.0	61.0	61.0	61.0	61.0	61.0	61.0
Total Split (%)	32.5%	32.5%	32.5%	16.7%	49.2%	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lag	Lead							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes							
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.23	0.80	0.20	0.45	0.25	0.24	0.20	0.07	0.03	0.57	0.20
Control Delay	38.5	58.6	8.7	21.8	6.6	20.9	14.0	7.2	15.8	22.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	58.6	8.7	21.8	6.6	20.9	14.0	7.2	15.8	22.3	3.2
Queue Length 50th (m)	12.3	79.2	0.0	18.6	1.6	5.6	23.3	2.3	2.2	90.4	0.3
Queue Length 95th (m)	22.9	104.2	11.6	49.8	62.2	m17.6	54.7	m13.3	7.4	153.4	13.4
Internal Link Dist (m)		371.4			41.8		216.1			261.5	
Turn Bay Length (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Base Capacity (vph)	329	521	456	328	785	184	978	867	632	1016	954
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.64	0.16	0.37	0.20	0.24	0.20	0.07	0.03	0.57	0.20

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

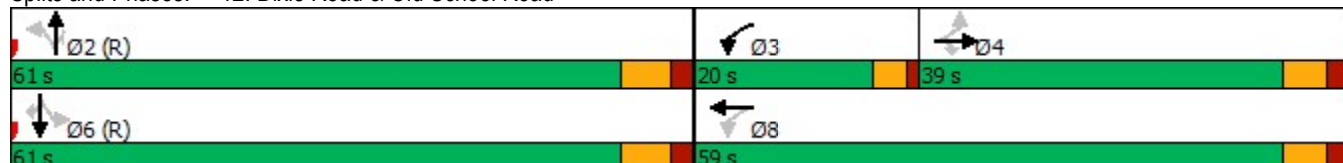
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Dixie Road & Old School Road



HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background 2028 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	335	75	120	145	10	45	200	60	20	580	190
Future Volume (vph)	60	335	75	120	145	10	45	200	60	20	580	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.5	6.5	6.5	4.0	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1733	1902	1465	1785	1790		1008	1779	1521	1733	1847	1581
Flt Permitted	0.66	1.00	1.00	0.21	1.00		0.32	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	1201	1902	1465	397	1790		336	1779	1521	1149	1847	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	335	75	120	145	10	45	200	60	20	580	190
RTOR Reduction (vph)	0	0	59	0	3	0	0	0	27	0	0	84
Lane Group Flow (vph)	60	335	17	120	152	0	45	200	33	20	580	106
Heavy Vehicles (%)	3%	1%	9%	0%	6%	10%	77%	8%	5%	3%	4%	1%
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	26.4	26.4	26.4	41.0	41.0		66.0	66.0	66.0	66.0	66.0	66.0
Effective Green, g (s)	26.4	26.4	26.4	41.0	41.0		66.0	66.0	66.0	66.0	66.0	66.0
Actuated g/C Ratio	0.22	0.22	0.22	0.34	0.34		0.55	0.55	0.55	0.55	0.55	0.55
Clearance Time (s)	6.5	6.5	6.5	4.0	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	264	418	322	258	611		184	978	836	631	1015	869
v/s Ratio Prot		c0.18		c0.04	0.09			0.11			c0.31	
v/s Ratio Perm	0.05		0.01	0.12			0.13		0.02	0.02		0.07
v/c Ratio	0.23	0.80	0.05	0.47	0.25		0.24	0.20	0.04	0.03	0.57	0.12
Uniform Delay, d1	38.4	44.3	36.9	29.6	28.4		14.0	13.7	12.4	12.4	17.7	13.0
Progression Factor	1.00	1.00	1.00	0.67	0.21		0.97	0.87	2.04	1.00	1.00	1.00
Incremental Delay, d2	0.4	10.6	0.1	1.3	0.2		2.7	0.4	0.1	0.1	2.3	0.3
Delay (s)	38.9	54.9	37.0	21.2	6.3		16.3	12.3	25.5	12.5	20.1	13.3
Level of Service	D	D	D	C	A		B	B	C	B	C	B
Approach Delay (s)		50.0			12.8			15.5			18.2	
Approach LOS		D			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			25.1			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)				17.0		
Intersection Capacity Utilization			75.8%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background 2028 (12861) AM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	410	0	0	280	0	0
Future Volume (Veh/h)	410	0	0	280	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	410	0	0	280	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	66					
pX, platoon unblocked						
vC, conflicting volume				410	550	205
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol				410	550	205
tC, single (s)				4.1	6.8	6.9
tC, 2 stage (s)						
tF (s)				2.2	3.5	3.3
p0 queue free %				100	100	100
cM capacity (veh/h)				1160	470	808
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	273	137	140	140	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.16	0.08	0.08	0.08	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	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			14.7%	ICU Level of Service		A
Analysis Period (min)			15			

Queues

14: 12861 Site Access 3 & Old School Road

Future Background 2028 (12861) AM Peak Hour

	→	←	
Lane Group	EBT	WBT	Ø2
Lane Configurations	↑↑	↑↑	
Traffic Volume (vph)	410	280	
Future Volume (vph)	410	280	
Lane Group Flow (vph)	410	280	
Turn Type	NA	NA	
Protected Phases	4		2
Permitted Phases		8	
Detector Phase	4	8	
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	28.5	31.5	31.5
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50%
Yellow Time (s)	4.5	4.5	4.0
All-Red Time (s)	2.0	2.0	2.5
Lost Time Adjust (s)	0.0	0.0	
Total Lost Time (s)	6.5	6.5	
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Min
v/c Ratio	0.70	0.48	
Control Delay	41.5	48.1	
Queue Delay	0.0	0.0	
Total Delay	41.5	48.1	
Queue Length 50th (m)	56.7	33.6	
Queue Length 95th (m)	68.7	45.6	
Internal Link Dist (m)	433.3	157.0	
Turn Bay Length (m)			
Base Capacity (vph)	1627	1627	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.25	0.17	

Intersection Summary

Cycle Length: 120

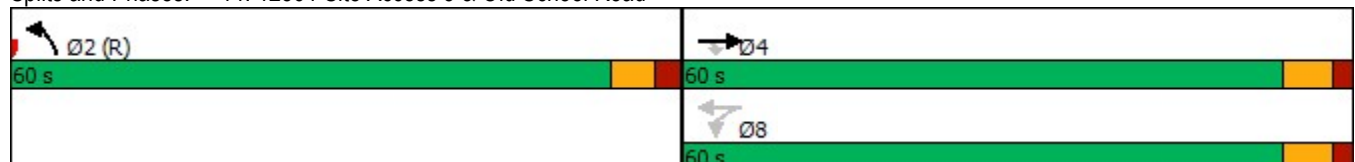
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 14: 12861 Site Access 3 & Old School Road



HCM Signalized Intersection Capacity Analysis

14: 12861 Site Access 3 & Old School Road

Future Background 2028 (12861) AM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	410	0	0	280	0	0
Future Volume (vph)	410	0	0	280	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.5	3.5	3.7	3.5	3.5
Total Lost time (s)	6.5			6.5		
Lane Util. Factor	0.95			0.95		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	3650			3650		
Flt Permitted	1.00			1.00		
Satd. Flow (perm)	3650			3650		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	410	0	0	280	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	410	0	0	280	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	NA	Perm	custom	NA	Prot	
Protected Phases	4				2	
Permitted Phases		4	8	8		
Actuated Green, G (s)	19.2			19.2		
Effective Green, g (s)	19.2			19.2		
Actuated g/C Ratio	0.16			0.16		
Clearance Time (s)	6.5			6.5		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	584			584		
v/s Ratio Prot	c0.11					
v/s Ratio Perm				0.08		
v/c Ratio	0.70			0.48		
Uniform Delay, d1	47.7			45.9		
Progression Factor	0.75			1.00		
Incremental Delay, d2	3.3			0.6		
Delay (s)	39.2			46.5		
Level of Service	D			D		
Approach Delay (s)	39.2			46.5	0.0	
Approach LOS	D			D	A	
Intersection Summary						
HCM 2000 Control Delay			42.1		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.13			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	13.0
Intersection Capacity Utilization			16.8%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Background 2028 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	310	85	25	210	0	40	75	20	5	155	30
Future Volume (vph)	10	310	85	25	210	0	40	75	20	5	155	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	310	85	25	210	0	40	75	20	5	155	30
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	405	235	135	190								
Volume Left (vph)	10	25	40	5								
Volume Right (vph)	85	0	20	30								
Hadj (s)	-0.09	0.09	0.07	-0.06								
Departure Headway (s)	5.2	5.6	6.1	5.9								
Degree Utilization, x	0.59	0.37	0.23	0.31								
Capacity (veh/h)	658	592	511	547								
Control Delay (s)	15.3	11.9	10.9	11.5								
Approach Delay (s)	15.3	11.9	10.9	11.5								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay				13.1								
Level of Service				B								
Intersection Capacity Utilization				51.2%	ICU Level of Service	A						
Analysis Period (min)				15								

Queues

1: Dixie Road & Mayfield Road

Future Background 2028 (12861) PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  			 			 	
Traffic Volume (vph)	540	1355	180	60	1350	105	210	245	60	160	270	1035
Future Volume (vph)	540	1355	180	60	1350	105	210	245	60	160	270	1035
Lane Group Flow (vph)	540	1355	180	60	1350	105	210	245	60	160	270	1035
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	8.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0
Minimum Split (s)	9.5	44.9	9.5	9.5	44.9	9.5	9.5	47.9	9.5	9.5	47.9	9.5
Total Split (s)	30.0	65.4	12.1	9.6	45.0	12.1	12.1	47.9	9.6	12.1	47.9	30.0
Total Split (%)	22.2%	48.4%	9.0%	7.1%	33.3%	9.0%	9.0%	35.5%	7.1%	9.0%	35.5%	22.2%
Yellow Time (s)	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.3	1.0
Lost Time Adjust (s)	-1.0	0.0	0.0	-1.0	0.0	0.0	-1.0	0.0	0.0	-1.0	0.0	0.0
Total Lost Time (s)	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
v/c Ratio	0.66	0.47	0.14	0.26	0.79	0.12	0.91	0.59	0.08	0.73	0.65	0.83
Control Delay	44.5	15.0	0.4	16.1	43.7	6.3	87.3	62.1	2.1	65.3	64.5	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	15.0	0.4	16.1	43.7	6.3	87.3	62.1	2.1	65.3	64.5	9.9
Queue Length 50th (m)	69.3	72.6	0.0	4.5	120.2	5.6	52.0	34.8	0.0	38.8	38.7	44.7
Queue Length 95th (m)	82.9	94.2	2.3	9.7	#171.6	15.2	#90.7	48.0	4.6	59.1	52.5	87.5
Internal Link Dist (m)		980.1			272.1			844.0			481.5	
Turn Bay Length (m)	115.0		75.0	115.0		110.0	115.0		65.0	115.0		135.0
Base Capacity (vph)	813	2913	1264	234	1718	879	232	1097	739	220	1086	1250
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.47	0.14	0.26	0.79	0.12	0.91	0.22	0.08	0.73	0.25	0.83

Intersection Summary

Cycle Length: 135

Actuated Cycle Length: 135

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 135

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Dixie Road & Mayfield Road

											
9.6 s	65.4 s					12.1 s	47.9 s				
											
30 s	45 s					12.1 s	47.9 s				

HCM Signalized Intersection Capacity Analysis

1: Dixie Road & Mayfield Road

Future Background 2028 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	540	1355	180	60	1350	105	210	245	60	160	270	1035
Future Volume (vph)	540	1355	180	60	1350	105	210	245	60	160	270	1035
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2584	4683	1475	1767	4902	1377	1730	3614	1289	1563	3579	1424
Flt Permitted	0.95	1.00	1.00	0.19	1.00	1.00	0.47	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	2584	4683	1475	352	4902	1377	852	3614	1289	849	3579	1424
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	540	1355	180	60	1350	105	210	245	60	160	270	1035
RTOR Reduction (vph)	0	0	38	0	0	23	0	0	29	0	0	63
Lane Group Flow (vph)	540	1355	142	60	1350	82	210	245	31	160	270	972
Confl. Peds. (#/hr)			10	10			5		5	5		5
Heavy Vehicles (%)	34%	12%	6%	1%	7%	16%	3%	1%	22%	14%	2%	11%
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Actuated Green, G (s)	41.5	83.0	106.4	53.1	47.3	70.7	23.4	15.6	68.7	23.4	15.6	108.9
Effective Green, g (s)	42.5	83.0	106.4	55.1	47.3	70.7	25.4	15.6	68.7	25.4	15.6	108.9
Actuated g/C Ratio	0.31	0.61	0.79	0.41	0.35	0.52	0.19	0.12	0.51	0.19	0.12	0.81
Clearance Time (s)	4.5	6.9	4.5	4.5	6.9	4.5	4.5	6.9	4.5	4.5	6.9	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	813	2879	1211	214	1717	767	217	417	655	206	413	1148
v/s Ratio Prot	0.21	0.29	0.01	0.01	0.28	0.01	c0.06	0.07	0.00	0.05	0.08	c0.26
v/s Ratio Perm			0.09	0.10		0.05	c0.12		0.02	0.10		0.42
v/c Ratio	0.66	0.47	0.12	0.28	0.79	0.11	0.97	0.59	0.05	0.78	0.65	0.85
Uniform Delay, d1	40.1	14.1	3.3	24.5	39.3	16.2	52.9	56.6	16.7	50.6	57.1	8.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	0.6	0.0	0.7	3.7	0.1	51.3	2.1	0.0	16.6	3.7	5.9
Delay (s)	42.1	14.6	3.4	25.2	43.0	16.3	104.3	58.8	16.7	67.2	60.8	13.9
Level of Service	D	B	A	C	D	B	F	E	B	E	E	B
Approach Delay (s)		20.8			40.5			72.4			28.4	
Approach LOS		C			D			E			C	
Intersection Summary												
HCM 2000 Control Delay			32.9									
HCM 2000 Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			135.0									
Intersection Capacity Utilization			115.2%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Future Background 2028 (12861) PM Peak Hour



Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	45	105	70	0	35	805	5	1280	10
Future Volume (vph)	45	105	70	0	35	805	5	1280	10
Lane Group Flow (vph)	45	105	70	5	35	820	0	1285	10
Turn Type	Perm	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases				8		2		6	
Permitted Phases	4	4	8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.0	31.0	31.0	31.0	31.0
Total Split (s)	42.0	42.0	42.0	42.0	78.0	78.0	78.0	78.0	78.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.30	0.48	0.59	0.01	0.14	0.34		0.51	0.01
Control Delay	52.3	29.4	69.2	0.0	5.3	4.4		4.1	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	52.3	29.4	69.2	0.0	5.3	4.4		4.1	0.8
Queue Length 50th (m)	10.5	10.0	16.8	0.0	1.7	24.7		32.0	0.0
Queue Length 95th (m)	21.4	26.5	31.3	0.0	5.9	42.1		61.2	m0.0
Internal Link Dist (m)				96.6		481.5		358.1	
Turn Bay Length (m)	15.0	15.0	15.0		70.0				65.0
Base Capacity (vph)	425	499	333	621	250	2399		2503	1230
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.11	0.21	0.21	0.01	0.14	0.34		0.51	0.01

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3



HCM Signalized Intersection Capacity Analysis

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Future Background 2028 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	105	70	0	5	35	805	15	5	1280	10
Future Volume (vph)	45	0	105	70	0	5	35	805	15	5	1280	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00		0.85	1.00	0.85		1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1785		1521	1394	1633		1536	3027			3319	1546
Flt Permitted	0.75		1.00	0.76	1.00		0.20	1.00			0.95	1.00
Satd. Flow (perm)	1418		1521	1111	1633		316	3027			3161	1546
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	45	0	105	70	0	5	35	805	15	5	1280	10
RTOR Reduction (vph)	0	0	55	0	4	0	0	1	0	0	0	2
Lane Group Flow (vph)	45	0	50	70	1	0	35	819	0	0	1285	8
Confl. Peds. (#/hr)							5					5
Heavy Vehicles (%)	0%	0%	5%	28%	0%	0%	16%	20%	33%	0%	10%	0%
Turn Type	Perm		Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	12.9		12.9	12.9	12.9		95.1	95.1			95.1	95.1
Effective Green, g (s)	12.9		12.9	12.9	12.9		95.1	95.1			95.1	95.1
Actuated g/C Ratio	0.11		0.11	0.11	0.11		0.79	0.79			0.79	0.79
Clearance Time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	152		163	119	175		250	2398			2505	1225
v/s Ratio Prot					0.00			0.27				
v/s Ratio Perm	0.03		0.03	c0.06			0.11				c0.41	0.01
v/c Ratio	0.30		0.30	0.59	0.00		0.14	0.34			0.51	0.01
Uniform Delay, d1	49.4		49.4	51.0	47.8		2.9	3.5			4.4	2.6
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00			0.75	2.33
Incremental Delay, d2	1.1		1.1	7.2	0.0		1.2	0.4			0.4	0.0
Delay (s)	50.5		50.5	58.3	47.8		4.1	3.9			3.7	6.0
Level of Service	D		D	E	D		A	A			A	A
Approach Delay (s)		50.5			57.6			3.9			3.7	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			8.5				HCM 2000 Level of Service			A		
HCM 2000 Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			62.7%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background 2028 (12861) PM Peak Hour



Lane Group	EBL	WBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	5	10	35	790	1315
Future Volume (vph)	5	10	35	790	1315
Lane Group Flow (vph)	5	10	0	830	1335
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	8	2		
Detector Phase	4	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	31.0	31.0	31.0
Total Split (s)	39.0	39.0	81.0	81.0	81.0
Total Split (%)	32.5%	32.5%	67.5%	67.5%	67.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.06	0.04		0.61	0.79
Control Delay	55.4	0.3		6.1	9.5
Queue Delay	0.0	0.0		0.0	0.0
Total Delay	55.4	0.3		6.1	9.5
Queue Length 50th (m)	1.2	0.0		44.9	3.7
Queue Length 95th (m)	5.6	0.0		102.5	#392.9
Internal Link Dist (m)				358.1	696.2
Turn Bay Length (m)					
Base Capacity (vph)	490	587		1366	1683
Starvation Cap Reductn	0	0		0	0
Spillback Cap Reductn	0	0		0	0
Storage Cap Reductn	0	0		0	0
Reduced v/c Ratio	0.01	0.02		0.61	0.79

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1



HCM Signalized Intersection Capacity Analysis

7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background 2028 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	0	0	0	10	35	790	5	0	1315	20
Future Volume (vph)	5	0	0	0	0	10	35	790	5	0	1315	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.7	3.5	3.5
Total Lost time (s)	6.0					6.0		6.0			6.0	
Lane Util. Factor	1.00					1.00		1.00			1.00	
Frpb, ped/bikes	1.00					1.00		1.00			1.00	
Flpb, ped/bikes	1.00					1.00		1.00			1.00	
Frt	1.00					0.85		1.00			1.00	
Flt Protected	0.95					1.00		1.00			1.00	
Satd. Flow (prot)	1785					1597		1562			1737	
Flt Permitted	0.95					1.00		0.90			1.00	
Satd. Flow (perm)	1785					1597		1410			1737	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	5	0	0	0	0	10	35	790	5	0	1315	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	0	0
Lane Group Flow (vph)	5	0	0	0	0	0	0	830	0	0	1335	0
Confl. Peds. (#/hr)							10		5	5		10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	23%	100%	0%	8%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm	NA			NA	
Protected Phases								2			6	
Permitted Phases	4		4	8		8	2					
Actuated Green, G (s)	1.4					1.4		106.6			106.6	
Effective Green, g (s)	1.4					1.4		106.6			106.6	
Actuated g/C Ratio	0.01					0.01		0.89			0.89	
Clearance Time (s)	6.0					6.0		6.0			6.0	
Vehicle Extension (s)	3.0					3.0		3.0			3.0	
Lane Grp Cap (vph)	20					18		1252			1543	
v/s Ratio Prot											c0.77	
v/s Ratio Perm	c0.00					0.00		0.59				
v/c Ratio	0.25					0.01		0.66			0.87	
Uniform Delay, d1	58.8					58.6		1.8			3.2	
Progression Factor	1.00					1.00		3.03			2.62	
Incremental Delay, d2	6.5					0.1		2.7			5.1	
Delay (s)	65.3					58.8		8.2			13.5	
Level of Service	E					E		A			B	
Approach Delay (s)		65.3			58.8			8.2			13.5	
Approach LOS		E			E			A			B	
Intersection Summary												
HCM 2000 Control Delay			11.8			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			82.1%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Future Background 2028 (12861) PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	785	10	0	1240
Future Volume (Veh/h)	0	0	785	10	0	1240
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	785	10	0	1240
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						394
pX, platoon unblocked	0.27					
vC, conflicting volume	2025	785			795	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3431	785			795	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	2	396			835	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	785	10	1240		
Volume Left	0	0	0	0		
Volume Right	0	0	10	0		
cSH	1700	1700	1700	835		
Volume to Capacity	0.00	0.46	0.01	0.00		
Queue Length 95th (m)	0.0	0.0	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			75.3%		ICU Level of Service	D
Analysis Period (min)			15			

Queues

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Future Background 2028 (12861) PM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	35	0	90	0	20	740	25	15	1100	5
Future Volume (vph)	35	0	90	0	20	740	25	15	1100	5
Lane Group Flow (vph)	35	55	90	55	20	740	25	15	1100	5
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	39.0	39.0	39.0	39.0	81.0	81.0	81.0	81.0	81.0	81.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.23	0.20	0.61	0.14	0.08	0.60	0.02	0.03	0.79	0.00
Control Delay	49.5	2.0	67.0	0.7	3.1	9.1	0.9	6.7	19.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	2.0	67.0	0.7	3.1	9.1	0.9	6.7	19.7	1.0
Queue Length 50th (m)	8.0	0.0	21.6	0.0	0.9	98.1	0.3	0.9	169.0	0.0
Queue Length 95th (m)	17.5	1.3	37.6	0.0	m1.5	154.3	m0.7	m4.5	308.9	m0.3
Internal Link Dist (m)		161.0		124.2		369.7			813.5	
Turn Bay Length (m)	20.0		20.0		60.0		60.0	60.0		60.0
Base Capacity (vph)	372	524	351	615	252	1229	1252	492	1389	1252
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.10	0.26	0.09	0.08	0.60	0.02	0.03	0.79	0.00

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

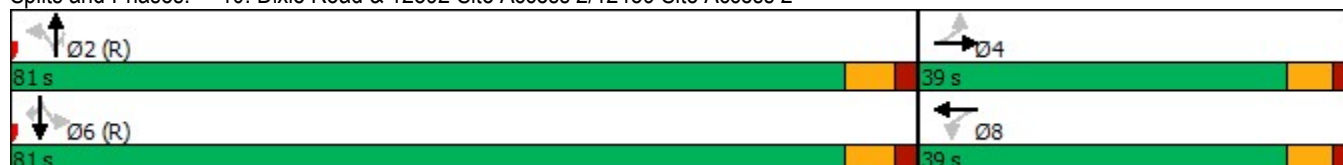
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2



HCM Signalized Intersection Capacity Analysis

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Future Background 2028 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	0	55	90	0	55	20	740	25	15	1100	5
Future Volume (vph)	35	0	55	90	0	55	20	740	25	15	1100	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	1633		1685	1633		1785	1575	1597	1785	1779	1597
Flt Permitted	0.72	1.00		0.72	1.00		0.17	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	1355	1633		1279	1633		324	1575	1597	631	1779	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	0	55	90	0	55	20	740	25	15	1100	5
RTOR Reduction (vph)	0	49	0	0	49	0	0	0	5	0	0	1
Lane Group Flow (vph)	35	6	0	90	6	0	20	740	20	15	1100	4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	22%	0%	0%	8%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	13.8	13.8		13.8	13.8		93.7	93.7	93.7	93.7	93.7	93.7
Effective Green, g (s)	13.8	13.8		13.8	13.8		93.7	93.7	93.7	93.7	93.7	93.7
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.78	0.78	0.78	0.78	0.78	0.78
Clearance Time (s)	6.0	6.0		6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	155	187		147	187		252	1229	1246	492	1389	1246
v/s Ratio Prot		0.00			0.00			0.47			c0.62	
v/s Ratio Perm	0.03			c0.07			0.06		0.01	0.02		0.00
v/c Ratio	0.23	0.03		0.61	0.03		0.08	0.60	0.02	0.03	0.79	0.00
Uniform Delay, d1	48.2	47.2		50.6	47.2		3.1	5.4	2.9	3.0	7.6	2.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	1.12	0.64	1.64	1.59	1.00
Incremental Delay, d2	0.7	0.1		7.3	0.1		0.5	1.8	0.0	0.1	4.7	0.0
Delay (s)	49.0	47.3		57.9	47.3		2.4	7.9	1.9	5.0	16.7	2.9
Level of Service	D	D		E	D		A	A	A	A	B	A
Approach Delay (s)		47.9			53.9			7.5			16.5	
Approach LOS		D			D			A			B	
Intersection Summary												
HCM 2000 Control Delay	17.1			HCM 2000 Level of Service			B					
HCM 2000 Volume to Capacity ratio	0.77											
Actuated Cycle Length (s)	120.0			Sum of lost time (s)			12.5					
Intersection Capacity Utilization	80.0%			ICU Level of Service			D					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Background 2028 (12861) PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	830	0	0	1120
Future Volume (Veh/h)	0	0	830	0	0	1120
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	830	0	0	1120
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						240
pX, platoon unblocked	0.91					
vC, conflicting volume	1950	830			830	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1997	830			830	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	61	373			811	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	830	1120			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.12	0.49	0.66			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	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		62.3%		ICU Level of Service		B
Analysis Period (min)		15				

Queues

12: Dixie Road & Old School Road

Future Background 2028 (12861) PM Peak Hour

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	130	150	105	70	350	90	530	115	5	325	65
Future Volume (vph)	130	150	105	70	350	90	530	115	5	325	65
Lane Group Flow (vph)	130	150	105	70	365	90	530	115	5	325	65
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8		2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	8	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	13.7	58.7	58.7	45.0	45.0	61.3	61.3	61.3	61.3	61.3	61.3
Total Split (%)	11.4%	48.9%	48.9%	37.5%	37.5%	51.1%	51.1%	51.1%	51.1%	51.1%	51.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes						
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.52	0.23	0.17	0.24	0.81	0.30	0.51	0.13	0.01	0.34	0.07
Control Delay	32.1	27.2	4.8	23.8	44.5	28.9	31.9	12.9	16.0	18.0	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	27.2	4.8	23.8	44.5	28.9	31.9	12.9	16.0	18.0	3.9
Queue Length 50th (m)	21.6	26.0	0.0	18.7	97.0	17.9	120.9	10.8	0.6	43.7	0.0
Queue Length 95th (m)	32.4	37.8	10.7	35.0	128.6	m31.6	166.3	26.0	3.0	74.2	7.4
Internal Link Dist (m)		371.4			41.8		216.1			261.5	
Turn Bay Length (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Base Capacity (vph)	250	811	747	399	606	305	1031	864	345	955	880
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.18	0.14	0.18	0.60	0.30	0.51	0.13	0.01	0.34	0.07

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

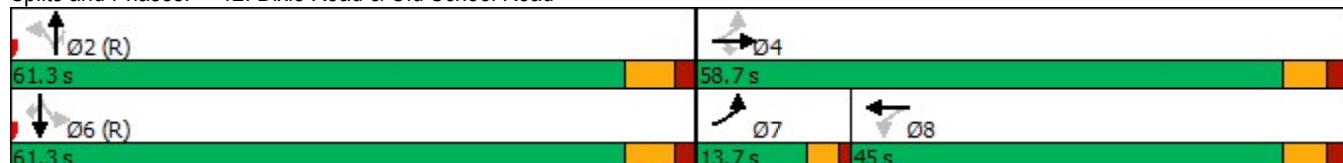
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Dixie Road & Old School Road



HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background 2028 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	150	105	70	350	15	90	530	115	5	325	65
Future Volume (vph)	130	150	105	70	350	15	90	530	115	5	325	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	4.0	6.5	6.5	6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	1865	1581	1785	1886		1038	1902	1521	1733	1762	1566
Flt Permitted	0.20	1.00	1.00	0.66	1.00		0.52	1.00	1.00	0.35	1.00	1.00
Satd. Flow (perm)	369	1865	1581	1243	1886		563	1902	1521	636	1762	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	150	105	70	350	15	90	530	115	5	325	65
RTOR Reduction (vph)	0	0	68	0	2	0	0	0	40	0	0	30
Lane Group Flow (vph)	130	150	37	70	363	0	90	530	75	5	325	35
Heavy Vehicles (%)	0%	3%	1%	0%	1%	7%	72%	1%	5%	3%	9%	2%
Turn Type	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	42.0	42.0	42.0	28.5	28.5		65.0	65.0	65.0	65.0	65.0	65.0
Effective Green, g (s)	42.0	42.0	42.0	28.5	28.5		65.0	65.0	65.0	65.0	65.0	65.0
Actuated g/C Ratio	0.35	0.35	0.35	0.24	0.24		0.54	0.54	0.54	0.54	0.54	0.54
Clearance Time (s)	4.0	6.5	6.5	6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	241	652	553	295	447		304	1030	823	344	954	848
v/s Ratio Prot	c0.04	0.08			c0.19			c0.28			0.18	
v/s Ratio Perm	0.15		0.02	0.06			0.16		0.05	0.01		0.02
v/c Ratio	0.54	0.23	0.07	0.24	0.81		0.30	0.51	0.09	0.01	0.34	0.04
Uniform Delay, d1	29.4	27.6	26.0	37.0	43.2		15.0	17.5	13.3	12.7	15.5	12.9
Progression Factor	1.00	1.00	1.00	0.63	0.71		1.49	1.58	2.34	1.00	1.00	1.00
Incremental Delay, d2	2.3	0.2	0.1	0.4	10.6		2.1	1.6	0.2	0.1	1.0	0.1
Delay (s)	31.7	27.8	26.0	23.6	41.1		24.4	29.2	31.3	12.8	16.4	13.0
Level of Service	C	C	C	C	D		C	C	C	B	B	B
Approach Delay (s)		28.6			38.3			29.0			15.8	
Approach LOS		C			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			28.3			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			78.2%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background 2028 (12861) PM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↗
Traffic Volume (veh/h)	265	0	0	430	0	0
Future Volume (Veh/h)	265	0	0	430	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	265	0	0	430	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	66					
pX, platoon unblocked						
vC, conflicting volume			265		480	132
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			265		480	132
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1311		520	899
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	177	88	215	215	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.10	0.05	0.13	0.13	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	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			15.2%		ICU Level of Service	A
Analysis Period (min)			15			

Queues

14: 12861 Site Access 3 & Old School Road

Future Background 2028 (12861) PM Peak Hour

	→	←	
Lane Group	EBT	WBT	Ø2
Lane Configurations	↑↑	↑↑	
Traffic Volume (vph)	265	430	
Future Volume (vph)	265	430	
Lane Group Flow (vph)	265	430	
Turn Type	NA	NA	
Protected Phases	4	8	2
Permitted Phases			
Detector Phase	4	8	
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	28.5	31.5	31.5
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50%
Yellow Time (s)	4.5	4.5	4.0
All-Red Time (s)	2.0	2.0	2.5
Lost Time Adjust (s)	0.0	0.0	
Total Lost Time (s)	6.5	6.5	
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Min
v/c Ratio	0.44	0.71	
Control Delay	37.6	53.9	
Queue Delay	0.0	0.0	
Total Delay	37.6	53.9	
Queue Length 50th (m)	28.0	53.6	
Queue Length 95th (m)	45.3	68.1	
Internal Link Dist (m)	433.3	157.0	
Turn Bay Length (m)			
Base Capacity (vph)	1627	1627	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.16	0.26	

Intersection Summary

Cycle Length: 120

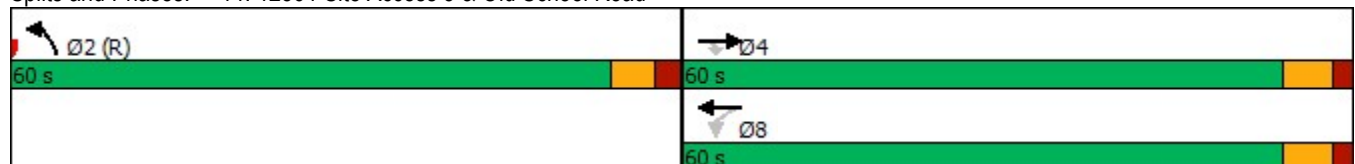
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 14: 12861 Site Access 3 & Old School Road



HCM Signalized Intersection Capacity Analysis

14: 12861 Site Access 3 & Old School Road

Future Background 2028 (12861) PM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	265	0	0	430	0	0
Future Volume (vph)	265	0	0	430	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.5	3.5	3.7	3.5	3.5
Total Lost time (s)	6.5			6.5		
Lane Util. Factor	0.95			0.95		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	3650			3650		
Flt Permitted	1.00			1.00		
Satd. Flow (perm)	3650			3650		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	265	0	0	430	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	265	0	0	430	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	NA	Perm	Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases		4	8			
Actuated Green, G (s)	19.9			19.9		
Effective Green, g (s)	19.9			19.9		
Actuated g/C Ratio	0.17			0.17		
Clearance Time (s)	6.5			6.5		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	605			605		
v/s Ratio Prot	0.07			0.12		
v/s Ratio Perm						
v/c Ratio	0.44			0.71		
Uniform Delay, d1	45.0			47.3		
Progression Factor	0.79			1.00		
Incremental Delay, d2	0.5			3.9		
Delay (s)	36.3			51.3		
Level of Service	D			D		
Approach Delay (s)	36.3			51.3	0.0	
Approach LOS	D			D	A	
Intersection Summary						
HCM 2000 Control Delay		45.5		HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio		0.13				
Actuated Cycle Length (s)		120.0		Sum of lost time (s)		13.0
Intersection Capacity Utilization		17.3%		ICU Level of Service		A
Analysis Period (min)		15				

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Background 2028 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	225	25	15	355	10	60	200	35	10	55	15
Future Volume (vph)	15	225	25	15	355	10	60	200	35	10	55	15
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	15	225	25	15	355	10	60	200	35	10	55	15
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	265	380	295	80								
Volume Left (vph)	15	15	60	10								
Volume Right (vph)	25	10	35	15								
Hadj (s)	0.02	0.01	-0.03	0.02								
Departure Headway (s)	5.7	5.5	5.9	6.4								
Degree Utilization, x	0.42	0.59	0.48	0.14								
Capacity (veh/h)	578	616	564	462								
Control Delay (s)	12.9	16.1	14.1	10.5								
Approach Delay (s)	12.9	16.1	14.1	10.5								
Approach LOS	B	C	B	B								
Intersection Summary												
Delay				14.2								
Level of Service				B								
Intersection Capacity Utilization				53.3%	ICU Level of Service	A						
Analysis Period (min)				15								

Queues

1: Dixie Road & Mayfield Road

Future Background 2033 (12861) AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  			 			 	
Traffic Volume (vph)	825	2005	280	60	930	195	130	315	60	110	295	410
Future Volume (vph)	825	2005	280	60	930	195	130	315	60	110	295	410
Lane Group Flow (vph)	825	2005	280	60	930	195	130	315	60	110	295	410
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Detector Phase	5	2	2 4	1	6	6 8	7	4	4 6	3	8	8 2
Switch Phase												
Minimum Initial (s)	5.0	8.0		5.0	8.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	9.5	44.9		9.5	44.9		9.5	47.0		9.5	47.9	
Total Split (s)	31.0	66.4		9.6	45.0		11.1	47.9		11.1	47.9	
Total Split (%)	23.0%	49.2%		7.1%	33.3%		8.2%	35.5%		8.2%	35.5%	
Yellow Time (s)	3.5	4.6		3.5	4.6		3.5	4.0		3.5	4.6	
All-Red Time (s)	1.0	2.3		1.0	2.3		1.0	2.0		1.0	2.3	
Lost Time Adjust (s)	-1.0	0.0		-1.0	0.0		-1.0	0.0		-1.0	0.0	
Total Lost Time (s)	3.5	6.9		3.5	6.9		3.5	6.0		3.5	6.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
v/c Ratio	0.75	0.69	0.23	0.41	0.79	0.28	0.54	0.62	0.10	0.61	0.65	0.36
Control Delay	42.3	21.7	0.8	28.3	51.9	2.7	50.0	59.3	1.4	56.5	61.3	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	21.7	0.8	28.3	51.9	2.7	50.0	59.3	1.4	56.5	61.3	1.2
Queue Length 50th (m)	104.3	135.0	0.0	5.5	86.4	0.0	30.1	44.4	0.0	25.6	41.8	0.0
Queue Length 95th (m)	#148.6	182.5	3.8	13.5	103.5	10.0	46.4	57.6	3.0	41.1	55.0	4.4
Internal Link Dist (m)		980.1			272.1			844.0			481.5	
Turn Bay Length (m)	115.0		75.0	115.0		110.0	115.0		65.0	115.0		135.0
Base Capacity (vph)	1107	2909	1363	148	1287	947	241	1068	824	181	998	1252
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.69	0.21	0.41	0.72	0.21	0.54	0.29	0.07	0.61	0.30	0.33

Intersection Summary

Cycle Length: 135

Actuated Cycle Length: 135

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Dixie Road & Mayfield Road

 Ø1	 Ø2 (R)	 Ø3	 Ø4
9.6 s	66.4 s	11.1 s	47.9 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
31 s	45 s	11.1 s	47.9 s

HCM Signalized Intersection Capacity Analysis

1: Dixie Road & Mayfield Road

Future Background 2033 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	825	2005	280	60	930	195	130	315	60	110	295	410
Future Volume (vph)	825	2005	280	60	930	195	130	315	60	110	295	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	3.5	6.9	6.9	3.5	6.9	6.9	3.5	6.0	6.0	3.5	6.9	6.9
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2886	4902	1554	1539	4561	1479	1666	3444	1319	1361	3288	1402
Flt Permitted	0.95	1.00	1.00	0.11	1.00	1.00	0.46	1.00	1.00	0.40	1.00	1.00
Satd. Flow (perm)	2886	4902	1554	181	4561	1479	801	3444	1319	577	3288	1402
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	825	2005	280	60	930	195	130	315	60	110	295	410
RTOR Reduction (vph)	0	0	75	0	0	118	0	0	36	0	0	112
Lane Group Flow (vph)	825	2005	205	60	930	77	130	315	24	110	295	298
Confl. Peds. (#/hr)			5	5			5		5	5		5
Heavy Vehicles (%)	20%	7%	1%	16%	15%	8%	7%	6%	19%	31%	11%	12%
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Actuated Green, G (s)	50.8	79.2	99.0	41.2	34.8	53.6	27.6	19.8	54.6	26.5	18.8	98.0
Effective Green, g (s)	51.8	79.2	99.0	43.2	34.8	53.6	29.6	19.8	54.6	28.5	18.8	98.0
Actuated g/C Ratio	0.38	0.59	0.73	0.32	0.26	0.40	0.22	0.15	0.40	0.21	0.14	0.73
Clearance Time (s)	4.5	6.9		4.5	6.9		4.5	6.0		4.5	6.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1107	2875	1139	132	1175	587	232	505	533	172	457	1017
v/s Ratio Prot	c0.29	0.41		0.02	c0.20		0.04	0.09		c0.04	0.09	
v/s Ratio Perm			0.13	0.12		0.05	0.09		0.02	c0.09		0.21
v/c Ratio	0.75	0.70	0.18	0.45	0.79	0.13	0.56	0.62	0.05	0.64	0.65	0.29
Uniform Delay, d1	35.9	19.5	5.5	43.6	46.7	25.9	44.8	54.1	24.4	46.2	54.9	6.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	1.4	0.1	2.5	5.5	0.1	3.1	2.4	0.0	7.6	3.1	0.2
Delay (s)	38.7	20.9	5.6	46.0	52.2	26.0	47.8	56.5	24.4	53.8	58.1	6.6
Level of Service	D	C	A	D	D	C	D	E	C	D	E	A
Approach Delay (s)		24.3			47.6			50.5			31.6	
Approach LOS		C			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			32.6			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			135.0			Sum of lost time (s)			20.8			
Intersection Capacity Utilization			80.4%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Future Background 2033 (12861) AM Peak Hour



Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	20	65	35	0	135	1085	15	715	40
Future Volume (vph)	20	65	35	0	135	1085	15	715	40
Lane Group Flow (vph)	20	65	35	5	135	1120	0	730	40
Turn Type	Perm	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases				8		2		6	
Permitted Phases	4	4	8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.0	31.0	31.0	31.0	31.0
Total Split (s)	42.0	42.0	42.0	42.0	78.0	78.0	78.0	78.0	78.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.18	0.20	0.45	0.02	0.24	0.40		0.30	0.03
Control Delay	52.5	1.3	69.4	0.2	4.2	3.6		1.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	52.5	1.3	69.4	0.2	4.2	3.6		1.4	0.2
Queue Length 50th (m)	4.7	0.0	8.4	0.0	6.1	31.3		6.8	0.2
Queue Length 95th (m)	12.3	0.0	18.9	0.0	15.5	52.1		8.6	m0.1
Internal Link Dist (m)				96.6		481.5		358.1	
Turn Bay Length (m)	15.0	15.0	15.0		70.0				65.0
Base Capacity (vph)	393	584	271	557	554	2819		2470	1353
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.11	0.13	0.01	0.24	0.40		0.30	0.03

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3



HCM Signalized Intersection Capacity Analysis

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Future Background 2033 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	0	65	35	0	5	135	1085	35	15	715	40
Future Volume (vph)	20	0	65	35	0	5	135	1085	35	15	715	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00		0.85	1.00	0.85		1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1653		1413	1137	1633		1668	3341			3179	1597
Flt Permitted	0.75		1.00	0.76	1.00		0.37	1.00			0.92	1.00
Satd. Flow (perm)	1313		1413	906	1633		657	3341			2927	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	65	35	0	5	135	1085	35	15	715	40
RTOR Reduction (vph)	0	0	60	0	5	0	0	1	0	0	0	7
Lane Group Flow (vph)	20	0	5	35	0	0	135	1119	0	0	730	33
Confl. Peds. (#/hr)									5	5		
Heavy Vehicles (%)	8%	0%	13%	57%	0%	0%	7%	8%	28%	0%	15%	0%
Turn Type	Perm		Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		6			6
Actuated Green, G (s)	9.1		9.1	9.1	9.1		98.9	98.9			98.9	98.9
Effective Green, g (s)	9.1		9.1	9.1	9.1		98.9	98.9			98.9	98.9
Actuated g/C Ratio	0.08		0.08	0.08	0.08		0.82	0.82			0.82	0.82
Clearance Time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	99		107	68	123		541	2753			2412	1316
v/s Ratio Prot					0.00			c0.33				
v/s Ratio Perm	0.02		0.00	c0.04			0.21				0.25	0.02
v/c Ratio	0.20		0.05	0.51	0.00		0.25	0.41			0.30	0.03
Uniform Delay, d1	52.0		51.4	53.3	51.3		2.3	2.8			2.5	1.9
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00			0.40	0.16
Incremental Delay, d2	1.0		0.2	6.4	0.0		1.1	0.4			0.3	0.0
Delay (s)	53.1		51.6	59.8	51.3		3.4	3.2			1.3	0.3
Level of Service	D		D	E	D		A	A			A	A
Approach Delay (s)		51.9			58.7			3.3			1.2	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			5.5				HCM 2000 Level of Service			A		
HCM 2000 Volume to Capacity ratio			0.42									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			74.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background 2033 (12861) AM Peak Hour

						
Lane Group	EBR	NBL	NBT	SBL	SBT	Ø8
Lane Configurations						
Traffic Volume (vph)	5	60	990	15	795	
Future Volume (vph)	5	60	990	15	795	
Lane Group Flow (vph)	5	60	1000	0	825	
Turn Type	Perm	Perm	NA	Perm	NA	
Protected Phases			2		6	8
Permitted Phases	4	2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	31.0	31.0	31.0	31.0	39.0
Total Split (s)	39.0	81.0	81.0	81.0	81.0	39.0
Total Split (%)	32.5%	67.5%	67.5%	67.5%	67.5%	33%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
v/c Ratio	0.02	0.10	0.31		0.52	
Control Delay	0.2	0.9	0.7		5.1	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	0.2	0.9	0.7		5.1	
Queue Length 50th (m)	0.0	0.0	0.0		5.5	
Queue Length 95th (m)	0.0	3.6	23.0		197.5	
Internal Link Dist (m)			358.1		696.2	
Turn Bay Length (m)						
Base Capacity (vph)	424	616	3277		1592	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.01	0.10	0.31		0.52	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1



HCM Signalized Intersection Capacity Analysis

7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background 2033 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	0	0	0	60	990	10	15	795	15
Future Volume (vph)	0	0	5	0	0	0	60	990	10	15	795	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.7	3.5	3.5
Total Lost time (s)			6.0				6.0	6.0			6.0	
Lane Util. Factor			1.00				1.00	0.95			1.00	
Frt			0.85				1.00	1.00			1.00	
Flt Protected			1.00				0.95	1.00			1.00	
Satd. Flow (prot)			998				1700	3377			1678	
Flt Permitted			1.00				0.35	1.00			0.98	
Satd. Flow (perm)			998				635	3377			1639	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	5	0	0	0	60	990	10	15	795	15
RTOR Reduction (vph)	0	0	5	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	60	1000	0	0	825	0
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	8%	0%	0%	12%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm	NA		Perm	NA	
Protected Phases								2				6
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)			1.1				106.9	106.9			106.9	
Effective Green, g (s)			1.1				106.9	106.9			106.9	
Actuated g/C Ratio			0.01				0.89	0.89			0.89	
Clearance Time (s)			6.0				6.0	6.0			6.0	
Vehicle Extension (s)			3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)			9				565	3008			1460	
v/s Ratio Prot								0.30				
v/s Ratio Perm			c0.00				0.09				c0.50	
v/c Ratio			0.01				0.11	0.33			0.56	
Uniform Delay, d1			58.9				0.8	1.0			1.4	
Progression Factor			1.00				1.00	0.96			4.72	
Incremental Delay, d2			0.2				0.4	0.3			1.4	
Delay (s)			59.1				1.1	1.3			8.2	
Level of Service			E				A	A			A	
Approach Delay (s)		59.1			0.0			1.3			8.2	
Approach LOS		E			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			4.5				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			59.8%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Future Background 2033 (12861) AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	905	60	0	795
Future Volume (Veh/h)	0	0	905	60	0	795
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	905	60	0	795
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						394
pX, platoon unblocked	0.87					
vC, conflicting volume	1700	905			965	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1731	905			965	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	85	338			722	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	905	60	795		
Volume Left	0	0	0	0		
Volume Right	0	0	60	0		
cSH	1700	1700	1700	722		
Volume to Capacity	0.00	0.53	0.04	0.00		
Queue Length 95th (m)	0.0	0.0	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			52.2%		ICU Level of Service	A
Analysis Period (min)			15			

Queues

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Future Background 2033 (12861) AM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	15	0	45	0	70	785	50	50	725	25
Future Volume (vph)	15	0	45	0	70	785	50	50	725	25
Lane Group Flow (vph)	15	30	45	20	70	785	50	50	725	25
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.5	30.5	30.5	30.5	28.5	28.5	28.5	28.5	28.5	28.5
Total Split (s)	30.5	30.5	30.5	30.5	89.5	89.5	89.5	89.5	89.5	89.5
Total Split (%)	25.4%	25.4%	25.4%	25.4%	74.6%	74.6%	74.6%	74.6%	74.6%	74.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.14	0.08	0.43	0.06	0.12	0.53	0.04	0.10	0.51	0.02
Control Delay	52.3	0.4	64.4	0.3	6.6	12.2	3.6	5.2	8.8	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	0.4	64.4	0.3	6.6	12.2	3.6	5.2	8.8	2.4
Queue Length 50th (m)	3.5	0.0	10.8	0.0	6.1	111.3	0.8	1.7	35.5	0.0
Queue Length 95th (m)	10.4	0.0	22.8	0.0	15.5	186.4	8.3	m10.7	196.5	m2.8
Internal Link Dist (m)		161.0		124.2		369.7			813.5	
Turn Bay Length (m)	20.0		20.0		60.0		60.0	60.0		60.0
Base Capacity (vph)	279	549	261	525	567	1485	1354	524	1433	1351
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.05	0.17	0.04	0.12	0.53	0.04	0.10	0.51	0.02

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2



HCM Signalized Intersection Capacity Analysis

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Future Background 2033 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	30	45	0	20	70	785	50	50	725	25
Future Volume (vph)	15	0	30	45	0	20	70	785	50	50	725	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	1633		1685	1633		1785	1762	1597	1785	1700	1597
Flt Permitted	0.74	1.00		0.74	1.00		0.36	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	1399	1633		1308	1633		673	1762	1597	622	1700	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	0	30	45	0	20	70	785	50	50	725	25
RTOR Reduction (vph)	0	28	0	0	19	0	0	0	9	0	0	4
Lane Group Flow (vph)	15	2	0	45	1	0	70	785	41	50	725	21
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	13%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	8.4	8.4		8.4	8.4		98.6	98.6	98.6	98.6	98.6	98.6
Effective Green, g (s)	8.4	8.4		8.4	8.4		98.6	98.6	98.6	98.6	98.6	98.6
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.82	0.82	0.82	0.82	0.82	0.82
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	97	114		91	114		552	1447	1312	511	1396	1312
v/s Ratio Prot		0.00			0.00			c0.45			0.43	
v/s Ratio Perm	0.01			c0.03			0.10		0.03	0.08		0.01
v/c Ratio	0.15	0.02		0.49	0.01		0.13	0.54	0.03	0.10	0.52	0.02
Uniform Delay, d1	52.5	52.0		53.8	51.9		2.1	3.4	2.0	2.1	3.3	1.9
Progression Factor	1.00	1.00		1.00	1.00		2.18	2.69	4.33	1.71	1.98	3.15
Incremental Delay, d2	0.7	0.1		4.2	0.0		0.5	1.4	0.0	0.3	1.2	0.0
Delay (s)	53.2	52.0		57.9	52.0		5.1	10.7	8.5	3.9	7.8	6.1
Level of Service	D	D		E	D		A	B	A	A	A	A
Approach Delay (s)		52.4			56.1			10.1			7.5	
Approach LOS		D			E			B			A	
Intersection Summary												
HCM 2000 Control Delay			11.7				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			13.0		
Intersection Capacity Utilization			70.9%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Background 2033 (12861) AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	820	0	0	800
Future Volume (Veh/h)	0	0	820	0	0	800
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	820	0	0	800
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						240
pX, platoon unblocked	0.76					
vC, conflicting volume	1620	820			820	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1658	820			820	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	82	378			818	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	820	800			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.48	0.47			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	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		46.5%		ICU Level of Service		A
Analysis Period (min)		15				

Queues

12: Dixie Road & Old School Road

Future Background 2033 (12861) AM Peak Hour

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	60	365	75	120	160	45	200	60	20	580	190
Future Volume (vph)	60	365	75	120	160	45	200	60	20	580	190
Lane Group Flow (vph)	60	365	75	120	170	45	200	60	20	580	190
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		3	8		2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	3	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.5	31.5	31.5	9.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	39.0	39.0	39.0	20.0	59.0	61.0	61.0	61.0	61.0	61.0	61.0
Total Split (%)	32.5%	32.5%	32.5%	16.7%	49.2%	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lag	Lead							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes							
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.22	0.83	0.19	0.47	0.27	0.26	0.21	0.07	0.03	0.58	0.20
Control Delay	37.1	59.0	8.3	22.2	5.8	24.2	15.9	7.9	16.4	23.5	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	59.0	8.3	22.2	5.8	24.2	15.9	7.9	16.4	23.5	3.3
Queue Length 50th (m)	12.1	86.2	0.0	19.2	2.5	6.6	27.1	2.6	2.3	93.7	0.3
Queue Length 95th (m)	22.7	113.1	11.5	49.3	66.9	m22.1	59.7	m14.8	7.5	155.4	13.6
Internal Link Dist (m)		371.4			41.8		216.1			261.5	
Turn Bay Length (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Base Capacity (vph)	327	524	458	323	786	175	957	850	616	993	937
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.70	0.16	0.37	0.22	0.26	0.21	0.07	0.03	0.58	0.20

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

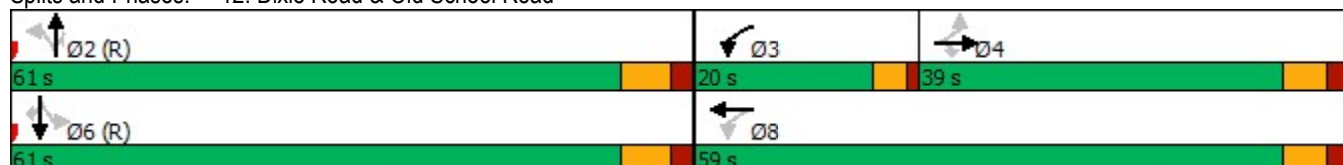
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Dixie Road & Old School Road



HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background 2033 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	365	75	120	160	10	45	200	60	20	580	190
Future Volume (vph)	60	365	75	120	160	10	45	200	60	20	580	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.5	6.5	6.5	4.0	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1733	1902	1465	1785	1792		1008	1779	1521	1733	1847	1581
Flt Permitted	0.65	1.00	1.00	0.19	1.00		0.31	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	1185	1902	1465	354	1792		327	1779	1521	1145	1847	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	365	75	120	160	10	45	200	60	20	580	190
RTOR Reduction (vph)	0	0	58	0	2	0	0	0	28	0	0	86
Lane Group Flow (vph)	60	365	18	120	168	0	45	200	32	20	580	104
Heavy Vehicles (%)	3%	1%	9%	0%	6%	10%	77%	8%	5%	3%	4%	1%
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	28.0	28.0	28.0	42.5	42.5		64.5	64.5	64.5	64.5	64.5	64.5
Effective Green, g (s)	28.0	28.0	28.0	42.5	42.5		64.5	64.5	64.5	64.5	64.5	64.5
Actuated g/C Ratio	0.23	0.23	0.23	0.35	0.35		0.54	0.54	0.54	0.54	0.54	0.54
Clearance Time (s)	6.5	6.5	6.5	4.0	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	276	443	341	250	634		175	956	817	615	992	849
v/s Ratio Prot		c0.19		c0.04	0.09			0.11			c0.31	
v/s Ratio Perm	0.05		0.01	0.13			0.14		0.02	0.02		0.07
v/c Ratio	0.22	0.82	0.05	0.48	0.27		0.26	0.21	0.04	0.03	0.58	0.12
Uniform Delay, d1	37.2	43.7	35.7	28.9	27.6		14.9	14.5	13.1	13.1	18.7	13.7
Progression Factor	1.00	1.00	1.00	0.69	0.19		1.07	0.94	2.19	1.00	1.00	1.00
Incremental Delay, d2	0.4	11.8	0.1	1.4	0.2		3.1	0.4	0.1	0.1	2.5	0.3
Delay (s)	37.5	55.4	35.8	21.5	5.4		19.0	14.1	28.8	13.2	21.2	14.0
Level of Service	D	E	D	C	A		B	B	C	B	C	B
Approach Delay (s)		50.3			12.0			17.7			19.3	
Approach LOS		D			B			B			B	
Intersection Summary												
HCM 2000 Control Delay	26.2			HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio	0.64											
Actuated Cycle Length (s)	120.0			Sum of lost time (s)					17.0			
Intersection Capacity Utilization	77.4%			ICU Level of Service					D			
Analysis Period (min)	15											
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background 2033 (12861) AM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	440	0	0	295	0	0
Future Volume (Veh/h)	440	0	0	295	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	440	0	0	295	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	66					
pX, platoon unblocked						
vC, conflicting volume			440		588	220
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			440		588	220
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1131		445	790
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	293	147	148	148	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.17	0.09	0.09	0.09	0.00	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	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			15.5%	ICU Level of Service		A
Analysis Period (min)			15			

Queues

14: 12861 Site Access 3 & Old School Road

Future Background 2033 (12861) AM Peak Hour



Lane Group	EBT	WBT	Ø2
Lane Configurations	↑↑	↑↑	
Traffic Volume (vph)	440	295	
Future Volume (vph)	440	295	
Lane Group Flow (vph)	440	295	
Turn Type	NA	NA	
Protected Phases	4		2
Permitted Phases		8	
Detector Phase	4	8	
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	28.5	31.5	31.5
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50%
Yellow Time (s)	4.5	4.5	4.0
All-Red Time (s)	2.0	2.0	2.5
Lost Time Adjust (s)	0.0	0.0	
Total Lost Time (s)	6.5	6.5	
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Min
v/c Ratio	0.72	0.48	
Control Delay	40.3	47.2	
Queue Delay	0.0	0.0	
Total Delay	40.3	47.2	
Queue Length 50th (m)	60.8	35.2	
Queue Length 95th (m)	67.7	47.3	
Internal Link Dist (m)	433.3	157.0	
Turn Bay Length (m)			
Base Capacity (vph)	1627	1627	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.27	0.18	

Intersection Summary

Cycle Length: 120

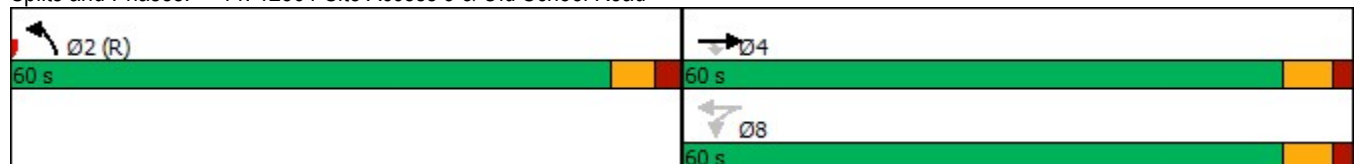
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 14: 12861 Site Access 3 & Old School Road



HCM Signalized Intersection Capacity Analysis

14: 12861 Site Access 3 & Old School Road

Future Background 2033 (12861) AM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	440	0	0	295	0	0
Future Volume (vph)	440	0	0	295	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.5	3.5	3.7	3.5	3.5
Total Lost time (s)	6.5			6.5		
Lane Util. Factor	0.95			0.95		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	3650			3650		
Flt Permitted	1.00			1.00		
Satd. Flow (perm)	3650			3650		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	440	0	0	295	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	440	0	0	295	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	NA	Perm	custom	NA	Prot	
Protected Phases	4				2	
Permitted Phases		4	8	8		
Actuated Green, G (s)	20.2			20.2		
Effective Green, g (s)	20.2			20.2		
Actuated g/C Ratio	0.17			0.17		
Clearance Time (s)	6.5			6.5		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	614			614		
v/s Ratio Prot	c0.12					
v/s Ratio Perm				0.08		
v/c Ratio	0.72			0.48		
Uniform Delay, d1	47.2			45.2		
Progression Factor	0.74			1.00		
Incremental Delay, d2	3.3			0.6		
Delay (s)	38.1			45.7		
Level of Service	D			D		
Approach Delay (s)	38.1			45.7	0.0	
Approach LOS	D			D	A	
Intersection Summary						
HCM 2000 Control Delay			41.2		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.14			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	13.0
Intersection Capacity Utilization			17.6%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Background 2033 (12861) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	340	85	25	225	0	40	85	20	5	170	30
Future Volume (vph)	10	340	85	25	225	0	40	85	20	5	170	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	340	85	25	225	0	40	85	20	5	170	30
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	435	250	145	205								
Volume Left (vph)	10	25	40	5								
Volume Right (vph)	85	0	20	30								
Hadj (s)	-0.08	0.09	0.07	-0.06								
Departure Headway (s)	5.4	5.8	6.4	6.1								
Degree Utilization, x	0.65	0.41	0.26	0.35								
Capacity (veh/h)	638	558	485	525								
Control Delay (s)	17.8	12.8	11.5	12.3								
Approach Delay (s)	17.8	12.8	11.5	12.3								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay				14.6								
Level of Service				B								
Intersection Capacity Utilization				54.1%	ICU Level of Service	A						
Analysis Period (min)				15								

Queues

1: Dixie Road & Mayfield Road

Future Background 2033 (12861) PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	540	1495	180	60	1485	105	210	245	60	160	270	1035
Future Volume (vph)	540	1495	180	60	1485	105	210	245	60	160	270	1035
Lane Group Flow (vph)	540	1495	180	60	1485	105	210	245	60	160	270	1035
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	8.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0
Minimum Split (s)	9.5	44.9	9.5	9.5	44.9	9.5	9.5	47.9	9.5	9.5	47.9	9.5
Total Split (s)	24.0	63.6	13.1	10.4	50.0	13.1	13.1	47.9	10.4	13.1	47.9	24.0
Total Split (%)	17.8%	47.1%	9.7%	7.7%	37.0%	9.7%	9.7%	35.5%	7.7%	9.7%	35.5%	17.8%
Yellow Time (s)	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.3	1.0
Lost Time Adjust (s)	-1.0	0.0	0.0	-1.0	0.0	0.0	-1.0	0.0	0.0	-1.0	0.0	0.0
Total Lost Time (s)	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
v/c Ratio	0.62	0.52	0.14	0.29	0.94	0.12	0.86	0.59	0.09	0.69	0.65	0.83
Control Delay	41.9	16.4	0.4	17.6	57.2	6.2	77.9	62.1	1.9	60.9	64.5	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	16.4	0.4	17.6	57.2	6.2	77.9	62.1	1.9	60.9	64.5	10.3
Queue Length 50th (m)	65.9	85.4	0.0	4.8	146.7	6.2	51.5	34.8	0.0	38.4	38.7	48.5
Queue Length 95th (m)	89.1	109.8	2.3	10.0	#181.0	13.4	#85.5	48.0	3.8	58.4	52.5	94.9
Internal Link Dist (m)		980.1			272.1			844.0			481.5	
Turn Bay Length (m)	115.0		75.0	115.0		110.0	115.0		65.0	115.0		135.0
Base Capacity (vph)	871	2881	1264	208	1579	850	244	1097	704	231	1086	1246
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.52	0.14	0.29	0.94	0.12	0.86	0.22	0.09	0.69	0.25	0.83

Intersection Summary

Cycle Length: 135

Actuated Cycle Length: 135

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 135

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Dixie Road & Mayfield Road

								
Ø1	Ø2 (R)		Ø3		Ø4			
10.4 s	63.6 s		13.1 s		47.9 s			
								
Ø5	Ø6 (R)		Ø7		Ø8			
24 s	50 s		13.1 s		47.9 s			

HCM Signalized Intersection Capacity Analysis

1: Dixie Road & Mayfield Road

Future Background 2033 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	540	1495	180	60	1485	105	210	245	60	160	270	1035
Future Volume (vph)	540	1495	180	60	1485	105	210	245	60	160	270	1035
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2584	4683	1476	1767	4902	1377	1730	3614	1289	1563	3579	1425
Flt Permitted	0.95	1.00	1.00	0.16	1.00	1.00	0.47	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	2584	4683	1476	303	4902	1377	852	3614	1289	849	3579	1425
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	540	1495	180	60	1485	105	210	245	60	160	270	1035
RTOR Reduction (vph)	0	0	38	0	0	24	0	0	31	0	0	68
Lane Group Flow (vph)	540	1495	142	60	1485	81	210	245	29	160	270	967
Confl. Peds. (#/hr)			10	10			5		5	5		5
Heavy Vehicles (%)	34%	12%	6%	1%	7%	16%	3%	1%	22%	14%	2%	11%
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Actuated Green, G (s)	44.5	82.1	106.4	49.2	43.4	67.7	24.3	15.6	64.8	24.3	15.6	108.0
Effective Green, g (s)	45.5	82.1	106.4	51.2	43.4	67.7	26.3	15.6	64.8	26.3	15.6	108.0
Actuated g/C Ratio	0.34	0.61	0.79	0.38	0.32	0.50	0.19	0.12	0.48	0.19	0.12	0.80
Clearance Time (s)	4.5	6.9	4.5	4.5	6.9	4.5	4.5	6.9	4.5	4.5	6.9	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	870	2847	1212	188	1575	736	229	417	618	216	413	1140
v/s Ratio Prot	0.21	0.32	0.01	0.02	c0.30	0.01	c0.07	0.07	0.00	0.05	0.08	c0.28
v/s Ratio Perm			0.09	0.10		0.05	c0.11		0.02	0.09		0.40
v/c Ratio	0.62	0.53	0.12	0.32	0.94	0.11	0.92	0.59	0.05	0.74	0.65	0.85
Uniform Delay, d1	37.5	15.2	3.3	32.4	44.6	17.8	51.6	56.6	18.7	49.4	57.1	8.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.7	0.0	1.0	12.6	0.1	37.2	2.1	0.0	12.8	3.7	6.0
Delay (s)	38.9	15.9	3.4	33.4	57.2	17.8	88.9	58.8	18.7	62.2	60.8	14.4
Level of Service	D	B	A	C	E	B	F	E	B	E	E	B
Approach Delay (s)		20.5			53.9			66.4			28.2	
Approach LOS		C			D			E			C	
Intersection Summary												
HCM 2000 Control Delay			35.9									
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			135.0									
Intersection Capacity Utilization			117.8%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Future Background 2033 (12861) PM Peak Hour



Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	45	105	70	0	35	805	5	1280	10
Future Volume (vph)	45	105	70	0	35	805	5	1280	10
Lane Group Flow (vph)	45	105	70	5	35	820	0	1285	10
Turn Type	Perm	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases				8		2		6	
Permitted Phases	4	4	8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.0	31.0	31.0	31.0	31.0
Total Split (s)	42.0	42.0	42.0	42.0	78.0	78.0	78.0	78.0	78.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.30	0.48	0.59	0.01	0.14	0.34		0.51	0.01
Control Delay	52.3	29.4	69.2	0.0	5.3	4.4		4.1	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	52.3	29.4	69.2	0.0	5.3	4.4		4.1	0.8
Queue Length 50th (m)	10.5	10.0	16.8	0.0	1.7	24.7		31.7	0.0
Queue Length 95th (m)	21.4	26.5	31.3	0.0	5.9	42.1		61.2	m0.0
Internal Link Dist (m)				96.6		481.5		358.1	
Turn Bay Length (m)	15.0	15.0	15.0		70.0				65.0
Base Capacity (vph)	425	499	333	621	250	2399		2503	1230
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.11	0.21	0.21	0.01	0.14	0.34		0.51	0.01

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3



HCM Signalized Intersection Capacity Analysis

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Future Background 2033 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	105	70	0	5	35	805	15	5	1280	10
Future Volume (vph)	45	0	105	70	0	5	35	805	15	5	1280	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00		0.85	1.00	0.85		1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1785		1521	1394	1633		1536	3027			3319	1546
Flt Permitted	0.75		1.00	0.76	1.00		0.20	1.00			0.95	1.00
Satd. Flow (perm)	1418		1521	1111	1633		316	3027			3161	1546
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	45	0	105	70	0	5	35	805	15	5	1280	10
RTOR Reduction (vph)	0	0	55	0	4	0	0	1	0	0	0	2
Lane Group Flow (vph)	45	0	50	70	1	0	35	819	0	0	1285	8
Confl. Peds. (#/hr)							5					5
Heavy Vehicles (%)	0%	0%	5%	28%	0%	0%	16%	20%	33%	0%	10%	0%
Turn Type	Perm		Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		6			6
Actuated Green, G (s)	12.9		12.9	12.9	12.9		95.1	95.1			95.1	95.1
Effective Green, g (s)	12.9		12.9	12.9	12.9		95.1	95.1			95.1	95.1
Actuated g/C Ratio	0.11		0.11	0.11	0.11		0.79	0.79			0.79	0.79
Clearance Time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	152		163	119	175		250	2398			2505	1225
v/s Ratio Prot					0.00			0.27				
v/s Ratio Perm	0.03		0.03	c0.06			0.11				c0.41	0.01
v/c Ratio	0.30		0.30	0.59	0.00		0.14	0.34			0.51	0.01
Uniform Delay, d1	49.4		49.4	51.0	47.8		2.9	3.5			4.4	2.6
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00			0.75	2.33
Incremental Delay, d2	1.1		1.1	7.2	0.0		1.2	0.4			0.4	0.0
Delay (s)	50.5		50.5	58.3	47.8		4.1	3.9			3.7	6.0
Level of Service	D		D	E	D		A	A			A	A
Approach Delay (s)		50.5			57.6			3.9			3.7	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			8.5				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			62.7%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background 2033 (12861) PM Peak Hour



Lane Group	EBL	WBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	5	10	35	790	1315
Future Volume (vph)	5	10	35	790	1315
Lane Group Flow (vph)	5	10	35	795	1335
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	8	2		
Detector Phase	4	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	31.0	31.0	31.0
Total Split (s)	39.0	39.0	81.0	81.0	81.0
Total Split (%)	32.5%	32.5%	67.5%	67.5%	67.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.06	0.04	0.13	0.28	0.79
Control Delay	55.4	0.3	1.8	0.7	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	55.4	0.3	1.8	0.7	9.6
Queue Length 50th (m)	1.2	0.0	0.0	0.0	3.7
Queue Length 95th (m)	5.6	0.0	2.9	19.3	#392.9
Internal Link Dist (m)				358.1	696.2
Turn Bay Length (m)					
Base Capacity (vph)	490	587	271	2859	1683
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.01	0.02	0.13	0.28	0.79

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1



HCM Signalized Intersection Capacity Analysis

7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background 2033 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	0	0	0	10	35	790	5	0	1315	20
Future Volume (vph)	5	0	0	0	0	10	35	790	5	0	1315	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.7	3.5	3.5
Total Lost time (s)	6.0					6.0	6.0	6.0			6.0	
Lane Util. Factor	1.00					1.00	1.00	0.95			1.00	
Frpb, ped/bikes	1.00					1.00	1.00	1.00			1.00	
Flpb, ped/bikes	1.00					1.00	1.00	1.00			1.00	
Frt	1.00					0.85	1.00	1.00			1.00	
Flt Protected	0.95					1.00	0.95	1.00			1.00	
Satd. Flow (prot)	1785					1597	1750	2953			1737	
Flt Permitted	0.95					1.00	0.15	1.00			1.00	
Satd. Flow (perm)	1785					1597	281	2953			1737	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	5	0	0	0	0	10	35	790	5	0	1315	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	0	0
Lane Group Flow (vph)	5	0	0	0	0	0	35	795	0	0	1335	0
Confl. Peds. (#/hr)							10		5	5		10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	23%	100%	0%	8%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm	NA			NA	
Protected Phases								2			6	
Permitted Phases	4		4	8		8	2					
Actuated Green, G (s)	1.4					1.4	106.6	106.6			106.6	
Effective Green, g (s)	1.4					1.4	106.6	106.6			106.6	
Actuated g/C Ratio	0.01					0.01	0.89	0.89			0.89	
Clearance Time (s)	6.0					6.0	6.0	6.0			6.0	
Vehicle Extension (s)	3.0					3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)	20					18	249	2623			1543	
v/s Ratio Prot								0.27			c0.77	
v/s Ratio Perm	c0.00					0.00	0.12					
v/c Ratio	0.25					0.01	0.14	0.30			0.87	
Uniform Delay, d1	58.8					58.6	0.9	1.0			3.2	
Progression Factor	1.00					1.00	0.95	0.91			2.67	
Incremental Delay, d2	6.5					0.1	1.1	0.3			5.1	
Delay (s)	65.3					58.8	1.9	1.2			13.7	
Level of Service	E					E	A	A			B	
Approach Delay (s)		65.3			58.8			1.3			13.7	
Approach LOS		E			E			A			B	
Intersection Summary												
HCM 2000 Control Delay			9.3				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			82.1%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Future Background 2033 (12861) PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	785	10	0	1240
Future Volume (Veh/h)	0	0	785	10	0	1240
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	785	10	0	1240
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						394
pX, platoon unblocked	0.27					
vC, conflicting volume	2025	785			795	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3431	785			795	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	2	396			835	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	785	10	1240		
Volume Left	0	0	0	0		
Volume Right	0	0	10	0		
cSH	1700	1700	1700	835		
Volume to Capacity	0.00	0.46	0.01	0.00		
Queue Length 95th (m)	0.0	0.0	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			75.3%		ICU Level of Service	D
Analysis Period (min)			15			

Queues

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Future Background 2033 (12861) PM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	35	0	90	0	20	740	25	15	1100	5
Future Volume (vph)	35	0	90	0	20	740	25	15	1100	5
Lane Group Flow (vph)	35	55	90	55	20	740	25	15	1100	5
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	39.0	39.0	39.0	39.0	81.0	81.0	81.0	81.0	81.0	81.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.23	0.20	0.61	0.14	0.08	0.60	0.02	0.03	0.79	0.00
Control Delay	49.5	2.0	67.0	0.7	5.0	12.1	2.4	6.7	20.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	2.0	67.0	0.7	5.0	12.1	2.4	6.7	20.3	1.0
Queue Length 50th (m)	8.0	0.0	21.6	0.0	1.5	98.1	0.4	1.0	177.7	0.0
Queue Length 95th (m)	17.5	1.3	37.6	0.0	5.6	166.8	3.6	m4.3	308.6	m0.3
Internal Link Dist (m)		161.0		124.2		369.7			813.5	
Turn Bay Length (m)	20.0		20.0		60.0		60.0	60.0		60.0
Base Capacity (vph)	372	524	351	615	252	1229	1252	492	1389	1252
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.10	0.26	0.09	0.08	0.60	0.02	0.03	0.79	0.00

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

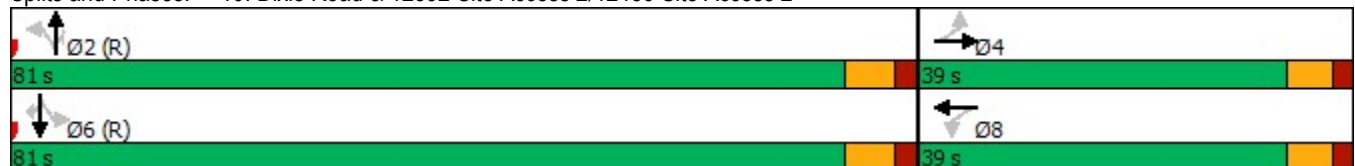
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2



HCM Signalized Intersection Capacity Analysis

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Future Background 2033 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	0	55	90	0	55	20	740	25	15	1100	5
Future Volume (vph)	35	0	55	90	0	55	20	740	25	15	1100	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	1633		1685	1633		1785	1575	1597	1785	1779	1597
Flt Permitted	0.72	1.00		0.72	1.00		0.17	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	1355	1633		1279	1633		324	1575	1597	631	1779	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	0	55	90	0	55	20	740	25	15	1100	5
RTOR Reduction (vph)	0	49	0	0	49	0	0	0	5	0	0	1
Lane Group Flow (vph)	35	6	0	90	6	0	20	740	20	15	1100	4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	22%	0%	0%	8%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	13.8	13.8		13.8	13.8		93.7	93.7	93.7	93.7	93.7	93.7
Effective Green, g (s)	13.8	13.8		13.8	13.8		93.7	93.7	93.7	93.7	93.7	93.7
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.78	0.78	0.78	0.78	0.78	0.78
Clearance Time (s)	6.0	6.0		6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	155	187		147	187		252	1229	1246	492	1389	1246
v/s Ratio Prot		0.00			0.00			0.47			c0.62	
v/s Ratio Perm	0.03			c0.07			0.06		0.01	0.02		0.00
v/c Ratio	0.23	0.03		0.61	0.03		0.08	0.60	0.02	0.03	0.79	0.00
Uniform Delay, d1	48.2	47.2		50.6	47.2		3.1	5.4	2.9	3.0	7.6	2.9
Progression Factor	1.00	1.00		1.00	1.00		1.02	1.53	1.70	1.66	1.66	1.00
Incremental Delay, d2	0.7	0.1		7.3	0.1		0.6	2.1	0.0	0.1	4.7	0.0
Delay (s)	49.0	47.3		57.9	47.3		3.7	10.4	5.0	5.0	17.2	2.9
Level of Service	D	D		E	D		A	B	A	A	B	A
Approach Delay (s)		47.9			53.9			10.1			17.0	
Approach LOS		D			D			B			B	
Intersection Summary												
HCM 2000 Control Delay	18.2			HCM 2000 Level of Service			B					
HCM 2000 Volume to Capacity ratio	0.77											
Actuated Cycle Length (s)	120.0			Sum of lost time (s)			12.5					
Intersection Capacity Utilization	80.0%			ICU Level of Service			D					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Background 2033 (12861) PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	830	0	0	1120
Future Volume (Veh/h)	0	0	830	0	0	1120
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	830	0	0	1120
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						240
pX, platoon unblocked	0.90					
vC, conflicting volume	1950	830			830	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1999	830			830	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	60	373			811	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	830	1120			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.06	0.49	0.66			
Queue Length 95th (m)	0.0	0.0	0.0			
Control Delay (s)	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		62.3%		ICU Level of Service		B
Analysis Period (min)		15				

Queues

12: Dixie Road & Old School Road

Future Background 2033 (12861) PM Peak Hour

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	130	160	105	70	385	90	530	115	5	325	65
Future Volume (vph)	130	160	105	70	385	90	530	115	5	325	65
Lane Group Flow (vph)	130	160	105	70	400	90	530	115	5	325	65
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8		2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	8	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	13.7	58.7	58.7	45.0	45.0	61.3	61.3	61.3	61.3	61.3	61.3
Total Split (%)	11.4%	48.9%	48.9%	37.5%	37.5%	51.1%	51.1%	51.1%	51.1%	51.1%	51.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes						
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.54	0.23	0.16	0.22	0.83	0.31	0.53	0.14	0.02	0.35	0.08
Control Delay	31.3	25.9	4.5	23.0	45.4	31.1	34.0	13.7	17.0	19.3	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	25.9	4.5	23.0	45.4	31.1	34.0	13.7	17.0	19.3	4.2
Queue Length 50th (m)	20.9	27.0	0.0	18.7	106.3	18.4	123.8	10.9	0.6	45.7	0.0
Queue Length 95th (m)	31.4	39.1	10.4	34.8	139.0	m34.0	167.6	25.6	3.1	76.7	7.7
Internal Link Dist (m)		371.4			41.8		216.1			261.5	
Turn Bay Length (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Base Capacity (vph)	244	811	747	395	606	292	998	839	324	924	854
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.20	0.14	0.18	0.66	0.31	0.53	0.14	0.02	0.35	0.08

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

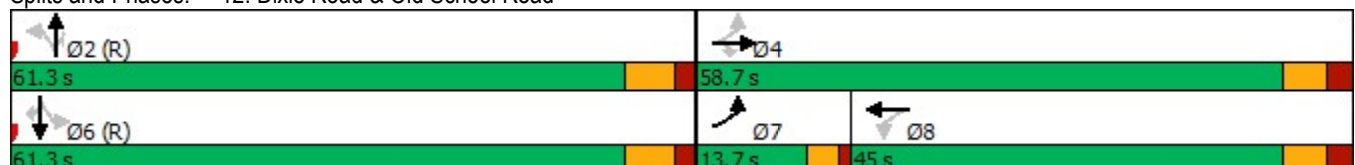
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Dixie Road & Old School Road



HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background 2033 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	160	105	70	385	15	90	530	115	5	325	65
Future Volume (vph)	130	160	105	70	385	15	90	530	115	5	325	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	4.0	6.5	6.5	6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	1865	1581	1785	1887		1038	1902	1521	1733	1762	1566
Flt Permitted	0.17	1.00	1.00	0.66	1.00		0.51	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	328	1865	1581	1232	1887		557	1902	1521	618	1762	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	160	105	70	385	15	90	530	115	5	325	65
RTOR Reduction (vph)	0	0	67	0	1	0	0	0	41	0	0	31
Lane Group Flow (vph)	130	160	39	70	399	0	90	530	74	5	325	34
Heavy Vehicles (%)	0%	3%	1%	0%	1%	7%	72%	1%	5%	3%	9%	2%
Turn Type	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	44.0	44.0	44.0	30.5	30.5		63.0	63.0	63.0	63.0	63.0	63.0
Effective Green, g (s)	44.0	44.0	44.0	30.5	30.5		63.0	63.0	63.0	63.0	63.0	63.0
Actuated g/C Ratio	0.37	0.37	0.37	0.25	0.25		0.52	0.52	0.52	0.52	0.52	0.52
Clearance Time (s)	4.0	6.5	6.5	6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	235	683	579	313	479		292	998	798	324	925	822
v/s Ratio Prot	c0.04	0.09			c0.21			c0.28			0.18	
v/s Ratio Perm	0.16		0.02	0.06			0.16		0.05	0.01		0.02
v/c Ratio	0.55	0.23	0.07	0.22	0.83		0.31	0.53	0.09	0.02	0.35	0.04
Uniform Delay, d1	28.5	26.3	24.7	35.4	42.3		16.2	18.8	14.2	13.6	16.6	13.8
Progression Factor	1.00	1.00	1.00	0.64	0.73		1.48	1.57	2.33	1.00	1.00	1.00
Incremental Delay, d2	2.8	0.2	0.0	0.4	11.5		2.3	1.7	0.2	0.1	1.1	0.1
Delay (s)	31.3	26.5	24.7	23.0	42.5		26.3	31.2	33.4	13.7	17.6	13.9
Level of Service	C	C	C	C	D		C	C	C	B	B	B
Approach Delay (s)		27.6			39.6			30.9			17.0	
Approach LOS		C			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			29.6			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			80.0%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background 2033 (12861) PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 		 
Traffic Volume (veh/h)	275	0	0	465	0	0
Future Volume (Veh/h)	275	0	0	465	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	275	0	0	465	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)	66					
pX, platoon unblocked						
vC, conflicting volume			275		508	138
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			275		508	138
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1300		500	892
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	183	92	232	232	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.11	0.05	0.14	0.14	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	
Control Delay (s)	0.0	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			16.2%	ICU Level of Service		A
Analysis Period (min)			15			

Queues

14: 12861 Site Access 3 & Old School Road

Future Background 2033 (12861) PM Peak Hour

	→	←	
Lane Group	EBT	WBT	Ø2
Lane Configurations	↑↑	↑↑	
Traffic Volume (vph)	275	465	
Future Volume (vph)	275	465	
Lane Group Flow (vph)	275	465	
Turn Type	NA	NA	
Protected Phases	4	8	2
Permitted Phases			
Detector Phase	4	8	
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	28.5	31.5	31.5
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50%
Yellow Time (s)	4.5	4.5	4.0
All-Red Time (s)	2.0	2.0	2.5
Lost Time Adjust (s)	0.0	0.0	
Total Lost Time (s)	6.5	6.5	
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Min
v/c Ratio	0.43	0.73	
Control Delay	37.8	53.3	
Queue Delay	0.0	0.0	
Total Delay	37.8	53.3	
Queue Length 50th (m)	29.1	57.8	
Queue Length 95th (m)	47.0	72.5	
Internal Link Dist (m)	433.3	157.0	
Turn Bay Length (m)			
Base Capacity (vph)	1627	1627	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.17	0.29	

Intersection Summary

Cycle Length: 120

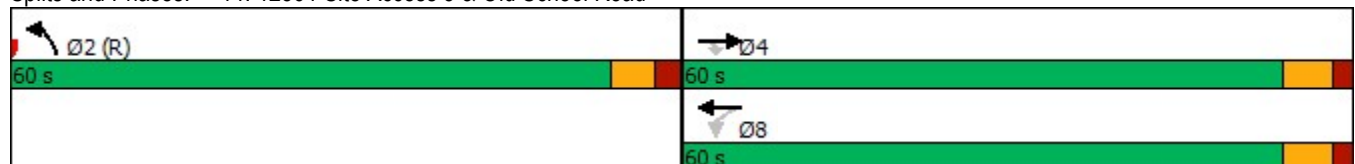
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 14: 12861 Site Access 3 & Old School Road



HCM Signalized Intersection Capacity Analysis

14: 12861 Site Access 3 & Old School Road

Future Background 2033 (12861) PM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	275	0	0	465	0	0
Future Volume (vph)	275	0	0	465	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.5	3.5	3.7	3.5	3.5
Total Lost time (s)	6.5			6.5		
Lane Util. Factor	0.95			0.95		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	3650			3650		
Flt Permitted	1.00			1.00		
Satd. Flow (perm)	3650			3650		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	275	0	0	465	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	275	0	0	465	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	NA	Perm	Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases		4	8			
Actuated Green, G (s)	21.1			21.1		
Effective Green, g (s)	21.1			21.1		
Actuated g/C Ratio	0.18			0.18		
Clearance Time (s)	6.5			6.5		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	641			641		
v/s Ratio Prot	0.08			0.13		
v/s Ratio Perm						
v/c Ratio	0.43			0.73		
Uniform Delay, d1	44.1			46.7		
Progression Factor	0.82			1.00		
Incremental Delay, d2	0.5			4.1		
Delay (s)	36.7			50.8		
Level of Service	D			D		
Approach Delay (s)	36.7			50.8	0.0	
Approach LOS	D			D	A	
Intersection Summary						
HCM 2000 Control Delay		45.6		HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio		0.14				
Actuated Cycle Length (s)		120.0		Sum of lost time (s)		13.0
Intersection Capacity Utilization		18.3%		ICU Level of Service		A
Analysis Period (min)		15				

c Critical Lane Group

Future Background 2033 (12861) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	235	25	15	390	10	60	220	35	10	60	15
Future Volume (vph)	15	235	25	15	390	10	60	220	35	10	60	15
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	15	235	25	15	390	10	60	220	35	10	60	15
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	275	415	315	85								
Volume Left (vph)	15	15	60	10								
Volume Right (vph)	25	10	35	15								
Hadj (s)	0.02	0.01	-0.03	0.03								
Departure Headway (s)	6.0	5.7	6.1	6.7								
Degree Utilization, x	0.46	0.66	0.53	0.16								
Capacity (veh/h)	554	601	547	434								
Control Delay (s)	14.0	19.3	15.8	11.0								
Approach Delay (s)	14.0	19.3	15.8	11.0								
Approach LOS	B	C	C	B								
Intersection Summary												
Delay				16.3								
Level of Service				C								
Intersection Capacity Utilization				56.2%	ICU Level of Service	B						
Analysis Period (min)				15								

Queues

1: Dixie Road & Mayfield Road

Future Total 2028 AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	905	1820	280	60	845	225	130	355	60	115	310	455
Future Volume (vph)	905	1820	280	60	845	225	130	355	60	115	310	455
Lane Group Flow (vph)	905	1820	280	60	845	225	130	355	60	115	310	455
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Detector Phase	5	2	2 4	1	6	6 8	7	4	4 6	3	8	8 2
Switch Phase												
Minimum Initial (s)	5.0	8.0		5.0	8.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	9.5	44.9		9.5	44.9		9.5	47.0		9.5	47.9	
Total Split (s)	31.0	66.4		9.6	45.0		11.1	47.9		11.1	47.9	
Total Split (%)	23.0%	49.2%		7.1%	33.3%		8.2%	35.5%		8.2%	35.5%	
Yellow Time (s)	3.5	4.6		3.5	4.6		3.5	4.0		3.5	4.6	
All-Red Time (s)	1.0	2.3		1.0	2.3		1.0	2.0		1.0	2.3	
Lost Time Adjust (s)	-1.0	0.0		-1.0	0.0		-1.0	0.0		-1.0	0.0	
Total Lost Time (s)	3.5	6.9		3.5	6.9		3.5	6.0		3.5	6.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
v/c Ratio	0.86	0.65	0.23	0.40	0.75	0.32	0.51	0.68	0.10	0.61	0.66	0.44
Control Delay	49.4	22.0	0.8	27.0	51.6	2.7	46.4	59.8	1.3	54.1	60.3	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	22.0	0.8	27.0	51.6	2.7	46.4	59.8	1.3	54.1	60.3	1.6
Queue Length 50th (m)	125.4	126.3	0.0	5.4	78.3	0.0	28.7	49.9	0.0	25.5	43.6	0.0
Queue Length 95th (m)	#187.8	163.2	3.8	12.5	92.3	9.9	45.1	63.5	2.9	41.4	56.7	4.6
Internal Link Dist (m)		980.1			272.1			844.0			481.5	
Turn Bay Length (m)	115.0		75.0	115.0		110.0	115.0		65.0	115.0		135.0
Base Capacity (vph)	1049	2820	1348	149	1309	943	256	1029	824	190	947	1126
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.65	0.21	0.40	0.65	0.24	0.51	0.34	0.07	0.61	0.33	0.40

Intersection Summary

Cycle Length: 135

Actuated Cycle Length: 135

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Dixie Road & Mayfield Road

											
Ø1	Ø2 (R)		Ø3	Ø4		Ø5	Ø6 (R)		Ø7	Ø8	
9.6 s	66.4 s		11.1 s	47.9 s		31 s	45 s		11.1 s	47.9 s	

HCM Signalized Intersection Capacity Analysis

1: Dixie Road & Mayfield Road

Future Total 2028 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	905	1820	280	60	845	225	130	355	60	115	310	455
Future Volume (vph)	905	1820	280	60	845	225	130	355	60	115	310	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	3.5	6.9	6.9	3.5	6.9	6.9	3.5	6.0	6.0	3.5	6.9	6.9
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2748	4902	1554	1539	4641	1452	1666	3318	1319	1382	3120	1256
Flt Permitted	0.95	1.00	1.00	0.12	1.00	1.00	0.45	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	2748	4902	1554	193	4641	1452	784	3318	1319	526	3120	1256
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	905	1820	280	60	845	225	130	355	60	115	310	455
RTOR Reduction (vph)	0	0	77	0	0	137	0	0	36	0	0	128
Lane Group Flow (vph)	905	1820	203	60	845	88	130	355	24	115	310	327
Confl. Peds. (#/hr)			5	5			5		5	5		5
Heavy Vehicles (%)	26%	7%	1%	16%	13%	10%	7%	10%	19%	29%	17%	25%
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Actuated Green, G (s)	50.6	76.7	98.1	39.1	32.6	53.0	30.0	21.4	54.0	28.9	20.4	97.1
Effective Green, g (s)	51.6	76.7	98.1	41.1	32.6	53.0	32.0	21.4	54.0	30.9	20.4	97.1
Actuated g/C Ratio	0.38	0.57	0.73	0.30	0.24	0.39	0.24	0.16	0.40	0.23	0.15	0.72
Clearance Time (s)	4.5	6.9		4.5	6.9		4.5	6.0		4.5	6.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1050	2785	1129	133	1120	570	248	525	527	180	471	903
v/s Ratio Prot	c0.33	0.37		0.02	c0.18		0.04	c0.11		c0.04	0.10	
v/s Ratio Perm			0.13	0.11		0.06	0.09		0.02	0.10		0.26
v/c Ratio	0.86	0.65	0.18	0.45	0.75	0.15	0.52	0.68	0.05	0.64	0.66	0.36
Uniform Delay, d1	38.4	20.0	5.8	44.5	47.5	26.5	42.7	53.5	24.8	44.0	54.0	7.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.4	1.2	0.1	2.4	4.7	0.1	2.0	3.4	0.0	7.2	3.3	0.2
Delay (s)	45.8	21.2	5.9	46.9	52.2	26.6	44.7	57.0	24.8	51.2	57.3	7.4
Level of Service	D	C	A	D	D	C	D	E	C	D	E	A
Approach Delay (s)		27.2			46.8			50.5			30.7	
Approach LOS		C			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			34.0									
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			135.0									
Intersection Capacity Utilization			80.0%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Future Total 2028 AM Peak Hour

									
Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	20	65	35	0	135	1235	15	780	40
Future Volume (vph)	20	65	35	0	135	1235	15	780	40
Lane Group Flow (vph)	20	65	35	5	135	1270	0	795	40
Turn Type	Perm	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases				8		2		6	
Permitted Phases	4	4	8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.0	31.0	31.0	31.0	31.0
Total Split (s)	42.0	42.0	42.0	42.0	78.0	78.0	78.0	78.0	78.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.18	0.22	0.45	0.02	0.26	0.47		0.35	0.03
Control Delay	52.5	1.6	69.4	0.2	4.4	4.1		2.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	52.5	1.6	69.4	0.2	4.4	4.1		2.0	0.8
Queue Length 50th (m)	4.7	0.0	8.4	0.0	6.2	39.4		9.2	0.1
Queue Length 95th (m)	12.3	0.0	18.9	0.0	16.0	65.7		22.0	m0.6
Internal Link Dist (m)				96.6		481.5		358.1	
Turn Bay Length (m)	15.0	15.0	15.0		70.0				65.0
Base Capacity (vph)	393	563	271	537	519	2680		2283	1353
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.12	0.13	0.01	0.26	0.47		0.35	0.03

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

	Ø2 (R)		Ø4
78 s		42 s	
	Ø6 (R)		Ø8
78 s		42 s	

HCM Signalized Intersection Capacity Analysis

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Future Total 2028 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	0	65	35	0	5	135	1235	35	15	780	40
Future Volume (vph)	20	0	65	35	0	5	135	1235	35	15	780	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00		0.85	1.00	0.85		1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1653		1413	1137	1633		1668	3175			2952	1597
Flt Permitted	0.75		1.00	0.76	1.00		0.35	1.00			0.92	1.00
Satd. Flow (perm)	1313		1413	906	1633		614	3175			2706	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	65	35	0	5	135	1235	35	15	780	40
RTOR Reduction (vph)	0	0	60	0	5	0	0	1	0	0	0	7
Lane Group Flow (vph)	20	0	5	35	0	0	135	1269	0	0	795	33
Confl. Peds. (#/hr)									5	5		
Heavy Vehicles (%)	8%	0%	13%	57%	0%	0%	7%	14%	28%	0%	24%	0%
Turn Type	Perm		Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	9.1		9.1	9.1	9.1		98.9	98.9			98.9	98.9
Effective Green, g (s)	9.1		9.1	9.1	9.1		98.9	98.9			98.9	98.9
Actuated g/C Ratio	0.08		0.08	0.08	0.08		0.82	0.82			0.82	0.82
Clearance Time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	99		107	68	123		506	2616			2230	1316
v/s Ratio Prot					0.00			c0.40				
v/s Ratio Perm	0.02		0.00	c0.04			0.22				0.29	0.02
v/c Ratio	0.20		0.05	0.51	0.00		0.27	0.49			0.36	0.03
Uniform Delay, d1	52.0		51.4	53.3	51.3		2.4	3.1			2.6	1.9
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00			0.55	0.79
Incremental Delay, d2	1.0		0.2	6.4	0.0		1.3	0.6			0.4	0.0
Delay (s)	53.1		51.6	59.8	51.3		3.7	3.7			1.8	1.5
Level of Service	D		D	E	D		A	A			A	A
Approach Delay (s)		51.9			58.7			3.7			1.8	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			5.7				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			80.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

7: Dixie Road & UPS Facility Access/12173 West Access 1

Future Total 2028 AM Peak Hour

	↘	↙	↑	↘	↓	
Lane Group	EBR	NBL	NBT	SBL	SBT	Ø8
Lane Configurations	↗		↗		↗	
Traffic Volume (vph)	5	60	1140	15	860	
Future Volume (vph)	5	60	1140	15	860	
Lane Group Flow (vph)	5	0	1210	0	890	
Turn Type	Perm	Perm	NA	Perm	NA	
Protected Phases			2		6	8
Permitted Phases	4	2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	31.0	31.0	31.0	31.0	39.0
Total Split (s)	39.0	81.0	81.0	81.0	81.0	39.0
Total Split (%)	32.5%	67.5%	67.5%	67.5%	67.5%	33%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	6.0		6.0		6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
v/c Ratio	0.02		0.81		0.60	
Control Delay	0.2		13.4		6.8	
Queue Delay	0.0		0.0		0.0	
Total Delay	0.2		13.4		6.8	
Queue Length 50th (m)	0.0		136.5		9.4	
Queue Length 95th (m)	0.0		#293.9		238.4	
Internal Link Dist (m)			358.1		696.2	
Turn Bay Length (m)						
Base Capacity (vph)	404		1494		1473	
Starvation Cap Reductn	0		0		0	
Spillback Cap Reductn	0		0		0	
Storage Cap Reductn	0		0		0	
Reduced v/c Ratio	0.01		0.81		0.60	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1



HCM Signalized Intersection Capacity Analysis

7: Dixie Road & UPS Facility Access/12173 West Access 1

Future Total 2028 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	0	0	0	60	1140	10	15	860	15
Future Volume (vph)	0	0	5	0	0	0	60	1140	10	15	860	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.7	3.5	3.5
Total Lost time (s)			6.0					6.0			6.0	
Lane Util. Factor			1.00					1.00			1.00	
Frt			0.85					1.00			1.00	
Flt Protected			1.00					1.00			1.00	
Satd. Flow (prot)			998					1674			1557	
Flt Permitted			1.00					0.92			0.97	
Satd. Flow (perm)			998					1539			1516	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	5	0	0	0	60	1140	10	15	860	15
RTOR Reduction (vph)	0	0	5	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	1210	0	0	890	0
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	15%	0%	0%	21%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)			1.1					106.9			106.9	
Effective Green, g (s)			1.1					106.9			106.9	
Actuated g/C Ratio			0.01					0.89			0.89	
Clearance Time (s)			6.0					6.0			6.0	
Vehicle Extension (s)			3.0					3.0			3.0	
Lane Grp Cap (vph)			9					1370			1350	
v/s Ratio Prot												
v/s Ratio Perm			c0.00					c0.79			0.59	
v/c Ratio			0.01					0.88			0.66	
Uniform Delay, d1			58.9					3.4			1.7	
Progression Factor			1.00					4.00			4.61	
Incremental Delay, d2			0.2					7.8			2.2	
Delay (s)			59.1					21.2			10.1	
Level of Service			E					C			B	
Approach Delay (s)		59.1			0.0			21.2			10.1	
Approach LOS		E			A			C			B	
Intersection Summary												
HCM 2000 Control Delay			16.6					HCM 2000 Level of Service			B	
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			120.0					Sum of lost time (s)		12.0		
Intersection Capacity Utilization			98.7%					ICU Level of Service		F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Future Total 2028 AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1055	60	0	860
Future Volume (Veh/h)	0	0	1055	60	0	860
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	1055	60	0	860
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						394
pX, platoon unblocked	0.80					
vC, conflicting volume	1915	1055			1115	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2022	1055			1115	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	51	277			634	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	1055	60	860		
Volume Left	0	0	0	0		
Volume Right	0	0	60	0		
cSH	1700	1700	1700	634		
Volume to Capacity	0.00	0.62	0.04	0.00		
Queue Length 95th (m)	0.0	0.0	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			58.9%		ICU Level of Service	B
Analysis Period (min)			15			

Queues

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Future Total 2028 AM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	15	0	45	0	70	935	50	50	790	25
Future Volume (vph)	15	0	45	0	70	935	50	50	790	25
Lane Group Flow (vph)	15	30	45	20	70	935	50	50	790	25
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.5	30.5	30.5	30.5	28.5	28.5	28.5	28.5	28.5	28.5
Total Split (s)	30.5	30.5	30.5	30.5	89.5	89.5	89.5	89.5	89.5	89.5
Total Split (%)	25.4%	25.4%	25.4%	25.4%	74.6%	74.6%	74.6%	74.6%	74.6%	74.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.15	0.09	0.54	0.07	0.18	0.66	0.06	0.14	0.59	0.02
Control Delay	49.7	0.6	73.4	0.5	5.6	11.5	2.0	7.7	12.4	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	0.6	73.4	0.5	5.6	11.5	2.0	7.7	12.4	3.2
Queue Length 50th (m)	3.5	0.0	10.8	0.0	4.6	160.9	0.9	1.8	39.1	0.0
Queue Length 95th (m)	10.0	0.0	22.7	0.0	m7.2	204.8	m1.6	m11.4	215.7	m2.3
Internal Link Dist (m)		161.0		124.2		369.7			813.5	
Turn Bay Length (m)	20.0		20.0		60.0		60.0	60.0		60.0
Base Capacity (vph)	210	414	168	409	388	1413	830	361	1330	1321
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.07	0.27	0.05	0.18	0.66	0.06	0.14	0.59	0.02

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2



HCM Signalized Intersection Capacity Analysis

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Future Total 2028 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	30	45	0	20	70	935	50	50	790	25
Future Volume (vph)	15	0	30	45	0	20	70	935	50	50	790	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1342	1089		1087	1306		1394	1715	998	1623	1614	1597
Flt Permitted	0.74	1.00		0.74	1.00		0.32	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	1052	1089		844	1306		471	1715	998	438	1614	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	0	30	45	0	20	70	935	50	50	790	25
RTOR Reduction (vph)	0	27	0	0	18	0	0	0	9	0	0	5
Lane Group Flow (vph)	15	3	0	45	2	0	70	935	41	50	790	20
Heavy Vehicles (%)	33%	0%	50%	55%	0%	25%	28%	12%	60%	10%	19%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	10.7	10.7		10.7	10.7		96.3	96.3	96.3	96.3	96.3	96.3
Effective Green, g (s)	10.7	10.7		10.7	10.7		96.3	96.3	96.3	96.3	96.3	96.3
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.80	0.80	0.80	0.80	0.80	0.80
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	93	97		75	116		377	1376	800	351	1295	1281
v/s Ratio Prot		0.00			0.00			c0.55			0.49	
v/s Ratio Perm	0.01			c0.05			0.15		0.04	0.11		0.01
v/c Ratio	0.16	0.03		0.60	0.02		0.19	0.68	0.05	0.14	0.61	0.02
Uniform Delay, d1	50.5	49.9		52.6	49.8		2.8	5.1	2.4	2.6	4.6	2.4
Progression Factor	1.00	1.00		1.00	1.00		1.25	1.54	1.45	1.78	1.86	3.13
Incremental Delay, d2	0.8	0.1		12.3	0.1		0.6	1.5	0.1	0.7	1.8	0.0
Delay (s)	51.3	50.0		64.9	49.9		4.0	9.5	3.6	5.4	10.3	7.4
Level of Service	D	D		E	D		A	A	A	A	B	A
Approach Delay (s)		50.5			60.3			8.8			10.0	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			11.9				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			13.0		
Intersection Capacity Utilization			78.2%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Total 2028 AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	20	820	150	0	865
Future Volume (Veh/h)	0	20	820	150	0	865
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	20	820	150	0	865
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						240
pX, platoon unblocked	0.71					
vC, conflicting volume	1760	895			970	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1867	895			970	
tC, single (s)	6.4	6.5			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.5			2.2	
p0 queue free %	100	94			100	
cM capacity (veh/h)	57	308			719	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	20	970	865			
Volume Left	0	0	0			
Volume Right	20	150	0			
cSH	308	1700	1700			
Volume to Capacity	0.06	0.57	0.51			
Queue Length 95th (m)	1.7	0.0	0.0			
Control Delay (s)	17.5	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	17.5	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			62.3%	ICU Level of Service		B
Analysis Period (min)			15			

Queues

12: Dixie Road & Old School Road

Future Total 2028 AM Peak Hour

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	60	340	75	185	145	45	220	60	60	580	190
Future Volume (vph)	60	340	75	185	145	45	220	60	60	580	190
Lane Group Flow (vph)	60	340	75	185	155	45	220	60	60	580	190
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		3	8		2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	3	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.5	31.5	31.5	9.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	39.0	39.0	39.0	20.0	59.0	61.0	61.0	61.0	61.0	61.0	61.0
Total Split (%)	32.5%	32.5%	32.5%	16.7%	49.2%	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lag	Lead							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes							
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.23	0.82	0.20	0.70	0.23	0.28	0.25	0.08	0.11	0.62	0.21
Control Delay	38.8	60.7	8.9	37.1	7.3	20.8	14.1	5.5	18.1	26.0	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	60.7	8.9	37.1	7.3	20.8	14.1	5.5	18.1	26.0	3.4
Queue Length 50th (m)	12.2	80.4	0.0	20.1	4.0	5.8	27.2	1.9	7.6	101.5	0.4
Queue Length 95th (m)	23.5	108.6	11.9	64.4	52.6	m13.2	58.8	m6.4	17.5	156.9	13.5
Internal Link Dist (m)		371.4			41.8		216.1			261.5	
Turn Bay Length (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Base Capacity (vph)	325	509	451	282	785	161	885	762	528	935	906
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.67	0.17	0.66	0.20	0.28	0.25	0.08	0.11	0.62	0.21

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

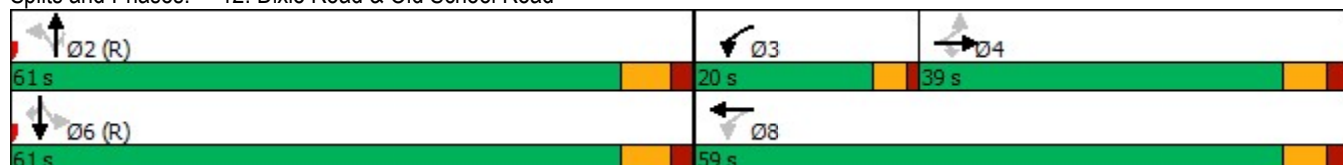
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Dixie Road & Old School Road



HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Total 2028 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	340	75	185	145	10	45	220	60	60	580	190
Future Volume (vph)	60	340	75	185	145	10	45	220	60	60	580	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.5	6.5	6.5	4.0	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1733	1883	1465	1475	1790		1008	1715	1413	1608	1812	1581
Flt Permitted	0.66	1.00	1.00	0.20	1.00		0.29	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1201	1883	1465	315	1790		312	1715	1413	1024	1812	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	340	75	185	145	10	45	220	60	60	580	190
RTOR Reduction (vph)	0	0	59	0	2	0	0	0	29	0	0	91
Lane Group Flow (vph)	60	340	17	185	153	0	45	220	31	60	580	99
Heavy Vehicles (%)	3%	2%	9%	21%	6%	10%	77%	12%	13%	11%	6%	1%
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	26.4	26.4	26.4	45.1	45.1		61.9	61.9	61.9	61.9	61.9	61.9
Effective Green, g (s)	26.4	26.4	26.4	45.1	45.1		61.9	61.9	61.9	61.9	61.9	61.9
Actuated g/C Ratio	0.22	0.22	0.22	0.38	0.38		0.52	0.52	0.52	0.52	0.52	0.52
Clearance Time (s)	6.5	6.5	6.5	4.0	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	264	414	322	260	672		160	884	728	528	934	815
v/s Ratio Prot		c0.18		c0.09	0.09			0.13			c0.32	
v/s Ratio Perm	0.05		0.01	0.18			0.14		0.02	0.06		0.06
v/c Ratio	0.23	0.82	0.05	0.71	0.23		0.28	0.25	0.04	0.11	0.62	0.12
Uniform Delay, d1	38.4	44.6	36.9	28.7	25.6		16.5	16.1	14.4	14.9	20.7	15.0
Progression Factor	1.00	1.00	1.00	0.98	0.27		0.82	0.75	1.46	1.00	1.00	1.00
Incremental Delay, d2	0.4	12.3	0.1	8.8	0.2		3.4	0.5	0.1	0.4	3.1	0.3
Delay (s)	38.9	56.9	37.0	36.8	7.2		16.8	12.7	21.0	15.4	23.8	15.3
Level of Service	D	E	D	D	A		B	B	C	B	C	B
Approach Delay (s)		51.5			23.3			14.8			21.2	
Approach LOS		D			C			B			C	
Intersection Summary												
HCM 2000 Control Delay			27.8			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			82.4%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Total 2028 AM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑ 			↑↑		
Traffic Volume (veh/h)	415	40	0	345	0	5
Future Volume (Veh/h)	415	40	0	345	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	415	40	0	345	0	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)	66					
pX, platoon unblocked						
vC, conflicting volume			455		608	228
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			455		608	228
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1116		432	781
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	277	178	172	172	5	
Volume Left	0	0	0	0	0	
Volume Right	0	40	0	0	5	
cSH	1700	1700	1700	1700	781	
Volume to Capacity	0.16	0.10	0.10	0.10	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.2	
Control Delay (s)	0.0	0.0	0.0	0.0	9.6	
Lane LOS					A	
Approach Delay (s)	0.0		0.0		9.6	
Approach LOS					A	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			22.7%	ICU Level of Service		A
Analysis Period (min)			15			

Queues

14: 12861 Site Access 3 & Old School Road

Future Total 2028 AM Peak Hour

	→	↘	↙	←	↖
Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Configurations	↑↑	↑	↘	↑↑	↘
Traffic Volume (vph)	415	5	30	280	65
Future Volume (vph)	415	5	30	280	65
Lane Group Flow (vph)	415	5	30	280	70
Turn Type	NA	Perm	custom	NA	Prot
Protected Phases	4				2
Permitted Phases		4	8	8	
Detector Phase	4	4	8	8	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	28.5	28.5	31.5	31.5	31.5
Total Split (s)	60.0	60.0	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	C-Min
v/c Ratio	0.71	0.04	0.36	0.47	0.08
Control Delay	37.8	10.0	56.2	47.7	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	10.0	56.2	47.7	5.4
Queue Length 50th (m)	56.3	0.7	6.7	33.5	4.1
Queue Length 95th (m)	63.3	m0.8	16.4	45.4	10.0
Internal Link Dist (m)	433.3			157.0	183.7
Turn Bay Length (m)		50.0	95.0		
Base Capacity (vph)	1611	358	228	1627	828
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.01	0.13	0.17	0.08

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

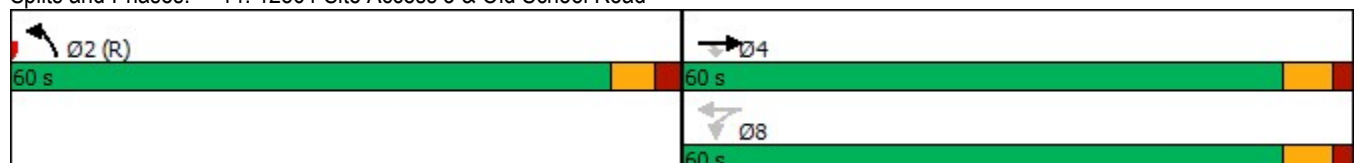
Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: 12861 Site Access 3 & Old School Road



HCM Signalized Intersection Capacity Analysis

14: 12861 Site Access 3 & Old School Road

Future Total 2028 AM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	415	5	30	280	65	5
Future Volume (vph)	415	5	30	280	65	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.5	3.5	3.7	3.5	3.5
Total Lost time (s)	6.5	6.5	6.5	6.5	6.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	3614	799	1539	3650	1135	
Flt Permitted	1.00	1.00	0.32	1.00	0.96	
Satd. Flow (perm)	3614	799	512	3650	1135	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	415	5	30	280	65	5
RTOR Reduction (vph)	0	4	0	0	1	0
Lane Group Flow (vph)	415	1	30	280	69	0
Heavy Vehicles (%)	1%	100%	16%	0%	61%	0%
Turn Type	NA	Perm	custom	NA	Prot	
Protected Phases	4				2	
Permitted Phases		4	8	8		
Actuated Green, G (s)	19.5	19.5	19.5	19.5	87.5	
Effective Green, g (s)	19.5	19.5	19.5	19.5	87.5	
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.73	
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	587	129	83	593	827	
v/s Ratio Prot	c0.11				c0.06	
v/s Ratio Perm		0.00	0.06	0.08		
v/c Ratio	0.71	0.01	0.36	0.47	0.08	
Uniform Delay, d1	47.5	42.1	44.7	45.6	4.7	
Progression Factor	0.67	0.41	1.00	1.00	1.00	
Incremental Delay, d2	3.4	0.0	2.7	0.6	0.2	
Delay (s)	35.3	17.1	47.4	46.2	4.9	
Level of Service	D	B	D	D	A	
Approach Delay (s)	35.1			46.3	4.9	
Approach LOS	D			D	A	
Intersection Summary						
HCM 2000 Control Delay			36.8		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.20			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	13.0
Intersection Capacity Utilization			36.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Total 2028 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	310	85	25	210	0	40	75	20	5	155	60
Future Volume (vph)	20	310	85	25	210	0	40	75	20	5	155	60
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	310	85	25	210	0	40	75	20	5	155	60
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	415	235	135	220								
Volume Left (vph)	20	25	40	5								
Volume Right (vph)	85	0	20	60								
Hadj (s)	-0.06	0.07	0.06	-0.09								
Departure Headway (s)	5.4	5.8	6.2	5.9								
Degree Utilization, x	0.62	0.38	0.23	0.36								
Capacity (veh/h)	639	572	494	545								
Control Delay (s)	16.6	12.2	11.2	12.2								
Approach Delay (s)	16.6	12.2	11.2	12.2								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay				13.9								
Level of Service				B								
Intersection Capacity Utilization				55.1%	ICU Level of Service	B						
Analysis Period (min)				15								

Queues

1: Dixie Road & Mayfield Road

Future Total 2033 AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  			 			 	
Traffic Volume (vph)	905	2005	280	60	930	225	130	355	60	115	310	455
Future Volume (vph)	905	2005	280	60	930	225	130	355	60	115	310	455
Lane Group Flow (vph)	905	2005	280	60	930	225	130	355	60	115	310	455
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Detector Phase	5	2	2 4	1	6	6 8	7	4	4 6	3	8	8 2
Switch Phase												
Minimum Initial (s)	5.0	8.0		5.0	8.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	9.5	44.9		9.5	44.9		9.5	47.0		9.5	47.9	
Total Split (s)	31.0	66.4		9.6	45.0		11.1	47.9		11.1	47.9	
Total Split (%)	23.0%	49.2%		7.1%	33.3%		8.2%	35.5%		8.2%	35.5%	
Yellow Time (s)	3.5	4.6		3.5	4.6		3.5	4.0		3.5	4.6	
All-Red Time (s)	1.0	2.3		1.0	2.3		1.0	2.0		1.0	2.3	
Lost Time Adjust (s)	-1.0	0.0		-1.0	0.0		-1.0	0.0		-1.0	0.0	
Total Lost Time (s)	3.5	6.9		3.5	6.9		3.5	6.0		3.5	6.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
v/c Ratio	0.88	0.70	0.23	0.41	0.77	0.31	0.54	0.68	0.10	0.65	0.66	0.43
Control Delay	52.2	22.9	0.8	27.7	50.8	2.6	48.4	59.7	1.3	58.1	60.3	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	22.9	0.8	27.7	50.8	2.6	48.4	59.7	1.3	58.1	60.3	1.6
Queue Length 50th (m)	125.4	141.4	0.0	5.2	86.0	0.0	29.4	49.9	0.0	26.2	43.6	0.0
Queue Length 95th (m)	#187.8	190.4	3.8	13.7	102.8	9.9	45.1	63.5	2.9	41.4	56.7	4.6
Internal Link Dist (m)		980.1			272.1			844.0			481.5	
Turn Bay Length (m)	115.0		75.0	115.0		110.0	115.0		65.0	115.0		135.0
Base Capacity (vph)	1023	2861	1359	148	1309	943	242	1029	824	178	947	1133
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.70	0.21	0.41	0.71	0.24	0.54	0.34	0.07	0.65	0.33	0.40

Intersection Summary

Cycle Length: 135

Actuated Cycle Length: 135

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Dixie Road & Mayfield Road

 Ø1	 Ø2 (R)	 Ø3	 Ø4
9.6 s	66.4 s	11.1 s	47.9 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
31 s	45 s	11.1 s	47.9 s

HCM Signalized Intersection Capacity Analysis

1: Dixie Road & Mayfield Road

Future Total 2033 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	905	2005	280	60	930	225	130	355	60	115	310	455
Future Volume (vph)	905	2005	280	60	930	225	130	355	60	115	310	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	3.5	6.9	6.9	3.5	6.9	6.9	3.5	6.0	6.0	3.5	6.9	6.9
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2748	4902	1554	1539	4641	1452	1666	3318	1319	1382	3120	1256
Flt Permitted	0.95	1.00	1.00	0.11	1.00	1.00	0.45	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	2748	4902	1554	180	4641	1452	784	3318	1319	526	3120	1256
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	905	2005	280	60	930	225	130	355	60	115	310	455
RTOR Reduction (vph)	0	0	74	0	0	133	0	0	35	0	0	124
Lane Group Flow (vph)	905	2005	206	60	930	92	130	355	25	115	310	331
Confl. Peds. (#/hr)			5	5			5		5	5		5
Heavy Vehicles (%)	26%	7%	1%	16%	13%	10%	7%	10%	19%	29%	17%	25%
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Actuated Green, G (s)	49.3	77.9	99.3	41.4	35.0	55.4	28.9	21.4	56.4	27.8	20.4	98.3
Effective Green, g (s)	50.3	77.9	99.3	43.4	35.0	55.4	30.9	21.4	56.4	29.8	20.4	98.3
Actuated g/C Ratio	0.37	0.58	0.74	0.32	0.26	0.41	0.23	0.16	0.42	0.22	0.15	0.73
Clearance Time (s)	4.5	6.9		4.5	6.9		4.5	6.0		4.5	6.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1023	2828	1143	132	1203	595	234	525	551	169	471	914
v/s Ratio Prot	c0.33	0.41		0.02	c0.20		0.03	0.11		c0.04	0.10	
v/s Ratio Perm			0.13	0.12		0.06	0.09		0.02	c0.11		0.26
v/c Ratio	0.88	0.71	0.18	0.45	0.77	0.16	0.56	0.68	0.05	0.68	0.66	0.36
Uniform Delay, d1	39.6	20.4	5.4	43.5	46.3	25.1	43.8	53.5	23.3	45.7	54.0	6.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.3	1.5	0.1	2.5	4.9	0.1	2.8	3.4	0.0	10.7	3.3	0.2
Delay (s)	48.9	22.0	5.5	46.0	51.2	25.2	46.6	57.0	23.4	56.5	57.3	7.0
Level of Service	D	C	A	D	D	C	D	E	C	E	E	A
Approach Delay (s)		28.2			46.1			50.8			31.2	
Approach LOS		C			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			34.5									
HCM 2000 Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			135.0									
Intersection Capacity Utilization			81.7%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Future Total 2033 AM Peak Hour

									
Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	20	65	35	0	135	1235	15	780	40
Future Volume (vph)	20	65	35	0	135	1235	15	780	40
Lane Group Flow (vph)	20	65	35	5	135	1270	0	795	40
Turn Type	Perm	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases				8		2		6	
Permitted Phases	4	4	8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.0	31.0	31.0	31.0	31.0
Total Split (s)	42.0	42.0	42.0	42.0	78.0	78.0	78.0	78.0	78.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.18	0.22	0.45	0.02	0.26	0.47		0.35	0.03
Control Delay	52.5	1.6	69.4	0.2	4.4	4.1		2.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	52.5	1.6	69.4	0.2	4.4	4.1		2.0	0.8
Queue Length 50th (m)	4.7	0.0	8.4	0.0	6.2	39.4		9.5	0.1
Queue Length 95th (m)	12.3	0.0	18.9	0.0	16.0	65.7		21.9	m0.6
Internal Link Dist (m)				96.6		481.5		358.1	
Turn Bay Length (m)	15.0	15.0	15.0		70.0				65.0
Base Capacity (vph)	393	563	271	537	519	2680		2283	1353
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.12	0.13	0.01	0.26	0.47		0.35	0.03

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3



HCM Signalized Intersection Capacity Analysis

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Future Total 2033 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	0	65	35	0	5	135	1235	35	15	780	40
Future Volume (vph)	20	0	65	35	0	5	135	1235	35	15	780	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00		0.85	1.00	0.85		1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1653		1413	1137	1633		1668	3175			2952	1597
Flt Permitted	0.75		1.00	0.76	1.00		0.35	1.00			0.92	1.00
Satd. Flow (perm)	1313		1413	906	1633		614	3175			2706	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	65	35	0	5	135	1235	35	15	780	40
RTOR Reduction (vph)	0	0	60	0	5	0	0	1	0	0	0	7
Lane Group Flow (vph)	20	0	5	35	0	0	135	1269	0	0	795	33
Confl. Peds. (#/hr)									5	5		
Heavy Vehicles (%)	8%	0%	13%	57%	0%	0%	7%	14%	28%	0%	24%	0%
Turn Type	Perm		Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	9.1		9.1	9.1	9.1		98.9	98.9			98.9	98.9
Effective Green, g (s)	9.1		9.1	9.1	9.1		98.9	98.9			98.9	98.9
Actuated g/C Ratio	0.08		0.08	0.08	0.08		0.82	0.82			0.82	0.82
Clearance Time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	99		107	68	123		506	2616			2230	1316
v/s Ratio Prot					0.00			c0.40				
v/s Ratio Perm	0.02		0.00	c0.04			0.22				0.29	0.02
v/c Ratio	0.20		0.05	0.51	0.00		0.27	0.49			0.36	0.03
Uniform Delay, d1	52.0		51.4	53.3	51.3		2.4	3.1			2.6	1.9
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00			0.55	0.79
Incremental Delay, d2	1.0		0.2	6.4	0.0		1.3	0.6			0.4	0.0
Delay (s)	53.1		51.6	59.8	51.3		3.7	3.7			1.8	1.5
Level of Service	D		D	E	D		A	A			A	A
Approach Delay (s)		51.9			58.7			3.7			1.8	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			5.7				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			80.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

7: Dixie Road & UPS Facility Access/12173 West Access 1

Future Total 2033 AM Peak Hour

						
Lane Group	EBR	NBL	NBT	SBL	SBT	Ø8
Lane Configurations						
Traffic Volume (vph)	5	60	1140	15	860	
Future Volume (vph)	5	60	1140	15	860	
Lane Group Flow (vph)	5	60	1150	0	890	
Turn Type	Perm	Perm	NA	Perm	NA	
Protected Phases			2		6	8
Permitted Phases	4	2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	31.0	31.0	31.0	31.0	39.0
Total Split (s)	39.0	81.0	81.0	81.0	81.0	39.0
Total Split (%)	32.5%	67.5%	67.5%	67.5%	67.5%	33%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
v/c Ratio	0.02	0.10	0.37		0.60	
Control Delay	0.2	0.9	0.8		6.8	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	0.2	0.9	0.8		6.8	
Queue Length 50th (m)	0.0	0.0	0.0		8.7	
Queue Length 95th (m)	0.0	3.6	29.1		238.2	
Internal Link Dist (m)			358.1		696.2	
Turn Bay Length (m)						
Base Capacity (vph)	404	612	3081		1473	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.01	0.10	0.37		0.60	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1



HCM Signalized Intersection Capacity Analysis

7: Dixie Road & UPS Facility Access/12173 West Access 1

Future Total 2033 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	0	0	0	60	1140	10	15	860	15
Future Volume (vph)	0	0	5	0	0	0	60	1140	10	15	860	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.7	3.5	3.5
Total Lost time (s)			6.0				6.0	6.0			6.0	
Lane Util. Factor			1.00				1.00	0.95			1.00	
Frt			0.85				1.00	1.00			1.00	
Flt Protected			1.00				0.95	1.00			1.00	
Satd. Flow (prot)			998				1700	3173			1557	
Flt Permitted			1.00				0.35	1.00			0.97	
Satd. Flow (perm)			998				630	3173			1516	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	5	0	0	0	60	1140	10	15	860	15
RTOR Reduction (vph)	0	0	5	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	60	1150	0	0	890	0
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	15%	0%	0%	21%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm	NA		Perm	NA	
Protected Phases								2				6
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)			1.1				106.9	106.9			106.9	
Effective Green, g (s)			1.1				106.9	106.9			106.9	
Actuated g/C Ratio			0.01				0.89	0.89			0.89	
Clearance Time (s)			6.0				6.0	6.0			6.0	
Vehicle Extension (s)			3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)			9				561	2826			1350	
v/s Ratio Prot								0.36				
v/s Ratio Perm			c0.00				0.10				c0.59	
v/c Ratio			0.01				0.11	0.41			0.66	
Uniform Delay, d1			58.9				0.8	1.1			1.7	
Progression Factor			1.00				0.99	0.93			4.61	
Incremental Delay, d2			0.2				0.3	0.4			2.2	
Delay (s)			59.1				1.1	1.4			10.2	
Level of Service			E				A	A			B	
Approach Delay (s)		59.1			0.0			1.4			10.2	
Approach LOS		E			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			5.3				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			63.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Future Total 2033 AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1055	60	0	860
Future Volume (Veh/h)	0	0	1055	60	0	860
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	1055	60	0	860
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						394
pX, platoon unblocked	0.80					
vC, conflicting volume	1915	1055			1115	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2022	1055			1115	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	51	277			634	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	1055	60	860		
Volume Left	0	0	0	0		
Volume Right	0	0	60	0		
cSH	1700	1700	1700	634		
Volume to Capacity	0.00	0.62	0.04	0.00		
Queue Length 95th (m)	0.0	0.0	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			58.9%		ICU Level of Service	B
Analysis Period (min)			15			

Queues

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Future Total 2033 AM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	15	0	45	0	70	935	50	50	790	25
Future Volume (vph)	15	0	45	0	70	935	50	50	790	25
Lane Group Flow (vph)	15	30	45	20	70	935	50	50	790	25
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.5	30.5	30.5	30.5	28.5	28.5	28.5	28.5	28.5	28.5
Total Split (s)	30.5	30.5	30.5	30.5	89.5	89.5	89.5	89.5	89.5	89.5
Total Split (%)	25.4%	25.4%	25.4%	25.4%	74.6%	74.6%	74.6%	74.6%	74.6%	74.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.15	0.09	0.54	0.07	0.18	0.66	0.06	0.14	0.59	0.02
Control Delay	49.7	0.6	73.4	0.5	9.3	18.1	4.6	7.9	13.0	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	0.6	73.4	0.5	9.3	18.1	4.6	7.9	13.0	3.3
Queue Length 50th (m)	3.5	0.0	10.8	0.0	6.9	173.8	2.4	1.8	47.0	0.0
Queue Length 95th (m)	10.0	0.0	22.7	0.0	19.1	285.7	9.4	m11.3	214.6	m2.3
Internal Link Dist (m)		161.0		124.2		369.7			813.5	
Turn Bay Length (m)	20.0		20.0		60.0		60.0	60.0		60.0
Base Capacity (vph)	210	414	168	409	388	1413	830	361	1330	1321
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.07	0.27	0.05	0.18	0.66	0.06	0.14	0.59	0.02

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

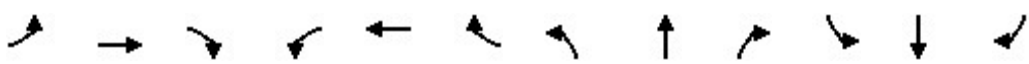
Splits and Phases: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2



HCM Signalized Intersection Capacity Analysis

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Future Total 2033 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	30	45	0	20	70	935	50	50	790	25
Future Volume (vph)	15	0	30	45	0	20	70	935	50	50	790	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1342	1089		1087	1306		1394	1715	998	1623	1614	1597
Flt Permitted	0.74	1.00		0.74	1.00		0.32	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	1052	1089		844	1306		471	1715	998	438	1614	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	0	30	45	0	20	70	935	50	50	790	25
RTOR Reduction (vph)	0	27	0	0	18	0	0	0	9	0	0	5
Lane Group Flow (vph)	15	3	0	45	2	0	70	935	41	50	790	20
Heavy Vehicles (%)	33%	0%	50%	55%	0%	25%	28%	12%	60%	10%	19%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	10.7	10.7		10.7	10.7		96.3	96.3	96.3	96.3	96.3	96.3
Effective Green, g (s)	10.7	10.7		10.7	10.7		96.3	96.3	96.3	96.3	96.3	96.3
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.80	0.80	0.80	0.80	0.80	0.80
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	93	97		75	116		377	1376	800	351	1295	1281
v/s Ratio Prot		0.00			0.00			c0.55			0.49	
v/s Ratio Perm	0.01			c0.05			0.15		0.04	0.11		0.01
v/c Ratio	0.16	0.03		0.60	0.02		0.19	0.68	0.05	0.14	0.61	0.02
Uniform Delay, d1	50.5	49.9		52.6	49.8		2.8	5.1	2.4	2.6	4.6	2.4
Progression Factor	1.00	1.00		1.00	1.00		2.08	2.40	3.25	1.82	1.97	3.21
Incremental Delay, d2	0.8	0.1		12.3	0.1		1.0	2.6	0.1	0.7	1.8	0.0
Delay (s)	51.3	50.0		64.9	49.9		6.7	14.9	8.1	5.5	10.8	7.6
Level of Service	D	D		E	D		A	B	A	A	B	A
Approach Delay (s)		50.5			60.3			14.1			10.4	
Approach LOS		D			E			B			B	
Intersection Summary												
HCM 2000 Control Delay			14.8			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			13.0			
Intersection Capacity Utilization			78.2%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Total 2033 AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	20	820	150	0	865
Future Volume (Veh/h)	0	20	820	150	0	865
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	20	820	150	0	865
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						240
pX, platoon unblocked	0.71					
vC, conflicting volume	1760	895			970	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1868	895			970	
tC, single (s)	6.4	6.5			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.5			2.2	
p0 queue free %	100	94			100	
cM capacity (veh/h)	57	308			719	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	20	970	865			
Volume Left	0	0	0			
Volume Right	20	150	0			
cSH	308	1700	1700			
Volume to Capacity	0.06	0.57	0.51			
Queue Length 95th (m)	1.7	0.0	0.0			
Control Delay (s)	17.5	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	17.5	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay		0.2				
Intersection Capacity Utilization		62.3%		ICU Level of Service		B
Analysis Period (min)		15				

Queues

12: Dixie Road & Old School Road

Future Total 2033 AM Peak Hour

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	60	370	75	185	160	45	220	60	60	580	190
Future Volume (vph)	60	370	75	185	160	45	220	60	60	580	190
Lane Group Flow (vph)	60	370	75	185	170	45	220	60	60	580	190
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		3	8		2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	3	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	31.5	31.5	31.5	9.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	39.0	39.0	39.0	20.0	59.0	61.0	61.0	61.0	61.0	61.0	61.0
Total Split (%)	32.5%	32.5%	32.5%	16.7%	49.2%	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lag	Lead							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes							
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.22	0.85	0.19	0.72	0.25	0.29	0.25	0.08	0.12	0.63	0.21
Control Delay	37.8	62.3	8.7	39.8	6.8	23.3	15.5	5.8	18.7	27.1	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	62.3	8.7	39.8	6.8	23.3	15.5	5.8	18.7	27.1	3.5
Queue Length 50th (m)	12.0	87.3	0.0	10.7	4.2	6.6	30.6	2.1	7.8	104.5	0.4
Queue Length 95th (m)	23.5	119.6	11.9	63.8	56.8	m14.1	60.1	m6.4	17.5	156.9	13.5
Internal Link Dist (m)		371.4			41.8		216.1			261.5	
Turn Bay Length (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Base Capacity (vph)	321	509	451	273	787	154	869	749	517	918	893
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.73	0.17	0.68	0.22	0.29	0.25	0.08	0.12	0.63	0.21

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Dixie Road & Old School Road

					
Ø2 (R)			Ø3		Ø4
61 s			20 s		39 s
					
Ø6 (R)			Ø8		
61 s			59 s		

HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Total 2033 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	370	75	185	160	10	45	220	60	60	580	190
Future Volume (vph)	60	370	75	185	160	10	45	220	60	60	580	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.5	6.5	6.5	4.0	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1733	1883	1465	1475	1792		1008	1715	1413	1608	1812	1581
Flt Permitted	0.65	1.00	1.00	0.18	1.00		0.29	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1185	1883	1465	274	1792		304	1715	1413	1020	1812	1581
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	370	75	185	160	10	45	220	60	60	580	190
RTOR Reduction (vph)	0	0	58	0	2	0	0	0	30	0	0	92
Lane Group Flow (vph)	60	370	17	185	168	0	45	220	30	60	580	98
Heavy Vehicles (%)	3%	2%	9%	21%	6%	10%	77%	12%	13%	11%	6%	1%
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	27.7	27.7	27.7	46.3	46.3		60.7	60.7	60.7	60.7	60.7	60.7
Effective Green, g (s)	27.7	27.7	27.7	46.3	46.3		60.7	60.7	60.7	60.7	60.7	60.7
Actuated g/C Ratio	0.23	0.23	0.23	0.39	0.39		0.51	0.51	0.51	0.51	0.51	0.51
Clearance Time (s)	6.5	6.5	6.5	4.0	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	273	434	338	251	691		153	867	714	515	916	799
v/s Ratio Prot		c0.20		c0.09	0.09			0.13			c0.32	
v/s Ratio Perm	0.05		0.01	0.19			0.15		0.02	0.06		0.06
v/c Ratio	0.22	0.85	0.05	0.74	0.24		0.29	0.25	0.04	0.12	0.63	0.12
Uniform Delay, d1	37.4	44.2	35.9	28.3	25.0		17.2	16.8	15.0	15.6	21.6	15.6
Progression Factor	1.00	1.00	1.00	1.02	0.25		0.88	0.80	1.53	1.00	1.00	1.00
Incremental Delay, d2	0.4	14.9	0.1	10.7	0.2		3.8	0.5	0.1	0.5	3.3	0.3
Delay (s)	37.8	59.1	36.0	39.4	6.5		19.0	14.1	23.0	16.0	24.9	15.9
Level of Service	D	E	D	D	A		B	B	C	B	C	B
Approach Delay (s)		53.1			23.7			16.4			22.2	
Approach LOS		D			C			B			C	
Intersection Summary												
HCM 2000 Control Delay			29.3			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)				17.0		
Intersection Capacity Utilization			84.0%			ICU Level of Service				E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Total 2033 AM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑ 			↑↑		
Traffic Volume (veh/h)	445	40	0	360	0	5
Future Volume (Veh/h)	445	40	0	360	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	445	40	0	360	0	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	66					
pX, platoon unblocked						
vC, conflicting volume			485		645	242
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			485		645	242
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1088		409	764
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	297	188	180	180	5	
Volume Left	0	0	0	0	0	
Volume Right	0	40	0	0	5	
cSH	1700	1700	1700	1700	764	
Volume to Capacity	0.17	0.11	0.11	0.11	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.2	
Control Delay (s)	0.0	0.0	0.0	0.0	9.7	
Lane LOS					A	
Approach Delay (s)	0.0		0.0		9.7	
Approach LOS					A	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			23.6%		ICU Level of Service	
					A	
Analysis Period (min)			15			

Queues

14: 12861 Site Access 3 & Old School Road

Future Total 2033 AM Peak Hour

	→	↘	↙	←	↖
Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Configurations	↑↑	↑	↘	↑↑	↘
Traffic Volume (vph)	445	5	30	295	65
Future Volume (vph)	445	5	30	295	65
Lane Group Flow (vph)	445	5	30	295	70
Turn Type	NA	Perm	custom	NA	Prot
Protected Phases	4				2
Permitted Phases		4	8	8	
Detector Phase	4	4	8	8	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	28.5	28.5	31.5	31.5	31.5
Total Split (s)	60.0	60.0	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	C-Min
v/c Ratio	0.72	0.04	0.37	0.47	0.09
Control Delay	35.9	8.2	56.0	46.8	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	8.2	56.0	46.8	5.7
Queue Length 50th (m)	60.4	0.7	6.7	35.1	4.3
Queue Length 95th (m)	61.1	m0.7	16.4	47.0	10.4
Internal Link Dist (m)	433.3			157.0	183.7
Turn Bay Length (m)		50.0	95.0		
Base Capacity (vph)	1611	358	212	1627	818
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.01	0.14	0.18	0.09

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

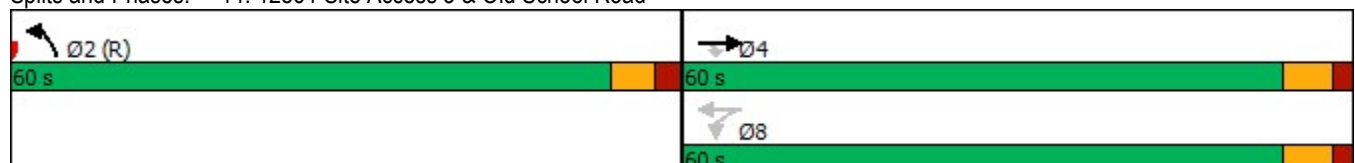
Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: 12861 Site Access 3 & Old School Road



HCM Signalized Intersection Capacity Analysis

14: 12861 Site Access 3 & Old School Road

Future Total 2033 AM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	445	5	30	295	65	5
Future Volume (vph)	445	5	30	295	65	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.5	3.5	3.7	3.5	3.5
Total Lost time (s)	6.5	6.5	6.5	6.5	6.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	3614	799	1539	3650	1135	
Flt Permitted	1.00	1.00	0.29	1.00	0.96	
Satd. Flow (perm)	3614	799	475	3650	1135	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	445	5	30	295	65	5
RTOR Reduction (vph)	0	4	0	0	1	0
Lane Group Flow (vph)	445	1	30	295	69	0
Heavy Vehicles (%)	1%	100%	16%	0%	61%	0%
Turn Type	NA	Perm	custom	NA	Prot	
Protected Phases	4				2	
Permitted Phases		4	8	8		
Actuated Green, G (s)	20.6	20.6	20.6	20.6	86.4	
Effective Green, g (s)	20.6	20.6	20.6	20.6	86.4	
Actuated g/C Ratio	0.17	0.17	0.17	0.17	0.72	
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	620	137	81	626	817	
v/s Ratio Prot	c0.12				c0.06	
v/s Ratio Perm		0.00	0.06	0.08		
v/c Ratio	0.72	0.01	0.37	0.47	0.08	
Uniform Delay, d1	47.0	41.2	44.0	44.8	5.0	
Progression Factor	0.64	0.34	1.00	1.00	1.00	
Incremental Delay, d2	3.3	0.0	2.8	0.6	0.2	
Delay (s)	33.5	14.1	46.8	45.4	5.2	
Level of Service	C	B	D	D	A	
Approach Delay (s)	33.3			45.5	5.2	
Approach LOS	C			D	A	
Intersection Summary						
HCM 2000 Control Delay			35.7		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.21			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	13.0
Intersection Capacity Utilization			36.9%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Total 2033 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	340	85	25	225	0	40	85	20	5	170	60
Future Volume (vph)	20	340	85	25	225	0	40	85	20	5	170	60
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	340	85	25	225	0	40	85	20	5	170	60
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	445	250	145	235								
Volume Left (vph)	20	25	40	5								
Volume Right (vph)	85	0	20	60								
Hadj (s)	-0.05	0.07	0.06	-0.08								
Departure Headway (s)	5.6	6.0	6.6	6.2								
Degree Utilization, x	0.69	0.42	0.26	0.40								
Capacity (veh/h)	621	540	469	512								
Control Delay (s)	20.0	13.3	11.9	13.3								
Approach Delay (s)	20.0	13.3	11.9	13.3								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay				15.9								
Level of Service				C								
Intersection Capacity Utilization				58.2%	ICU Level of Service	B						
Analysis Period (min)				15								

Queues

1: Dixie Road & Mayfield Road

Future Total 2028 PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	575	1355	180	60	1350	115	210	250	60	180	295	1120
Future Volume (vph)	575	1355	180	60	1350	115	210	250	60	180	295	1120
Lane Group Flow (vph)	575	1355	180	60	1350	115	210	250	60	180	295	1120
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	8.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0
Minimum Split (s)	9.5	44.9	9.5	9.5	44.9	9.5	9.5	47.9	9.5	9.5	47.9	9.5
Total Split (s)	30.0	65.4	12.1	9.6	45.0	12.1	12.1	47.9	9.6	12.1	47.9	30.0
Total Split (%)	22.2%	48.4%	9.0%	7.1%	33.3%	9.0%	9.0%	35.5%	7.1%	9.0%	35.5%	22.2%
Yellow Time (s)	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.3	1.0
Lost Time Adjust (s)	-1.0	0.0	0.0	-1.0	0.0	0.0	-1.0	0.0	0.0	-1.0	0.0	0.0
Total Lost Time (s)	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
v/c Ratio	0.62	0.47	0.14	0.28	0.96	0.15	0.92	0.56	0.09	0.83	0.68	0.93
Control Delay	38.8	15.6	0.4	19.2	64.4	8.0	89.7	60.1	2.2	75.7	64.3	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	15.6	0.4	19.2	64.4	8.0	89.7	60.1	2.2	75.7	64.3	21.0
Queue Length 50th (m)	67.3	74.2	0.0	5.6	137.4	8.3	51.4	35.2	0.0	43.9	42.2	82.0
Queue Length 95th (m)	92.9	96.8	2.3	10.1	#170.2	16.4	#89.9	48.2	4.4	#72.5	56.4	#376.8
Internal Link Dist (m)		980.1			272.1			844.0			481.5	
Turn Bay Length (m)	115.0		75.0	115.0		110.0	115.0		65.0	115.0		135.0
Base Capacity (vph)	920	2904	1264	211	1401	755	228	1097	667	218	1066	1198
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.47	0.14	0.28	0.96	0.15	0.92	0.23	0.09	0.83	0.28	0.93

Intersection Summary

Cycle Length: 135

Actuated Cycle Length: 135

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 135

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Dixie Road & Mayfield Road

											
9.6 s	65.4 s					12.1 s	47.9 s				
											
30 s	45 s					12.1 s	47.9 s				

HCM Signalized Intersection Capacity Analysis

1: Dixie Road & Mayfield Road

Future Total 2028 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	575	1355	180	60	1350	115	210	250	60	180	295	1120
Future Volume (vph)	575	1355	180	60	1350	115	210	250	60	180	295	1120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2456	4725	1475	1767	4948	1298	1731	3614	1289	1510	3510	1364
Flt Permitted	0.95	1.00	1.00	0.19	1.00	1.00	0.43	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	2456	4725	1475	352	4948	1298	792	3614	1289	820	3510	1364
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	575	1355	180	60	1350	115	210	250	60	180	295	1120
RTOR Reduction (vph)	0	0	38	0	0	26	0	0	33	0	0	58
Lane Group Flow (vph)	575	1355	142	60	1350	89	210	250	27	180	295	1062
Confl. Peds. (#/hr)			10	10			5		5	5		5
Heavy Vehicles (%)	41%	11%	6%	1%	6%	23%	3%	1%	22%	18%	4%	16%
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Actuated Green, G (s)	49.6	82.0	106.4	44.0	38.2	62.6	24.4	16.8	60.8	24.4	16.8	109.1
Effective Green, g (s)	50.6	82.0	106.4	46.0	38.2	62.6	26.4	16.8	60.8	26.4	16.8	109.1
Actuated g/C Ratio	0.37	0.61	0.79	0.34	0.28	0.46	0.20	0.12	0.45	0.20	0.12	0.81
Clearance Time (s)	4.5	6.9	4.5	4.5	6.9	4.5	4.5	6.9	4.5	4.5	6.9	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	920	2870	1211	191	1400	645	214	449	580	204	436	1102
v/s Ratio Prot	0.23	0.29	0.01	0.02	0.27	0.01	c0.06	0.07	0.00	0.06	0.08	c0.35
v/s Ratio Perm			0.09	0.09		0.06	c0.13		0.02	0.12		0.42
v/c Ratio	0.62	0.47	0.12	0.31	0.96	0.14	0.98	0.56	0.05	0.88	0.68	0.96
Uniform Delay, d1	34.5	14.6	3.3	35.4	47.7	20.7	52.5	55.6	20.8	51.4	56.5	11.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	0.6	0.0	0.9	16.9	0.1	55.9	1.5	0.0	33.0	4.1	18.8
Delay (s)	35.8	15.1	3.4	36.3	64.6	20.8	108.4	57.1	20.9	84.3	60.6	30.0
Level of Service	D	B	A	D	E	C	F	E	C	F	E	C
Approach Delay (s)		19.8			60.2			73.7			41.8	
Approach LOS		B			E			E			D	
Intersection Summary												
HCM 2000 Control Delay			41.5									
HCM 2000 Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			135.0									
Intersection Capacity Utilization			120.4%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Future Total 2028 PM Peak Hour

									
Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	45	105	70	0	35	855	5	1410	10
Future Volume (vph)	45	105	70	0	35	855	5	1410	10
Lane Group Flow (vph)	45	105	70	5	35	870	0	1415	10
Turn Type	Perm	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases				8		2		6	
Permitted Phases	4	4	8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.0	31.0	31.0	31.0	31.0
Total Split (s)	42.0	42.0	42.0	42.0	78.0	78.0	78.0	78.0	78.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.30	0.52	0.59	0.02	0.16	0.38		0.59	0.01
Control Delay	52.3	37.6	69.2	0.0	6.0	4.6		6.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	52.3	37.6	69.2	0.0	6.0	4.6		6.0	0.4
Queue Length 50th (m)	10.5	14.0	16.8	0.0	1.7	27.4		74.9	0.0
Queue Length 95th (m)	21.4	30.7	31.3	0.0	6.3	46.6		m39.5	m0.0
Internal Link Dist (m)				96.6		481.5		358.1	
Turn Bay Length (m)	15.0	15.0	15.0		70.0				65.0
Base Capacity (vph)	425	487	333	607	213	2286		2415	1230
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.11	0.22	0.21	0.01	0.16	0.38		0.59	0.01

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3



HCM Signalized Intersection Capacity Analysis

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Future Total 2028 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	105	70	0	5	35	855	15	5	1410	10
Future Volume (vph)	45	0	105	70	0	5	35	855	15	5	1410	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00		0.85	1.00	0.85		1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1785		1521	1394	1633		1537	2887			3203	1546
Flt Permitted	0.75		1.00	0.76	1.00		0.17	1.00			0.95	1.00
Satd. Flow (perm)	1418		1521	1111	1633		269	2887			3051	1546
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	45	0	105	70	0	5	35	855	15	5	1410	10
RTOR Reduction (vph)	0	0	40	0	4	0	0	1	0	0	0	2
Lane Group Flow (vph)	45	0	65	70	1	0	35	869	0	0	1415	8
Confl. Peds. (#/hr)							5					5
Heavy Vehicles (%)	0%	0%	5%	28%	0%	0%	16%	26%	33%	0%	14%	0%
Turn Type	Perm		Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	12.9		12.9	12.9	12.9		95.1	95.1			95.1	95.1
Effective Green, g (s)	12.9		12.9	12.9	12.9		95.1	95.1			95.1	95.1
Actuated g/C Ratio	0.11		0.11	0.11	0.11		0.79	0.79			0.79	0.79
Clearance Time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	152		163	119	175		213	2287			2417	1225
v/s Ratio Prot					0.00			0.30				
v/s Ratio Perm	0.03		0.04	0.06			0.13				0.46	0.01
v/c Ratio	0.30		0.40	0.59	0.00		0.16	0.38			0.59	0.01
Uniform Delay, d1	49.4		49.9	51.0	47.8		3.0	3.7			4.8	2.6
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.16
Incremental Delay, d2	1.1		1.6	7.2	0.0		1.7	0.5			0.4	0.0
Delay (s)	50.5		51.5	58.3	47.8		4.6	4.2			5.3	3.0
Level of Service	D		D	E	D		A	A			A	A
Approach Delay (s)		51.2			57.6			4.2			5.2	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.1				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			64.8%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

7: Dixie Road & UPS Facility Access/12173 West Access 1

Future Total 2028 PM Peak Hour



Lane Group	EBL	WBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	5	10	35	840	1445
Future Volume (vph)	5	10	35	840	1445
Lane Group Flow (vph)	5	10	0	880	1465
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	8	2		
Detector Phase	4	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	31.0	31.0	31.0
Total Split (s)	39.0	39.0	81.0	81.0	81.0
Total Split (%)	32.5%	32.5%	67.5%	67.5%	67.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.06	0.04		0.80	0.91
Control Delay	55.4	0.3		15.7	14.2
Queue Delay	0.0	0.0		0.0	0.0
Total Delay	55.4	0.3		15.7	14.2
Queue Length 50th (m)	1.2	0.0		106.3	172.6
Queue Length 95th (m)	5.6	0.0		#249.7 m	#456.1
Internal Link Dist (m)				358.1	696.2
Turn Bay Length (m)					
Base Capacity (vph)	490	571		1096	1609
Starvation Cap Reductn	0	0		0	0
Spillback Cap Reductn	0	0		0	0
Storage Cap Reductn	0	0		0	0
Reduced v/c Ratio	0.01	0.02		0.80	0.91

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 150

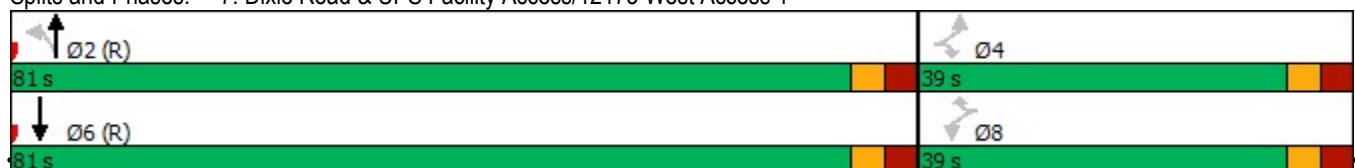
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1



Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

HCM Signalized Intersection Capacity Analysis

7: Dixie Road & UPS Facility Access/12173 West Access 1

Future Total 2028 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	0	0	0	10	35	840	5	0	1445	20
Future Volume (vph)	5	0	0	0	0	10	35	840	5	0	1445	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.7	3.5	3.5
Total Lost time (s)	6.0					6.0		6.0			6.0	
Lane Util. Factor	1.00					1.00		1.00			1.00	
Frpb, ped/bikes	1.00					1.00		1.00			1.00	
Flpb, ped/bikes	1.00					1.00		1.00			1.00	
Frt	1.00					0.85		1.00			1.00	
Flt Protected	0.95					1.00		1.00			1.00	
Satd. Flow (prot)	1785					1597		1493			1661	
Flt Permitted	0.95					1.00		0.76			1.00	
Satd. Flow (perm)	1785					1597		1132			1661	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	5	0	0	0	0	10	35	840	5	0	1445	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	0	0
Lane Group Flow (vph)	5	0	0	0	0	0	0	880	0	0	1465	0
Confl. Peds. (#/hr)							10		5	5		10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	29%	100%	0%	13%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm	NA			NA	
Protected Phases								2			6	
Permitted Phases	4		4	8		8	2					
Actuated Green, G (s)	1.4					1.4		106.6			106.6	
Effective Green, g (s)	1.4					1.4		106.6			106.6	
Actuated g/C Ratio	0.01					0.01		0.89			0.89	
Clearance Time (s)	6.0					6.0		6.0			6.0	
Vehicle Extension (s)	3.0					3.0		3.0			3.0	
Lane Grp Cap (vph)	20					18		1005			1475	
v/s Ratio Prot											c0.88	
v/s Ratio Perm	c0.00					0.00		0.78				
v/c Ratio	0.25					0.01		0.88			0.99	
Uniform Delay, d1	58.8					58.6		3.4			6.4	
Progression Factor	1.00					1.00		3.89			3.22	
Incremental Delay, d2	6.5					0.1		10.1			16.2	
Delay (s)	65.3					58.8		23.2			36.6	
Level of Service	E					E		C			D	
Approach Delay (s)		65.3			58.8			23.2			36.6	
Approach LOS		E			E			C			D	
Intersection Summary												
HCM 2000 Control Delay			31.8									
HCM 2000 Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			120.0								12.0	
Intersection Capacity Utilization			88.9%								E	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Future Total 2028 PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	835	10	0	1370
Future Volume (Veh/h)	0	0	835	10	0	1370
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	835	10	0	1370
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						394
pX, platoon unblocked	0.25					
vC, conflicting volume	2205	835			845	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4289	835			845	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1	371			800	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	835	10	1370		
Volume Left	0	0	0	0		
Volume Right	0	0	10	0		
cSH	1700	1700	1700	800		
Volume to Capacity	0.00	0.49	0.01	0.00		
Queue Length 95th (m)	0.0	0.0	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			82.1%		ICU Level of Service	E
Analysis Period (min)			15			

Queues

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Future Total 2028 PM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	35	0	90	0	20	790	25	15	1230	5
Future Volume (vph)	35	0	90	0	20	790	25	15	1230	5
Lane Group Flow (vph)	35	55	90	55	20	790	25	15	1230	5
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	39.0	39.0	39.0	39.0	81.0	81.0	81.0	81.0	81.0	81.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.23	0.23	0.66	0.15	0.21	0.67	0.04	0.06	0.93	0.00
Control Delay	47.6	6.5	70.6	0.9	11.2	11.6	2.6	4.4	23.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	6.5	70.6	0.9	11.2	11.6	2.6	4.4	23.5	0.0
Queue Length 50th (m)	7.9	0.0	21.5	0.0	1.6	108.6	0.3	0.6	176.9	0.0
Queue Length 95th (m)	17.1	6.6	37.5	0.0	m2.5	111.7	m0.7	m2.4	#409.3	m0.0
Internal Link Dist (m)		161.0		124.2		369.7			813.5	
Turn Bay Length (m)	20.0		20.0		60.0		60.0	60.0		60.0
Base Capacity (vph)	326	410	288	529	94	1176	685	264	1324	1228
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.13	0.31	0.10	0.21	0.67	0.04	0.06	0.93	0.00

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2



Tribal Lands Dixie

Synchro 11 Report
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HCM Signalized Intersection Capacity Analysis

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Future Total 2028 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	0	55	90	0	55	20	790	25	15	1230	5
Future Volume (vph)	35	0	55	90	0	55	20	790	25	15	1230	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1566	1286		1381	1384		1190	1537	887	1075	1731	1597
Flt Permitted	0.72	1.00		0.72	1.00		0.10	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)	1189	1286		1048	1384		124	1537	887	345	1731	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	0	55	90	0	55	20	790	25	15	1230	5
RTOR Reduction (vph)	0	48	0	0	48	0	0	0	6	0	0	1
Lane Group Flow (vph)	35	7	0	90	7	0	20	790	19	15	1230	4
Heavy Vehicles (%)	14%	0%	27%	22%	0%	18%	50%	25%	80%	66%	11%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	15.7	15.7		15.7	15.7		91.8	91.8	91.8	91.8	91.8	91.8
Effective Green, g (s)	15.7	15.7		15.7	15.7		91.8	91.8	91.8	91.8	91.8	91.8
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.76	0.76	0.76	0.76	0.76	0.76
Clearance Time (s)	6.0	6.0		6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	155	168		137	181		94	1175	678	263	1324	1221
v/s Ratio Prot		0.01			0.01			0.51			c0.71	
v/s Ratio Perm	0.03			c0.09			0.16		0.02	0.04		0.00
v/c Ratio	0.23	0.04		0.66	0.04		0.21	0.67	0.03	0.06	0.93	0.00
Uniform Delay, d1	46.7	45.6		49.6	45.6		4.0	6.8	3.4	3.5	11.5	3.3
Progression Factor	1.00	1.00		1.00	1.00		1.23	1.16	1.49	0.80	0.71	1.00
Incremental Delay, d2	0.7	0.1		10.8	0.1		3.0	1.8	0.0	0.4	12.6	0.0
Delay (s)	47.5	45.7		60.4	45.7		7.9	9.7	5.1	3.2	20.7	3.3
Level of Service	D	D		E	D		A	A	A	A	C	A
Approach Delay (s)		46.4			54.8			9.5			20.4	
Approach LOS		D			D			A			C	
Intersection Summary												
HCM 2000 Control Delay			19.7			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			12.5			
Intersection Capacity Utilization			86.8%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Total 2028 PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	45	830	50	0	1250
Future Volume (Veh/h)	0	45	830	50	0	1250
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	45	830	50	0	1250
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						240
pX, platoon unblocked	0.80					
vC, conflicting volume	2105	855			880	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2260	855			880	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	87			100	
cM capacity (veh/h)	36	345			777	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	45	880	1250			
Volume Left	0	0	0			
Volume Right	45	50	0			
cSH	345	1700	1700			
Volume to Capacity	0.13	0.52	0.74			
Queue Length 95th (m)	3.6	0.0	0.0			
Control Delay (s)	17.0	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	17.0	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			69.1%	ICU Level of Service		C
Analysis Period (min)			15			

Queues

12: Dixie Road & Old School Road

Future Total 2028 PM Peak Hour

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	130	150	105	200	350	90	575	115	20	325	65
Future Volume (vph)	130	150	105	200	350	90	575	115	20	325	65
Lane Group Flow (vph)	130	150	105	200	365	90	575	115	20	325	65
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8		2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	8	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	13.7	58.7	58.7	45.0	45.0	61.3	61.3	61.3	61.3	61.3	61.3
Total Split (%)	11.4%	48.9%	48.9%	37.5%	37.5%	51.1%	51.1%	51.1%	51.1%	51.1%	51.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes						
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.51	0.23	0.17	0.80	0.79	0.30	0.58	0.14	0.10	0.35	0.07
Control Delay	31.0	26.6	4.6	52.3	41.9	23.5	23.5	9.6	18.3	18.7	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	26.6	4.6	52.3	41.9	23.5	23.5	9.6	18.3	18.7	4.2
Queue Length 50th (m)	21.6	26.0	0.0	52.2	94.9	11.1	78.8	3.3	2.3	44.0	0.0
Queue Length 95th (m)	31.4	36.7	10.4	77.0	124.7	m26.4	140.5	m20.1	8.3	77.4	7.7
Internal Link Dist (m)		371.4			41.8		216.1			261.5	
Turn Bay Length (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Base Capacity (vph)	256	811	747	332	612	301	992	824	205	921	873
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.18	0.14	0.60	0.60	0.30	0.58	0.14	0.10	0.35	0.07

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

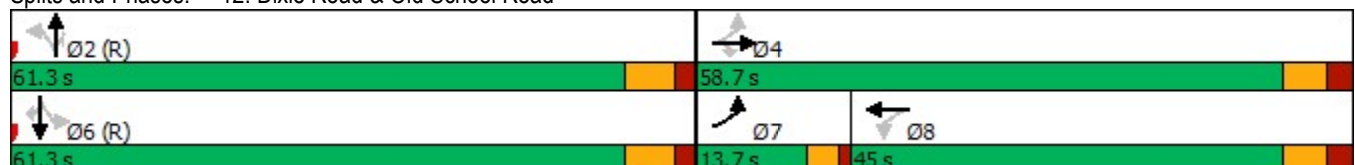
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Dixie Road & Old School Road



HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Total 2028 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	150	105	200	350	15	90	575	115	20	325	65
Future Volume (vph)	130	150	105	200	350	15	90	575	115	20	325	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	4.0	6.5	6.5	6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	1865	1581	1487	1904		1038	1847	1465	1167	1715	1566
Flt Permitted	0.20	1.00	1.00	0.66	1.00		0.51	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	382	1865	1581	1036	1904		561	1847	1465	383	1715	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	150	105	200	350	15	90	575	115	20	325	65
RTOR Reduction (vph)	0	0	68	0	2	0	0	0	37	0	0	30
Lane Group Flow (vph)	130	150	37	200	363	0	90	575	78	20	325	35
Heavy Vehicles (%)	0%	3%	1%	20%	0%	7%	72%	4%	9%	53%	12%	2%
Turn Type	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	42.5	42.5	42.5	29.0	29.0		64.5	64.5	64.5	64.5	64.5	64.5
Effective Green, g (s)	42.5	42.5	42.5	29.0	29.0		64.5	64.5	64.5	64.5	64.5	64.5
Actuated g/C Ratio	0.35	0.35	0.35	0.24	0.24		0.54	0.54	0.54	0.54	0.54	0.54
Clearance Time (s)	4.0	6.5	6.5	6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	660	559	250	460		301	992	787	205	921	841
v/s Ratio Prot	c0.04	0.08			0.19			c0.31			0.19	
v/s Ratio Perm	0.14		0.02	c0.19			0.16		0.05	0.05		0.02
v/c Ratio	0.53	0.23	0.07	0.80	0.79		0.30	0.58	0.10	0.10	0.35	0.04
Uniform Delay, d1	29.0	27.2	25.6	42.8	42.6		15.3	18.6	13.6	13.5	15.8	13.1
Progression Factor	1.00	1.00	1.00	0.71	0.70		1.14	1.04	1.47	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.2	0.1	16.3	8.8		2.1	2.0	0.2	0.9	1.1	0.1
Delay (s)	31.1	27.4	25.7	46.7	38.8		19.6	21.4	20.2	14.5	16.9	13.2
Level of Service	C	C	C	D	D		B	C	C	B	B	B
Approach Delay (s)		28.2			41.6			21.0			16.2	
Approach LOS		C			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			26.8			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			80.5%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Total 2028 PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 		
Traffic Volume (veh/h)	265	15	0	560	0	10
Future Volume (Veh/h)	265	15	0	560	0	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	265	15	0	560	0	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)	66					
pX, platoon unblocked						
vC, conflicting volume			280		552	140
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			280		552	140
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1294		468	889
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	177	103	280	280	10	
Volume Left	0	0	0	0	0	
Volume Right	0	15	0	0	10	
cSH	1700	1700	1700	1700	889	
Volume to Capacity	0.10	0.06	0.16	0.16	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.3	
Control Delay (s)	0.0	0.0	0.0	0.0	9.1	
Lane LOS					A	
Approach Delay (s)	0.0		0.0		9.1	
Approach LOS					A	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			18.8%		ICU Level of Service	
					A	
Analysis Period (min)			15			

Queues

14: 12861 Site Access 3 & Old School Road

Future Total 2028 PM Peak Hour

	→	↖	←	↙
Lane Group	EBT	WBL	WBT	NBL
Lane Configurations	↑↑	↑	↑↑	↘
Traffic Volume (vph)	275	10	430	130
Future Volume (vph)	275	10	430	130
Lane Group Flow (vph)	275	10	430	150
Turn Type	NA	Perm	NA	Prot
Protected Phases	4		8	2
Permitted Phases		8		
Detector Phase	4	8	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	28.5	31.5	31.5	31.5
Total Split (s)	60.0	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.5	4.5	4.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	C-Min
v/c Ratio	0.46	0.09	0.71	0.15
Control Delay	41.0	42.1	53.9	5.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	41.0	42.1	53.9	5.7
Queue Length 50th (m)	33.3	2.1	53.6	9.5
Queue Length 95th (m)	40.2	7.1	68.0	19.3
Internal Link Dist (m)	433.3		157.0	183.7
Turn Bay Length (m)		95.0		
Base Capacity (vph)	1611	288	1611	1019
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.03	0.27	0.15

Intersection Summary

Cycle Length: 120

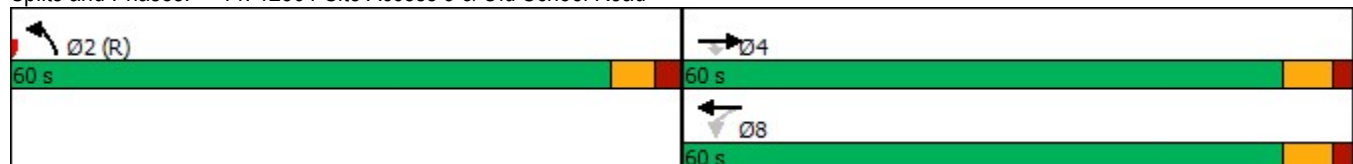
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 14: 12861 Site Access 3 & Old School Road



HCM Signalized Intersection Capacity Analysis

14: 12861 Site Access 3 & Old School Road

Future Total 2028 PM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	275	0	10	430	130	20
Future Volume (vph)	275	0	10	430	130	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.5	3.5	3.7	3.5	3.5
Total Lost time (s)	6.5		6.5	6.5	6.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3614		1190	3614	1405	
Flt Permitted	1.00		0.52	1.00	0.96	
Satd. Flow (perm)	3614		648	3614	1405	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	275	0	10	430	130	20
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	275	0	10	430	148	0
Heavy Vehicles (%)	1%	0%	50%	1%	26%	25%
Turn Type	NA	Perm	Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases		4	8			
Actuated Green, G (s)	20.0		20.0	20.0	87.0	
Effective Green, g (s)	20.0		20.0	20.0	87.0	
Actuated g/C Ratio	0.17		0.17	0.17	0.72	
Clearance Time (s)	6.5		6.5	6.5	6.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	602		108	602	1018	
v/s Ratio Prot	0.08			c0.12	c0.11	
v/s Ratio Perm			0.02			
v/c Ratio	0.46		0.09	0.71	0.15	
Uniform Delay, d1	45.1		42.3	47.3	5.1	
Progression Factor	0.87		1.00	1.00	1.00	
Incremental Delay, d2	0.5		0.4	4.0	0.3	
Delay (s)	39.6		42.7	51.3	5.4	
Level of Service	D		D	D	A	
Approach Delay (s)	39.6			51.1	5.4	
Approach LOS	D			D	A	
Intersection Summary						
HCM 2000 Control Delay			39.5		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.25			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	13.0
Intersection Capacity Utilization			31.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Total 2028 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	45	225	25	15	355	10	60	200	35	10	55	25
Future Volume (vph)	45	225	25	15	355	10	60	200	35	10	55	25
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	45	225	25	15	355	10	60	200	35	10	55	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	295	380	295	90								
Volume Left (vph)	45	15	60	10								
Volume Right (vph)	25	10	35	25								
Hadj (s)	0.10	0.03	-0.03	0.05								
Departure Headway (s)	6.0	5.7	6.0	6.7								
Degree Utilization, x	0.49	0.61	0.50	0.17								
Capacity (veh/h)	563	599	547	443								
Control Delay (s)	14.5	17.1	14.8	11.0								
Approach Delay (s)	14.5	17.1	14.8	11.0								
Approach LOS	B	C	B	B								
Intersection Summary												
Delay				15.2								
Level of Service				C								
Intersection Capacity Utilization				61.8%	ICU Level of Service	B						
Analysis Period (min)				15								

Queues

1: Dixie Road & Mayfield Road

Future Total 2033 PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	575	1495	180	60	1485	115	210	250	60	180	295	1120
Future Volume (vph)	575	1495	180	60	1485	115	210	250	60	180	295	1120
Lane Group Flow (vph)	575	1495	180	60	1485	115	210	250	60	180	295	1120
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	8.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0
Minimum Split (s)	9.5	44.9	9.5	9.5	44.9	9.5	9.5	47.9	9.5	9.5	47.9	9.5
Total Split (s)	24.0	63.6	13.1	10.4	50.0	13.1	13.1	47.9	10.4	13.1	47.9	24.0
Total Split (%)	17.8%	47.1%	9.7%	7.7%	37.0%	9.7%	9.7%	35.5%	7.7%	9.7%	35.5%	17.8%
Yellow Time (s)	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5
All-Red Time (s)	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.3	1.0	1.0	2.3	1.0
Lost Time Adjust (s)	-1.0	0.0	0.0	-1.0	0.0	0.0	-1.0	0.0	0.0	-1.0	0.0	0.0
Total Lost Time (s)	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
v/c Ratio	0.71	0.52	0.14	0.29	0.94	0.14	0.86	0.56	0.08	0.78	0.68	0.94
Control Delay	45.8	17.1	0.4	17.7	57.8	6.4	77.2	60.1	1.8	67.9	64.3	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	17.1	0.4	17.7	57.8	6.4	77.2	60.1	1.8	67.9	64.3	22.3
Queue Length 50th (m)	72.5	87.4	0.0	4.8	148.4	7.3	50.9	35.2	0.0	43.5	42.2	89.3
Queue Length 95th (m)	99.6	112.5	2.3	10.4	#179.4	14.4	#84.8	48.2	3.6	#68.0	56.4	#377.5
Internal Link Dist (m)		980.1			272.1			844.0			481.5	
Turn Bay Length (m)	115.0		75.0	115.0		110.0	115.0		65.0	115.0		135.0
Base Capacity (vph)	814	2861	1264	208	1579	809	243	1097	710	231	1066	1190
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.52	0.14	0.29	0.94	0.14	0.86	0.23	0.08	0.78	0.28	0.94

Intersection Summary

Cycle Length: 135

Actuated Cycle Length: 135

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Dixie Road & Mayfield Road

								
10.4 s	63.6 s		13.1 s		47.9 s			
								
24 s	50 s		13.1 s		47.9 s			

HCM Signalized Intersection Capacity Analysis

1: Dixie Road & Mayfield Road

Future Total 2033 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	575	1495	180	60	1485	115	210	250	60	180	295	1120
Future Volume (vph)	575	1495	180	60	1485	115	210	250	60	180	295	1120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5	3.5	6.9	4.5
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2456	4725	1476	1767	4948	1298	1731	3614	1289	1510	3510	1363
Flt Permitted	0.95	1.00	1.00	0.16	1.00	1.00	0.43	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	2456	4725	1476	303	4948	1298	792	3614	1289	820	3510	1363
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	575	1495	180	60	1485	115	210	250	60	180	295	1120
RTOR Reduction (vph)	0	0	38	0	0	24	0	0	31	0	0	64
Lane Group Flow (vph)	575	1495	142	60	1485	91	210	250	29	180	295	1056
Confl. Peds. (#/hr)			10	10			5		5	5		5
Heavy Vehicles (%)	41%	11%	6%	1%	6%	23%	3%	1%	22%	18%	4%	16%
Turn Type	Prot	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom	pm+pt	NA	custom
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2 4	6		6 8	4		4 6	8		8 2
Actuated Green, G (s)	43.7	80.8	106.4	48.7	42.9	68.5	25.6	16.8	65.5	25.6	16.8	107.9
Effective Green, g (s)	44.7	80.8	106.4	50.7	42.9	68.5	27.6	16.8	65.5	27.6	16.8	107.9
Actuated g/C Ratio	0.33	0.60	0.79	0.38	0.32	0.51	0.20	0.12	0.49	0.20	0.12	0.80
Clearance Time (s)	4.5	6.9	4.5	4.5	6.9	4.5	4.5	6.9	4.5	4.5	6.9	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	813	2828	1212	187	1572	701	230	449	625	217	436	1089
v/s Ratio Prot	0.23	0.32	0.01	0.02	0.30	0.01	0.07	0.07	0.00	0.06	0.08	0.31
v/s Ratio Perm			0.09	0.10		0.06	0.12		0.02	0.11		0.46
v/c Ratio	0.71	0.53	0.12	0.32	0.94	0.13	0.91	0.56	0.05	0.83	0.68	0.97
Uniform Delay, d1	39.4	15.9	3.3	27.2	44.9	17.5	50.7	55.6	18.3	49.8	56.5	12.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	0.7	0.0	1.0	12.9	0.1	36.4	1.5	0.0	22.3	4.1	20.1
Delay (s)	42.3	16.6	3.4	28.2	57.8	17.6	87.1	57.1	18.3	72.0	60.6	32.2
Level of Service	D	B	A	C	E	B	F	E	B	E	E	C
Approach Delay (s)		22.1			53.9			64.8			41.9	
Approach LOS		C			D			E			D	
Intersection Summary												
HCM 2000 Control Delay			39.8									
HCM 2000 Volume to Capacity ratio			1.01									
Actuated Cycle Length (s)			135.0									
Intersection Capacity Utilization			123.0%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Future Total 2033 PM Peak Hour



Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	45	105	70	0	35	855	5	1410	10
Future Volume (vph)	45	105	70	0	35	855	5	1410	10
Lane Group Flow (vph)	45	105	70	5	35	870	0	1415	10
Turn Type	Perm	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases				8		2		6	
Permitted Phases	4	4	8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.0	31.0	31.0	31.0	31.0
Total Split (s)	42.0	42.0	42.0	42.0	78.0	78.0	78.0	78.0	78.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.30	0.52	0.59	0.02	0.16	0.38		0.59	0.01
Control Delay	52.3	37.6	69.2	0.0	6.0	4.6		5.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	52.3	37.6	69.2	0.0	6.0	4.6		5.9	0.4
Queue Length 50th (m)	10.5	14.0	16.8	0.0	1.7	27.4		74.9	0.0
Queue Length 95th (m)	21.4	30.7	31.3	0.0	6.3	46.6		m39.5	m0.0
Internal Link Dist (m)				96.6		481.5		358.1	
Turn Bay Length (m)	15.0	15.0	15.0		70.0				65.0
Base Capacity (vph)	425	487	333	607	213	2286		2415	1230
Starvation Cap Reductn	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.11	0.22	0.21	0.01	0.16	0.38		0.59	0.01

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3



HCM Signalized Intersection Capacity Analysis

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Future Total 2033 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	105	70	0	5	35	855	15	5	1410	10
Future Volume (vph)	45	0	105	70	0	5	35	855	15	5	1410	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00		0.85	1.00	0.85		1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1785		1521	1394	1633		1537	2887			3203	1546
Flt Permitted	0.75		1.00	0.76	1.00		0.17	1.00			0.95	1.00
Satd. Flow (perm)	1418		1521	1111	1633		269	2887			3051	1546
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	45	0	105	70	0	5	35	855	15	5	1410	10
RTOR Reduction (vph)	0	0	40	0	4	0	0	1	0	0	0	2
Lane Group Flow (vph)	45	0	65	70	1	0	35	869	0	0	1415	8
Confl. Peds. (#/hr)							5					5
Heavy Vehicles (%)	0%	0%	5%	28%	0%	0%	16%	26%	33%	0%	14%	0%
Turn Type	Perm		Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	12.9		12.9	12.9	12.9		95.1	95.1			95.1	95.1
Effective Green, g (s)	12.9		12.9	12.9	12.9		95.1	95.1			95.1	95.1
Actuated g/C Ratio	0.11		0.11	0.11	0.11		0.79	0.79			0.79	0.79
Clearance Time (s)	6.0		6.0	6.0	6.0		6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	152		163	119	175		213	2287			2417	1225
v/s Ratio Prot					0.00			0.30				
v/s Ratio Perm	0.03		0.04	0.06			0.13				0.46	0.01
v/c Ratio	0.30		0.40	0.59	0.00		0.16	0.38			0.59	0.01
Uniform Delay, d1	49.4		49.9	51.0	47.8		3.0	3.7			4.8	2.6
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00			1.00	1.16
Incremental Delay, d2	1.1		1.6	7.2	0.0		1.7	0.5			0.4	0.0
Delay (s)	50.5		51.5	58.3	47.8		4.6	4.2			5.2	3.0
Level of Service	D		D	E	D		A	A			A	A
Approach Delay (s)		51.2			57.6			4.2			5.2	
Approach LOS		D			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.1				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			64.8%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

7: Dixie Road & UPS Facility Access/12173 West Access 1

Future Total 2033 PM Peak Hour



Lane Group	EBL	WBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	5	10	35	840	1445
Future Volume (vph)	5	10	35	840	1445
Lane Group Flow (vph)	5	10	35	845	1465
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases				2	6
Permitted Phases	4	8	2		
Detector Phase	4	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	31.0	31.0	31.0
Total Split (s)	39.0	39.0	81.0	81.0	81.0
Total Split (%)	32.5%	32.5%	67.5%	67.5%	67.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.06	0.04	0.20	0.31	0.91
Control Delay	55.4	0.3	3.2	0.7	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	55.4	0.3	3.2	0.7	14.1
Queue Length 50th (m)	1.2	0.0	0.0	0.0	172.5
Queue Length 95th (m)	5.6	0.0	2.1	13.6 m#	456.1
Internal Link Dist (m)				358.1	696.2
Turn Bay Length (m)					
Base Capacity (vph)	490	571	175	2729	1609
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.01	0.02	0.20	0.31	0.91

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 150

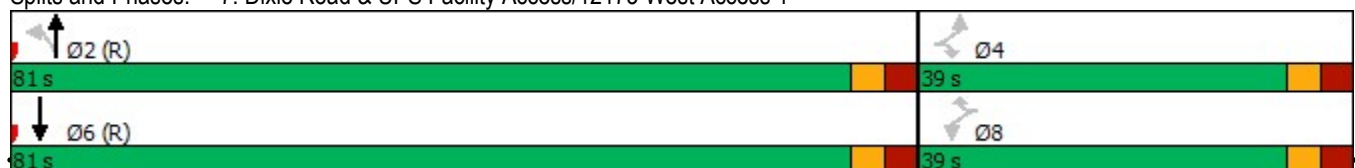
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1



Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Signalized Intersection Capacity Analysis

7: Dixie Road & UPS Facility Access/12173 West Access 1

Future Total 2033 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	0	0	0	10	35	840	5	0	1445	20
Future Volume (vph)	5	0	0	0	0	10	35	840	5	0	1445	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.7	3.5	3.5
Total Lost time (s)	6.0					6.0	6.0	6.0			6.0	
Lane Util. Factor	1.00					1.00	1.00	0.95			1.00	
Frpb, ped/bikes	1.00					1.00	1.00	1.00			1.00	
Flpb, ped/bikes	1.00					1.00	1.00	1.00			1.00	
Frt	1.00					0.85	1.00	1.00			1.00	
Flt Protected	0.95					1.00	0.95	1.00			1.00	
Satd. Flow (prot)	1785					1597	1750	2817			1661	
Flt Permitted	0.95					1.00	0.10	1.00			1.00	
Satd. Flow (perm)	1785					1597	181	2817			1661	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	5	0	0	0	0	10	35	840	5	0	1445	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	0	0
Lane Group Flow (vph)	5	0	0	0	0	0	35	845	0	0	1465	0
Confl. Peds. (#/hr)							10		5	5		10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	29%	100%	0%	13%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm	NA			NA	
Protected Phases								2			6	
Permitted Phases	4		4	8		8	2					
Actuated Green, G (s)	1.4					1.4	106.6	106.6			106.6	
Effective Green, g (s)	1.4					1.4	106.6	106.6			106.6	
Actuated g/C Ratio	0.01					0.01	0.89	0.89			0.89	
Clearance Time (s)	6.0					6.0	6.0	6.0			6.0	
Vehicle Extension (s)	3.0					3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)	20					18	160	2502			1475	
v/s Ratio Prot								0.30			c0.88	
v/s Ratio Perm	c0.00					0.00	0.19					
v/c Ratio	0.25					0.01	0.22	0.34			0.99	
Uniform Delay, d1	58.8					58.6	0.9	1.1			6.4	
Progression Factor	1.00					1.00	0.76	0.67			3.16	
Incremental Delay, d2	6.5					0.1	3.0	0.3			16.2	
Delay (s)	65.3					58.8	3.7	1.1			36.3	
Level of Service	E					E	A	A			D	
Approach Delay (s)		65.3			58.8			1.2			36.3	
Approach LOS		E			E			A			D	
Intersection Summary												
HCM 2000 Control Delay		23.3										
HCM 2000 Volume to Capacity ratio		0.98										
Actuated Cycle Length (s)		120.0										
Intersection Capacity Utilization		88.9%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Future Total 2033 PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	835	10	0	1370
Future Volume (Veh/h)	0	0	835	10	0	1370
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	835	10	0	1370
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						394
pX, platoon unblocked	0.25					
vC, conflicting volume	2205	835			845	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4289	835			845	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1	371			800	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	835	10	1370		
Volume Left	0	0	0	0		
Volume Right	0	0	10	0		
cSH	1700	1700	1700	800		
Volume to Capacity	0.00	0.49	0.01	0.00		
Queue Length 95th (m)	0.0	0.0	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			82.1%		ICU Level of Service	E
Analysis Period (min)			15			

Queues

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Future Total 2033 PM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	35	0	90	0	20	790	25	15	1230	5
Future Volume (vph)	35	0	90	0	20	790	25	15	1230	5
Lane Group Flow (vph)	35	55	90	55	20	790	25	15	1230	5
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4		8		2			6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	2	2	2	6	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	39.0	39.0	39.0	39.0	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	39.0	39.0	39.0	39.0	81.0	81.0	81.0	81.0	81.0	81.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.23	0.23	0.66	0.15	0.21	0.67	0.04	0.06	0.93	0.00
Control Delay	47.6	6.5	70.6	0.9	11.1	12.9	1.6	4.4	23.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	6.5	70.6	0.9	11.1	12.9	1.6	4.4	23.5	0.0
Queue Length 50th (m)	7.9	0.0	21.5	0.0	1.1	72.8	0.0	0.6	176.7	0.0
Queue Length 95th (m)	17.1	6.6	37.5	0.0	5.1	141.0	2.3	m2.4	#409.1	m0.0
Internal Link Dist (m)		161.0		124.2		369.7			813.5	
Turn Bay Length (m)	20.0		20.0		60.0		60.0	60.0		60.0
Base Capacity (vph)	326	410	288	529	94	1176	685	264	1324	1228
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.13	0.31	0.10	0.21	0.67	0.04	0.06	0.93	0.00

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2



Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Signalized Intersection Capacity Analysis

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Future Total 2033 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	0	55	90	0	55	20	790	25	15	1230	5
Future Volume (vph)	35	0	55	90	0	55	20	790	25	15	1230	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	6.0	6.0		6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1566	1286		1381	1384		1190	1537	887	1075	1731	1597
Flt Permitted	0.72	1.00		0.72	1.00		0.10	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)	1189	1286		1048	1384		124	1537	887	345	1731	1597
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	0	55	90	0	55	20	790	25	15	1230	5
RTOR Reduction (vph)	0	48	0	0	48	0	0	0	6	0	0	1
Lane Group Flow (vph)	35	7	0	90	7	0	20	790	19	15	1230	4
Heavy Vehicles (%)	14%	0%	27%	22%	0%	18%	50%	25%	80%	66%	11%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	15.7	15.7		15.7	15.7		91.8	91.8	91.8	91.8	91.8	91.8
Effective Green, g (s)	15.7	15.7		15.7	15.7		91.8	91.8	91.8	91.8	91.8	91.8
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.76	0.76	0.76	0.76	0.76	0.76
Clearance Time (s)	6.0	6.0		6.0	6.0		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	155	168		137	181		94	1175	678	263	1324	1221
v/s Ratio Prot		0.01			0.01			0.51			c0.71	
v/s Ratio Perm	0.03			c0.09			0.16		0.02	0.04		0.00
v/c Ratio	0.23	0.04		0.66	0.04		0.21	0.67	0.03	0.06	0.93	0.00
Uniform Delay, d1	46.7	45.6		49.6	45.6		4.0	6.8	3.4	3.5	11.5	3.3
Progression Factor	1.00	1.00		1.00	1.00		0.93	1.17	0.90	0.80	0.70	1.00
Incremental Delay, d2	0.7	0.1		10.8	0.1		4.9	3.0	0.1	0.4	12.6	0.0
Delay (s)	47.5	45.7		60.4	45.7		8.6	11.0	3.1	3.2	20.7	3.3
Level of Service	D	D		E	D		A	B	A	A	C	A
Approach Delay (s)		46.4			54.8			10.7			20.4	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay			20.1			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			12.5			
Intersection Capacity Utilization			86.8%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Total 2033 PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	45	830	50	0	1250
Future Volume (Veh/h)	0	45	830	50	0	1250
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	45	830	50	0	1250
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (m)						240
pX, platoon unblocked	0.80					
vC, conflicting volume	2105	855			880	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2261	855			880	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	87			100	
cM capacity (veh/h)	36	345			777	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	45	880	1250			
Volume Left	0	0	0			
Volume Right	45	50	0			
cSH	345	1700	1700			
Volume to Capacity	0.13	0.52	0.74			
Queue Length 95th (m)	3.6	0.0	0.0			
Control Delay (s)	17.0	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	17.0	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			69.1%	ICU Level of Service		C
Analysis Period (min)			15			

Queues

12: Dixie Road & Old School Road

Future Total 2033 PM Peak Hour

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	130	160	105	200	385	90	575	115	20	325	65
Future Volume (vph)	130	160	105	200	385	90	575	115	20	325	65
Lane Group Flow (vph)	130	160	105	200	400	90	575	115	20	325	65
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8		2			6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	8	8	2	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Total Split (s)	13.7	58.7	58.7	45.0	45.0	61.3	61.3	61.3	61.3	61.3	61.3
Total Split (%)	11.4%	48.9%	48.9%	37.5%	37.5%	51.1%	51.1%	51.1%	51.1%	51.1%	51.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes						
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.54	0.24	0.16	0.77	0.83	0.31	0.59	0.14	0.10	0.36	0.08
Control Delay	31.7	26.1	4.5	48.3	44.1	22.7	23.4	8.9	18.8	19.4	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.7	26.1	4.5	48.3	44.1	22.7	23.4	8.9	18.8	19.4	4.2
Queue Length 50th (m)	21.0	27.2	0.0	52.1	103.9	12.3	86.9	6.7	2.4	45.6	0.0
Queue Length 95th (m)	31.4	39.1	10.4	76.8	135.8	m26.5	140.4	m20.1	8.3	77.4	7.7
Internal Link Dist (m)		371.4			41.8		216.1			261.5	
Turn Bay Length (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Base Capacity (vph)	242	811	747	329	612	293	972	809	197	903	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.20	0.14	0.61	0.65	0.31	0.59	0.14	0.10	0.36	0.08

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

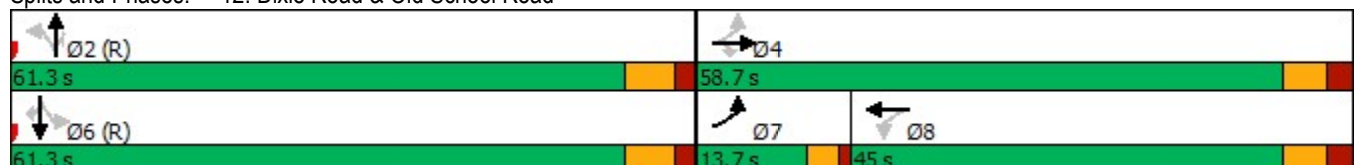
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Dixie Road & Old School Road



HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Total 2033 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	160	105	200	385	15	90	575	115	20	325	65
Future Volume (vph)	130	160	105	200	385	15	90	575	115	20	325	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	4.0	6.5	6.5	6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1785	1865	1581	1487	1905		1038	1847	1465	1167	1715	1566
Flt Permitted	0.17	1.00	1.00	0.66	1.00		0.51	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	322	1865	1581	1027	1905		557	1847	1465	375	1715	1566
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	160	105	200	385	15	90	575	115	20	325	65
RTOR Reduction (vph)	0	0	67	0	1	0	0	0	38	0	0	31
Lane Group Flow (vph)	130	160	38	200	399	0	90	575	77	20	325	34
Heavy Vehicles (%)	0%	3%	1%	20%	0%	7%	72%	4%	9%	53%	12%	2%
Turn Type	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	43.8	43.8	43.8	30.3	30.3		63.2	63.2	63.2	63.2	63.2	63.2
Effective Green, g (s)	43.8	43.8	43.8	30.3	30.3		63.2	63.2	63.2	63.2	63.2	63.2
Actuated g/C Ratio	0.36	0.36	0.36	0.25	0.25		0.53	0.53	0.53	0.53	0.53	0.53
Clearance Time (s)	4.0	6.5	6.5	6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	233	680	577	259	481		293	972	771	197	903	824
v/s Ratio Prot	c0.04	0.09			c0.21			c0.31			0.19	
v/s Ratio Perm	0.16		0.02	0.19			0.16		0.05	0.05		0.02
v/c Ratio	0.56	0.24	0.07	0.77	0.83		0.31	0.59	0.10	0.10	0.36	0.04
Uniform Delay, d1	28.7	26.5	24.8	41.6	42.4		16.0	19.5	14.2	14.2	16.6	13.7
Progression Factor	1.00	1.00	1.00	0.71	0.71		1.06	0.99	1.34	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2	0.0	13.1	11.0		2.2	2.2	0.2	1.0	1.1	0.1
Delay (s)	31.5	26.6	24.8	42.4	40.9		19.2	21.5	19.2	15.2	17.7	13.8
Level of Service	C	C	C	D	D		B	C	B	B	B	B
Approach Delay (s)		27.8			41.4			20.9			17.0	
Approach LOS		C			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			27.0			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			82.4%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

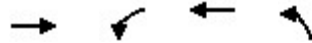
Future Total 2033 PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	275	15	0	595	0	10
Future Volume (Veh/h)	275	15	0	595	0	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	275	15	0	595	0	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)	66					
pX, platoon unblocked						
vC, conflicting volume			290		580	145
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			290		580	145
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1283		450	882
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	183	107	298	298	10	
Volume Left	0	0	0	0	0	
Volume Right	0	15	0	0	10	
cSH	1700	1700	1700	1700	882	
Volume to Capacity	0.11	0.06	0.17	0.17	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.3	
Control Delay (s)	0.0	0.0	0.0	0.0	9.1	
Lane LOS					A	
Approach Delay (s)	0.0		0.0		9.1	
Approach LOS					A	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			19.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Queues

14: 12861 Site Access 3 & Old School Road

Future Total 2033 PM Peak Hour



Lane Group	EBT	WBL	WBT	NBL
Lane Configurations	↑↑	↑	↑↑	↑
Traffic Volume (vph)	285	10	465	130
Future Volume (vph)	285	10	465	130
Lane Group Flow (vph)	285	10	465	150
Turn Type	NA	Perm	NA	Prot
Protected Phases	4		8	2
Permitted Phases		8		
Detector Phase	4	8	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	28.5	31.5	31.5	31.5
Total Split (s)	60.0	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.5	4.5	4.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	C-Min
v/c Ratio	0.45	0.09	0.73	0.15
Control Delay	40.1	40.9	53.2	6.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	40.1	40.9	53.2	6.1
Queue Length 50th (m)	33.5	2.1	57.8	9.9
Queue Length 95th (m)	41.8	7.0	72.5	20.1
Internal Link Dist (m)	433.3		157.0	183.7
Turn Bay Length (m)		95.0		
Base Capacity (vph)	1611	284	1611	1005
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.04	0.29	0.15

Intersection Summary

Cycle Length: 120

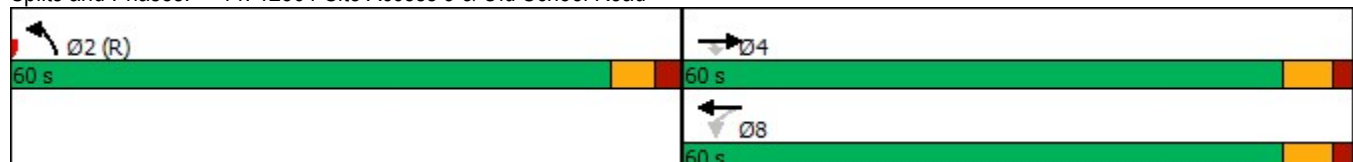
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 14: 12861 Site Access 3 & Old School Road



HCM Signalized Intersection Capacity Analysis

14: 12861 Site Access 3 & Old School Road

Future Total 2033 PM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	285	0	10	465	130	20
Future Volume (vph)	285	0	10	465	130	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.5	3.5	3.7	3.5	3.5
Total Lost time (s)	6.5		6.5	6.5	6.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3614		1190	3614	1405	
Flt Permitted	1.00		0.51	1.00	0.96	
Satd. Flow (perm)	3614		639	3614	1405	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	285	0	10	465	130	20
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	285	0	10	465	148	0
Heavy Vehicles (%)	1%	0%	50%	1%	26%	25%
Turn Type	NA	Perm	Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases		4	8			
Actuated Green, G (s)	21.3		21.3	21.3	85.7	
Effective Green, g (s)	21.3		21.3	21.3	85.7	
Actuated g/C Ratio	0.18		0.18	0.18	0.71	
Clearance Time (s)	6.5		6.5	6.5	6.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	641		113	641	1003	
v/s Ratio Prot	0.08			c0.13	c0.11	
v/s Ratio Perm			0.02			
v/c Ratio	0.44		0.09	0.73	0.15	
Uniform Delay, d1	44.1		41.2	46.6	5.5	
Progression Factor	0.87		1.00	1.00	1.00	
Incremental Delay, d2	0.5		0.3	4.1	0.3	
Delay (s)	38.9		41.6	50.7	5.8	
Level of Service	D		D	D	A	
Approach Delay (s)	38.9			50.5	5.8	
Approach LOS	D			D	A	
Intersection Summary						
HCM 2000 Control Delay			39.5		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.26			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	13.0
Intersection Capacity Utilization			32.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Total 2033 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	45	235	25	15	390	10	60	220	35	10	60	25
Future Volume (vph)	45	235	25	15	390	10	60	220	35	10	60	25
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	45	235	25	15	390	10	60	220	35	10	60	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	305	415	315	95								
Volume Left (vph)	45	15	60	10								
Volume Right (vph)	25	10	35	25								
Hadj (s)	0.10	0.03	-0.03	0.06								
Departure Headway (s)	6.2	5.9	6.3	7.0								
Degree Utilization, x	0.53	0.68	0.55	0.18								
Capacity (veh/h)	541	572	530	415								
Control Delay (s)	15.8	20.7	16.7	11.6								
Approach Delay (s)	15.8	20.7	16.7	11.6								
Approach LOS	C	C	C	B								
Intersection Summary												
Delay				17.5								
Level of Service				C								
Intersection Capacity Utilization				64.2%	ICU Level of Service							
Analysis Period (min)				15								

Appendix I: SimTraffic Worksheets

1: Dixie Road & Mayfield Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.2	0.3	1.7	0.2	1.3	1.7	0.4	2.0	0.1	0.0	0.1
Total Del/Veh (s)	59.3	27.5	14.0	32.4	29.0	12.9	61.9	30.2	17.3	38.6	31.5	8.6
Stop Del/Veh (s)	49.3	17.3	7.5	28.6	22.9	9.1	56.9	23.8	16.1	33.4	23.4	5.7

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	29.2
Stop Del/Veh (s)	21.3

5: Dixie Road & Abbotside Wy. /Spokanne St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.4	0.0	0.1	0.0	0.1
Total Del/Veh (s)	8.8	4.8	5.4	2.8	1.3	0.2	2.3
Stop Del/Veh (s)	6.8	4.5	2.0	0.3	0.0	0.0	0.4

7: Dixie Road & UPS Facility Access/Construction Access Performance by movement

Movement	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	4.4	3.4	1.2	11.5	11.9	7.6
Stop Del/Veh (s)	4.0	2.2	0.1	0.2	0.3	0.4

12: Dixie Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.2	0.5	0.6	4.0	0.3	0.1	0.0	0.0	0.0	3.5	0.4	0.5
Total Del/Veh (s)	21.9	21.5	19.4	36.4	16.0	7.8	19.8	14.7	11.8	20.5	14.3	11.0
Stop Del/Veh (s)	21.8	21.3	18.8	29.7	11.0	2.7	12.4	5.6	4.8	14.1	8.2	5.1

12: Dixie Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	17.6
Stop Del/Veh (s)	13.1

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.4	0.5	0.1	0.2	0.1	0.2	0.3	0.2	0.2	0.3	0.3
Total Del/Veh (s)	7.3	9.6	10.0	7.4	7.2	8.0	7.9	8.3	8.6	8.1	7.0	8.6
Stop Del/Veh (s)	3.2	4.2	4.6	2.6	3.1	3.6	3.4	3.9	4.1	3.5	2.6	3.7

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	31.6
Stop Del/Veh (s)	19.0

Queuing and Blocking Report
Existing AM Peak Hour

07-22-2025

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	T	R
Maximum Queue (m)	158.9	142.8	143.1	137.5	122.5	33.4	125.8	115.5	72.5	85.5	46.1	27.6
Average Queue (m)	73.3	73.6	81.1	80.2	33.2	12.7	61.7	62.1	46.6	34.1	23.9	8.4
95th Queue (m)	132.3	124.3	129.3	124.3	86.5	25.9	92.8	93.8	77.2	66.1	47.5	19.6
Link Distance (m)		991.5	991.5	991.5			565.9	565.9			845.5	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	155.0				115.0	150.0			65.0	140.0		65.0
Storage Blk Time (%)	0			1	0			3	0			
Queuing Penalty (veh)	1			4	0			9	1			

Intersection: 1: Dixie Road & Mayfield Road

Movement	SB	SB	SB
Directions Served	L	T	R
Maximum Queue (m)	39.9	76.8	53.9
Average Queue (m)	14.2	40.2	19.8
95th Queue (m)	30.3	68.0	37.8
Link Distance (m)		476.5	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	100.0		170.0
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Dixie Road & Abbotside Wy. /Spokane St

Movement	EB	NB
Directions Served	LTR	L
Maximum Queue (m)	18.4	13.2
Average Queue (m)	8.0	3.9
95th Queue (m)	16.9	10.6
Link Distance (m)	235.5	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		95.0
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
Existing AM Peak Hour

07-22-2025

Intersection: 7: Dixie Road & UPS Facility Access/Construction Access

Movement	EB	NB
Directions Served	R	LT
Maximum Queue (m)	16.1	18.0
Average Queue (m)	2.4	3.9
95th Queue (m)	10.2	12.3
Link Distance (m)	49.1	122.2
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Dixie Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	72.4	101.1	14.6	33.5	19.7	41.4	19.8	58.5
Average Queue (m)	11.8	49.5	8.8	17.2	3.2	13.5	3.7	34.6
95th Queue (m)	40.9	80.1	15.4	29.6	12.0	31.2	12.5	55.8
Link Distance (m)		130.2		147.7		2408.8		273.7
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)	65.0		65.0		65.0		65.0	
Storage Blk Time (%)		5						
Queuing Penalty (veh)		2						

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	39.1	22.2	21.7	20.8
Average Queue (m)	19.1	11.0	11.5	11.8
95th Queue (m)	28.2	17.3	19.3	18.3
Link Distance (m)	120.6	90.4	175.7	122.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 17

1: Dixie Road & Mayfield Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.1	0.1	1.5	0.2	1.1	1.2	0.4	1.3	0.0	0.0	0.1
Total Del/Veh (s)	41.6	19.3	7.1	23.9	30.2	14.5	49.6	37.1	12.4	41.7	29.3	14.9
Stop Del/Veh (s)	33.2	12.9	3.4	20.2	22.6	9.7	43.4	30.4	8.6	36.4	24.0	11.2

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	26.1
Stop Del/Veh (s)	19.6

5: Dixie Road & Abbotside Wy. /Spokanne St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	13.4	4.2	5.9	3.5	1.1	2.6
Stop Del/Veh (s)	11.2	3.8	2.8	0.2	0.0	0.5

7: Dixie Road & UPS Facility Access/Construction Access Performance by movement

Movement	EBL	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.1	0.1	0.2	0.1
Total Del/Veh (s)	8.1	5.6	1.2	12.2	9.5	6.7
Stop Del/Veh (s)	5.0	2.0	0.1	0.2	0.1	0.2

12: Dixie Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.2	0.2	0.4	3.6	0.5	0.6	0.0	0.0	0.5	2.3	0.3	0.2
Total Del/Veh (s)	31.0	19.0	13.5	25.1	22.8	20.4	29.9	21.6	20.5	13.6	10.1	7.9
Stop Del/Veh (s)	27.9	14.7	11.0	21.5	17.2	17.2	10.7	6.6	6.1	11.4	6.9	6.2

12: Dixie Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	19.1
Stop Del/Veh (s)	11.3

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	0.1	0.3	0.3	0.5	0.3	0.3	0.2	0.1	0.1	0.2
Total Del/Veh (s)	7.5	7.5	3.5	7.6	9.3	4.5	6.8	8.9	5.3	5.3	7.1	4.1
Stop Del/Veh (s)	4.8	3.2	2.6	4.0	4.3	2.8	3.5	3.8	3.2	3.1	3.2	3.2

15: Bramalea Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	8.0
Stop Del/Veh (s)	3.8

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	29.9
Stop Del/Veh (s)	17.5

Queuing and Blocking Report
Existing PM Peak Hour

07-22-2025

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	T	R
Maximum Queue (m)	105.1	99.1	91.7	84.5	29.5	30.4	141.7	136.6	72.5	83.6	59.0	35.3
Average Queue (m)	47.7	47.2	51.0	50.2	13.6	11.0	82.9	83.7	61.0	43.7	34.0	11.9
95th Queue (m)	84.8	81.9	77.3	81.5	23.3	22.5	121.1	118.3	89.1	72.5	54.1	27.5
Link Distance (m)		991.5	991.5	991.5			565.9	565.9			845.5	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	155.0				115.0	150.0			65.0	140.0		65.0
Storage Blk Time (%)								12	2		0	
Queuing Penalty (veh)								54	8		0	

Intersection: 1: Dixie Road & Mayfield Road

Movement	SB	SB	SB
Directions Served	L	T	R
Maximum Queue (m)	39.3	33.8	62.3
Average Queue (m)	12.4	15.5	31.7
95th Queue (m)	28.8	30.3	56.8
Link Distance (m)		476.5	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	100.0		170.0
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Dixie Road & Abbotside Wy. /Spokane St

Movement	EB	NB
Directions Served	LTR	L
Maximum Queue (m)	21.6	15.8
Average Queue (m)	8.7	3.3
95th Queue (m)	16.9	12.4
Link Distance (m)	235.5	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		95.0
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
Existing PM Peak Hour

07-22-2025

Intersection: 7: Dixie Road & UPS Facility Access/Construction Access

Movement	EB	NB
Directions Served	L	LT
Maximum Queue (m)	8.6	24.5
Average Queue (m)	1.5	3.2
95th Queue (m)	6.8	13.1
Link Distance (m)	49.1	122.2
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Dixie Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	14.7	41.9	21.8	66.7	15.0	97.2	8.2	47.4
Average Queue (m)	6.3	22.3	8.3	37.3	2.5	30.3	1.0	25.3
95th Queue (m)	13.5	39.2	18.1	53.4	9.5	61.3	5.2	44.0
Link Distance (m)		130.2		147.7		2408.8		273.7
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)	65.0		65.0		65.0		65.0	
Storage Blk Time (%)				0		1		
Queuing Penalty (veh)				0		0		

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	21.8	42.7	28.1	16.1
Average Queue (m)	10.4	19.8	16.0	8.8
95th Queue (m)	16.9	32.1	24.1	13.7
Link Distance (m)	120.6	90.4	175.7	122.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 62

1: Dixie Road & Mayfield Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.4	0.5	2.7	0.2	2.7	0.8	0.1	0.7	0.0	0.0	0.1
Total Del/Veh (s)	156.3	37.3	15.6	39.5	42.3	4.0	53.5	48.3	4.3	52.7	41.3	4.7
Stop Del/Veh (s)	117.4	18.2	0.8	36.9	35.0	1.1	48.7	42.7	1.4	47.9	36.8	0.6

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	53.7
Stop Del/Veh (s)	37.6

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.1	3.9	4.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	39.2	7.4	54.8	5.1	14.9	8.3	10.5	10.5	3.1	2.0	8.3
Stop Del/Veh (s)	36.9	7.0	50.3	1.5	8.8	2.7	1.9	6.7	1.1	0.6	3.9

7: Dixie Road & UPS Facility Access/12173 West Access 1 Performance by movement

Movement	EBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.4	0.1	0.1	0.0
Total Del/Veh (s)	4.6	11.5	8.0	4.2	16.5	5.6	4.6	7.2
Stop Del/Veh (s)	4.6	6.6	2.9	0.9	7.6	0.1	0.0	1.9

8: Dixie Road & 12489 Site Access 1 Performance by movement

Movement	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.2	5.0	3.0	4.9
Stop Del/Veh (s)	0.4	0.3	0.1	0.3

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.2	0.1	4.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	68.2	10.3	57.8	12.3	11.3	5.1	3.6	14.1	6.7	5.2	8.2
Stop Del/Veh (s)	64.5	7.0	53.8	9.1	5.5	0.8	0.6	5.1	1.2	0.9	3.4

11: Dixie Road & 12861 Site Access 1 Performance by movement

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.2	0.2
Total Del/Veh (s)	6.9	2.3	4.9
Stop Del/Veh (s)	0.1	0.1	0.1

12: Dixie Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	3.0	0.6	3.2	0.1	0.0	0.0	0.0	2.7	1.0	3.2	0.9
Total Del/Veh (s)	38.4	44.1	12.4	38.7	23.3	3.1	4.9	12.8	12.2	3.1	14.6
Stop Del/Veh (s)	33.9	37.2	8.8	37.3	18.1	1.7	2.4	8.9	8.1	1.2	11.2

13: 12861 Site Access 2 & Old School Road Performance by movement

Movement	EBT	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	1.6	1.6
Stop Del/Veh (s)	0.1	0.1

14: 12861 Site Access 3 & Old School Road Performance by movement

Movement	EBT	WBT	All
Denied Del/Veh (s)	0.0	1819.9	721.1
Total Del/Veh (s)	1.7	3598.0	412.3
Stop Del/Veh (s)	0.2	3598.0	410.9

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.4	0.7	0.3	0.3	0.1	0.2	0.2	0.1	0.2	0.3	0.3
Total Del/Veh (s)	9.2	10.0	10.6	8.1	8.0	7.2	7.4	6.7	9.8	7.9	8.1	8.7
Stop Del/Veh (s)	4.3	4.6	4.7	3.7	3.4	3.2	3.3	2.9	3.8	3.6	3.8	3.9

Total Network Performance

Movement	All
Denied Del/Veh (s)	68.0
Total Del/Veh (s)	80.9
Stop Del/Veh (s)	59.0

Queuing and Blocking Report
Future Background 2028 (12861) AM Peak Hour

07-23-2025

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	L
Maximum Queue (m)	137.5	160.0	911.2	991.5	857.9	129.9	32.2	124.8	123.7	94.1	44.5	46.2
Average Queue (m)	122.6	139.0	354.4	347.5	203.9	13.8	13.5	87.3	75.6	53.9	3.9	27.7
95th Queue (m)	163.6	192.4	757.7	796.6	528.6	79.8	26.5	120.4	109.8	89.0	22.8	46.0
Link Distance (m)			988.7	988.7	988.7			280.2	280.2	280.2		
Upstream Blk Time (%)				0								
Queuing Penalty (veh)				0								
Storage Bay Dist (m)	115.0	115.0				75.0	115.0				110.0	115.0
Storage Blk Time (%)	22	37	1		17			1				
Queuing Penalty (veh)	134	223	9		48			1				

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	64.2	58.3	25.8	76.8	51.2	59.2	36.7
Average Queue (m)	32.2	34.7	2.8	27.0	26.3	27.4	9.4
95th Queue (m)	51.3	53.6	12.8	58.4	47.0	46.7	28.6
Link Distance (m)	847.5	847.5			469.3	469.3	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			65.0	115.0		135.0	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	TR	L	T	TR	LT	T	R
Maximum Queue (m)	16.2	21.0	22.3	49.2	47.8	485.0	487.5	31.1	38.6	5.8
Average Queue (m)	4.3	12.2	14.7	11.9	14.2	30.6	54.3	5.6	10.2	1.2
95th Queue (m)	13.6	22.3	29.0	37.6	32.3	177.9	253.6	19.1	29.6	4.8
Link Distance (m)				104.9		469.3	469.3	360.0	360.0	
Upstream Blk Time (%)						0	1			
Queuing Penalty (veh)						1	8			
Storage Bay Dist (m)	15.0	15.0	15.0		70.0					65.0
Storage Blk Time (%)	3	4	29	3		0				
Queuing Penalty (veh)	2	1	1	1		0				

Queuing and Blocking Report
Future Background 2028 (12861) AM Peak Hour

07-23-2025

Intersection: 7: Dixie Road & UPS Facility Access/12173 West Access 1

Movement	EB	NB	NB	SB
Directions Served	R	LT	TR	LTR
Maximum Queue (m)	16.0	79.4	82.4	35.3
Average Queue (m)	1.7	27.3	22.8	3.4
95th Queue (m)	8.7	60.9	67.8	18.9
Link Distance (m)	102.2	360.0	360.0	699.7
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Dixie Road & 12489 Site Access 1

Movement				
Directions Served				
Maximum Queue (m)				
Average Queue (m)				
95th Queue (m)				
Link Distance (m)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (m)	13.4	13.7	21.9	12.4	28.9	60.4	14.6	16.4	79.8	15.6
Average Queue (m)	4.3	5.7	9.0	3.1	9.5	17.1	2.7	5.9	20.7	0.8
95th Queue (m)	11.0	11.9	18.8	8.8	17.7	43.8	9.9	14.2	54.1	6.1
Link Distance (m)		171.5		134.0		375.1			819.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	20.0		20.0		60.0		60.0	60.0		60.0
Storage Blk Time (%)			5			0			0	
Queuing Penalty (veh)			1			0			0	

Queuing and Blocking Report
Future Background 2028 (12861) AM Peak Hour

07-23-2025

Intersection: 11: Dixie Road & 12861 Site Access 1

Movement

Directions Served

Maximum Queue (m)

Average Queue (m)

95th Queue (m)

Link Distance (m)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (m)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 12: Dixie Road & Old School Road

Movement	EB	EB	EB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	T	R	TR	L	T	R	L	T	R	
Maximum Queue (m)	44.9	101.9	29.2	18.3	27.9	38.1	24.4	14.4	99.6	21.3	
Average Queue (m)	13.3	61.3	10.5	3.3	13.3	16.5	4.4	2.6	49.7	8.0	
95th Queue (m)	29.9	96.9	22.6	13.1	26.9	34.9	14.8	9.6	76.0	17.2	
Link Distance (m)	382.3		43.2		215.0		274.1				
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)	75.0	75.0		75.0		50.0		75.0	75.0		
Storage Blk Time (%)	8								2		
Queuing Penalty (veh)	11								3		

Intersection: 13: 12861 Site Access 2 & Old School Road

Movement

Directions Served

Maximum Queue (m)

Average Queue (m)

95th Queue (m)

Link Distance (m)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (m)

Storage Blk Time (%)

Queuing Penalty (veh)

Queuing and Blocking Report
Future Background 2028 (12861) AM Peak Hour

07-23-2025

Intersection: 14: 12861 Site Access 3 & Old School Road

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	9.1	16.8	179.4	175.0
Average Queue (m)	1.2	2.2	170.7	171.1
95th Queue (m)	5.9	10.2	173.5	172.4
Link Distance (m)	439.5	439.5	174.8	174.8
Upstream Blk Time (%)			100	99
Queuing Penalty (veh)			0	0
Storage Bay Dist (m)				
Storage Blk Time (%)			100	
Queuing Penalty (veh)			0	

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	51.1	29.4	32.2	30.0
Average Queue (m)	21.0	16.9	12.2	11.5
95th Queue (m)	37.3	25.7	22.4	19.5
Link Distance (m)	120.6	90.4	175.7	122.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 445

1: Dixie Road & Mayfield Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.2	0.3	2.3	0.2	2.1	0.9	0.1	0.9	23.8	51.6	20.1
Total Del/Veh (s)	59.2	20.2	6.3	37.2	48.5	3.2	65.0	51.6	2.2	71.2	59.5	162.6
Stop Del/Veh (s)	47.2	12.7	0.0	34.0	38.9	0.1	59.4	46.3	0.0	60.0	48.5	136.0

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	6.7
Total Del/Veh (s)	60.8
Stop Del/Veh (s)	49.2

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	3.9	3.8	4.0	0.1	0.0	0.0	0.0	0.0	3.9	0.0	2.4
Total Del/Veh (s)	40.6	35.1	90.5	14.0	28.1	12.0	14.1	108.2	117.7	114.8	71.3
Stop Del/Veh (s)	37.0	34.1	86.9	12.2	23.8	5.7	9.0	102.0	106.4	108.9	62.8

7: Dixie Road & UPS Facility Access/12173 West Access 1 Performance by movement

Movement	EBL	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	2.0	0.1	1.2
Total Del/Veh (s)	70.4	23.8	52.5	14.0	7.0	29.8	31.0	24.2
Stop Del/Veh (s)	68.4	23.6	44.6	7.1	0.0	15.7	14.7	13.0

8: Dixie Road & 12489 Site Access 1 Performance by movement

Movement	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.6	6.2	5.8	6.1
Stop Del/Veh (s)	0.6	0.1	0.5	0.6

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.0	0.3	4.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	51.9	30.2	56.4	13.3	31.6	9.0	4.2	30.4	18.3	9.1	17.5
Stop Del/Veh (s)	49.1	28.8	53.3	12.7	27.7	3.0	0.3	22.5	4.3	1.1	7.9

11: Dixie Road & 12861 Site Access 1 Performance by movement

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.0	1.3	0.8
Total Del/Veh (s)	7.4	2.2	4.4
Stop Del/Veh (s)	0.1	0.1	0.1

12: Dixie Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.1	0.6	3.4	0.0	0.0	0.7	0.0	0.0	0.0	4.2	0.5	3.5
Total Del/Veh (s)	36.1	25.7	4.8	25.1	23.1	22.3	28.8	18.4	5.3	14.9	20.4	9.7
Stop Del/Veh (s)	32.5	21.8	3.9	21.6	18.1	20.0	24.5	11.7	2.2	12.5	15.9	9.0

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	20.2
Stop Del/Veh (s)	15.5

13: 12861 Site Access 2 & Old School Road Performance by movement

Movement	EBT	WBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	1.0	10.1	6.7
Stop Del/Veh (s)	0.2	4.0	2.6

14: 12861 Site Access 3 & Old School Road Performance by movement

Movement	EBT	WBT	All
Denied Del/Veh (s)	0.0	0.1	0.1
Total Del/Veh (s)	22.8	25.7	24.6
Stop Del/Veh (s)	18.6	20.7	19.9

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.3	0.3	0.2	0.3	0.8	0.4	0.3	0.3	0.1	0.2	0.1
Total Del/Veh (s)	7.9	8.7	4.6	7.6	9.7	8.9	8.6	9.9	7.5	7.0	7.2	4.9
Stop Del/Veh (s)	4.6	3.8	2.9	4.2	4.7	6.0	5.4	5.1	6.0	3.6	3.4	4.6

15: Bramalea Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	9.0
Stop Del/Veh (s)	4.6

Total Network Performance

Denied Del/Veh (s)	6.4
Total Del/Veh (s)	92.5
Stop Del/Veh (s)	66.5

Queuing and Blocking Report
Future Background 2028 (12861) PM Peak Hour

07-24-2025

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	L	T	T	T	L	T	T
Maximum Queue (m)	137.3	150.7	90.7	104.8	108.0	34.3	182.4	164.8	130.2	78.8	46.4	52.0
Average Queue (m)	80.9	85.1	53.3	58.1	62.7	12.4	127.7	116.0	86.4	50.3	28.0	30.1
95th Queue (m)	123.5	128.2	81.4	91.3	99.4	28.7	173.0	162.4	126.4	77.9	43.4	48.0
Link Distance (m)			988.7	988.7	988.7		280.2	280.2	280.2		847.5	847.5
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0	115.0				115.0				115.0		
Storage Blk Time (%)	0	3			4		14		1			
Queuing Penalty (veh)	2	14			7		9		1			

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	SB	SB	SB	SB
Directions Served	R	L	T	T	R
Maximum Queue (m)	16.3	96.8	487.7	479.2	205.0
Average Queue (m)	0.6	40.5	401.1	459.5	205.0
95th Queue (m)	5.6	71.8	626.7	536.6	205.0
Link Distance (m)			469.3	469.3	
Upstream Blk Time (%)			4	17	
Queuing Penalty (veh)			30	122	
Storage Bay Dist (m)	65.0	115.0			135.0
Storage Blk Time (%)				5	69
Queuing Penalty (veh)				55	94

Intersection: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	TR	LT	T	R
Maximum Queue (m)	22.0	64.5	22.5	22.5	64.6	26.5	97.0	482.4	362.6	367.0	72.5
Average Queue (m)	8.4	15.9	17.3	14.3	17.9	6.5	34.0	54.9	209.9	227.8	18.0
95th Queue (m)	18.1	47.2	26.6	27.6	54.5	17.6	85.4	200.5	386.0	397.5	69.6
Link Distance (m)		232.4			104.9		469.3	469.3	360.0	360.0	
Upstream Blk Time (%)								0	1	5	
Queuing Penalty (veh)								0	3	34	
Storage Bay Dist (m)	15.0		15.0	15.0		70.0					65.0
Storage Blk Time (%)	7	0	32	42	4		2			74	0
Queuing Penalty (veh)	7	0	15	2	3		1			7	0

Queuing and Blocking Report
Future Background 2028 (12861) PM Peak Hour

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Intersection: 7: Dixie Road & UPS Facility Access/12173 West Access 1

Movement	EB	WB	NB	NB	SB
Directions Served	L	R	LT	TR	TR
Maximum Queue (m)	14.1	8.2	111.3	105.8	721.0
Average Queue (m)	2.4	1.4	46.4	47.8	97.6
95th Queue (m)	8.5	5.9	91.6	94.6	438.7
Link Distance (m)	102.2	77.2	360.0	360.0	699.7
Upstream Blk Time (%)					3
Queuing Penalty (veh)					41
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Dixie Road & 12489 Site Access 1

Movement	SB
Directions Served	LT
Maximum Queue (m)	84.9
Average Queue (m)	3.0
95th Queue (m)	29.0
Link Distance (m)	375.1
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (m)	20.7	39.0	27.1	38.6	16.5	156.6	7.3	16.6	151.7	8.6
Average Queue (m)	6.4	10.5	18.8	9.1	5.3	42.7	0.5	4.8	76.3	0.3
95th Queue (m)	17.4	25.4	29.1	24.0	13.7	110.5	3.6	13.3	145.8	2.9
Link Distance (m)		171.5		134.0		375.1			819.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	20.0		20.0		60.0		60.0	60.0		60.0
Storage Blk Time (%)	2	4	24	1		4			8	
Queuing Penalty (veh)	1	1	13	1		2			2	

Queuing and Blocking Report
Future Background 2028 (12861) PM Peak Hour

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Intersection: 11: Dixie Road & 12861 Site Access 1

Movement

Directions Served

Maximum Queue (m)

Average Queue (m)

95th Queue (m)

Link Distance (m)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (m)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 12: Dixie Road & Old School Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	T	R	L	TR	L	T	R	L	T	R	
Maximum Queue (m)	47.3	46.2	27.9	43.0	65.2	69.8	147.3	124.9	8.5	95.9	20.6	
Average Queue (m)	25.4	24.9	7.7	20.7	56.8	27.3	71.2	19.1	0.3	43.6	9.0	
95th Queue (m)	46.5	44.6	13.7	46.5	77.7	47.0	130.7	78.9	2.9	80.0	20.6	
Link Distance (m)	382.3			43.2		215.0			274.1			
Upstream Blk Time (%)				0	15							
Queuing Penalty (veh)				0	64							
Storage Bay Dist (m)	75.0	75.0		65.0	75.0		50.0		75.0	75.0		
Storage Blk Time (%)				0	15	0	12					1
Queuing Penalty (veh)				1	10	0	24					1

Intersection: 13: 12861 Site Access 2 & Old School Road

Movement	WB	WB
Directions Served	T	T
Maximum Queue (m)	40.0	47.0
Average Queue (m)	12.6	15.4
95th Queue (m)	30.7	35.9
Link Distance (m)	439.5	439.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
Future Background 2028 (12861) PM Peak Hour

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Intersection: 14: 12861 Site Access 3 & Old School Road

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	46.2	47.6	65.3	58.3
Average Queue (m)	21.7	27.1	46.1	31.1
95th Queue (m)	36.8	40.1	65.7	58.5
Link Distance (m)	439.5	439.5	174.8	174.8
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	28.3	38.2	39.0	20.5
Average Queue (m)	16.6	21.0	17.8	8.7
95th Queue (m)	25.3	31.8	29.6	16.6
Link Distance (m)	120.6	90.4	175.7	122.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 567

1: Dixie Road & Mayfield Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.5	0.6	2.5	0.2	2.5	0.9	0.1	0.8	0.1	0.0	0.2
Total Del/Veh (s)	155.8	36.6	15.5	51.3	45.4	4.0	45.3	47.3	3.5	69.5	44.0	6.0
Stop Del/Veh (s)	118.0	17.7	0.9	48.6	37.9	1.0	40.6	41.6	0.9	64.7	39.0	1.1

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	53.9
Stop Del/Veh (s)	38.0

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	3.9	4.1	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	54.4	7.7	55.4	7.6	15.2	10.4	9.7	12.5	3.7	2.8	9.6
Stop Del/Veh (s)	52.0	7.1	50.7	5.0	9.1	3.3	2.0	8.5	1.4	0.9	4.4

7: Dixie Road & UPS Facility Access/12173 West Access 1 Performance by movement

Movement	EBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.9	0.1	0.6	0.1
Total Del/Veh (s)	6.5	8.8	4.6	6.4	12.4	6.3	5.7	5.4
Stop Del/Veh (s)	6.5	6.2	1.0	0.3	6.2	0.2	0.1	0.9

8: Dixie Road & 12489 Site Access 1 Performance by movement

Movement	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.1	6.4	3.1	4.9
Stop Del/Veh (s)	0.3	0.4	0.1	0.2

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.1	0.1	4.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	60.5	11.0	57.0	11.0	12.5	4.6	2.4	13.4	7.4	7.8	8.3
Stop Del/Veh (s)	56.7	7.4	53.1	8.1	6.2	0.5	0.2	4.4	1.3	1.1	3.3

11: Dixie Road & 12861 Site Access 1 Performance by movement

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1
Total Del/Veh (s)	7.0	2.3	4.8
Stop Del/Veh (s)	0.1	0.1	0.1

12: Dixie Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	3.1	0.7	3.2	0.1	0.1	0.0	0.0	0.0	2.8	1.1	3.2	1.0
Total Del/Veh (s)	37.6	39.8	10.7	16.6	0.9	31.1	3.9	5.2	21.0	15.2	3.8	15.8
Stop Del/Veh (s)	33.3	32.1	8.0	14.9	0.0	26.6	2.3	2.6	16.9	10.2	1.5	11.8

13: 12861 Site Access 2 & Old School Road Performance by movement

Movement	EBT	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	1.6	1.6
Stop Del/Veh (s)	0.1	0.1

14: 12861 Site Access 3 & Old School Road Performance by movement

Movement	EBT	WBT	All
Denied Del/Veh (s)	0.0	1685.1	614.3
Total Del/Veh (s)	1.6	3592.2	359.4
Stop Del/Veh (s)	0.1	3592.0	358.0

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.5	0.5	0.4	0.3	0.2	0.2	0.4	0.1	0.2	0.3	0.3
Total Del/Veh (s)	10.3	11.7	11.7	8.9	9.5	9.2	9.6	8.2	12.1	8.6	8.8	10.2
Stop Del/Veh (s)	4.6	6.2	6.0	4.0	5.1	4.5	4.8	3.6	6.0	4.1	4.1	5.3

Total Network Performance

Movement	All
Denied Del/Veh (s)	60.5
Total Del/Veh (s)	79.5
Stop Del/Veh (s)	57.6

Queuing and Blocking Report
Future Background 2033 (12861) AM Peak Hour

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Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	L
Maximum Queue (m)	137.4	160.0	633.8	621.4	625.2	129.9	47.2	137.4	141.8	91.6	50.2	51.5
Average Queue (m)	132.5	150.7	364.5	274.8	179.0	15.6	16.9	92.6	83.3	59.9	1.3	28.0
95th Queue (m)	149.9	182.6	644.2	607.8	450.0	82.0	35.5	122.7	113.5	85.0	12.3	46.5
Link Distance (m)			988.7	988.7	988.7			280.2	280.2	280.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0	115.0				75.0	115.0				110.0	115.0
Storage Blk Time (%)	36	45	2		21			1				
Queuing Penalty (veh)	238	298	18		59			1				

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	59.7	51.0	21.2	82.6	58.6	56.3	61.4
Average Queue (m)	33.2	31.5	1.8	34.4	28.2	32.2	13.6
95th Queue (m)	54.3	45.1	10.7	66.0	44.6	50.4	42.8
Link Distance (m)	847.5	847.5			469.3	469.3	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			65.0	115.0		135.0	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	TR	LT	T	R
Maximum Queue (m)	21.0	16.2	20.4	22.5	48.1	32.4	50.7	488.9	37.7	37.2	11.6
Average Queue (m)	6.6	0.9	10.8	11.3	5.0	14.0	16.2	143.1	7.5	10.9	1.3
95th Queue (m)	15.9	6.4	20.6	24.6	23.9	28.4	44.3	467.7	23.0	26.8	5.6
Link Distance (m)		232.4			101.5		469.3	469.3	359.7	359.7	
Upstream Blk Time (%)								1			
Queuing Penalty (veh)								5			
Storage Bay Dist (m)	15.0		15.0	15.0		70.0				65.0	
Storage Blk Time (%)	5	0	3	21	0						
Queuing Penalty (veh)	3	0	1	1	0						

Queuing and Blocking Report
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Intersection: 7: Dixie Road & UPS Facility Access/12173 West Access 1

Movement	EB	NB	NB	NB	SB
Directions Served	R	L	T	TR	LTR
Maximum Queue (m)	13.8	21.2	48.6	61.2	52.0
Average Queue (m)	1.2	7.5	10.4	12.0	5.2
95th Queue (m)	7.4	17.3	30.7	37.7	27.8
Link Distance (m)	100.4	359.7	359.7	359.7	699.4
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Dixie Road & 12489 Site Access 1

Movement	
Directions Served	
Maximum Queue (m)	
Average Queue (m)	
95th Queue (m)	
Link Distance (m)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (m)	13.5	12.9	26.6	30.8	22.0	42.4	8.7	16.1	135.8	22.2
Average Queue (m)	4.2	5.6	11.0	3.0	9.9	15.9	0.6	4.0	16.5	1.6
95th Queue (m)	12.0	11.2	22.0	12.9	20.0	36.8	4.3	12.5	61.9	9.2
Link Distance (m)		171.5		134.0		375.1			819.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	20.0		20.0		60.0		60.0	60.0		60.0
Storage Blk Time (%)			7						1	
Queuing Penalty (veh)			1						1	

Queuing and Blocking Report
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Intersection: 11: Dixie Road & 12861 Site Access 1

Movement

Directions Served

Maximum Queue (m)

Average Queue (m)

95th Queue (m)

Link Distance (m)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (m)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 12: Dixie Road & Old School Road

Movement	EB	EB	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	TR	L	T	R	L	T	R
Maximum Queue (m)	27.9	101.5	34.6	15.1	38.0	65.3	13.3	14.9	138.3	20.8
Average Queue (m)	10.6	74.1	9.9	3.3	16.5	19.6	3.2	3.7	56.5	9.5
95th Queue (m)	22.9	101.8	21.2	12.9	32.0	43.0	10.6	11.1	103.6	19.0
Link Distance (m)	382.3		43.2		215.0		274.1			
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	75.0	75.0		75.0		50.0	75.0	75.0		
Storage Blk Time (%)	9				1		3			
Queuing Penalty (veh)	13				1		6			

Intersection: 13: 12861 Site Access 2 & Old School Road

Movement

Directions Served

Maximum Queue (m)

Average Queue (m)

95th Queue (m)

Link Distance (m)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (m)

Storage Blk Time (%)

Queuing Penalty (veh)

Queuing and Blocking Report
Future Background 2033 (12861) AM Peak Hour

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Intersection: 14: 12861 Site Access 3 & Old School Road

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	9.2	16.4	177.1	173.8
Average Queue (m)	1.0	2.2	173.0	169.9
95th Queue (m)	5.6	9.4	174.3	171.1
Link Distance (m)	439.5	439.5	174.8	174.8
Upstream Blk Time (%)			99	98
Queuing Penalty (veh)			0	0
Storage Bay Dist (m)				
Storage Blk Time (%)			100	
Queuing Penalty (veh)			0	

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	81.4	57.9	38.0	23.8
Average Queue (m)	26.4	18.3	15.8	12.9
95th Queue (m)	49.3	36.1	29.9	20.7
Link Distance (m)	120.6	90.4	175.7	122.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 646

1: Dixie Road & Mayfield Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.5	0.2	0.3	2.2	0.2	2.0	0.8	0.1	0.7	12.4	35.5	15.4
Total Del/Veh (s)	70.6	24.0	6.8	33.1	47.8	2.8	72.1	46.8	2.0	50.1	64.4	181.7
Stop Del/Veh (s)	57.0	14.7	0.1	29.5	37.4	0.3	66.1	42.0	0.3	41.6	53.7	153.4

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	4.6
Total Del/Veh (s)	63.1
Stop Del/Veh (s)	50.8

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	3.8	4.0	4.1	0.1	0.0	0.0	0.0	0.0	11.4	0.0	6.3
Total Del/Veh (s)	54.3	48.8	86.8	3.6	23.2	13.3	19.7	54.1	161.2	190.0	94.9
Stop Del/Veh (s)	50.6	47.5	84.0	2.6	18.4	5.7	11.5	52.3	150.0	187.9	86.0

7: Dixie Road & UPS Facility Access/12173 West Access 1 Performance by movement

Movement	EBL	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	21.3	0.1	12.4
Total Del/Veh (s)	85.9	18.7	31.0	6.6	14.5	79.6	125.0	50.5
Stop Del/Veh (s)	83.8	18.7	26.3	2.5	11.0	50.4	84.4	31.6

8: Dixie Road & 12489 Site Access 1 Performance by movement

Movement	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.0	1.1	0.0	0.0
Total Del/Veh (s)	5.5	4.3	23.2	16.2
Stop Del/Veh (s)	0.5	0.0	14.5	8.9

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.1	0.2	3.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	48.9	33.7	64.1	13.8	42.6	7.9	2.8	30.4	27.8	6.1	22.7
Stop Del/Veh (s)	45.5	33.0	60.9	12.7	39.2	2.4	0.5	22.1	12.8	1.2	12.7

11: Dixie Road & 12861 Site Access 1 Performance by movement

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.0	1.1	0.7
Total Del/Veh (s)	7.2	2.3	4.4
Stop Del/Veh (s)	0.1	0.1	0.1

12: Dixie Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.3	0.9	3.3	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.4	3.8
Total Del/Veh (s)	43.4	24.6	5.1	19.4	20.4	13.8	45.1	19.6	4.1	20.1	15.2	6.7
Stop Del/Veh (s)	39.6	20.7	4.3	15.8	15.4	11.7	41.0	13.4	1.8	17.5	11.4	6.2

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	20.6
Stop Del/Veh (s)	16.3

13: 12861 Site Access 2 & Old School Road Performance by movement

Movement	EBT	WBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	1.0	9.6	6.4
Stop Del/Veh (s)	0.2	3.6	2.4

14: 12861 Site Access 3 & Old School Road Performance by movement

Movement	EBT	WBT	All
Denied Del/Veh (s)	0.0	0.1	0.1
Total Del/Veh (s)	22.2	27.7	25.7
Stop Del/Veh (s)	18.0	22.3	20.7

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.3	0.4	0.4	0.3	0.6	0.3	0.3	0.1	0.3	0.2	0.2
Total Del/Veh (s)	11.8	10.6	6.3	10.5	11.9	14.1	9.2	11.8	6.5	8.4	8.1	5.4
Stop Del/Veh (s)	8.8	5.8	4.5	7.0	7.0	12.3	6.1	6.8	5.0	5.4	4.1	4.3

15: Bramalea Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	10.7
Stop Del/Veh (s)	6.3

Total Network Performance

Denied Del/Veh (s)	8.8
Total Del/Veh (s)	107.1
Stop Del/Veh (s)	79.1

Queuing and Blocking Report
Future Background 2033 (12861) PM Peak Hour

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Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	L
Maximum Queue (m)	137.0	158.9	230.8	543.0	150.4	48.7	27.0	211.0	193.4	146.0	42.9	91.8
Average Queue (m)	85.2	92.2	66.9	85.6	67.2	1.7	11.6	136.0	123.9	92.2	1.5	53.1
95th Queue (m)	133.2	144.9	135.5	235.3	107.6	16.6	25.1	174.0	161.9	126.1	14.7	87.7
Link Distance (m)			988.7	988.7	988.7			280.2	280.2	280.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0	115.0				75.0	115.0				110.0	115.0
Storage Blk Time (%)	3	5	0		6			18		1		
Queuing Penalty (veh)	12	27	0		11			11		1		

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	32.8	38.7	19.0	60.0	497.3	482.2	205.0
Average Queue (m)	19.7	22.3	1.1	26.5	394.5	463.0	205.0
95th Queue (m)	30.5	35.0	8.1	49.9	630.9	525.4	205.0
Link Distance (m)	847.5	847.5			469.3	469.3	
Upstream Blk Time (%)					5	18	
Queuing Penalty (veh)					35	131	
Storage Bay Dist (m)			65.0	115.0			135.0
Storage Blk Time (%)					0	8	71
Queuing Penalty (veh)					0	79	96

Intersection: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	TR	LT	T	R
Maximum Queue (m)	22.4	71.3	22.5	22.4	64.9	22.4	470.5	489.4	384.9	367.2	72.4
Average Queue (m)	10.8	23.9	17.9	16.0	12.9	5.4	48.7	84.4	267.0	276.5	13.1
95th Queue (m)	22.1	64.4	26.0	25.1	47.2	16.3	192.4	279.8	484.2	476.5	58.7
Link Distance (m)		232.4			101.5		469.3	469.3	359.7	359.7	
Upstream Blk Time (%)							0	0	4	10	
Queuing Penalty (veh)							0	0	26	68	
Storage Bay Dist (m)	15.0		15.0	15.0		70.0					65.0
Storage Blk Time (%)	15	5	42	51	1		1			73	0
Queuing Penalty (veh)	16	8	19	3	1		0			7	0

Queuing and Blocking Report
Future Background 2033 (12861) PM Peak Hour

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Intersection: 7: Dixie Road & UPS Facility Access/12173 West Access 1

Movement	EB	WB	NB	NB	NB	SB
Directions Served	L	R	L	T	TR	TR
Maximum Queue (m)	7.5	8.0	21.7	78.9	91.1	732.0
Average Queue (m)	1.0	2.4	9.0	22.2	28.1	323.8
95th Queue (m)	5.0	8.1	20.4	56.8	71.3	847.2
Link Distance (m)	100.4	75.4	359.7	359.7	359.7	699.4
Upstream Blk Time (%)						15
Queuing Penalty (veh)						190
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 8: Dixie Road & 12489 Site Access 1

Movement	SB
Directions Served	LT
Maximum Queue (m)	370.5
Average Queue (m)	69.5
95th Queue (m)	291.5
Link Distance (m)	375.1
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (m)	27.4	35.6	27.3	55.1	14.8	110.6	8.8	15.5	357.7	134.9
Average Queue (m)	9.1	10.2	19.9	15.8	4.2	38.7	0.9	3.7	113.2	5.1
95th Queue (m)	20.5	22.3	30.5	41.0	11.7	90.8	5.2	11.5	244.8	46.4
Link Distance (m)		171.5		134.0		375.1			819.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	20.0		20.0		60.0		60.0	60.0		60.0
Storage Blk Time (%)	1	3	32	0		2			17	
Queuing Penalty (veh)	1	1	17	0		1			3	

Queuing and Blocking Report
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Intersection: 11: Dixie Road & 12861 Site Access 1

Movement

Directions Served

Maximum Queue (m)

Average Queue (m)

95th Queue (m)

Link Distance (m)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (m)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection: 12: Dixie Road & Old School Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T	R
Maximum Queue (m)	60.7	48.7	15.3	43.1	65.2	83.1	114.2	20.3	8.4	71.1	14.0
Average Queue (m)	32.4	24.8	8.2	23.0	57.3	37.4	77.3	6.4	0.3	33.9	5.9
95th Queue (m)	49.8	46.1	14.0	49.3	79.0	74.8	106.5	15.0	2.9	61.9	12.6
Link Distance (m)	382.3			43.2		215.0			274.1		
Upstream Blk Time (%)				0	12						
Queuing Penalty (veh)				0	55						
Storage Bay Dist (m)	75.0	75.0		65.0	75.0		50.0	75.0	75.0		
Storage Blk Time (%)				0	12	2	16				0
Queuing Penalty (veh)				1	8	10	33				0

Intersection: 13: 12861 Site Access 2 & Old School Road

Movement	WB	WB
Directions Served	T	T
Maximum Queue (m)	39.3	42.2
Average Queue (m)	13.0	13.9
95th Queue (m)	31.6	33.4
Link Distance (m)	439.5	439.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
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Intersection: 14: 12861 Site Access 3 & Old School Road

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (m)	48.3	48.5	85.4	78.8
Average Queue (m)	22.9	24.6	48.6	32.5
95th Queue (m)	41.0	43.4	73.2	61.9
Link Distance (m)	439.5	439.5	174.8	174.8
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	55.6	56.6	35.5	22.6
Average Queue (m)	19.9	25.2	20.4	11.7
95th Queue (m)	36.9	42.6	30.9	21.7
Link Distance (m)	120.6	90.4	175.7	122.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 874

1: Dixie Road & Mayfield Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.4	0.6	2.8	0.2	2.5	0.7	0.1	0.7	0.0	0.0	0.1
Total Del/Veh (s)	164.0	34.3	13.4	46.3	45.9	7.9	46.7	46.5	3.1	63.8	47.1	6.5
Stop Del/Veh (s)	120.0	16.5	0.3	43.7	38.4	4.2	42.6	40.9	0.2	59.0	41.2	1.2

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	55.5
Stop Del/Veh (s)	39.0

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.1	4.1	4.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	58.9	7.8	53.5	23.1	18.6	8.2	8.8	24.1	4.2	3.0	8.5
Stop Del/Veh (s)	56.5	7.5	49.6	19.9	12.7	2.7	1.4	18.3	1.5	0.7	4.1

7: Dixie Road & UPS Facility Access/12173 West Access 1 Performance by movement

Movement	EBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	8.9	9.6	9.8	13.0	24.0	8.2	9.0	9.3
Stop Del/Veh (s)	8.6	5.7	3.9	5.8	14.3	1.3	2.3	3.1

8: Dixie Road & 12489 Site Access 1 Performance by movement

Movement	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.2	7.1	3.4	5.7
Stop Del/Veh (s)	0.7	0.6	0.1	0.5

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.2	0.1	4.1	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	57.2	11.9	58.9	21.5	15.3	6.4	4.3	13.1	8.4	6.9	9.2
Stop Del/Veh (s)	52.1	8.3	54.5	17.3	9.5	1.4	0.5	5.3	1.7	0.3	3.6

11: Dixie Road & 12861 Site Access 1 Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.4	0.4	0.3
Total Del/Veh (s)	12.6	7.7	7.1	2.9	5.6
Stop Del/Veh (s)	9.0	0.0	0.1	0.2	0.2

12: Dixie Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.9	0.6	2.9	0.2	0.0	0.0	0.0	0.0	0.0	3.3	1.2	3.2
Total Del/Veh (s)	40.0	43.5	13.3	45.0	38.8	15.7	26.9	3.6	4.1	18.1	16.7	3.4
Stop Del/Veh (s)	35.9	36.8	9.8	42.0	37.0	13.8	22.3	2.3	2.0	13.7	10.9	1.2

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.9
Total Del/Veh (s)	16.6
Stop Del/Veh (s)	12.8

13: 12861 Site Access 2 & Old School Road Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	1.6	1.7	3.9	7.4	1.9
Stop Del/Veh (s)	0.1	0.3	0.6	3.4	0.2

14: 12861 Site Access 3 & Old School Road Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	2.4	1490.1	1760.3	0.1	0.4	706.8
Total Del/Veh (s)	1.7	1.0	3535.5	3587.2	54.1	28.8	384.3
Stop Del/Veh (s)	0.5	0.0	3535.6	3586.9	49.1	21.8	382.7

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.4	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.4	0.2	0.2	0.2
Total Del/Veh (s)	9.8	10.0	9.6	7.8	7.9	7.4	7.1	7.4	9.7	8.2	8.6	8.7
Stop Del/Veh (s)	3.9	4.7	4.1	3.4	3.3	3.3	3.1	3.1	4.8	3.6	3.5	3.8

Total Network Performance

Denied Del/Veh (s)	72.9
Total Del/Veh (s)	84.1
Stop Del/Veh (s)	60.7

Queuing and Blocking Report
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Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	L
Maximum Queue (m)	137.5	159.9	763.5	735.8	668.5	129.9	44.5	138.9	125.7	105.2	72.0	52.1
Average Queue (m)	135.6	157.3	455.7	381.6	236.6	4.6	16.5	93.5	81.0	57.4	20.0	27.6
95th Queue (m)	142.8	171.2	742.7	757.2	572.4	44.4	36.2	120.9	111.1	85.8	60.0	44.9
Link Distance (m)			988.7	988.7	988.7			280.2	280.2	280.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0	115.0				75.0	115.0				110.0	115.0
Storage Blk Time (%)	26	49			13			2		0		
Queuing Penalty (veh)	155	297			37			1		0		

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	56.8	64.2	15.5	85.5	82.7	83.9	56.6
Average Queue (m)	40.1	41.2	2.0	31.8	38.3	38.3	14.6
95th Queue (m)	59.2	62.7	10.3	62.8	71.3	71.7	44.3
Link Distance (m)	847.5	847.5			469.3	469.3	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			65.0	115.0		135.0	
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Intersection: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	TR	LT	T	R
Maximum Queue (m)	13.9	6.9	20.4	23.3	41.3	40.0	63.7	474.1	49.5	69.8	5.7
Average Queue (m)	5.5	0.2	10.5	10.8	3.8	14.4	18.5	37.7	13.4	17.1	1.0
95th Queue (m)	14.6	2.4	19.5	24.3	19.4	29.1	53.0	180.6	34.4	47.7	4.2
Link Distance (m)		232.4			104.9		469.3	469.3	360.0	360.0	
Upstream Blk Time (%)								0			
Queuing Penalty (veh)								1			
Storage Bay Dist (m)	15.0		15.0	15.0		70.0					65.0
Storage Blk Time (%)	8		2	25	2					0	
Queuing Penalty (veh)	5		0	1	1					0	

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Intersection: 7: Dixie Road & UPS Facility Access/12173 West Access 1

Movement	EB	NB	NB	SB
Directions Served	R	LT	TR	LTR
Maximum Queue (m)	19.6	66.6	81.1	121.2
Average Queue (m)	3.8	33.4	35.5	11.9
95th Queue (m)	14.3	57.0	68.5	57.0
Link Distance (m)	102.2	360.0	360.0	699.7
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Dixie Road & 12489 Site Access 1

Movement				
Directions Served				
Maximum Queue (m)				
Average Queue (m)				
95th Queue (m)				
Link Distance (m)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (m)	15.4	28.0	26.7	42.7	40.8	108.6	19.9	21.0	78.7	8.6
Average Queue (m)	2.8	8.2	14.8	6.0	12.6	26.9	2.9	6.0	27.2	0.6
95th Queue (m)	10.9	20.2	27.4	25.4	28.8	76.3	12.5	15.5	71.9	4.3
Link Distance (m)		171.5		134.0		375.1			819.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	20.0		20.0		60.0		60.0	60.0		60.0
Storage Blk Time (%)	0	1	17	0		2			2	
Queuing Penalty (veh)	0	0	3	0		2			2	

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Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	WB
Directions Served	R
Maximum Queue (m)	25.9
Average Queue (m)	7.3
95th Queue (m)	18.7
Link Distance (m)	89.6
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Dixie Road & Old School Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T	R
Maximum Queue (m)	32.4	97.0	28.1	37.0	22.6	28.6	51.4	12.8	27.2	130.2	14.6
Average Queue (m)	12.7	58.0	10.9	15.5	9.1	14.7	15.1	3.1	7.6	66.6	7.1
95th Queue (m)	28.5	86.4	18.6	32.1	21.5	29.7	35.6	9.2	18.7	112.7	13.7
Link Distance (m)		382.3			43.2		215.0			274.1	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Storage Blk Time (%)		4					1			5	
Queuing Penalty (veh)		5					1			13	

Intersection: 13: 12861 Site Access 2 & Old School Road

Movement	NB
Directions Served	R
Maximum Queue (m)	8.4
Average Queue (m)	0.9
95th Queue (m)	5.1
Link Distance (m)	166.2
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
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Intersection: 14: 12861 Site Access 3 & Old School Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	T	T	T	LR
Maximum Queue (m)	15.7	16.6	179.4	175.6	48.7
Average Queue (m)	3.5	2.9	176.2	171.5	22.2
95th Queue (m)	11.9	11.2	177.6	174.3	42.8
Link Distance (m)	439.5	439.5	174.8	174.8	189.2
Upstream Blk Time (%)			96	96	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (m)					
Storage Blk Time (%)			100		
Queuing Penalty (veh)			30		

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	58.4	28.1	21.8	22.7
Average Queue (m)	21.4	14.7	10.1	14.9
95th Queue (m)	40.0	22.8	16.9	22.9
Link Distance (m)	120.6	90.4	175.7	122.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 555

1: Dixie Road & Mayfield Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.1	0.3	1.0	2.2	0.2	2.0	1.6	0.2	1.8	0.0	11.2	5.6
Total Del/Veh (s)	61.6	23.4	5.5	35.1	68.5	5.5	59.9	44.3	2.8	88.8	53.1	161.0
Stop Del/Veh (s)	46.8	13.0	0.0	27.7	50.5	0.4	53.7	36.6	0.0	77.6	38.5	123.6

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	1.8
Total Del/Veh (s)	65.3
Stop Del/Veh (s)	48.7

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.0	3.9	4.1	0.1	0.0	0.0	0.0	0.0	1.5	0.0	1.1
Total Del/Veh (s)	59.6	20.7	63.0	6.0	23.3	11.2	7.4	166.9	160.1	145.0	88.8
Stop Del/Veh (s)	57.1	19.9	59.8	6.0	17.0	3.0	0.3	151.3	143.7	133.8	77.2

7: Dixie Road & UPS Facility Access/12173 West Access 1 Performance by movement

Movement	EBL	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	45.5	122.0	26.6
Total Del/Veh (s)	69.0	14.8	24.6	9.7	6.9	125.5	156.8	76.0
Stop Del/Veh (s)	67.1	14.4	14.4	2.1	1.3	71.2	86.7	41.8

8: Dixie Road & 12489 Site Access 1 Performance by movement

Movement	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.6	0.4
Total Del/Veh (s)	7.6	6.4	53.2	34.4
Stop Del/Veh (s)	0.3	0.2	26.5	15.7

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.1	0.2	4.0	0.4	0.0	0.0	0.0	0.0	0.7	0.0	0.6
Total Del/Veh (s)	54.3	34.9	63.1	23.2	55.2	12.9	4.4	118.6	109.0	14.9	67.6
Stop Del/Veh (s)	51.1	33.4	59.5	20.7	50.8	3.7	0.4	81.0	65.7	10.0	41.1

11: Dixie Road & 12861 Site Access 1 Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1	9.4	5.4
Total Del/Veh (s)	21.4	11.6	9.7	10.1	10.9
Stop Del/Veh (s)	20.8	0.1	0.1	4.6	2.9

12: Dixie Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.5	0.7	3.5	0.6	0.0	0.0	0.0	0.0	0.0	3.3	0.6	3.4
Total Del/Veh (s)	28.6	24.7	7.5	52.4	42.0	38.3	41.5	28.8	6.4	47.6	19.7	6.3
Stop Del/Veh (s)	25.3	18.9	6.4	49.1	36.8	36.3	36.2	17.1	2.5	44.1	11.7	4.6

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	29.6
Stop Del/Veh (s)	22.8

13: 12861 Site Access 2 & Old School Road Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	1.0	1.1	45.0	2.1	29.6
Stop Del/Veh (s)	0.3	0.6	39.9	2.0	26.1

14: 12861 Site Access 3 & Old School Road Performance by movement

Movement	EBT	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	3.8	0.2	0.2	0.2	0.1
Total Del/Veh (s)	28.8	62.8	28.7	8.0	5.4	25.4
Stop Del/Veh (s)	22.5	58.8	21.0	6.0	5.0	19.2

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.3	0.4	0.6	0.4	1.0	0.3	0.2	0.2	0.1	0.2	0.1
Total Del/Veh (s)	8.2	11.7	5.7	15.3	13.6	8.0	8.3	11.7	6.3	6.9	10.2	3.5
Stop Del/Veh (s)	4.6	4.1	3.0	12.7	7.0	6.4	4.4	4.2	3.8	4.0	3.9	3.1

15: Bramalea Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	11.4
Stop Del/Veh (s)	5.2

Total Network Performance

Denied Del/Veh (s)	10.9
Total Del/Veh (s)	140.2
Stop Del/Veh (s)	94.4

Queuing and Blocking Report
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Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	T	L	T	T	T	R	L	T
Maximum Queue (m)	137.4	158.1	109.1	128.3	129.0	184.8	218.4	208.6	150.9	37.4	75.3	45.2
Average Queue (m)	91.7	97.9	51.9	59.9	56.5	18.1	146.8	130.9	101.2	1.3	46.3	24.5
95th Queue (m)	136.3	145.7	88.8	99.6	98.2	72.4	197.7	189.8	149.3	12.8	75.7	40.4
Link Distance (m)			988.7	988.7	988.7		280.2	280.2	280.2			847.5
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0	115.0				115.0				110.0	115.0	
Storage Blk Time (%)	1	4	0		2		25		3			
Queuing Penalty (veh)	5	17	0		4		15		3			

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R
Maximum Queue (m)	43.6	21.8	112.1	469.2	482.8	205.0
Average Queue (m)	19.2	0.8	49.2	135.8	414.6	201.1
95th Queue (m)	34.0	7.5	91.1	429.2	632.8	224.8
Link Distance (m)	847.5			469.3	469.3	
Upstream Blk Time (%)				0	5	
Queuing Penalty (veh)				0	37	
Storage Bay Dist (m)		65.0	115.0			135.0
Storage Blk Time (%)			0			60
Queuing Penalty (veh)			0			88

Intersection: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	TR	LT	T	R
Maximum Queue (m)	21.7	39.9	22.5	22.4	61.6	38.1	62.9	73.7	362.0	370.3	72.5
Average Queue (m)	10.1	5.7	14.6	15.6	12.3	6.1	18.3	23.9	243.8	292.8	15.7
95th Queue (m)	20.0	24.1	21.9	26.5	42.2	18.4	46.9	60.1	464.5	487.1	64.6
Link Distance (m)		232.4			104.9		469.3	469.3	360.0	360.0	
Upstream Blk Time (%)									2	8	
Queuing Penalty (veh)									14	58	
Storage Bay Dist (m)	15.0		15.0	15.0		70.0					65.0
Storage Blk Time (%)	21	0	16	40	0					68	0
Queuing Penalty (veh)	22	0	7	2	0					7	0

Queuing and Blocking Report
Future Total 2028 PM Peak Hour

07-24-2025

Intersection: 7: Dixie Road & UPS Facility Access/12173 West Access 1

Movement	EB	WB	NB	NB	SB
Directions Served	L	R	LT	TR	TR
Maximum Queue (m)	14.1	20.4	71.7	87.7	735.6
Average Queue (m)	1.6	3.7	22.0	16.9	464.9
95th Queue (m)	6.7	12.5	52.3	53.6	984.3
Link Distance (m)	102.2	77.2	360.0	360.0	699.7
Upstream Blk Time (%)					27
Queuing Penalty (veh)					364
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Dixie Road & 12489 Site Access 1

Movement	SB
Directions Served	LT
Maximum Queue (m)	375.1
Average Queue (m)	133.4
95th Queue (m)	404.1
Link Distance (m)	375.1
Upstream Blk Time (%)	0
Queuing Penalty (veh)	3
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (m)	27.4	31.8	27.2	95.3	29.9	113.3	13.0	154.8	852.9	7.4
Average Queue (m)	11.9	13.6	21.5	23.4	7.6	58.9	1.2	12.5	356.4	0.3
95th Queue (m)	24.8	29.1	31.7	67.1	20.4	116.3	7.0	77.8	831.5	2.5
Link Distance (m)		171.5		134.0		375.1			819.4	
Upstream Blk Time (%)									14	
Queuing Penalty (veh)									171	
Storage Bay Dist (m)	20.0		20.0		60.0		60.0	60.0		60.0
Storage Blk Time (%)	4	9	34	0		5			32	
Queuing Penalty (veh)	2	3	19	0		2			6	

Queuing and Blocking Report
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Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	WB	SB
Directions Served	R	T
Maximum Queue (m)	29.2	149.1
Average Queue (m)	10.5	18.7
95th Queue (m)	24.6	94.8
Link Distance (m)	89.6	215.0
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Dixie Road & Old School Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T	R
Maximum Queue (m)	40.2	46.2	23.0	43.0	72.2	70.5	165.5	125.0	33.1	86.6	14.0
Average Queue (m)	19.1	23.1	9.0	37.8	64.3	30.5	85.0	19.7	7.0	36.2	4.0
95th Queue (m)	32.0	39.1	16.7	51.4	76.7	58.1	144.6	79.7	20.8	72.7	9.6
Link Distance (m)		382.3			43.2		215.0			274.1	
Upstream Blk Time (%)				10	46						
Queuing Penalty (veh)				0	255						
Storage Bay Dist (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Storage Blk Time (%)				10	46	0	21			1	
Queuing Penalty (veh)				38	91	0	42			1	

Intersection: 13: 12861 Site Access 2 & Old School Road

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (m)	115.7	116.7	8.2
Average Queue (m)	56.1	48.0	1.4
95th Queue (m)	108.9	96.9	6.3
Link Distance (m)	439.5	439.5	166.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
Future Total 2028 PM Peak Hour

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Intersection: 14: 12861 Site Access 3 & Old School Road

Movement	EB	EB	WB	WB	WB	NB
Directions Served	T	T	L	T	T	LR
Maximum Queue (m)	41.7	48.3	20.4	85.0	56.2	48.4
Average Queue (m)	25.7	29.1	4.9	46.2	27.9	15.7
95th Queue (m)	41.9	45.8	15.7	69.6	58.2	35.9
Link Distance (m)	439.5	439.5		174.8	174.8	189.2
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			95.0			
Storage Blk Time (%)		1				
Queuing Penalty (veh)		0				

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	35.2	76.8	28.2	18.0
Average Queue (m)	20.3	24.8	14.8	10.4
95th Queue (m)	32.3	48.1	22.9	15.5
Link Distance (m)	120.6	90.4	175.7	122.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 1278

1: Dixie Road & Mayfield Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.7	0.5	0.5	2.4	0.2	2.5	0.8	0.1	0.8	0.1	0.0	0.1
Total Del/Veh (s)	100.7	37.0	17.8	41.3	42.5	5.1	48.4	51.7	5.1	55.9	49.5	6.6
Stop Del/Veh (s)	72.7	18.9	1.3	38.6	35.2	1.6	43.7	45.7	2.1	51.5	43.7	0.8

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	45.1
Stop Del/Veh (s)	30.8

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.1	4.0	4.1	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	56.2	8.1	63.6	21.2	19.7	10.4	13.4	27.3	4.0	2.5	10.0
Stop Del/Veh (s)	53.9	7.8	59.2	17.4	13.8	2.7	3.8	23.2	1.3	0.6	4.3

7: Dixie Road & UPS Facility Access/12173 West Access 1 Performance by movement

Movement	EBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.3	0.2	0.0	0.1
Total Del/Veh (s)	6.7	14.0	9.4	11.4	64.3	34.1	30.3	19.4
Stop Del/Veh (s)	6.6	10.8	4.4	5.2	50.5	21.3	19.6	11.4

8: Dixie Road & 12489 Site Access 1 Performance by movement

Movement	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.2	5.4	3.7	5.7
Stop Del/Veh (s)	0.7	0.6	0.1	0.4

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.2	0.2	4.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	62.3	10.1	65.1	21.4	19.2	7.0	3.1	29.0	10.3	8.2	11.1
Stop Del/Veh (s)	58.1	7.0	60.6	17.9	13.3	1.5	0.1	20.4	2.4	1.0	4.8

11: Dixie Road & 12861 Site Access 1 Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.2	0.2	0.1
Total Del/Veh (s)	12.4	7.7	7.4	3.0	5.6
Stop Del/Veh (s)	9.1	0.1	0.1	0.2	0.2

12: Dixie Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.1	0.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.2	2.9
Total Del/Veh (s)	40.7	43.9	14.4	49.6	24.0	7.7	40.4	3.9	4.4	26.6	21.3	4.9
Stop Del/Veh (s)	36.2	35.8	11.2	46.1	22.1	4.7	35.9	2.4	2.4	21.7	14.7	1.9

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	1.0
Total Del/Veh (s)	19.7
Stop Del/Veh (s)	15.2

13: 12861 Site Access 2 & Old School Road Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	1.7	1.9	4.1	6.8	2.0
Stop Del/Veh (s)	0.1	0.2	0.5	3.0	0.2

14: 12861 Site Access 3 & Old School Road Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	2194.5	1818.5	0.4	672.5
Total Del/Veh (s)	3.4	1.2	3593.7	3599.9	51.5	328.9
Stop Del/Veh (s)	1.3	0.0	3593.9	3599.8	45.1	326.5

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.5	0.6	0.5	0.4	0.3	0.2	0.2	0.3	0.4	0.2	0.2	0.4
Total Del/Veh (s)	13.7	11.8	13.5	9.0	8.7	8.6	8.6	8.1	8.5	10.1	10.2	10.5
Stop Del/Veh (s)	8.0	6.2	8.0	4.2	4.1	4.2	4.0	3.9	3.6	5.3	5.3	5.4

Total Network Performance

Denied Del/Veh (s)	70.6
Total Del/Veh (s)	77.9
Stop Del/Veh (s)	55.3

Queuing and Blocking Report
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Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	L
Maximum Queue (m)	137.4	159.9	535.2	520.5	495.4	130.0	26.5	135.2	108.8	100.9	53.6	47.9
Average Queue (m)	122.0	139.0	221.7	179.7	157.4	47.7	11.5	90.5	78.6	54.7	10.8	25.4
95th Queue (m)	159.6	190.0	434.3	386.9	334.4	148.8	22.6	116.6	102.0	79.5	42.1	40.0
Link Distance (m)			988.7	988.7	988.7			280.2	280.2	280.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0	115.0				75.0	115.0				110.0	115.0
Storage Blk Time (%)	17	30	3		22			1				
Queuing Penalty (veh)	110	197	23		60			1				

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	58.1	68.9	26.2	59.7	91.3	99.3	60.4
Average Queue (m)	38.4	38.2	3.4	31.7	37.0	39.4	19.6
95th Queue (m)	57.1	56.5	16.0	55.3	69.5	75.6	49.3
Link Distance (m)	847.5	847.5			469.3	469.3	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)			65.0	115.0		135.0	
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Intersection: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	TR	LT	T	R
Maximum Queue (m)	16.8	16.9	22.3	22.4	53.0	48.1	93.6	474.7	50.3	62.4	11.8
Average Queue (m)	5.3	0.6	11.5	12.1	3.0	15.7	13.0	49.8	11.5	12.2	1.4
95th Queue (m)	13.4	5.8	20.5	23.1	19.5	34.2	50.7	193.6	32.8	38.7	5.9
Link Distance (m)		232.4			101.5		469.3	469.3	359.7	359.7	
Upstream Blk Time (%)								0			
Queuing Penalty (veh)								1			
Storage Bay Dist (m)	15.0		15.0	15.0		70.0					65.0
Storage Blk Time (%)	3	0	3	29	0		0			0	
Queuing Penalty (veh)	2	0	1	1	0		0			0	

Queuing and Blocking Report
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Intersection: 7: Dixie Road & UPS Facility Access/12173 West Access 1

Movement	EB	NB	NB	NB	SB
Directions Served	R	L	T	TR	LTR
Maximum Queue (m)	19.3	21.8	94.0	76.3	621.9
Average Queue (m)	3.3	7.0	26.1	30.4	104.3
95th Queue (m)	12.9	19.0	59.6	68.7	397.2
Link Distance (m)	100.4	359.7	359.7	359.7	699.4
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Dixie Road & 12489 Site Access 1

Movement	NB
Directions Served	T
Maximum Queue (m)	730.8
Average Queue (m)	26.1
95th Queue (m)	249.9
Link Distance (m)	699.4
Upstream Blk Time (%)	0
Queuing Penalty (veh)	1
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (m)	18.8	19.5	27.2	44.6	34.2	140.8	14.6	20.7	128.6	15.8
Average Queue (m)	6.8	6.4	15.9	9.2	14.2	33.6	0.5	6.5	37.4	2.1
95th Queue (m)	17.4	17.1	31.7	30.8	29.1	83.6	5.0	16.8	95.6	8.9
Link Distance (m)		171.5		134.0		375.1			819.4	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	20.0		20.0		60.0		60.0	60.0		60.0
Storage Blk Time (%)	1	0	22	1		1			2	
Queuing Penalty (veh)	0	0	4	0		1			1	

Queuing and Blocking Report
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Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	WB
Directions Served	R
Maximum Queue (m)	20.0
Average Queue (m)	6.3
95th Queue (m)	16.4
Link Distance (m)	89.6
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Dixie Road & Old School Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T	R
Maximum Queue (m)	33.6	135.4	39.7	43.1	62.8	43.9	52.2	14.2	35.1	158.8	25.8
Average Queue (m)	15.4	84.2	11.4	21.5	8.9	15.7	20.5	3.6	11.4	73.0	9.3
95th Queue (m)	30.0	126.1	26.1	40.6	36.0	33.5	45.9	11.1	25.1	128.1	19.6
Link Distance (m)		382.3			43.2		215.0			274.1	
Upstream Blk Time (%)				0	3						
Queuing Penalty (veh)				0	10						
Storage Bay Dist (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Storage Blk Time (%)		14		0	3		0			9	
Queuing Penalty (veh)		19		0	5		0			22	

Intersection: 13: 12861 Site Access 2 & Old School Road

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (m)	5.7	6.6	8.3
Average Queue (m)	0.2	0.2	0.8
95th Queue (m)	2.0	2.3	4.9
Link Distance (m)	439.5	439.5	166.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
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Intersection: 14: 12861 Site Access 3 & Old School Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	T	T	T	LR
Maximum Queue (m)	26.8	34.9	174.4	170.4	66.7
Average Queue (m)	5.7	9.5	170.5	164.1	26.0
95th Queue (m)	17.2	25.7	171.8	166.1	53.6
Link Distance (m)	439.5	439.5	174.8	174.8	189.2
Upstream Blk Time (%)			100	0	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (m)					
Storage Blk Time (%)			100		
Queuing Penalty (veh)			30		

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	65.7	36.0	28.3	42.6
Average Queue (m)	25.9	16.0	12.1	16.7
95th Queue (m)	43.6	26.6	20.9	30.2
Link Distance (m)	120.6	90.4	175.7	122.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 493

1: Dixie Road & Mayfield Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.1	0.3	0.8	2.1	0.2	2.2	1.5	0.2	2.0	12.4	8.7	12.6
Total Del/Veh (s)	145.1	30.3	7.3	41.1	71.1	6.3	81.0	46.2	3.3	94.6	55.8	184.9
Stop Del/Veh (s)	115.3	14.8	0.0	33.0	52.1	1.0	74.2	38.3	0.0	83.0	40.5	141.9

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	2.9
Total Del/Veh (s)	79.9
Stop Del/Veh (s)	59.4

5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	3.9	4.0	4.0	0.6	0.0	0.0	0.0	0.0	14.2	0.0	7.2
Total Del/Veh (s)	49.4	27.3	63.4	6.8	32.6	18.8	10.6	219.6	190.6	179.1	104.2
Stop Del/Veh (s)	46.5	26.4	60.2	5.6	25.5	4.6	1.5	195.4	173.0	171.0	89.8

7: Dixie Road & UPS Facility Access/12173 West Access 1 Performance by movement

Movement	EBL	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	57.1	122.3	32.2
Total Del/Veh (s)	49.6	30.1	37.4	13.0	10.6	155.6	127.4	91.6
Stop Del/Veh (s)	48.0	29.8	29.0	3.8	3.6	94.0	69.8	53.8

8: Dixie Road & 12489 Site Access 1 Performance by movement

Movement	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	8.4	8.0	72.1	44.9
Stop Del/Veh (s)	0.6	0.2	42.7	24.7

10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.1	0.2	4.0	0.2	0.3	0.0	0.1	0.0	3.5	0.0	2.0
Total Del/Veh (s)	40.7	36.5	56.4	16.2	42.7	11.3	3.8	168.9	134.0	170.8	78.4
Stop Del/Veh (s)	37.2	34.8	53.4	15.3	38.9	2.6	0.2	137.0	92.2	145.8	53.2

11: Dixie Road & 12861 Site Access 1 Performance by movement

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	45.6	26.0
Total Del/Veh (s)	15.6	13.1	10.4	17.0	15.2
Stop Del/Veh (s)	15.0	0.1	0.2	10.1	6.0

12: Dixie Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.5	0.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.6	3.6
Total Del/Veh (s)	34.9	24.5	6.6	35.0	29.1	19.2	59.1	27.1	6.2	60.8	21.7	9.3
Stop Del/Veh (s)	31.2	19.4	5.4	31.5	24.0	16.8	53.8	15.1	2.5	56.2	12.7	7.3

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	26.5
Stop Del/Veh (s)	19.4

13: 12861 Site Access 2 & Old School Road Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	1.0	1.7	19.2	2.6	13.0
Stop Del/Veh (s)	0.3	1.1	13.5	2.5	9.0

14: 12861 Site Access 3 & Old School Road Performance by movement

Movement	EBT	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	4.0	0.1	0.2	0.1	0.1
Total Del/Veh (s)	27.2	24.9	29.7	7.5	4.6	25.9
Stop Del/Veh (s)	21.1	19.6	21.9	6.1	4.1	19.5

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.3	0.4	0.6	0.4	0.8	0.4	0.4	0.2	0.1	0.2	0.1
Total Del/Veh (s)	8.9	11.9	6.4	10.4	12.5	9.4	9.5	13.0	6.4	3.8	10.7	3.8
Stop Del/Veh (s)	5.0	4.6	3.8	6.2	5.6	7.0	4.7	4.8	3.8	2.7	4.4	3.7

15: Bramalea Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	11.4
Stop Del/Veh (s)	4.9

Total Network Performance

Denied Del/Veh (s)	20.2
Total Del/Veh (s)	158.0
Stop Del/Veh (s)	108.8

Queuing and Blocking Report
Future Total 2033 PM Peak Hour

07-24-2025

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	T	L	T	T	T	R	L	T
Maximum Queue (m)	137.5	160.0	533.6	480.5	120.9	184.3	199.4	195.5	178.6	48.1	134.8	45.2
Average Queue (m)	123.1	140.2	224.6	200.8	71.6	22.6	148.8	141.2	113.6	4.4	57.4	21.1
95th Queue (m)	164.6	189.9	472.6	427.8	112.4	97.0	193.0	188.1	159.2	25.4	103.7	38.1
Link Distance (m)			988.7	988.7	988.7		280.2	280.2	280.2			847.5
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0	115.0				115.0				110.0	115.0	
Storage Blk Time (%)	21	41	0		8		29		4		1	
Queuing Penalty (veh)	106	204	0		14		17		5		2	

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	SB	SB	SB	SB
Directions Served	T	L	T	T	R
Maximum Queue (m)	43.5	115.8	469.0	476.4	205.0
Average Queue (m)	25.3	50.8	115.3	464.9	205.0
95th Queue (m)	39.1	105.2	403.9	502.2	205.0
Link Distance (m)	847.5		469.3	469.3	
Upstream Blk Time (%)			0	8	
Queuing Penalty (veh)			0	62	
Storage Bay Dist (m)		115.0			135.0
Storage Blk Time (%)		1			64
Queuing Penalty (veh)		2			94

Intersection: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	TR	LT	T	R
Maximum Queue (m)	21.7	37.5	22.4	22.7	64.9	26.8	87.0	507.8	361.9	370.8	72.5
Average Queue (m)	9.6	8.0	14.9	16.5	14.7	6.9	23.7	89.8	278.6	324.1	7.7
95th Queue (m)	18.1	27.1	22.3	28.1	48.6	18.2	66.1	322.3	465.4	464.0	44.3
Link Distance (m)		232.4			101.5		469.3	469.3	359.7	359.7	
Upstream Blk Time (%)								1	1	12	
Queuing Penalty (veh)								6	10	90	
Storage Bay Dist (m)	15.0		15.0	15.0		70.0					65.0
Storage Blk Time (%)	12	1	27	43	4		1			78	0
Queuing Penalty (veh)	13	1	12	2	3		0			8	0

Queuing and Blocking Report
Future Total 2033 PM Peak Hour

07-24-2025

Intersection: 7: Dixie Road & UPS Facility Access/12173 West Access 1

Movement	EB	WB	NB	NB	NB	SB
Directions Served	L	R	L	T	TR	TR
Maximum Queue (m)	7.7	13.9	21.8	72.8	60.5	735.3
Average Queue (m)	0.9	3.2	7.0	20.7	21.6	517.9
95th Queue (m)	4.8	10.1	16.6	59.6	60.9	1014.1
Link Distance (m)	100.4	75.4	359.7	359.7	359.7	699.4
Upstream Blk Time (%)						36
Queuing Penalty (veh)						494
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 8: Dixie Road & 12489 Site Access 1

Movement	SB
Directions Served	LT
Maximum Queue (m)	375.9
Average Queue (m)	199.9
95th Queue (m)	482.0
Link Distance (m)	375.1
Upstream Blk Time (%)	1
Queuing Penalty (veh)	20
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T
Maximum Queue (m)	27.0	39.7	27.3	60.1	22.0	118.9	14.9	154.8	852.9
Average Queue (m)	6.5	14.8	18.1	14.2	8.0	41.3	1.3	9.4	403.9
95th Queue (m)	18.4	31.8	30.2	36.7	21.2	95.9	7.6	57.0	946.0
Link Distance (m)		171.5		134.0		375.1			819.4
Upstream Blk Time (%)									22
Queuing Penalty (veh)									274
Storage Bay Dist (m)	20.0		20.0		60.0		60.0	60.0	
Storage Blk Time (%)	1	11	24	4		3			37
Queuing Penalty (veh)	1	4	13	3		1			7

Queuing and Blocking Report
Future Total 2033 PM Peak Hour

07-24-2025

Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	WB	SB
Directions Served	R	T
Maximum Queue (m)	22.9	215.0
Average Queue (m)	10.1	39.7
95th Queue (m)	19.0	147.6
Link Distance (m)	89.6	215.0
Upstream Blk Time (%)		0
Queuing Penalty (veh)		1
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Dixie Road & Old School Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T	R
Maximum Queue (m)	52.9	52.8	21.6	43.1	71.2	99.8	111.8	21.0	41.0	78.0	26.2
Average Queue (m)	21.9	21.2	9.5	34.2	64.9	36.0	81.4	7.7	11.3	43.4	5.5
95th Queue (m)	40.3	40.4	17.3	52.7	70.4	69.3	113.9	17.5	30.2	71.3	15.1
Link Distance (m)		382.3			43.2		215.0			274.1	
Upstream Blk Time (%)				1	25						
Queuing Penalty (veh)				0	147						
Storage Bay Dist (m)	75.0		75.0	65.0		75.0		50.0	75.0		75.0
Storage Blk Time (%)				1	25	2	20			0	
Queuing Penalty (veh)				5	49	17	42			0	

Intersection: 13: 12861 Site Access 2 & Old School Road

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (m)	88.6	82.7	8.3
Average Queue (m)	31.3	27.5	2.2
95th Queue (m)	70.4	64.0	8.0
Link Distance (m)	439.5	439.5	166.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
Future Total 2033 PM Peak Hour

07-24-2025

Intersection: 14: 12861 Site Access 3 & Old School Road

Movement	EB	EB	WB	WB	WB	NB
Directions Served	T	T	L	T	T	LR
Maximum Queue (m)	41.2	48.2	20.4	71.4	64.1	36.3
Average Queue (m)	23.2	27.5	2.8	45.4	33.1	8.7
95th Queue (m)	36.6	40.8	11.7	65.7	58.6	21.7
Link Distance (m)	439.5	439.5		174.8	174.8	189.2
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)			95.0			
Storage Blk Time (%)		0				
Queuing Penalty (veh)		0				

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	37.4	41.8	27.5	16.0
Average Queue (m)	18.8	23.6	16.2	10.5
95th Queue (m)	30.6	38.5	25.5	16.9
Link Distance (m)	120.6	90.4	175.7	122.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 1727

Appendix J: Signal Warrant

Analysis Sheet

Input Sheet

Results Sheet

Proposed Collision

GO TO Justification:



Intersection: Dixie Road / Site Access 3

Count Date: 2022

Justification 1: Minimum Vehicle Volumes

Free Flow Rural Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW												
	☐	☐	☒	☐	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00				
1A	480	720	900	900	1,500	1,760	190	1,150	975	1,515	1,820	1,885				
	COMPLIANCE %				100	100	21	100	100	100	100	100	721	90		
1B	120	170	180	170	20	55	35	110	100	45	85	110				
	COMPLIANCE %				11	31	19	61	56	25	47	61	311	39		
Free Flow					Both 1A and 1B 100% Fulfilled each of 8 hours								Yes ☐		No ☒	
Signal Justification 1:					Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes ☐		No ☒	

Justification 2: Delay to Cross Traffic

Free Flow Rural Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent
	1 lanes		2 or More lanes		Hour Ending									
Flow Condition	FREE FLOW ☐	RESTR. FLOW ☐	FREE FLOW ☒	RESTR. FLOW ☐	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00		
2A	480	720	900	900	1,480	1,705	155	1,040	875	1,470	1,735	1,775	714	89
	COMPLIANCE %				100	100	17	100	97	100	100	100		
2B	50	75	75	75	75	95	80	130	125	90	115	130		
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100
Free Flow					Both 2A and 2B 100% Fulfilled each of 8 hours								Yes ☐	No ☒
Signal Justification 2:					Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes ☒	No ☐

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	YES ☐	NO ☒	YES ☐	NO ☒
Justification 2	Delay Cross Traffic	YES ☒	NO ☐		NOT JUSTIFIED

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
Justification 4	14:00	1,775	70	115	61 %	42 %
	13:00	1,735	55	115	48 %	
	8:00	1,705	40	115	35 %	
	12:00	1,470	30	115	26 %	

Analysis Sheet

Input Sheet

Results Sheet

Proposed Collision

GO TO Justification:



Intersection: Dixie Road / Site Access 3

Count Date: 2022

Justification 1: Minimum Vehicle Volumes

Free Flow Rural Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW ☐	RESTR. FLOW ☐	FREE FLOW ☒	RESTR. FLOW ☐	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00				
1A	480	720	900	900	915	915	915	915	915	915	915	915	800	100		
	COMPLIANCE %				100	100	100	100	100	100	100	100				
1B	120	170	180	170	45	45	45	45	45	45	45	45				
	COMPLIANCE %				25	25	25	25	25	25	25	25	200	25		
Free Flow Signal Justification 1:					Both 1A and 1B 100% Fulfilled each of 8 hours Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes ☐ Yes ☐		No ☒ No ☒	

Justification 2: Delay to Cross Traffic

Free Flow Rural Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 lanes		2 or More lanes		Hour Ending											
Flow Condition	FREE FLOW ☐	RESTR. FLOW ☐	FREE FLOW ☒	RESTR. FLOW ☐	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00				
2A	480	720	900	900	870	870	870	870	870	870	870	870				
	COMPLIANCE %				97	97	97	97	97	97	97	97	773	97		
2B	50	75	75	75	85	85	85	85	85	85	85	85				
	COMPLIANCE %				100	100	100	100	100	100	100	100			800	100
Free Flow Signal Justification 2:					Both 2A and 2B 100% Fulfilled each of 8 hours Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes ☐ Yes ☒		No ☒ No ☐	

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	YES ☐	NO ☒	YES ☐ NO ☒	NOT JUSTIFIED
Justification 2	Delay Cross Traffic	YES ☒	NO ☐		

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
Justification 4	7:00	X 870	Y (actual) 30	Y (warrant threshold) 247	12 %	12 %
	8:00	870	30	247	12 %	
	9:00	870	30	247	12 %	
	10:00	870	30	247	12 %	

Appendix K: Left Turn Warrant

Volumes

	VA	VL	VO	%	Design Speed
	Future Total 2033				60
Int 10 AM	865	50	1055	5%	60 Warranted
int 10 PM	1230	15	835	0%	60 Warranted
Int 14 AM	295	30	410	10%	60 Not Warranted
Int 14 PM	440	10	265	0%	60 Not Warranted

Exhibit-9A-7

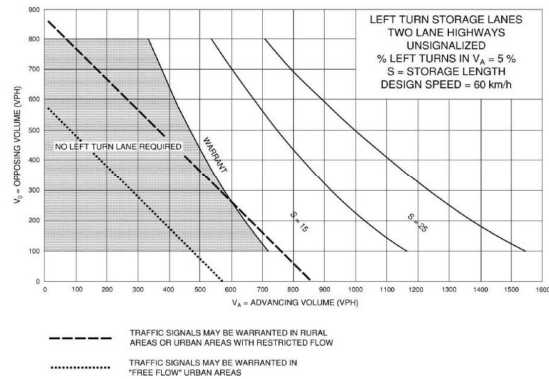


Exhibit-9A-11

