



MEMORANDUM

TO

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FROM

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PROJECT

7843-21
12489 and 12861 Dixie Road

DATE

December 6, 2024

RE: 12489 AND 12861 DIXIE ROAD – TRANSPORTATION RESPONSE TO COMMENTS

BA Group has had the opportunity to review the comments provided by the Town of Caledon and Region of Peel as they pertain to the 12489 and 12861 Dixie Road projects. The following memorandum includes a consolidated response to the consolidated comments received by the town and region for the 12489 and 12861 Dixie Road developments; it builds upon the previously submitted transportation impact studies (TIS) for each of the developments, “12489 Dixie Road, Town of Caledon, Urban Transportation Considerations” and “12681 Dixie Road, Town of Caledon, Urban Transportation Considerations”, which have been appended as **Appendix A** and **Appendix B**, respectively.

Included below is a summary of the provided comments (in bold and highlighted), followed by BA Group’s responses. Additional information has been provided where appropriate.

1.0 RESPONSE TO COMMENTS

1.1 Town of Caledon, Development Planning – July 6, 2024

Sec 5.6.20.14.12. As you are aware, Town staff are of the opinion that an east-west collector road system is required, which portions will be located on these lands.

A letter was sent to the Region of Peel on May 8, 2024, titled “Town of Caledon – Draft Official Plan – Road Network – Dixie Road” which addresses the rationale for excluding the proposed east west collector road. It outlines that the collector roads would negatively impact the functionality of employment lands by reducing developable space, duplicating on-site circulation systems, and creating conflicts between employment and residential land uses. Furthermore, the transportation needs of the area are already met by the regional arterial network and proximity to current and planned provincial highway interchanges. Including the collector road would not enhance connectivity but would likely generate conflicts and diminish the viability of employment lands.

1.2 Town of Caledon, Stormwater and Development Engineering – June 27, 2024

The Town Requires an east/west collector road as identified in the Official Plan. A memo was prepared by Engineering Services that outlines the Town’s rationale for requesting the collector road and it was provided to Armstrong Planning on May 29, 2024. The memo is attached to the Town’s Transportation Departments comments on this application. All reports and studies are to be updated to reflect the future collector road.

A letter was sent to the Region of Peel on May 8, 2024, titled “Town of Caledon – Draft Official Plan – Road Network – Dixie Road” which addresses the rationale for excluding the proposed east west collector road. It outlines that the collector roads would negatively impact the functionality of employment lands by reducing developable space, duplicating on-site circulation systems, and creating conflicts between employment and residential land uses. Furthermore, the transportation needs of the area are already met by the regional arterial network and proximity to current and planned provincial highway interchanges. Including the collector road would not enhance connectivity but would likely generate conflicts and diminish the viability of employment lands.

The Multi Modal Transportation Study and the Official Plan Passed by Town council identifies a 36 meter right of way width for Old School Road to support future growth. The applicant shall dedicate to the Town, gratuitously and free of all encumbrances, a road widening of 18 metres from the centerline along the frontage of development lands adjacent to Old School Road.

To accommodate the future 36m right-of-way for Old School Road, a road widening of 18m, measured from the centreline of Old School Road along the frontage of the Site has been dedicated to the Town for the widening of the roadway. The proposed area for the road widening is illustrated on the architectural plans.

Old School Road fronting 12861 Dixie Road permits local deliveries but is currently designated as a no-trucking route and is not designated for long term heavy truck traffic. The application currently proposes truck entrances off Old School Road and as such, the Town will require the applicant’s Geotechnical consultant to investigate the pavement structure and provide recommendations so Old School Road can accommodate truck traffic from the westerly entrance of their site to Dixie Road.

Acknowledged. Additional geotechnical investigation will occur following OPA/ZBA approval. Any required upgrades to Old School Road’s pavement structure need to be considered within the context of the City’s planned widening and reconstruction of the road as per the prior comment.

1.3 Town of Caledon, Transportation – June 26, 2024

Transportation Engineering Staff have reviewed the materials submitted for the above-mentioned file and offer the following comments:

Given the location of the proposed development, analysis/comments related to intersections and accesses along Dixie Road are being deferred to the Region of Peel.

Acknowledged.

The fragmentation of various developments along Dixie Road into individual transportation studies fails to holistically assess the impacts of all developments in the area. This could cause mitigation measures identified as “Background” issues.

Each development along Dixie Road has been analyzed through individual transportation submissions, as is required by the planning act for individual applications. These submissions include both future background and future total scenarios, ensuring that the cumulative and site-specific impacts of the transportation network are fully captured. By comparing the

future total and future background results within each submission, the incremental impact of each development on the road network can be effectively assessed. Site related volumes of each submission are indicated as such within each application, with their cumulative impacts being consistent between the reports. The future total results in each of the individual studies prepared by BA Group are all equal in volumes and results, allowing for a holistic evaluation of the future traffic conditions.

Please include recommendations for proposed transit route extensions from existing and future Brampton Transit Service and potential transit stops on-site to propose transit usage. The proposed Transit Plan is to be circulated to Brampton Staff for consideration.

Future potential stops are to be considered at the site accesses pending further discussion with Brampton Transit staff.

Please illustrate future active transportation connections from the site to the boundary AT network. Reference should be made to the Council-Approved Active Transportation Master Plan and the Multi-Modal Transportation Plan.

Active transportation connections from within the site to the site boundaries will be refined through the site plan planning process. Detailed AT connections do not require resolution at the OPA/ZBA stage.

Comments on the Transportation Studies

Section 2.0: Intersections of the existing east-west roads with Bramalea Road were not assessed. Bramalea Road and Old School Road should be included in the study intersections.

The Bramalea Road / Old School Road intersection results have been included in **Table 2** within **Appendix C**. The intersection operates at an overall LOS of C or better under all existing, 2028 and 2033 traffic scenarios. Therefore, there are no capacity issues at the intersection under any scenario.

Section 6.1 should include a review of the proposed access location, including but not limited to corner clearance, sight distance, safety and maneuverability.

A sight line review for the proposed access locations has been provided within **Appendix D**.

Section 7.2: To assist in the review, kindly append a figure illustrating the location of the included background developments, a figure illustrating the trip assignment for each individual background development, and excerpts from the relevant Traffic Studies.

Figures illustrating the location of the included background developments have been provided within the attached **Figure 1** and **Figure 2**. **Table 1** provided below lists the addresses and location identifiers of each background development. Trip assignment and excerpts from the relevant studies can be located within reports that have been previously submitted to the Town of Caledon and Region of Peel.

Table 1 Area Background Development

	Address	Development Description	Traffic Study
12489 Dixie Road Background Developments			
1	12892 Dixie Road (Tribal Lands)	83,038 m ² industrial use	BA Group, Dec 2023
2	12861 Dixie Road (Tribal Lands)	188,718 m ² industrial use	BA Group, Dec 2023
3	12173 Dixie Road (Tribal Lands)	190,824 m ² industrial use	BA Group, April 2023
4	12892 Dixie Road (Amazon Distribution Centre)	173,797 m ² industrial use	LEA, February 2021
12861 Dixie Road Background Developments			
1	12892 Dixie Road (Tribal Lands)	83,038 m ² industrial use	BA Group, Dec 2023
2	12490 Dixie Road (Tribal Lands)	136,576 m ² industrial use	BA Group, Dec 2023
3	12173 Dixie Road (Tribal Lands)	190,824 m ² industrial use	BA Group, April 2023
4	12892 Dixie Road (Amazon Distribution Centre)	173,797 m ² industrial use	LEA, February 2021

Figure 1: 12489 Dixie Road Background Development Locations

Figure 2: 12861 Dixie Road Background Development Locations

Section 7.2: Please describe how the following developments along Dixie Road have been considered. Revise as required:

Underdeveloped lots along Spiers Griffin Avenue

At the time of submission, no development applications for the lots had been submitted to the Town, and none are currently available. Background developments were reviewed in consultation with Peel Region as part of the submission process.

12434 Dixie Road

Trip Generation forecasts for the 12434 Dixie Road development amount to approximately 10 and 20 two-way trips during the AM and PM peak hours respectively. This translates to approximately 5 additional vehicles traversing through the Dixie Road / Mayfield Road intersection, representing less than 1% of the total vehicles at this intersection under future background conditions. The results of the analysis undertaken in the December 2023 submission would remain consistent with the inclusion of the 12434 Dixie Road development.

Section 7.2: Provide confirmation that the City of Brampton was consulted regarding any relevant background developments; revise as required.

Background developments were reviewed in consultation with Peel Region as part of the submission process.

Section 7.3: Please consider the POPA 2050 lands along Dixie Road to the north of Old School Road and revise as needed.

At the time of submission, no development applications for the lots had been submitted to the Town, and none are currently available. Background developments were reviewed in consultation with Peel Region as part of the submission process.

Section 7.4 Site Traffic Volumes

In general, urban cities are not comparable to the proposed development transportation context within Caledon. If the study proposes to continue using modified rates, justification of the proposed proxy sites being comparable to the proposed context is required to staff satisfaction.

The selected proxy sites are situated in industrial areas surrounded by low-density residential neighborhoods, ensuring they align with the characteristics of the proposed development context. The proxy sites are not located within high-density residential areas, avoiding inappropriate comparisons. Furthermore, sites outside urban centers like Mississauga or Brampton were chosen for their similar locational attributes to the subject site. The industrial nature of sites located within bigger cities such as Mississauga or Brampton, combined with their low-density residential surroundings, does not result in a significant enough difference in heavy vehicle percentages or trip generation outputs to warrant exclusion from the overall blended rate. It is important to note that the subject sites are on the boundary of Caledon, adjacent to the low density residential currently in place in Brampton, consistent with the proxy sites.

Justify how the quantity (number of survey data points) and the variety of ITE land use codes (i.e. 110, 150, and 155) were considered in establishing the proposed adopted rate or revising as required. Staff prefer conducting analysis with ITE LUC to ensure a conservative approach.

The proposed development is speculative and may accommodate a variety of warehousing uses, including general warehousing, fulfillment centers and other light industrial / commercial operations. Vehicle trip generation for such uses can vary significantly depending on factors like staff density, operating hours, shift composition and timing, and visitor frequency.

To account for this variability, trip generation rates were derived using a combination of data from the ITE 11th Edition (LUCs 110, 150, and 155) and proxy data collected by BA Group. This inclusion of proxy data is particularly relevant, as it reflects conditions at similar sites within the GTA that align with the characteristics of the proposed development, addressing potential gaps in the ITE LUCs. This blended approach ensures the adopted rates are comprehensive and tailored to the subject site context.

The proxy site 'Whirlpool Milton' has rail leading directly to/from their warehouse. Similarly, several other proxy sites have bus stops near the site. Please consider if this would materially impact the trip generation surveys compared to the proposed development and revise as required.

While some proxy sites include nearby bus stops, their inclusion does not lead to a substantial reduction in vehicular trip generation since the surveyed areas primarily cater to industrial and warehousing uses with a reliance on car-based commuting. Additionally, future potential stops are to be considered at the site accesses in further discussion with Brampton Transit, in addition to a proposed bus stop within short walking distance of the Dixie Road / Abbotside Way intersection.

The Whirlpool Milton proxy's site was included to provide a variable mix of sites within the blended trip generation rates. It is important to note that the direct rail connection to the Whirlpool Milton site does not provide passenger rail service that would materially alter the site's trip generation. As is evidenced by the collected proxy data, that site has a higher volume of heavy vehicle trip generation, consistent with what would be expected for such a facility. Deliveries may arrive by rail, but products leaving the site would be handled by trucks as goods are distributed to stores, warehouses, and consumer locations.

Please confirm that the occupant is anticipated to operate similarly to the survey proxy sites.

The proposed development is speculative and may accommodate a variety of warehousing uses, including general warehousing, fulfillment centers and other light industrial / commercial operations. Vehicle trip generation for such uses can vary significantly depending on factors like staff density, operating hours, shift composition and timing, and visitor frequency.

To account for this variability, trip generation rates were derived using a combination of data from the ITE 11th Edition (LUCs 110, 150, and 155) and proxy data collected by BA Group. This inclusion of proxy data is particularly relevant, as it reflects conditions at similar sites within the GTA that align with the characteristics of the proposed development, addressing potential gaps in the ITE LUCs. This blended approach ensures the adopted rates are comprehensive and tailored to the subject site context.

TTS data should be included in the appendix and referenced in the body of the report.

TTS Data has been provided within **Appendix E**.

TTS data appears to use zones in Bolton; revise to cite this assumption in the report and provide adequate justification.

The Bolton zone was used in the TTS data to better populate the raw data with additional work-related trips, addressing the limitation of the surrounding area, which is predominantly low-density residential. The zone is the closest in proximity to the site locations with employment type zoning, and effectively served as a proxy to reflect more representative trip patterns for the analysis.

Applicant should review heavy vehicle restrictions on Old School Road and revise the assignment as required. Note that Old School Road fronting the subject property permits local deliveries but is currently designated as a no-trucking route. A proposed truck route, among other studies, may be requested to confirm that truck travel distance along Old School Road is minimized.

Additional land has been requested by the Town to permit the widening of Old School Road, which would in turn permit for the removal of the No Truck prohibition. This anticipated upgrade aligns with the need to support truck movements while minimizing travel distances and complying with regional access requirements along the Dixie Road corridor. As noted above, additional geotechnical work will be undertaken in due course to determine the appropriate engineering response to the existing road conditions and the in-force No Truck designation.

In addition to the site-specific comments detailed in this memo, please be aware that the feedback related to the collector road network provided by Town Staff in response to the memo prepared by Armstrong Planning, titled “Dixie Road Core Employment Land Caledon, Request to Amend Adopted Caledon Official Plan Mapping” (attached), is also applicable.

Acknowledged.

Please note that comments related to the Zoning By-Law Amendment will be provided at a later date. Transportation Engineering reserves the right for additional comments based on a revised submission. Transportation Engineering requests that the Traffic Consultant provide a response letter with the re-submission package reiterating the Towns comments in order and including details for how each comment has been addressed.

Acknowledged.

1.4 Strategic Policy Review Comments – May 7, 2024

Region of Peel Official Plan, Region of Peel 2051 Transportation Master Plan, Region of Peel Scoped Subwatershed Study (click on “technical studies” and scroll to bottom)

1.5 Region of Peel – Development Engineering – July 10, 2024

No lots or blocks shall have direct access to Dixie Road. Any future access shall be in accordance with the Region Access Control By-law.

The 12489 Dixie Road development has two accesses onto Dixie Road. Site Access 1 (southern site access), which intersects with Dixie Road / UPS Access Facility and operates under right-in / right-out unsignalized conditions. Site Access 2 (northern site access), operates under full moves signalized conditions.

The 12861 Dixie Road development has one site access onto Dixie Road. It is located in the south west corner of the site, and operates under right-in / right-out unsignalized conditions.

The spacing between the intersection of Old School Road/Dixie Road and the right-in/right-out access for 12861 Dixie Road is approximately 200m. The spacing between the all-moves access and the right-in/right-out access for 12489 Dixie Road is approximately 350 metres. As per the Region of Peel’s Road Characterization study, the minimum distance between Full to Right-in/Right-out is 75m for a suburban connector. As such both distances satisfied the Region’s requirement outlined within the Region Access Control By-law.

A traffic Impact Study acceptable to the Region of Peel is required detailing the impact on the Regional road network and identifying any mitigation measures.

Acknowledged. Please see our previous report dated December 2023.

Engineering requirements for the Regional intersections shall be determined after the Traffic Impact Study has been completed and filed, to the satisfaction of the region.

Acknowledged. Please see our previous report dated December 2023.

Traffic Development

Please review the Public Works Design, Specifications & Procedure Manuals, and the Region of Peel's Standard Drawings which can be found at the following links. Digital copies can be provided upon request.

- **Linear Infrastructure – Site Plan Process: Public Works Design, Specifications & Procedures Manual – Linear Infrastructure – Site Plan Process 0 Revised November 2009 (peelregion.ca)**
- **Public Works Design, Specifications and Procedures Manual: Design, standards specifications and procedures – Region of Peel (peelregion.ca)**
- **Public Works Design, Specifications and Procedures Manual – Linear Infrastructure: Public Works - Design, Specifications & Procedures Manual – Linear Infrastructure - CAD Submission Requirements - Capital Works - June 2015 (peelregion.ca)**
- **Public Works CAD Submission Requirements – Development: Microsoft Word - Development Submission Requirements Manual - Nov2017.docx (brampton.ca)**
- **Standard Drawings - Roads & Traffic: Roads and traffic - standards drawings - Region of Peel (peelregion.ca)**

Acknowledged.

A Traffic Impact Study (TIS) will be required; terms of reference must be submitted to the Region for review and comment prior to study commencement.

Acknowledged. Please see our previous report dated December 2023.

The Region acknowledges the proposed accesses to the site, but access type, location and justification will be determined after receipt and review of a satisfactory TIS.

Acknowledged. Please see our previous report dated December 2023.

All accesses onto Regional roads shall be in accordance with Regional Standard based on the Controlled Access By-Law 62-2013, which speaks to the road Characterization Study (RCS). The RCS defines our various road classifications as well as the minimum access spacing distances that are associated with them. This portion of Dixie Road is classified as a Suburban Connector which calls for 300m spacing from full moves to full moves access; 75m spacing from full moves to right-in / right-out access; and 75m spacing from right-in / right out to right-in / right-out access.

Acknowledged. The proposed Site access points and spacing between each intersection conform with the requirements laid out in the RCS. As there are no consecutive full-move accesses along Dixie Road (the intersections alternate between full-moves and right-in / right-out without a median), 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.

There is a Capital Project along this section of Dixie Road. Project 11-4020 & 14-4020. Please reach out to the Project Manager for additional information and details as additional infrastructure and property requirements may be required.

Acknowledged.

Appendix A:
12489 Dixie Road, Town of Caledon, Urban Transportation
Considerations – December 2023 Report

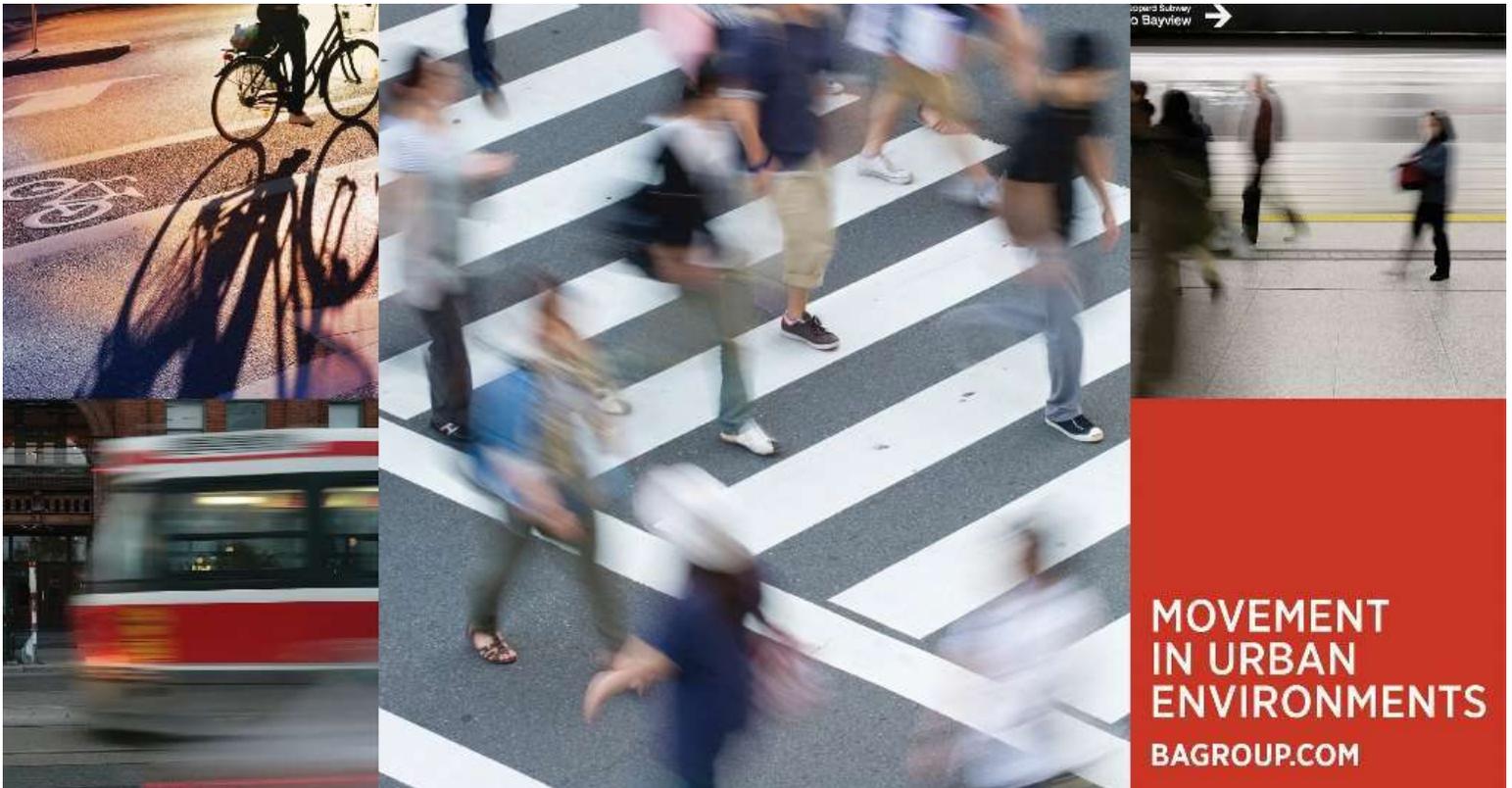


BA Group

12489 DIXIE ROAD TOWN OF CALEDON URBAN TRANSPORTATION CONSIDERATIONS

Prepared For: QuadReal Property Group

December 2023



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TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	THE SITE	1
1.2	THE PROPOSED DEVELOPMENT	2
2.0	TRANSPORTATION CONTEXT	5
2.1	EXISTING ROAD NETWORK.....	5
2.1.1	Dixie Road.....	5
2.1.2	Old School Road	5
2.1.3	Mayfield Road	5
2.1.4	Bramalea Road	6
2.1.5	Abbotside Way	6
2.2	EXISTING TRANSIT NETWORK.....	6
2.2.1	15 Bramalea.....	6
2.2.2	18 Dixie	6
2.3	EXISTING BICYCLE NETWORK.....	6
2.4	EXISTING PEDESTRIAN NETWORK.....	6
2.5	FUTURE INFRASTRUCTURE PROJECTS	12
2.5.1	Dixie Road Widening	12
2.5.2	Mayfield Road Widening	12
3.0	CAR PARKING CONSIDERATIONS.....	13
3.1	CAR PARKING STANDARDS	13
3.1.1	Town of Caledon Zoning By-law 2006-50.....	13
3.2	PROPOSED CAR PARKING PROVISION.....	13
3.3	ACCESSIBLE CAR PARKING.....	14
3.3.1	Accessible Car Parking Standards	14
3.3.2	Proposed Accessible Car Parking Provision	14
4.0	BICYCLE PARKING CONSIDERATIONS.....	15
5.0	LOADING CONSIDERATIONS.....	16
5.1	LOADING STANDARDS	16
5.1.1	Town of Caledon Zoning By-Law 2006-50	16
5.2	PROPOSED LOADING PROVISION	16
6.0	SITE PLAN CONSIDERATIONS	17
6.1	Site Access.....	17
6.2	Truck Access	17



7.0	TRAFFIC VOLUME FORECASTING	18
7.1	EXISTING TRAFFIC VOLUMES	18
7.2	EXISTING TRAFFIC CONDITIONS	18
7.3	FUTURE BACKGROUND TRAFFIC VOLUMES	19
7.3.1	Background Development Growth	19
7.3.2	Corridor Growth	19
7.3.3	Removal of Existing Traffic	20
7.3.4	Future Background Traffic Volumes	20
7.4	SITE TRAFFIC VOLUMES	21
7.4.1	Vehicle Trip Generation Data	21
7.4.2	Site Light Vehicle Trip Generation	23
7.4.3	Site Heavy Vehicle Trip Generation	24
7.4.4	Heavy and Light Vehicle Volumes	25
7.4.5	Vehicle Trip Distribution	26
7.4.6	Site Traffic Volumes	28
7.4.7	Future Total Traffic Volumes	29
8.0	TRAFFIC OPERATIONS ANALYSIS	38
8.1	TRAFFIC OPERATIONS SCENARIOS	38
8.2	ANALYSIS METHODOLOGY	38
8.3	INPUT AND CALIBRATION PARAMETERS	39
8.4	STUDY AREA INTERSECTION OPERATIONS	42
8.4.1	Signalized Intersections	43
8.4.2	Unsignalized Intersections	52
8.5	QUEUING ANALYSIS	53
9.0	SIGNAL WARRANT	55
9.1	Signal Warrant Results	55
9.2	Signal Warrant Analysis Summary	56
10.0	LEFT TURNING LANE WARRANTS	57
11.0	TRANSPORTATION DEMAND MANAGEMENT (TDM)	58
11.1	TDM PLAN STRATEGIES	58
11.1.1	Overview	58
11.1.2	Carpool Incentives	58
11.1.3	Transit Incentives	59
11.1.4	Walking Incentives	59
12.0	SUMMARY AND CONCLUSIONS	60





LIST OF TABLES

Table 1	Town of Caledon Zoning By-Law 2006-50	13
Table 2	Town of Caledon Zoning By-Law 2006-50	16
Table 3	Site Access Summary	17
Table 4	Existing Traffic Count information	18
Table 5	Area Background Development	19
Table 6	Summary of Removal of Existing Traffic.....	20
Table 7	Industrial Facility Trip Generation	22
Table 8	Light Vehicle Trip Generation Summary	24
Table 9	Heavy Vehicle Trip Generation Summary	25
Table 10	Heavy and Light Vehicle Volumes	26
Table 11	TTS Site Traffic Distribution	27
Table 12	Existing Survey Site Traffic Distribution	27
Table 13	Dixie Road / Mayfield Road Capacity Analysis Results.....	44
Table 14	Dixie Road / Abbotside Way / 12173 Site Access Road Capacity Analysis Results.....	45
Table 15	Dixie Road / UPS Facility Access / 12173 Site Access Road Capacity Analysis Results...	46
Table 16	Dixie Road / 12489 Dixie Road Site Access 2 / 12892 Dixie Road South Signal Access...	47
Table 17	Old School Road / Site Access 3 Road Capacity Analysis Results.....	48
Table 18	Old School Road / Site Access 3 Road Capacity Analysis Results.....	49
Table 19	Dixie Road / Old School Road Capacity Analysis Results.....	51
Table 20	Unsignalized Intersection Capacity Analysis Results	52
Table 21	95 th Percentile SimTraffic Queue Lengths	53
Table 22	Free Flow Signal Warrant Analysis – 2028 Future Total Traffic	56
Table 23	Recommended Site TDM Measures.....	58

LIST OF FIGURES

Figure 1:	Site Location	3
Figure 2:	Site Plan.....	4
Figure 3:	Existing Lane Configuration	8
Figure 4:	Area Road Network.....	9



Figure 5:	Area Transit Context	10
Figure 6:	Active Transportation Context.....	11
Figure 7:	Existing Traffic Volumes	30
Figure 8:	Future Background 2028 Traffic Volumes	31
Figure 9:	Future Background 2033 Traffic Volumes	32
Figure 10:	Site Light Vehicle Traffic Volumes	33
Figure 11:	Site Heavy Vehicle Traffic Volumes.....	34
Figure 12:	Total Site Traffic Volumes	35
Figure 13:	Future Total 2028 Traffic Volumes.....	36
Figure 14:	Future Total 2033 Traffic Volumes.....	37
Figure 15:	Future (2028 and 2033) Lane Configuration and Traffic Control.....	41

TABLE OF APPENDICES

APPENDIX A:	Reduced Architectural Drawings (Not to Scale) and Signage Plans
APPENDIX B:	Turning Movement Counts
APPENDIX C:	Signal Timing Plans
APPENDIX D:	Signal Warrant
APPENDIX E:	Lane Warrants
APPENDIX F:	Functional Design Plans
APPENDIX G:	Synchro and Simtraffic Worksheets



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 12489 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 three industrial buildings with a total gross floor area of 134,565 square metres.

The Subject Property is located on the east side of Dixie Road, south of Old School Road and north of Mayfield Road and is used mainly as agricultural land. The Subject Property is bounded by adjacent parcels to the north, east, and south, 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 581,318 square metres (144 acres) in size with approximately 393 metres of frontage along Dixie Road.

1.1 THE SITE

As outlined in **Section 1.0**, the Site is located on the east side of Dixie Road, south of Old School Road and north of Mayfield Road. The Site is bounded by adjacent development parcels to the north and east, and south, and Dixie Road to the west. A small, independent property with frontage on to Dixie Road, is surrounded by the Site on its other three sides. The property is not owned by QuadReal and currently operates as an existing residential property.

Existing vehicular access to consists of two unsignalized driveways to Dixie Road, located in the southeast and south areas of the Site, that are currently operating with all moves permitted.

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

1.2 THE PROPOSED DEVELOPMENT

The Proposed Development contemplates the demolition of the existing infrastructure on the Site and the construction of three 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 three industrial buildings approximately sized at 44,395 square metres, 49,269 square metres and 42,912 square metres with a combined floor area of approximately 136,576 square metres. Each building includes vehicle parking, truck loading docks, and in some cases, tractor-trailer parking spaces. A total of 1,606 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 plans for two vehicular access points, also presented in **Figure 2**, and a functional design plan is attached in **Appendix F**:

- Site Access 1: The northernmost access along Dixie Road, is proposed to operate under signalized control and under full moves access. Site Access 1 would align with the Tribal Lands portion of the 12892 Dixie Road development (12892 Dixie Road south signal access) on the opposite side of Dixie Road.
- Site Access 2: Approximately 395 metres south of Site Access 1, proposed to operate under right-in / right-out 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:\7843\21\Graphics\12861 Dixie Road (North)\Adbel\Ds\7843-21_12861 Dixie Road_December 2023.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

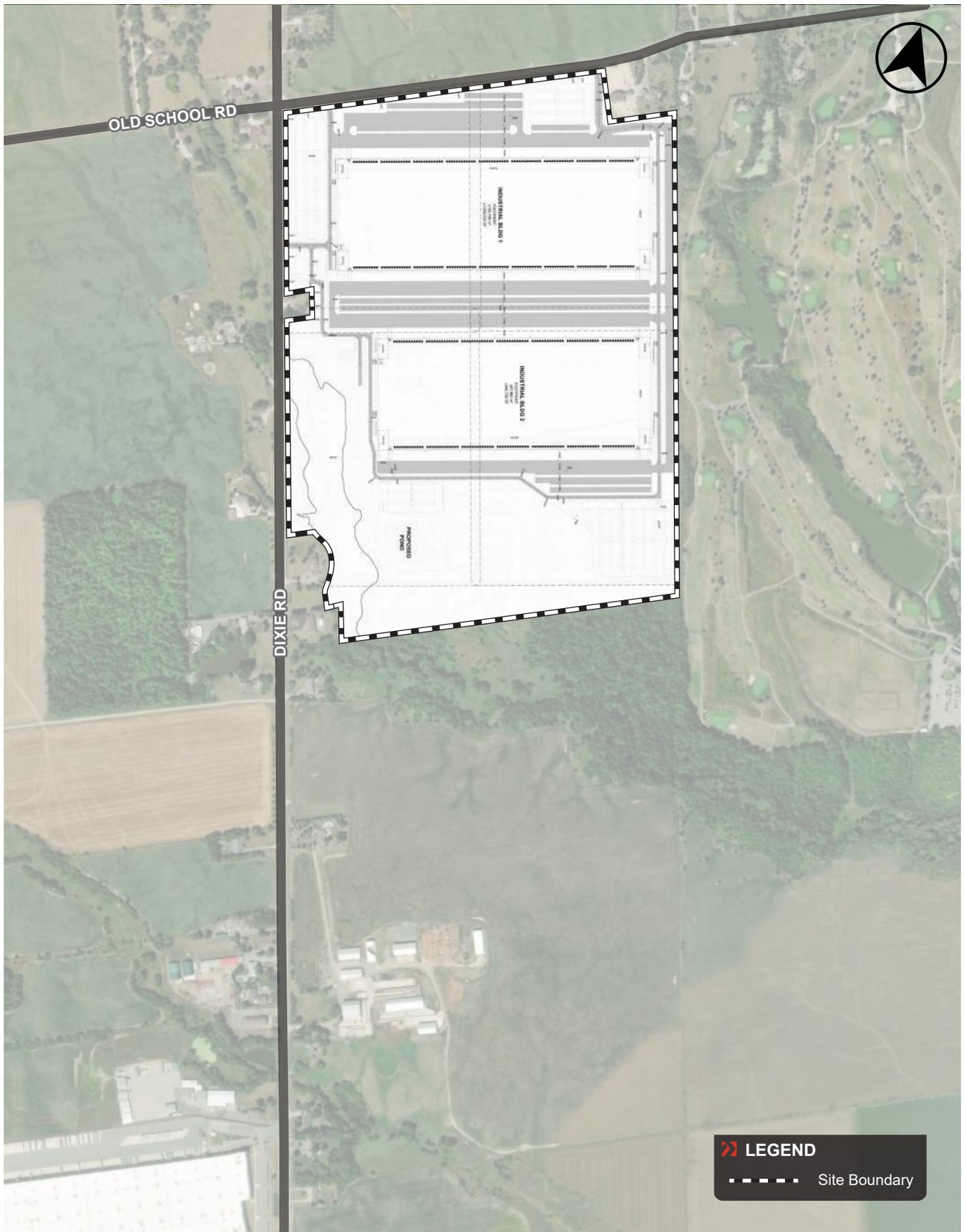


FIGURE 2 SITE PLAN

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 Brampton.

A posted speed limit of 70 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 is assumed to operate with an unposted speed limit of 50 kilometres per hour.

2.2 EXISTING TRANSIT NETWORK

Two bus services operate within 1 kilometre 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. The route operates 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 and Bramalea Road / Mayfield Road. The Active transportation network context in the vicinity of the Site is shown in **Figure 6**.

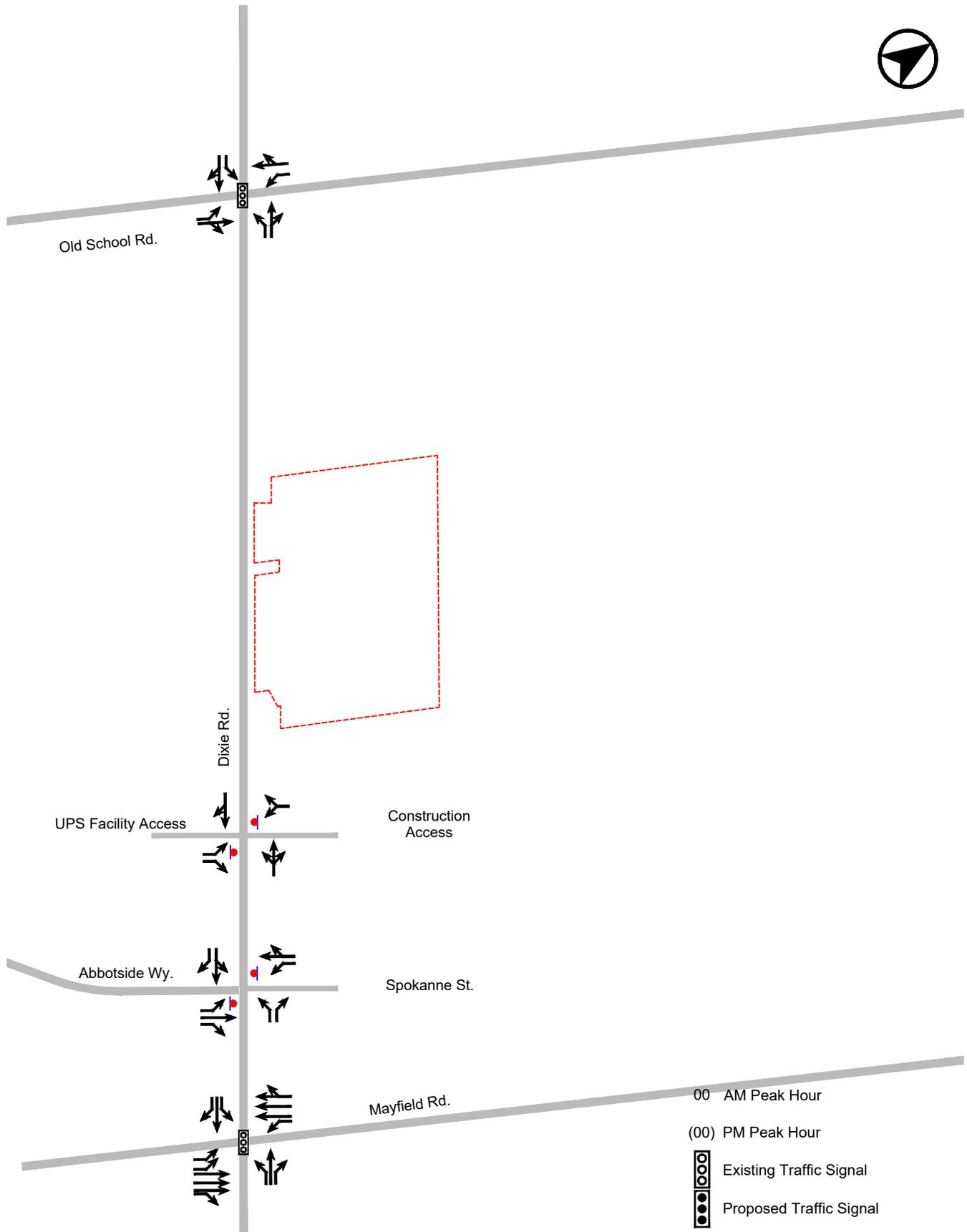


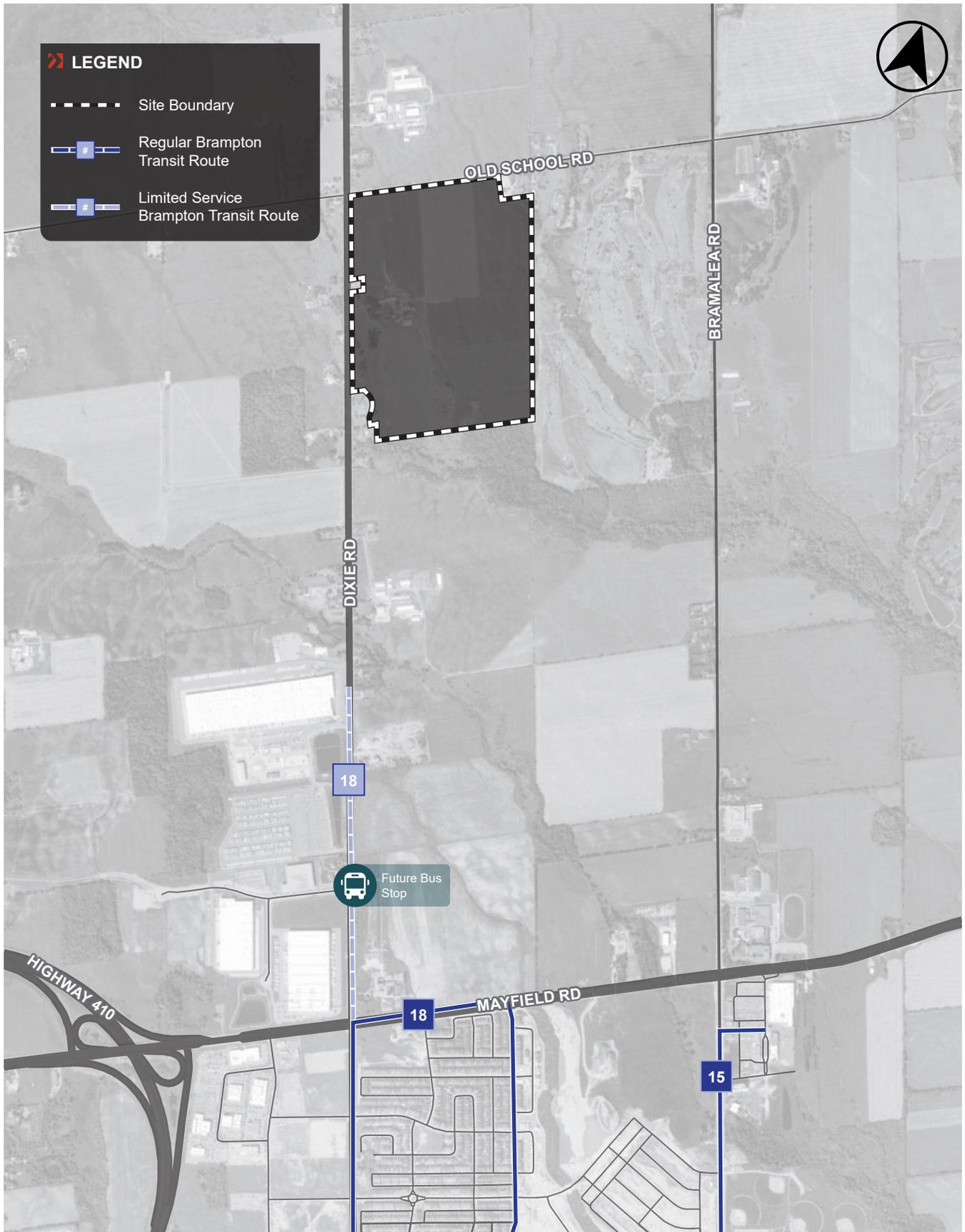
FIGURE 3 EXISING LANE CONFIGURATION AND TRAFFIC CONTROL



P:\7843\21\Graphics\12861 Dixie Road (North)\Adbel\Ds\7843-21_12861 Dixie Road_December 2023.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.

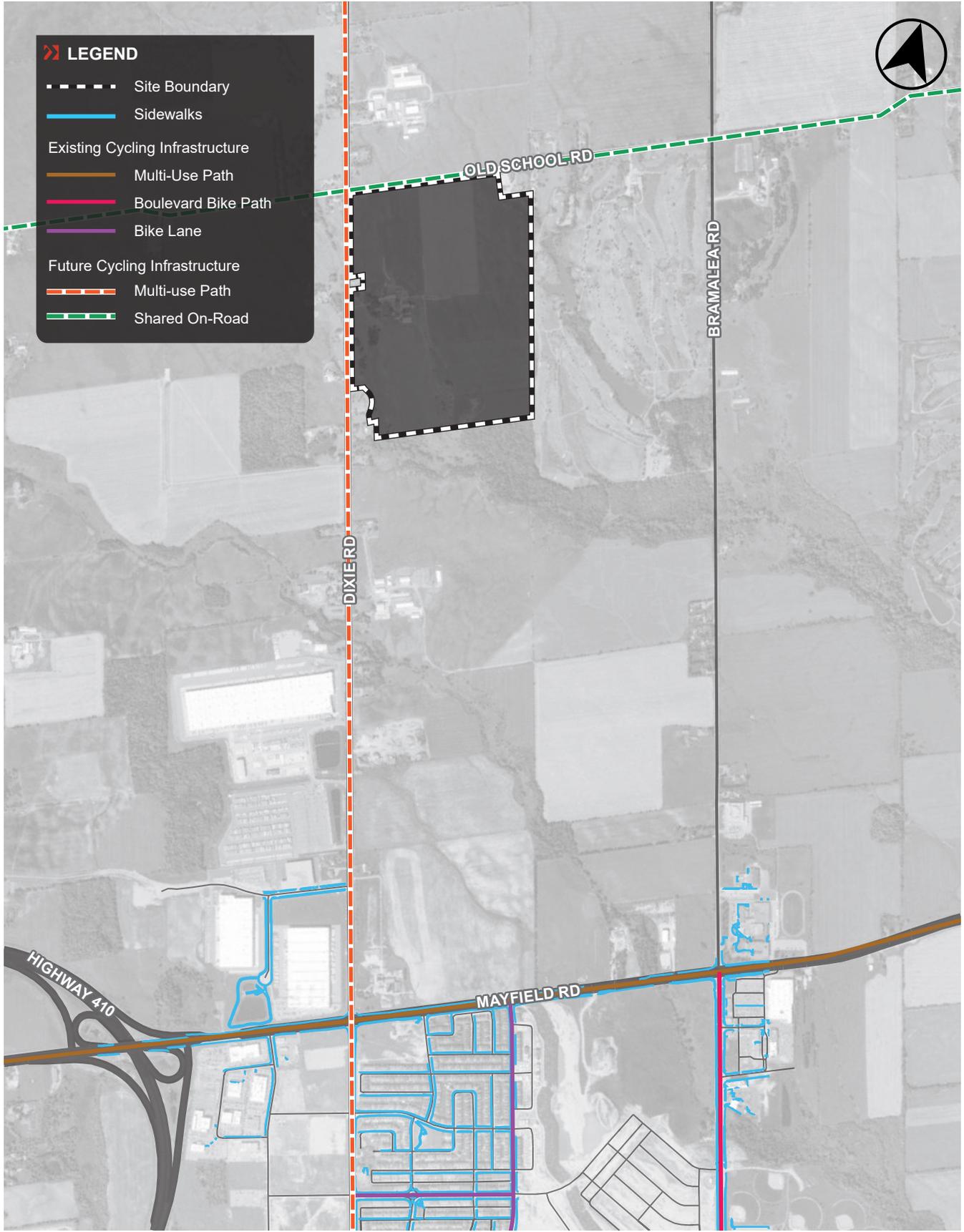
FIGURE 4 EXISTING STREET NETWORK



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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 5 EXISTING AND FUTURE TRANSIT NETWORK



P:\7843\21\Graphics\12861 Dixie Road (North)\Adbel\Ds\7843-21_12861 Dixie Road_December 2023.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 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 is 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. 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)	42,912 m ²	1 space per 230 square metres of gross floor area	333
Warehouse (Building 2)	49,269 m ²		370
Warehouse (Building 3)	44,395 m ²		342
Total	136,576 m ²		1,045

Based on the foregoing, under the Town of Caledon Zoning By-Law 2006-50, the development has a requirement to provide a total of 1,045 car spaces.

3.2 PROPOSED CAR PARKING PROVISION

A total of 1,606 car spaces are proposed, which exceeds the requirements and is therefore considered to be satisfactory.

It is also noted that whilst not a requirement, the proposed car parking supply also includes 24 electric vehicle (EV) spaces.

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 830 car spaces equates to a requirement to provide 27 accessible spaces, of which 13 should be Type A accessible spaces and 14 should be Type B accessible spaces.

3.3.2 Proposed Accessible Car Parking Provision

A total of 40 accessible spaces are proposed (including 20 Type A spaces and 20 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.

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)	42,912 m ²	7,441 m² 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	7
Warehouse (Building 2)	49,269 m ²		8
Warehouse (Building 3)	44,395 m ²		7
Total			22

Application of the Town of Caledon Zoning By-Law 2006-50 loading standards to the Proposed Development results in a minimum requirement of 22 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 252 potential loading docks and two drive-in doors are proposed at one end of each building. 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.

6.0 SITE PLAN CONSIDERATIONS

6.1 SITE ACCESS

As mentioned in **Section 1.2**, vehicular access is proposed via two access points along Dixie Road.

The northwest side of the property along Dixie Road proposes an all-moves traffic signal opposite 12892 Dixie Road property. A summary of the Site access points is provided in **Table 3**.

TABLE 3 SITE ACCESS SUMMARY

Site Access	Road Intersection	Configuration	Signalization
Site Access 1 (South)	Dixie Road / Site Access 1 / UPS Access Facility	Right-In / Right-Out	No
Site Access 2 (North)	Dixie Road / Site Access 2	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 with a median), 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 TRUCK ACCESS

Heavy vehicles are expected to enter and exit the Site via both site access points.

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 bay areas. Similarly, heavy vehicles may access the loading bays 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 B**.

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**.

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, background proposed developments include the order of 636,377 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.

TABLE 5 AREA BACKGROUND DEVELOPMENT

	Development Description	Traffic Study
12892 Dixie Road (Tribal Lands)	83,038 m ² industrial use	Tribal Lands Group
12861 Dixie Road (Tribal Lands)	188,718 m ² industrial use	Tribal Lands Group
12173 Dixie Road (Tribal Lands)	190,824 m ² industrial use	BA Group, April 2023
12892 Dixie Road (Amazon Distribution Centre)	173,797 m ² industrial use	LEA, February 2021
Total	636,377 m² industrial use	

7.3.2 Corridor Growth

To conservatively capture development progress outside of the study area for the horizon years of 2028 (occupancy), and 2033 (10 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 of the property along Dixie Road, north of Mayfield Road, that is scheduled to grow. The changes to the area's land use planning do not extend north of Old School road, and therefore there is no anticipated considerable development further up the corridor that would drive any additional traffic growth that is not represented within the listed background developments.

7.3.3 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 12489 Dixie Road (the site) development.

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.

7.3.4 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 8** and **Figure 9** 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 Rates ¹	--	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 m ² 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 m ² 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 m ² 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 m ² 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 m ² 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 m ² 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 m ² 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 m ² 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%

Location / Use	Time Period / Parameter	AM Peak Hour			PM Peak Hour			
		In	Out	2-Way	In	Out	2-Way	
Continued on Next Page								
8450 Boston Church Road (Ryder) , Milton [123,826 m ² 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 m ² 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 m ² 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 m ²]	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 CF 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 CF 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	42,912 m²	40	10	50	10	35	45
Building 2	49,269 m²	50	15	65	10	45	55
Building 3	44,395 m²	45	10	55	10	40	50
Total Vehicle Trips	136,576 m²	135	35	170	30	120	150

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 170 and 150 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	42,912 m²	10	10	20	5	10	15
Building 2	49,269 m²	10	10	20	10	10	20
Building 3	44,395 m²	10	10	20	10	10	20
Total Vehicle Trips	136,576 m²	30	30	60	25	30	55

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 60 and 55 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	18%	43%	28%	42%	17%	26%
Heavy Vehicle Volumes						
Building 1	10	10	20	5	10	15
Building 2	10	10	20	10	10	20
Building 3	10	10	20	10	10	20
Total Heavy Vehicle Trips	30	30	60	25	30	55
Light Vehicle Volumes						
Building 1	40	10	50	10	35	45
Building 2	50	15	65	10	45	55
Building 3	45	10	55	10	40	50
Total Light Vehicle Trips	135	35	170	30	120	150
Total Net-New Site Volumes	165	65	230	55	150	205

Notes:

1. Trips rounded to the nearest 5 vehicles.

It is estimated that the Proposed Development will generate in the order of 230 and 205 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 10**, **Figure 11**, and **Figure 12**, 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 13** and **Figure 14** for the 2028 and 2033 horizons, respectively.

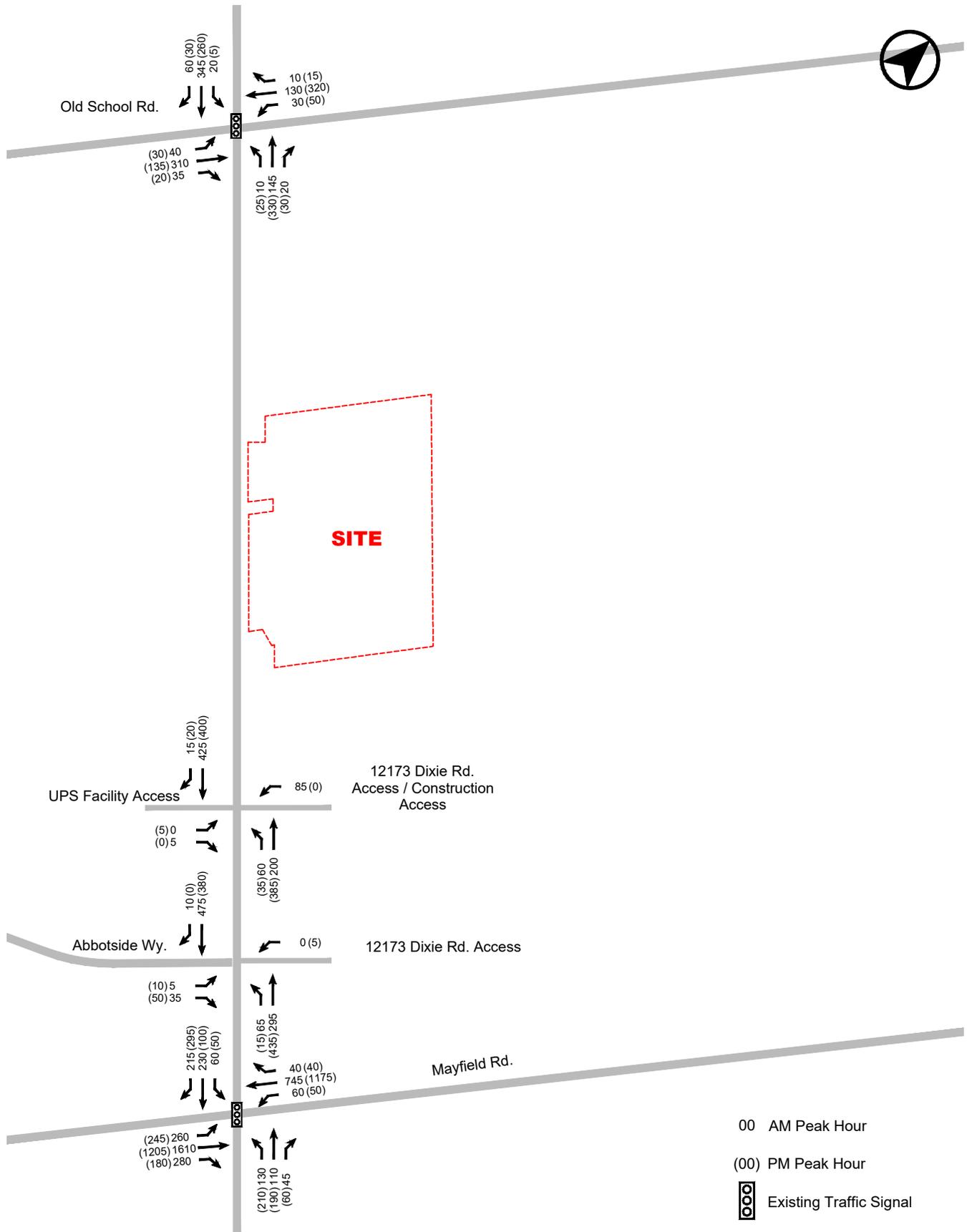


FIGURE 7 EXISTING TOTAL TRAFFIC VOLUMES

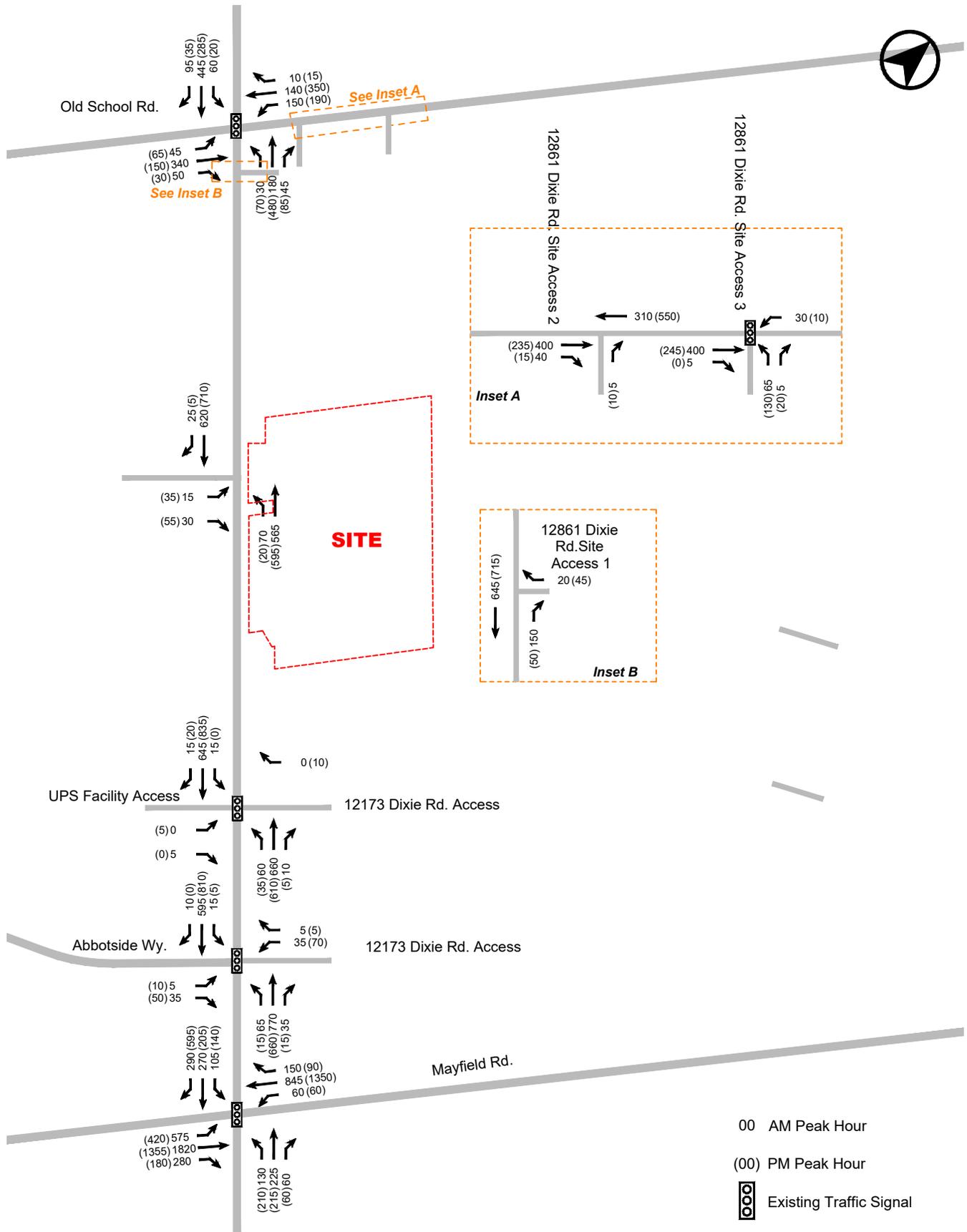


FIGURE 8 FUTURE BACKGROUND 2028 TOTAL TRAFFIC VOLUMES

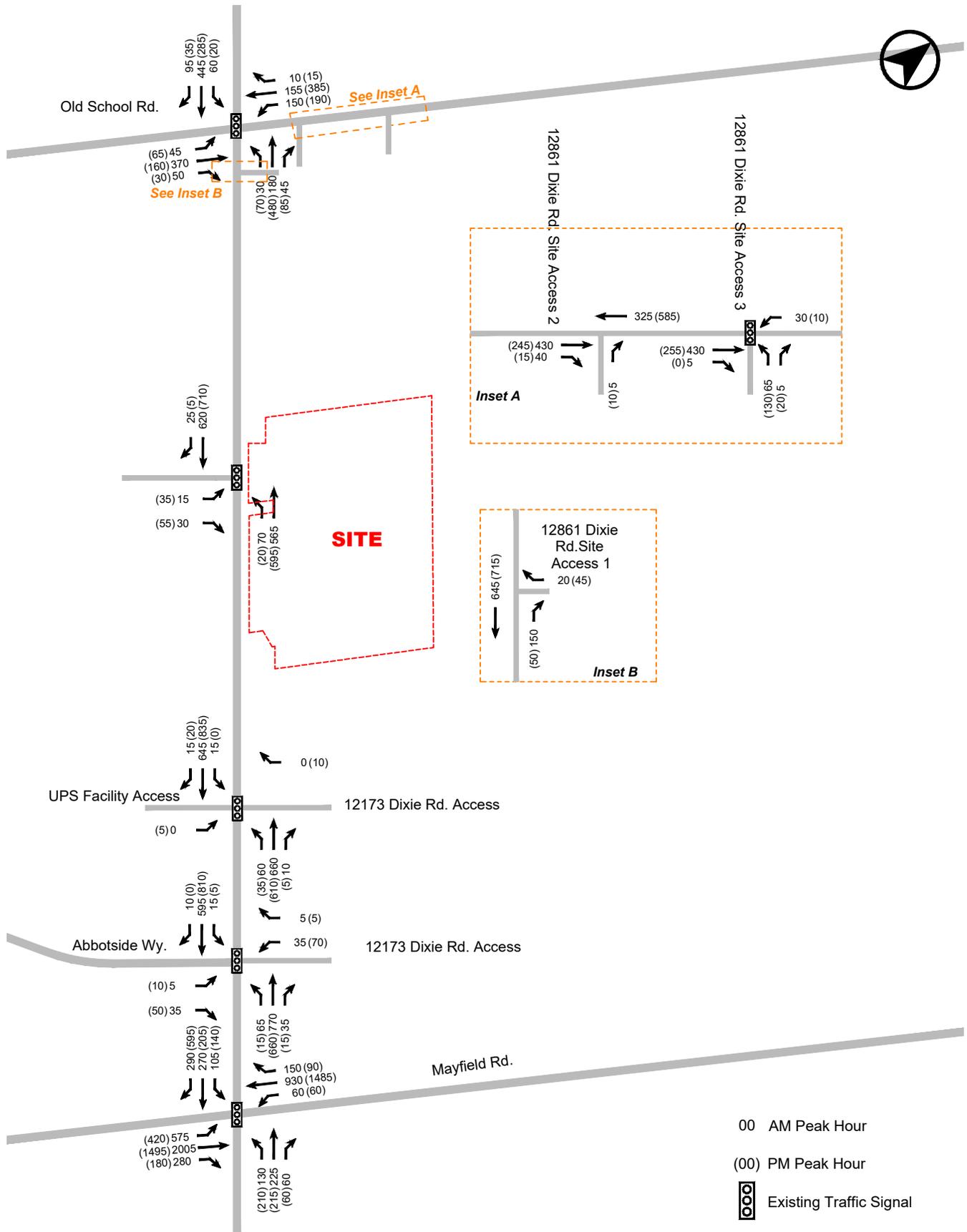


FIGURE 9 FUTURE BACKGROUND 2033 TOTAL TRAFFIC VOLUMES

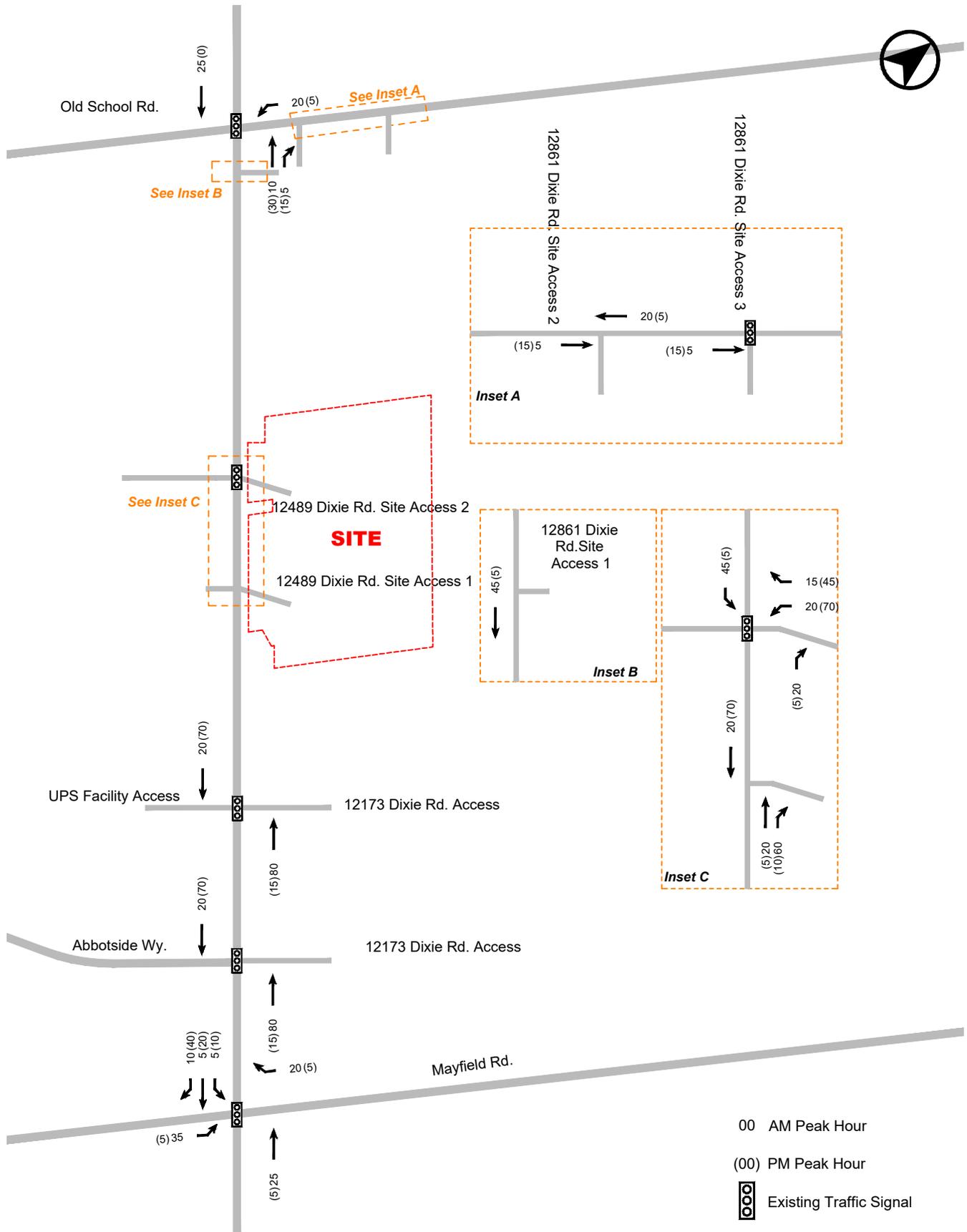


FIGURE 10 TOTAL LIGHT VEHICLE TRAFFIC VOLUMES

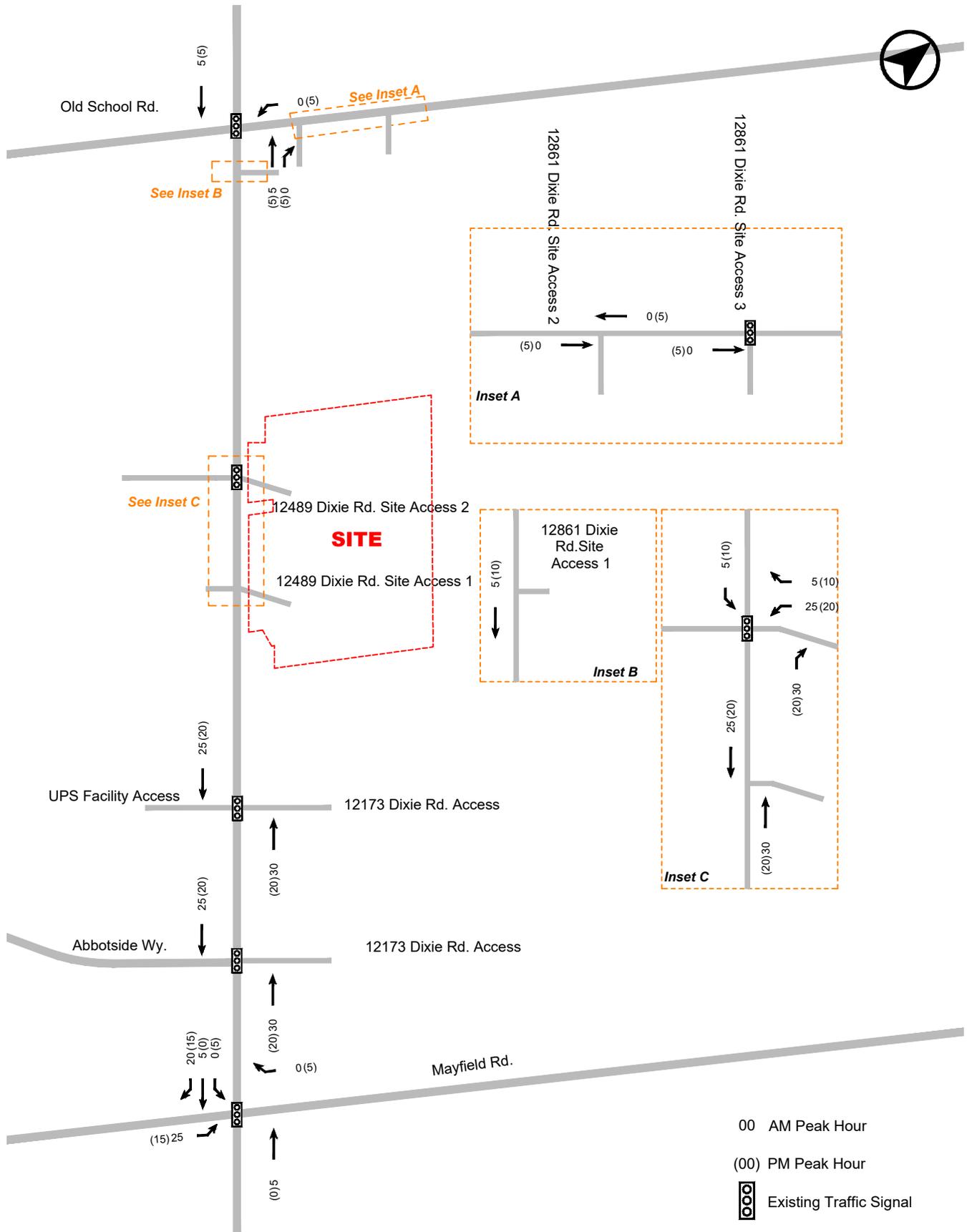


FIGURE 11 TOTAL HEAVY VEHICLE TRAFFIC VOLUMES

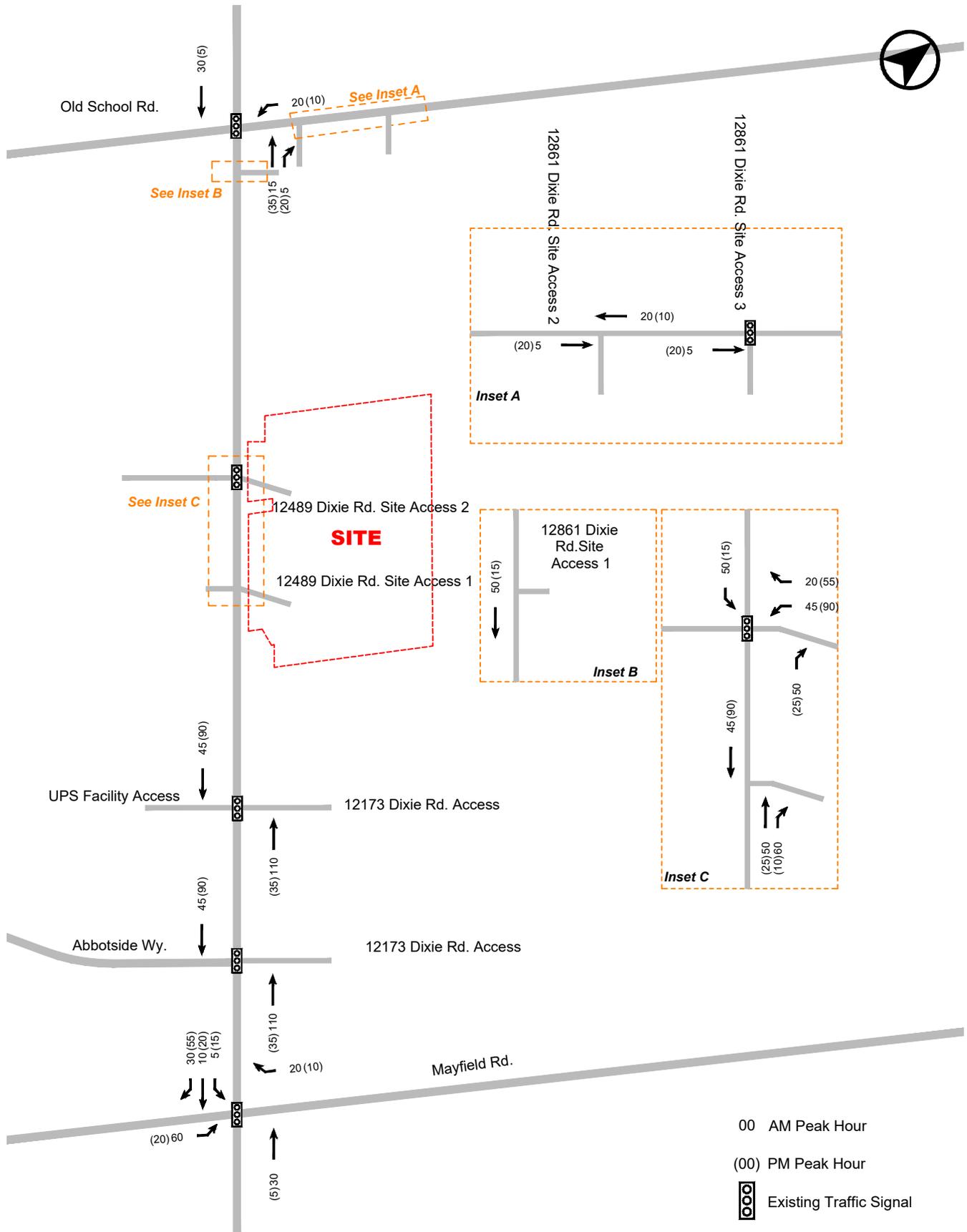


FIGURE 12 TOTAL SITE TRAFFIC VOLUMES

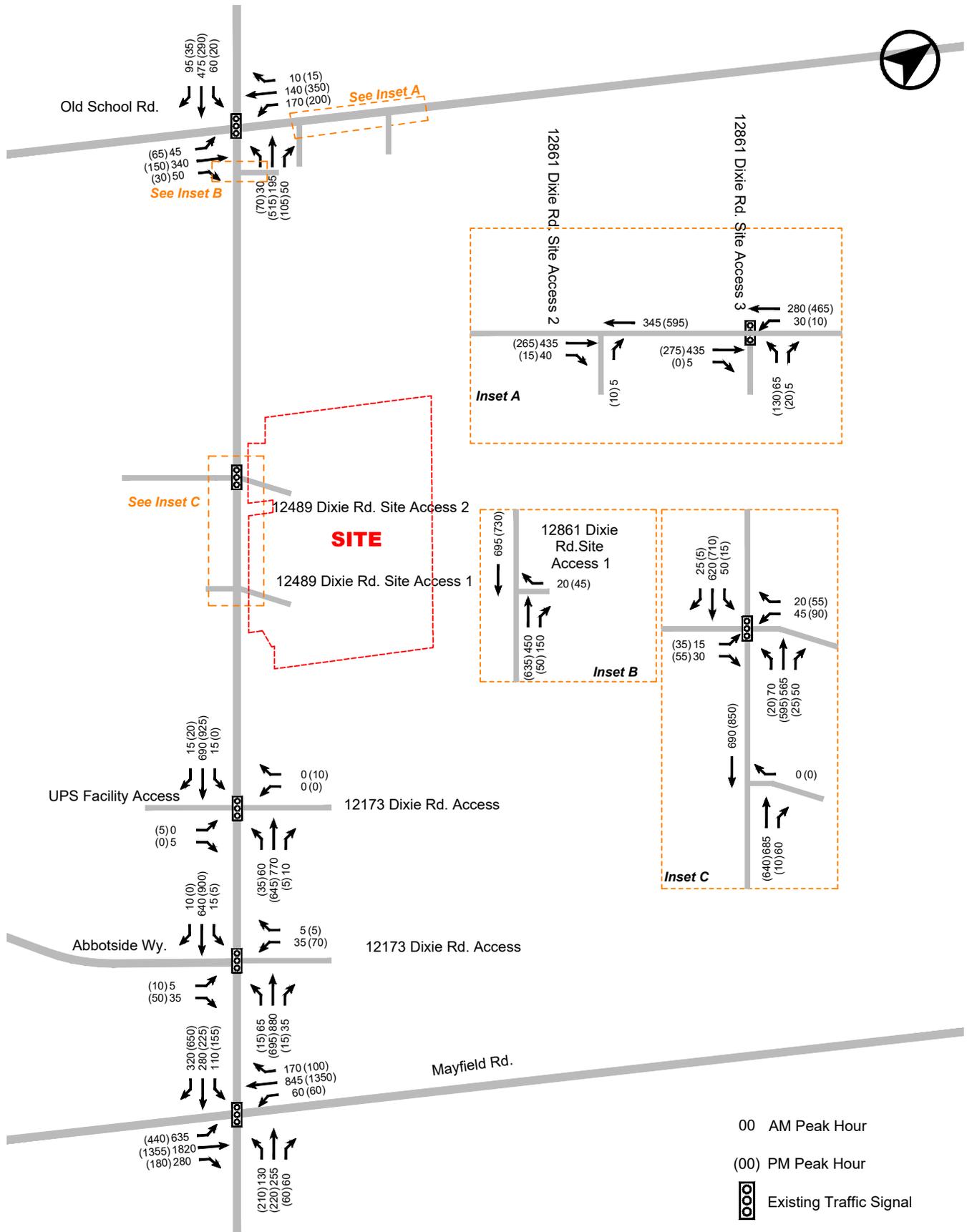


FIGURE 13 FUTURE TOTAL 2028 TOTAL TRAFFIC VOLUMES

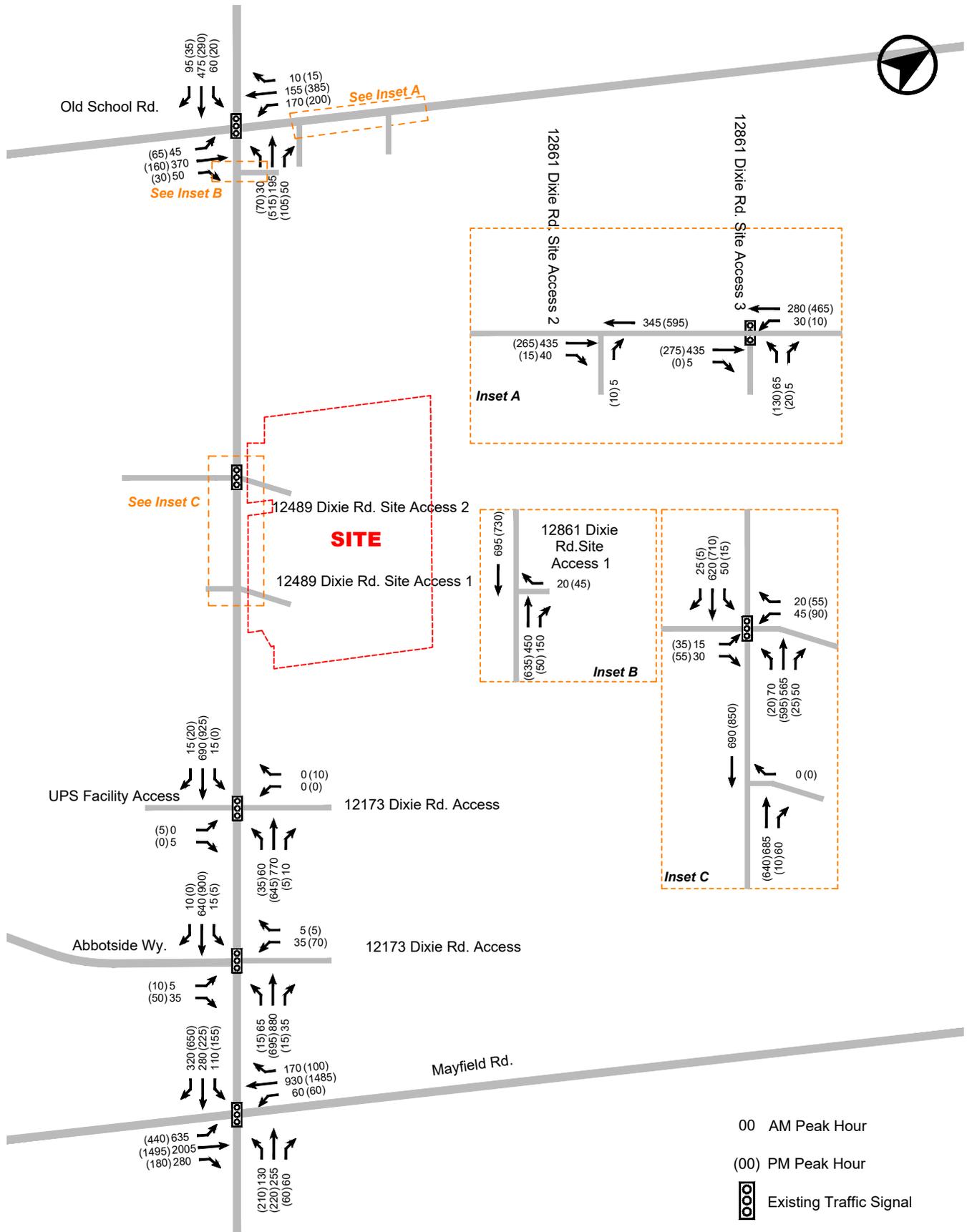


FIGURE 14 FUTURE TOTAL 2033 TOTAL TRAFFIC VOLUMES

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 15**.

Based on the Region of Peel's "Regional Guidelines for Using Synchro, Version 7.73 Rev 8" dated December 2010 and the City of Brampton's "Traffic Impact and Parking Study Terms of Reference" dated April 2019, 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 Brampton Roads.

Traffic Signal Timings

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

Under future background and future total conditions, traffic signal timings may 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 15: FUTURE (2028 AND 2033) 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 G**. 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:

- Dixie Road / Site Access 2 / 12892 Dixie Road South Signal Access

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 0.70 and 0.66, 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 0.69 and 0.88, in the weekday morning and afternoon peak hours, respectively. Under HCM 2000 methodology, the SBR movement is operating at critical capacity with an individual v/c ratio of 1.02.

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 0.68 and 0.96, in the weekday morning and afternoon peak hours, respectively. Under HCM 2000 methodology, the SBR movement is operating at critical capacity with an individual v/c ratio of 1.04.

Under future background (2033) conditions and a cycle length of 135 seconds, the intersection will operate with overall v/c ratios of 0.69 and 0.91, in the weekday morning and afternoon peak hours, respectively.

Under future total (2033) conditions and a cycle length of 135 seconds, the intersection sees major improvements when compared to the 120-second cycle length scenario. As the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.69 and 1.01 in the weekday morning and afternoon peak hours, respectively. Under HCM 2000 methodology, the SBR movement is operating at critical capacity with an individual v/c ratio of 1.04. While the SBR movement operates at capacity under all future PM peak hour scenarios, when analyzed with Simtraffic the movement operates with minimal delays, and with maximum queues that do not exceed the proposed storage length at the intersection. This could be attributed to the relatively high heavy vehicle percentage at the intersection, as area around Dixie Road north of Mayfield Road and South of Old School Road is proposed to function as an industrial corridor. Notwithstanding, These results are an improvement over the forecasted 2033 (with improvements) scenario capacity results outlined within the Dixie Road Environmental assessment, which forecast an overall v/c ratio of 1.39, with multiple individual movements above 1.0.

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	0.61 (0.60)	A (B)	0.79 (0.52)	D (D)	0.71 (0.49)	D (C)	0.79 (0.51)	E (D)	0.71 (0.48)	D (C)
EBT	0.54 (0.43)	B (B)	0.63 (0.47)	B (B)	0.63 (0.46)	B (B)	0.66 (0.50)	B (B)	0.69 (0.50)	B (B)
EBR	0.18 (0.12)	B (B)	0.18 (0.12)	B (A)	0.18 (0.12)	B (A)	0.18 (0.12)	B (A)	0.18 (0.12)	B (A)
WBL	0.31 (0.19)	B (B)	0.41 (0.29)	C (C)	0.42 (0.29)	C (C)	0.41 (0.29)	B (C)	0.45 (0.32)	C (C)
WBTR	0.33 (0.55)	B (C)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
WBT	-- (--)	-- (--)	0.48 (0.73)	C (D)	0.59 (0.83)	D (D)	0.44 (0.78)	C (D)	0.67 (0.94)	D (E)
WBR	-- (--)	-- (--)	0.11 (0.07)	C (C)	0.12 (0.10)	C (C)	0.08 (0.07)	C (C)	0.12 (0.08)	C (C)
NBL	0.96 (0.78)	F (E)	0.56 (0.80)	E (E)	0.53 (0.87)	E (F)	0.58 (0.86)	E (F)	0.59 (0.95)	E (F)
NBT	0.36 (0.47)	D (D)	0.55 (0.53)	E (E)	0.62 (0.55)	E (E)	0.46 (0.56)	E (E)	0.62 (0.55)	E (E)
NBR	0.04 (0.05)	D (D)	0.05 (0.05)	D (D)	0.05 (0.05)	D (D)	0.05 (0.05)	D (D)	0.05 (0.05)	D (D)
SBL	0.35 (0.30)	D (D)	0.53 (0.71)	D (E)	0.52 (0.78)	D (E)	0.47 (0.69)	D (E)	0.53 (0.83)	D (E)
SBT	0.73 (0.26)	D (D)	0.67 (0.59)	E (E)	0.67 (0.62)	E (E)	0.62 (0.59)	E (E)	0.63 (0.62)	E (E)
SBR	0.18 (0.62)	D (D)	0.19 (1.02)	D (E)	0.25 (1.04)	D (E)	0.18 (1.02)	E (E)	0.29 (1.04)	D (F)
Overall	0.70 (0.66)	C (C)	0.69 (0.88)	C (D)	0.68 (0.96)	C (D)	0.69 (0.91)	C (D)	0.69 (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 0.57 and 0.68, 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 0.78, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.44 and 0.68, 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 0.44 and 0.68, 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	-- (--)	-- (--)	0.10 (0.10)	D (C)						
EBR	-- (--)	-- (--)	0.03 (0.04)	D (C)						
WBL	-- (--)	-- (--)	0.56 (0.61)	E (D)						
WBTR	-- (--)	-- (--)	0.00 (0.00)	D (C)						
NBL	-- (--)	-- (--)	0.14 (0.08)	A (A)	0.14 (0.10)	A (A)	0.12 (0.08)	A (A)	0.14 (0.10)	A (A)
NBT	-- (--)	-- (--)	0.60 (0.62)	A (C)	0.73 (0.70)	B (C)	0.45 (0.62)	A (C)	0.75 (0.71)	B (C)
SBT	-- (--)	-- (--)	0.47 (0.74)	A (B)	0.56 (0.87)	A (B)	0.41 (0.74)	A (B)	0.57 (0.89)	A (C)
SBR	-- (--)	-- (--)	0.01 (--)	A (--)	0.01 (--)	A (--)	0.01 (--)	A (--)	0.01 (--)	A (--)
Overall	-- (--)	-- (--)	0.57 (0.68)	A (B)	0.69 (0.78)	B (C)	0.44 (0.68)	A (B)	0.71 (0.80)	B (C)

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, and therefore included within all future traffic scenarios.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.49 and 0.61, 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 0.61, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.38 and 0.62, 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 0.63 and 0.74, 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	-- (-)	-- (-)	-- (0.11)	-- (C)	-- (0.11)	-- (C)	-- (0.11)	-- (C)	-- (0.11)	-- (C)
EBR	-- (-)	-- (-)	0.01 (-)	D (-)	0.01 (-)	D (-)	0.01 (-)	D (-)	0.01 (-)	D (-)
WBR	-- (-)	-- (-)	-- (0.01)	-- (C)	-- (0.01)	-- (C)	-- (0.01)	-- (C)	-- (0.01)	-- (C)
NBTL	-- (-)	-- (-)	0.50 (0.54)	A (A)	0.62 (0.61)	A (A)	0.36 (0.54)	A (A)	0.64 (0.62)	A (A)
SBTR	-- (-)	-- (-)	0.43 (0.63)	A (A)	0.51 (0.74)	A (A)	0.39 (0.64)	A (A)	0.53 (0.77)	A (A)
Overall	-- (-)	-- (-)	0.49 (0.61)	A (A)	0.61 (0.72)	A (A)	0.38 (0.62)	A (A)	0.63 (0.74)	A (A)

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, and therefore included within all future traffic scenarios.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.45 and 0.47, 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 0.53 and 0.55, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.34 and 0.47, 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 0.54 and 0.57, 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	-- (--)	-- (--)	0.14 (0.36)	C (D)	0.15 (0.25)	C (D)	-- (0.36)	-- (D)	0.15 (0.24)	C (D)
EBTR	-- (--)	-- (--)	0.02 (0.03)	C (D)	0.03 (0.04)	C (D)	-- (0.03)	-- (D)	0.03 (0.04)	C (D)
WBL	-- (--)	-- (--)	-- (--)	-- (--)	0.53 (0.68)	D (D)	-- (--)	-- (--)	0.54 (0.70)	D (E)
WBTR	-- (--)	-- (--)	-- (--)	-- (--)	0.02 (0.04)	C (D)	-- (--)	-- (--)	0.02 (0.04)	C (D)
NBL	-- (--)	-- (--)	0.12 (0.03)	A (A)	0.17 (0.06)	A (A)	-- (0.03)	-- (A)	0.17 (0.06)	A (A)
NBT	-- (--)	-- (--)	0.42 (0.42)	A (A)	0.47 (0.47)	A (A)	0.37 (0.42)	A (A)	0.49 (0.48)	A (A)
NBR	-- (--)	-- (--)	-- (--)	-- (--)	0.05 (0.03)	A (A)	-- (--)	-- (--)	0.05 (0.03)	A (A)
SBL	-- (--)	-- (--)	-- (--)	-- (--)	0.09 (0.04)	A (A)	-- (--)	-- (--)	0.10 (0.04)	A (A)
SBT	-- (--)	-- (--)	0.47 (0.47)	A (A)	0.53 (0.53)	A (A)	0.49 (0.47)	B (A)	0.54 (0.55)	A (A)
SBR	-- (--)	-- (--)	0.02 (0.00)	A (A)	0.02 (0.00)	A (A)	-- (0.00)	-- (A)	0.02 (0.00)	A (A)
Overall	-- (--)	-- (--)	0.45 (0.47)	A (A)	0.53 (0.55)	A (B)	0.34 (0.47)	B (A)	0.54 (0.57)	A (B)

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, and therefore included within all future traffic scenarios.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.18 and 0.26, 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 0.21 and 0.29, 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 0.26, 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 0.19 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	-- (--)	-- (--)	0.59 (0.32)	C (B)	0.59 (0.34)	C (B)	0.59 (0.33)	C (B)	0.61 (0.36)	C (B)
EBR	-- (--)	-- (--)	0.00 (--)	B (--)	0.01 (--)	B (--)	-- (--)	-- (--)	0.00 (--)	B (--)
WBTL	-- (--)	-- (--)	0.48 (0.60)	C (C)	0.51 (0.61)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)
WBL	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (0.04)	-- (C)	0.18 (0.04)	C (C)
WBT	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	0.36 (0.59)	C (C)	0.39 (0.60)	C (C)
NBLR			0.06 (0.14)	A (A)	0.10 (0.18)	A (A)	-- (0.14)	-- (A)	0.06 (0.14)	A (A)
Overall	-- (--)	-- (--)	0.18 (0.26)	C (B)	0.21 (0.29)	C (B)	0.14 (0.26)	C (B)	0.19 (0.26)	C (B)

8.4.1.6 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, and therefore included within all future traffic scenarios.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.13 and 0.15, 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 0.21 and 0.29, 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 0.16, 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 0.19 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 18 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	-- (--)	-- (--)	0.59 (0.32)	C (B)	0.59 (0.34)	C (B)	0.59 (0.33)	C (B)	0.61 (0.36)	C (B)
EBR	-- (--)	-- (--)	0.00 (--)	B (--)	0.01 (--)	B (--)	-- (--)	-- (--)	0.00 (--)	B (--)
WBTL	-- (--)	-- (--)	0.48 (0.60)	C (C)	0.51 (0.61)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)
WBL	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (0.04)	-- (C)	0.18 (0.04)	C (C)
WBT	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	0.36 (0.59)	C (C)	0.39 (0.60)	C (C)
NBLR			0.06 (0.14)	A (A)	0.10 (0.18)	A (A)	-- (0.14)	-- (A)	0.06 (0.14)	A (A)
Overall	-- (--)	-- (--)	0.18 (0.26)	C (B)	0.21 (0.29)	C (B)	0.14 (0.26)	C (B)	0.19 (0.26)	C (B)

8.4.1.7 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 0.51 and 0.47, in the weekday morning and afternoon peak hours, respectively.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.56 and 0.55, 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 0.64 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 0.41 and 0.51, 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 0.61 and 0.67, 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 19 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 (0.15)	C (B)	0.14 (0.33)	C (C)	0.12 (0.32)	B (B)	0.21 (0.27)	C (C)	0.13 (0.22)	B (B)
EBTR	0.72 (0.31)	C (B)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
EBT	-- (--)	-- (--)	0.69 (0.30)	C (B)	0.60 (0.30)	C (B)	0.57 (0.19)	C (B)	0.36 (0.15)	B (B)
EBR	-- (--)	-- (--)	0.04 (0.03)	B (B)	0.04 (0.03)	B (B)	0.04 (0.03)	C (B)	0.04 (0.03)	B (B)
WBL	0.16 (0.16)	C (B)	0.80 (0.57)	E (D)	0.86 (0.71)	E (D)	0.43 (0.64)	D (D)	0.80 (0.84)	D (D)
WBTR	0.30 (0.69)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
WBT	-- (--)	-- (--)	0.30 (0.69)	C (D)	0.26 (0.67)	C (D)	0.25 (0.44)	D (D)	0.16 (0.35)	C (C)
WBR	-- (--)	-- (--)	0.01 (0.01)	B (B)	0.01 (0.01)	B (B)	0.01 (0.01)	C (B)	0.01 (0.01)	B (B)
NBL	0.02 (0.04)	A (A)	0.11 (0.18)	A (A)	0.13 (0.19)	A (A)	0.08 (0.18)	A (A)	0.12 (0.20)	A (B)
NBTR	0.17 (0.36)	A (A)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
NBT	-- (--)	-- (--)	0.18 (0.47)	A (B)	0.23 (0.53)	A (B)	0.14 (0.45)	A (A)	0.22 (0.57)	A (B)
NBR	-- (--)	-- (--)	0.03 (0.06)	A (A)	0.04 (0.07)	A (A)	0.02 (0.06)	A (A)	0.04 (0.07)	A (A)
SBL	0.03 (0.01)	A (A)	0.09 (0.05)	A (A)	0.11 (0.08)	A (A)	0.03 (0.05)	A (A)	0.13 (0.18)	A (B)
SBTR	0.41 (0.31)	B (A)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
SBT	-- (--)	-- (--)	0.44 (0.31)	B (A)	0.52 (0.33)	B (A)	0.37 (0.29)	A (A)	0.51 (0.35)	B (B)
SBR	-- (--)	-- (--)	0.06 (0.02)	A (A)						
Overall	0.51 (0.47)	B (B)	0.56 (0.55)	B (C)	0.64 (0.59)	B (C)	0.41 (0.51)	B (C)	0.61 (0.67)	B (B)

8.4.2 Unsignalized Intersections

Unsignalized intersection capacity results have been summarized in **Table 20**. The area unsignalized intersections all operate at an LOS of D or better under all future total scenarios. Therefore, site traffic can be readily accommodated at the network unsignalized intersections.

TABLE 20 UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS RESULTS

Key Movements	2028 Horizon Year		2033 Horizon Year	
	Future Total		Future Total	
	LOS	Delay (s)	LOS	Delay (s)
Dixie Road /12861 Dixie Road Site Access 1				
WBR	B (B)	11.6 (13.6)	B (B)	11.1 (13.2)
Old School Road / 12861 Dixie Road Site Access 2				
NBR	A (A)	9.6 (9.1)	A (A)	8.6 (8.9)

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.

Due to the prevalence of medians along the majority of the corridors adjacent to the Site, queueing issues for through and left-turning traffic are expected to be minimal. Similarly, no queueing issues are expected at any of the intersections due to right-turning traffic, after the redevelopment of the Site. **Table 21** summarizes the 95th percentile reported queueing lengths for key movements in both the weekday morning and weekday afternoon peak hours. Full Synchro and SimTraffic results are shown in **Appendix G**.

TABLE 21 95TH PERCENTILE SIMTRAFFIC QUEUE LENGTHS

Movement	95 th Percentile Queue Lengths (metres)				
	Existing	2028 Future Background	2028 Future Total	2033 Future Background	2033 Future Total
Dixie Road / Mayfield Road					
EBL	162.4 (75.7)	162.5 (162.4)	162.5 (162.5)	217.4 (217.5)	217.5 (217.4)
EBT	169.8 (83)	1005.2 (874)	1005.2 (1005.2)	934.7 (661.8)	1006.1 (1002.8)
EBR	49.5 (23.2)	122.3 (28.5)	53.8 (25)	0 (0)	0 (9.5)
WBL	27.7 (14.9)	30.1 (24.3)	29.9 (20.3)	18.2 (187.4)	28 (168.8)
WBT	92 (106.8)	118.1 (141.8)	114.5 (196.4)	139 (298.1)	170.8 (252.5)
WBR	72.5 (72.5)	72.5 (72.5)	60.1 (72.5)	16 (157.5)	74.1 (56)
NBL	63.2 (69.9)	38.4 (280.7)	70.7 (48.8)	49.6 (120.5)	43.8 (102.2)
NBT	41.2 (48.6)	40.9 (72.5)	51.7 (43.1)	40.5 (37.1)	85 (32.9)
NBR	27.5 (19.1)	30.7 (51.4)	22.4 (26.1)	25.9 (8.3)	72.5 (10.5)
SBL	33.9 (30.9)	57.1 (39)	64.3 (107.4)	44.3 (89)	82.7 (121)
SBT	79.8 (32.7)	40.8 (30)	52.3 (350.6)	37.3 (35.9)	66 (48.8)
SBR	38.3 (43.9)	42.9 (85.8)	70.3 (177.5)	25.3 (131.8)	50.1 (119.9)
Dixie Road / 12489 Dixie Road Site Access 2 / 12892 Dixie Road South Signal Access					
EBL	-- (--)	12.5 (18.7)	12.2 (19.2)	0 (17)	22.2 (18.7)
WBL	-- (--)	0 (0)	22.3 (23.2)	0 (0)	23.6 (22.4)
NBL	-- (--)	15.7 (0)	24 (14.7)	0 (7.4)	35.8 (13)
NBT	-- (--)	33.6 (0)	35.4 (51.9)	58 (30)	70.2 (42.6)

Movement	95 th Percentile Queue Lengths (metres)				
	Existing	2028 Future Background	2028 Future Total	2033 Future Background	2033 Future Total
NBR	-- (--)	0 (10.9)	11.7 (6.5)	0 (0)	20 (10)
SBL	-- (--)	0 (35.4)	19.7 (15.6)	0 (0)	21.8 (10.5)
SBT	-- (--)	14 (0)	42.5 (72)	67.9 (52.5)	78.3 (59.8)
SBR	-- (--)	0 (0)	2.9 (0)	0 (0)	15.2 (2.4)
EBLR	-- (--)	13 (45.3)	-- (--)	0 (17)	-- (--)
Dixie Road / Old School Road					
EBL	16.2 (75.7)	23.7 (20.8)	18.3 (28.3)	18.2 (19.8)	21.4 (28.2)
EBT	0 (83)	66.1 (32.3)	71.1 (30.8)	48.2 (26.2)	45.3 (33)
EBR	0 (23.2)	20.8 (33.1)	18.2 (18.5)	23.2 (21.4)	21.3 (23.8)
WBL	20.5 (14.9)	15.3 (16.3)	30.5 (43.2)	0 (37.2)	43.1 (43.2)
WBT	0 (106.8)	23 (43.2)	19.7 (58.6)	10.5 (38.5)	48.2 (76.2)
WBTR	29.1 (72.5)	15.5 (43.2)	5.3 (28.2)	8.8 (11.2)	14.3 (14.1)
NBL	14.6 (69.9)	18.7 (55.2)	23.4 (34.9)	31 (29.9)	25.9 (40.7)
NBT	0 (48.6)	30.8 (17)	39.2 (66)	32.9 (73.1)	44.7 (67.7)
NBR	0 (19.1)	11.6 (45.1)	10 (18.6)	6.7 (10.3)	13.9 (17.8)
SBL	9.3 (30.9)	20 (63.6)	17.8 (19.5)	9.6 (8.6)	28.1 (38.7)
SBT	0 (32.7)	52.8 (14.5)	82.5 (49.5)	45.3 (53.9)	91 (67.3)
SBR	0 (43.9)	15.6 (8.6)	16.6 (7.4)	10.7 (16.5)	14.6 (7.5)
Old School Road / Site Access 3					
EBL	-- (--)	0 (0)	0 (0)	0 (0)	0 (0)
EBT	-- (--)	29.2 (21.9)	35.5 (25.2)	35.1 (21.4)	46.8 (28.6)
EBR	-- (--)	19.4 (0)	6.6 (0)	0 (0)	8.6 (0)
WBL	-- (--)	0 (0)	0 (0)	0 (9.2)	0 (9.2)
WBT	-- (--)	173.1 (0)	177.8 (52.1)	179.4 (55.1)	177.8 (59.2)
NBL	-- (--)	0 (41.7)	0 (0)	0 (0)	0 (0)
NBLR	-- (--)	18.1 (0)	34.8 (58.6)	(25.8)	24.9 (37.7)

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 D**.

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 June 1st, 2022 at the Dixie Road / Mayfield Road, 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:

- Dixie Road / Site Access 2 / 12892 Dixie Road South Signal Access

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

9.1 SIGNAL WARRANT RESULTS

The three intersections within the network have 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 2028 horizon year is summarized in **Table 22**. As the volumes remain unchanged between the 2028 and 2033 horizon years along Dixie Road north of Mayfield Road, only 2028 scenarios were analyzed for the accesses along Dixie Road. As the South Site Access signal is warranted under 2028 volumes, no analysis was conducted for the 2033 horizon.

TABLE 22 FREE FLOW SIGNAL WARRANT ANALYSIS – 2028 FUTURE TOTAL TRAFFIC

Intersection	Justification 1 – Min. Vehicular Volume		Justification 2 – Delay to Cross Traffic		Justification 3 – Combination		Justification 7 – Projected Volumes			Justified?
Dixie Road / Site Access 2 / 12892 Dixie Road South Signal Access	1A	92%	2A	90%	1	73%	1	97%	11%	NO
	1B	73%	2B	94%	2	90%	2	94%	87%	
	Not Warranted		Not Warranted		Not Warranted		Not Warranted			

9.2 SIGNAL WARRANT ANALYSIS SUMMARY

The signal warrant analysis indicates that a traffic signal along Dixie Road / Site Access 2 / 12892 Dixie Road South Signal Access is not warranted under future total conditions by the 2033 horizon year according to the free flow warrant procedure. Signalization at Dixie Road / Site Access 2 / 12892 Dixie Road South Signal Access is not required as per the warrant criteria, although is close to being warranted under Justification 2. However, a traffic signal is desirable to improve the operation of multiple conditions within the network.

As the area network is proposed to be an industrial corridor, the area 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 these intersections 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 Dixie 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 Dixie Road.

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

In the 2033 scenario (after overall development has been fully constructed), the Dixie Road / Site Access 2 / 12892 Dixie Road South Signal Access intersection has a peak hour volume up to 50 vehicles per hour completing a left turn from the north on Dixie Road into the Site and 25 to 50 inbound vehicles completing a right turn into the Site from the south on Dixie Road during the morning and afternoon peak hours, respectively.

Based on the foregoing, a left lane warrant analysis was undertaken to confirm a left turn lane for the 2033 horizon scenario as per MTO Geometric Design Standards for Ontario Highways. The left turn warrant indicates that the left turn is warranted for the weekday morning and afternoon peak hours at the Old School Road / Site Access 3 intersection. It is recommended that a minimum storage length of 25 metres be provided.

Based on the foregoing, a left lane warrant analysis was undertaken to confirm a left turn lane for the base scenario as per MTO Geometric Design Standards for Ontario Highways. These volumes represent such a low percentage of the traffic stream that a southbound left turn at Dixie Road is not warranted or required under future background or future total traffic volumes. Notwithstanding, the Dixie Road ESR accounts for the potential inclusion of left turn turning lanes as the necessary width is available within the designs. It is therefore recommended that a left turn lane be introduced into the future road network to improve the delays for all horizon years. Left turn lane warrant sheets are attached in **Appendix E**.

11.0 TRANSPORTATION DEMAND MANAGEMENT (TDM)

11.1 TDM PLAN STRATEGIES

11.1.1 Overview

Based upon the Site context and proposed land uses, recommended TDM strategies are summarized in Table 23.

TABLE 23 RECOMMENDED SITE TDM MEASURES

Measure	Description	Cost Estimate	Implementation Strategy
Carpool	Encourage tenants to create and promote internal carpool program	TBD	Owner to encourage / incentivize 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 / incentivize tenant upon occupancy
	Encourage tenants to run carpool promotional campaigns	TBD	Owner to encourage / incentivize tenant upon occupancy
	Include designated signed carpool spots within the Site parking facilities.	TBD	Owner to encourage / incentivize 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 Dixie 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

11.1.2 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 / incentivized 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 / incentivized 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 / incentivized 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.

11.1.3 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.
- **Signalization of high-activity intersections:** Signalization of several site access intersections within proximity of transit stops to increase pedestrian safety and connectivity to transit stops.
- **Signalization of high activity intersections:** Signalization of several site access intersections along Dixie Road and Mayfield Road proximity of transit stops to increase cycling safety and connectivity to the multi-use paths on Dixie Road and Mayfield Road.

11.1.4 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 three new industrial buildings with an overall floor area of 136,576 square metres.
2. A total of 1,606 car parking spaces (including 40 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 both 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 1,032 parking spaces.
6. The proposed provision of 1,606 car parking spaces exceeds the requirements of the Town of Caledon Zoning By-Law 2006-50.
7. A total of 40 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 22 loading spaces.
10. A total of 252 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 230 and 205 two-way vehicle trips during the AM and PM peak hours respectively.

Traffic Operations

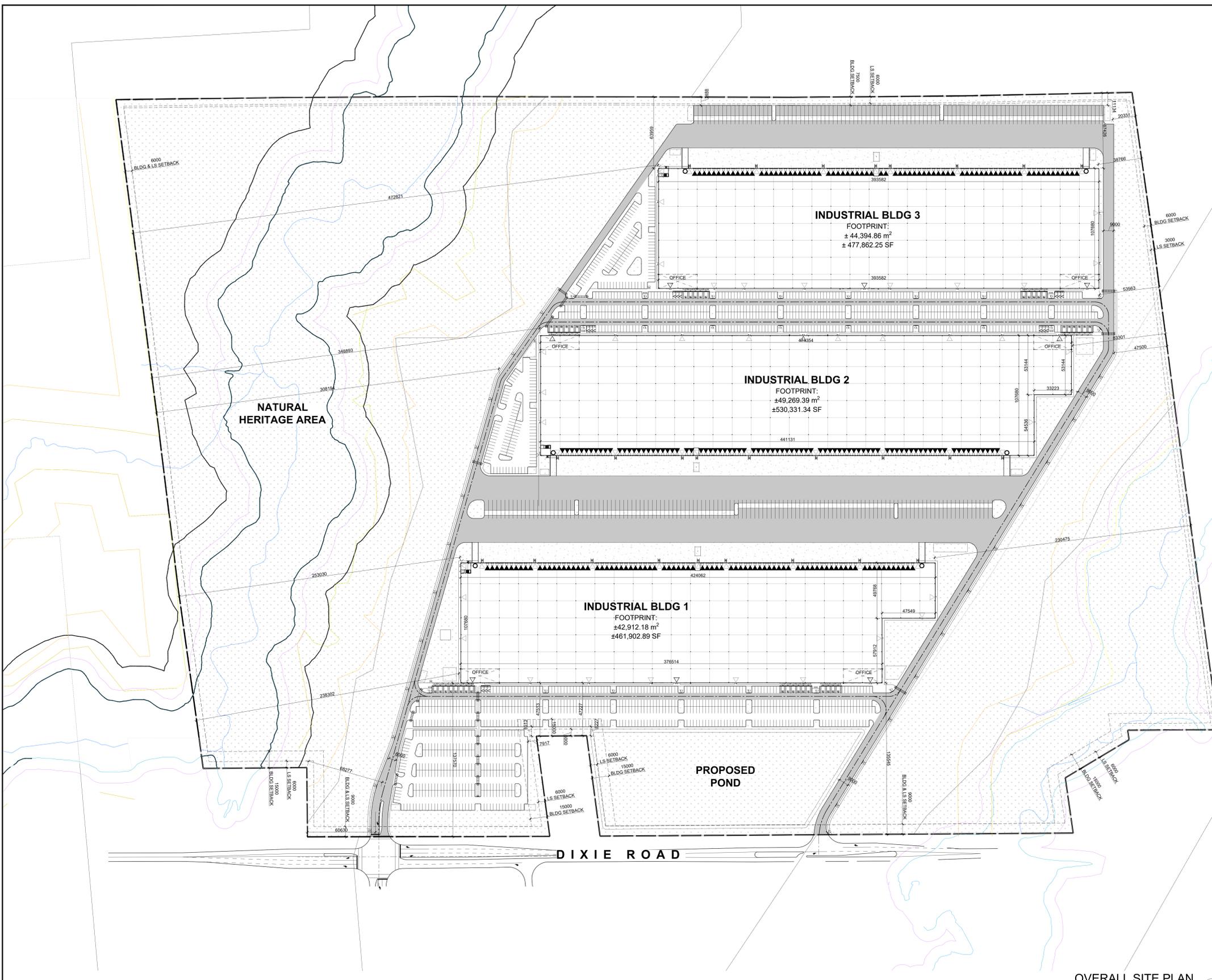
12. Under existing conditions, all area signalized intersections currently operate acceptably during the weekday morning and afternoon peak hours.
13. With the addition of background traffic, under the future horizon years of 2028 and 2033, the area signalized intersections continue to operate acceptably 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, except the Dixie Road / Mayfield Road intersection. The Dixie Road / Mayfield Road intersection is projected to approach capacity in all future horizon year scenarios. Under HCM 2000 methodology, the SBR movement is operating at critical capacity with an individual v/c ratio of 1.04. While the SBR movement operates at capacity under all future PM peak hour scenarios, when analyzed with Simtraffic the movement operates with minimal delays, and with maximum queues that do not exceed the proposed storage length at the intersection.
15. The analysis results are an improvement over the forecasted 2033 (with improvements) scenario capacity results outlined within the Dixie 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. No predicted queueing issues are expected at the area site intersections as a result of the Site redevelopment, due to the overall net decrease of site trips, after the redevelopment of the Site.
17. It is recommended that the traffic signals at the Dixie Road / Site Access 2 / 12892 Dixie Road South Signal Access 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 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;
 - 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		AT	
Existing Zoning Category	MP	Group #2 (B,C) A-3 (1,2,11)	
Proposed Zoning Category	MP	Group #2 (B,C) A-3 (1,2,11)	
Building Classification		3,445,017 SF	320,052.83m ²
NET DEVELOPABLE AREA		6,257,235 SF	581,316.71m ²
GROSS SITE AREA			
Zone Permitted Use (Town of Caledon Zoning By-law 2006-50)	Industrial		
Proposed Use	Industrial		
Section 8.3 - Zoning Standards - MP Zone			
BUILDING AREA:			
BUILDING 1	461,902 SF	42,912.18 m ²	
Warehouse Area	452,438 SF	42,012.18 m ²	
Office Area	9,464 SF	879.24 m ²	
BUILDING 2	530,331 SF	49,269.39 m ²	
Warehouse Area	520,992 SF	48,407.16 m ²	
Office Area	9,339 SF	867.64 m ²	
BUILDING 3	455,214 SF	42,383.74 m ²	
Warehouse Area	446,750 SF	41,504.50 m ²	
Office Area	8,464 SF	779.24 m ²	
TOTAL BUILDING AREA	1,448,447.82 m²	134,565.32 m²	
NET FLOOR AREA:			
BUILDING 1	460,852 SF	42,814.63 m ²	
Floor Area	441,802 SF	42,012.18 m ²	
Building Area under services, M&E rooms etc.	1,050 SF	97.55 m ²	
BUILDING 2	529,281 SF	49,171.85 m ²	
Floor Area	520,331 SF	49,269.39 m ²	
Building Area under services, M&E rooms etc.	1,050 SF	97.55 m ²	
BUILDING 3	455,184 SF	42,286.19 m ²	
Floor Area	456,214 SF	42,383.74 m ²	
Building Area under services, M&E rooms etc.	1,050 SF	97.55 m ²	
TOTAL NET AREA	1,445,297.62 m²	134,272.67 m²	
Requirements			
Min. Lot Area	Proposed: 581,316.71 m ²	Required: 925,000 m ²	
Net Floor Area	Proposed: 134,272.67 m ²	Required: 134,272.67 m ²	
Gross Floor Area	Proposed: 134,565.32 m ²	Required: -	
Building Area	Proposed: 23.15%	Required: 50.00%	
Min. Lot Frontage (m)	Proposed: 107.890	Required: 30.00	
Min. Front Yard Building Setback (m)	Proposed: 9.00	Required: 9.00	
Min. East Side Yard Building Setback (m)	Proposed: 7.50	Required: 7.50	
Min. Int. Side Yard Building Setback (m)	Proposed: 6.00	Required: 6.00	
Min. Int. Side Yard Building Setback (m) - Abutting Residential	Proposed: 15.00	Required: 15.00	
Min. Rear Yard Building Setback (m)	Proposed: 7.50	Required: 7.50	
Lot Coverage	Proposed: 23.15%	Required: 50.00%	
Maximum Building Height (m) - Building 1	Proposed: 16.01	Required: 18.00	
Maximum Building Height (m) - Building 2	Proposed: 16.01	Required: 18.00	
Min. Landscape Area (% of Lot Area)	Proposed: 10.00%	Required: 10.00%	
Min. Landscape Area (30)	Proposed: 58,537.67m ²	Required: -	
Min. Front Landscape Buffer (m)	Proposed: 6.00	Required: 6.00	
Min. East Side Landscape Buffer (m)	Proposed: 6.00	Required: 6.00	
Min. Int. Side Landscape Buffer (m)	Proposed: 6.00	Required: 6.00	
Min. Rear Landscape Buffer (m)	Proposed: 6.00	Required: 6.00	
Min. Landscape Buffer (m) - Abutting EPA > 6m width	Proposed: -	Required: -	
Parking Calculations			
BUILDING 1	Proposed: 795	Required: 333	
BUILDING 2	Proposed: 413	Required: 370	
BUILDING 3	Proposed: 398	Required: 329	
Total no. of Parking Spaces	1606	1032	
Accessible Parking Spaces			
BUILDING 1	Proposed: 18	Required: 9	
BUILDING 2	Proposed: 12	Required: 9	
BUILDING 3	Proposed: 10	Required: 9	
Total no. of Accessible Parking Spaces	40	27	
EV Parking Spaces			
BUILDING 1	Proposed: 20	Required: 14	
BUILDING 2	Proposed: 20	Required: 14	
BUILDING 3	Proposed: 24	Required: -	
Total no. of Trailer Parking Spaces	219	-	
Loading Space Calculations			
BUILDING 1	Proposed: 85	Required: 7	
BUILDING 2	Proposed: 87	Required: 7	
BUILDING 3	Proposed: 77	Required: 7	
Total no. of Loading Spaces	249	21	
Min. Loading Space Dimensions	Proposed: 3.5m(W) X 14.0m(L) X 3.5m(H)	Required: -	

OVERALL SITE PLAN
SCALE: 1:1200

- GENERAL NOTES**
- PROPERTY LINE
 - 2750x6000 PARKING STALL, PAINTED PARKING STRIP 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 STRIP PER CITY STANDARDS, TO HAVE (2) TYPE B (2750x6000)(2) TYPE A STALLS (3400x6000) OR ONE OF EACH WITH 1500mm PAH STRIP BETWEEN - REFER TO TOWN OF CALEDON'S ACCESSIBLE PARKING STANDARDS.
 - 1500mm WIDE CURB TYPICAL
 - MIN. 1500mm WIDE SIDEWALK TYPICAL UN.O
 - TRAILER PARKING STALL - 12'-0" X 55'-0"
 - ACCESSIBLE CURB RAMP AS PER DETAIL
 - FIRE DEPARTMENT CONNECTION / SIAMESS
 - PROPOSED LOCATION OF TRANSFORMER G/W CONCRETE PAD
 - 1.8m HIGH BLACK VINYL CHAIN LINK FENCING OR APPROVED EQUIV. 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.
 - EXTENSION 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 STOP SIGN LOCATION
 - 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
 - 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
 - SCREEN WALL
 - PROPOSED PYLON SIGNAGE
 - DRIVE-IN RAMP WITH GALVANIZED QUADRAIL 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



WARE MALCOLM
ARCHITECTURE - CIVIL ENGINEERING - BUILDING MEASUREMENT
6250 Highway 7, Suite 300
Vaughan, ON P 905.760.1221

QUADREAL PROPERTY GROUP
TOWN OF CALEDON DIXIE ROAD
12489 DIXIE ROAD
CALEDON, ONTARIO CANADA

OVERALL SITE PLAN
REVISIONS
DATE: 2023-12-01
ISSUED FOR REVIEW AND COORDINATION

PA/PM: AS
DRAWN BY: JS
JOB NO.: TOR22-011-00
SHEET: A100

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APPENDIX B: 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)

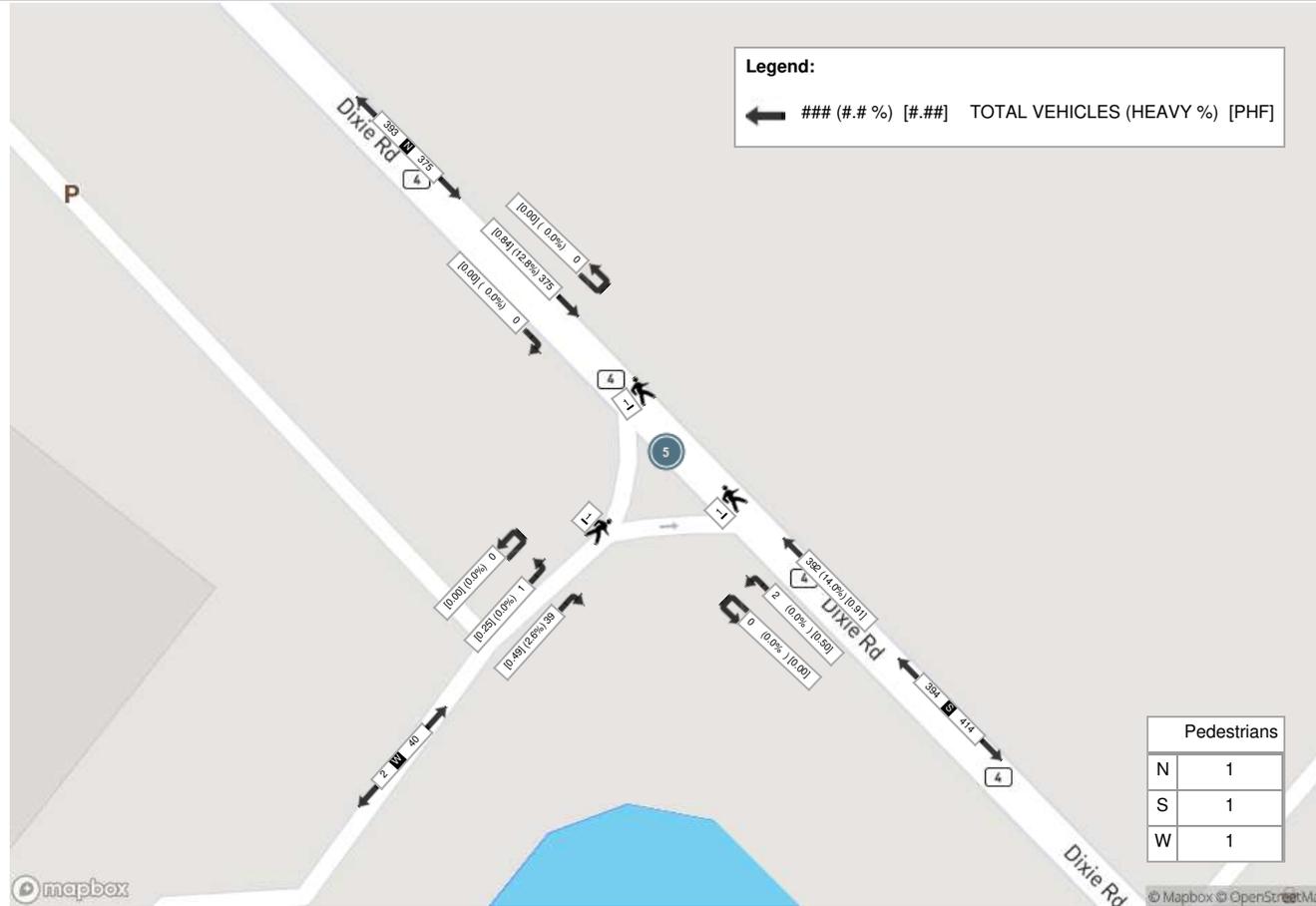
Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach 12424 DIXIE RD (UPS SOUTH ACCESS)					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
07:00:00	0	107	0	0	107	65	0	0	0	65	4	0	0	0	4	176
07:15:00	0	90	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: 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 INERSECTION (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)

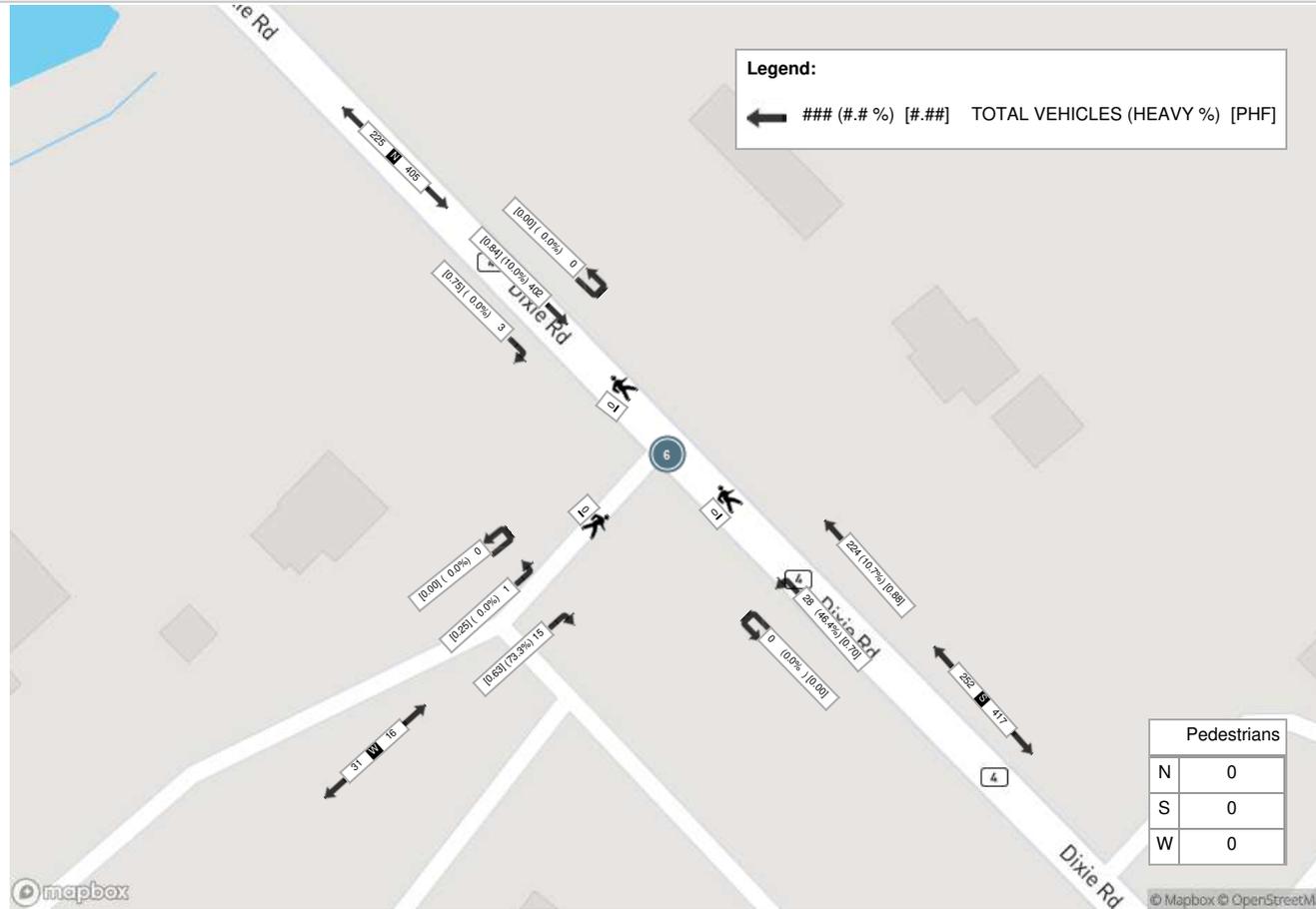
Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS MAIN INTERSECTION (12424 DIXIE RD)					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
07:00:00	1	101	0	0	102	57	6	0	0	63	6	1	0	0	7	172
07:15:00	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%	-	-



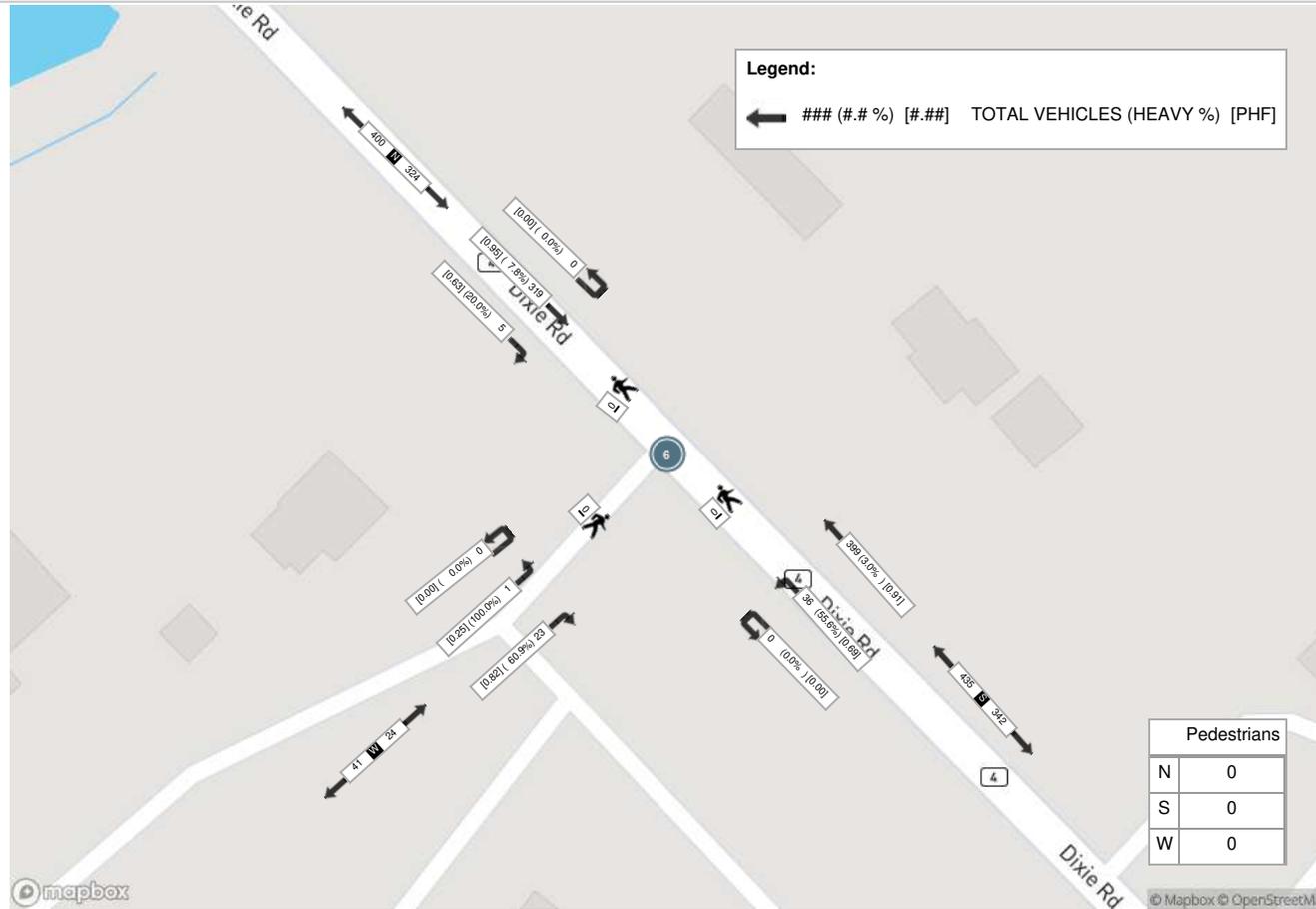
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS MAIN INERSECTION (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)

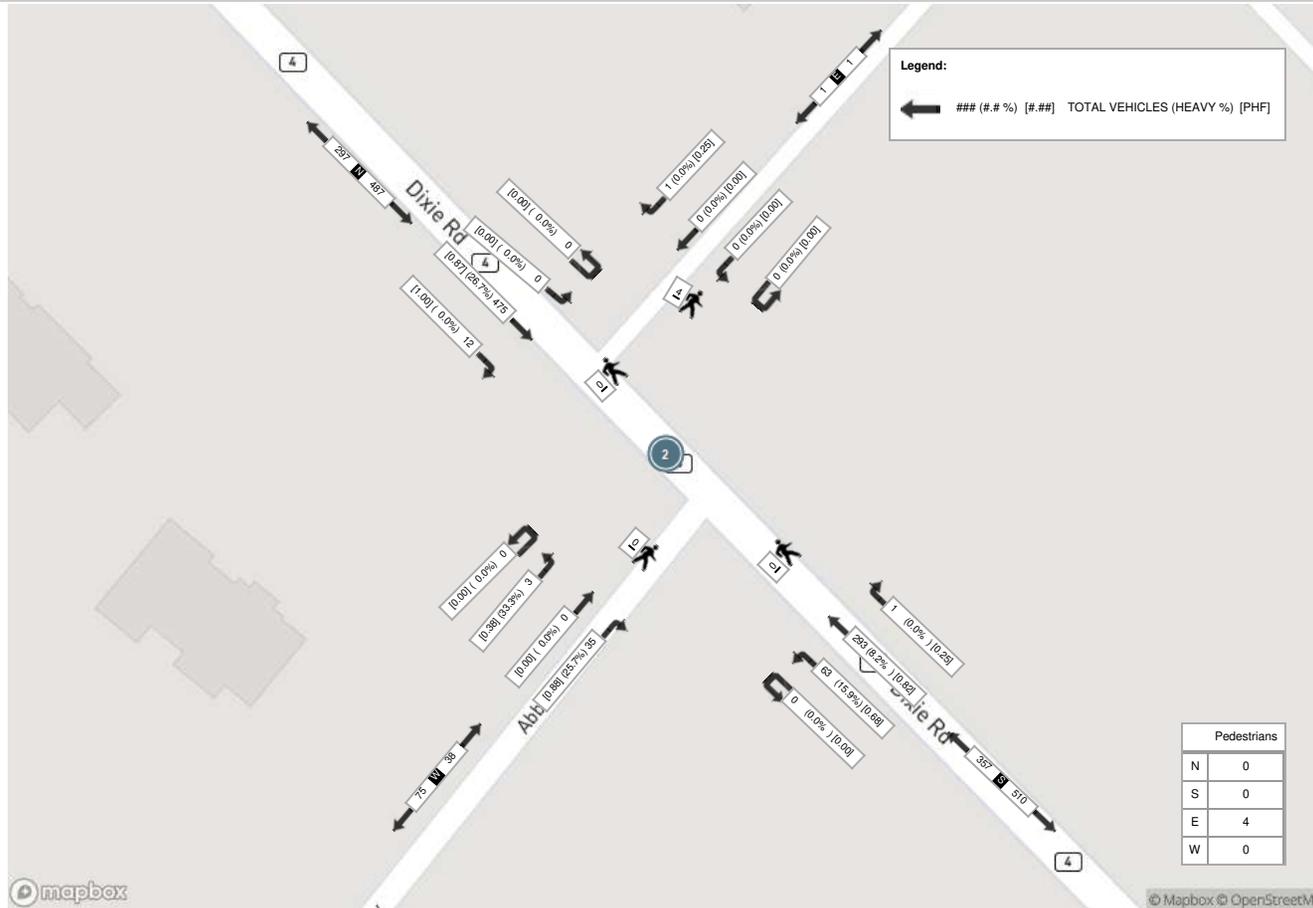
Start Time	N Approach DIXIE RD						E Approach SPOKANE ST						S Approach						W Approach						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	3	113	0	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%	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	0.25	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	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%	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	0	1	1	1	269	53	0	323	26	0	2	0	28	-	-	-
Lights %	100%	73.3%	0%	0%	73.9%	100%	0%	0%	0%	0%	100%	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	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%	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	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%	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	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%	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%	-	-	-



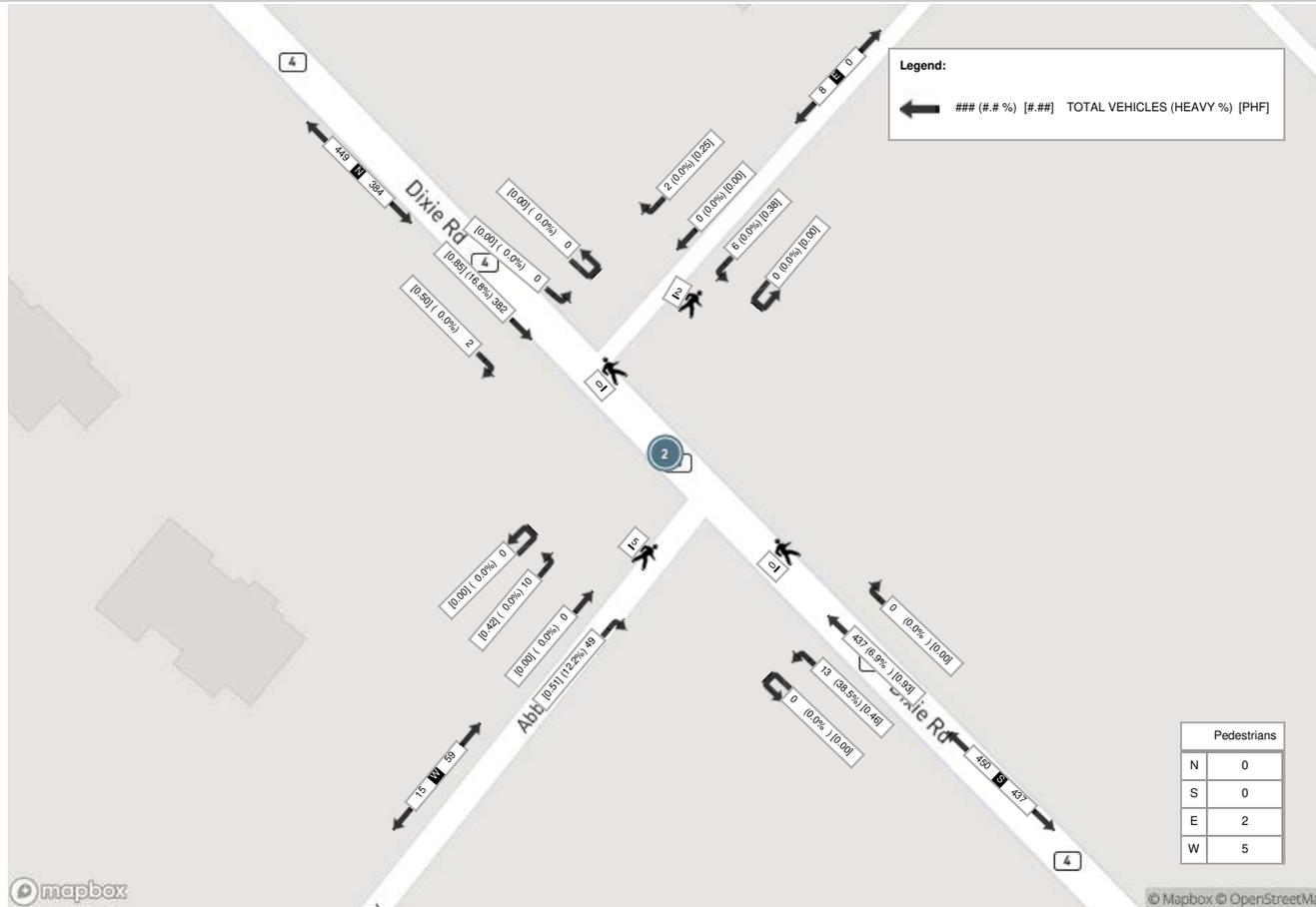
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

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)

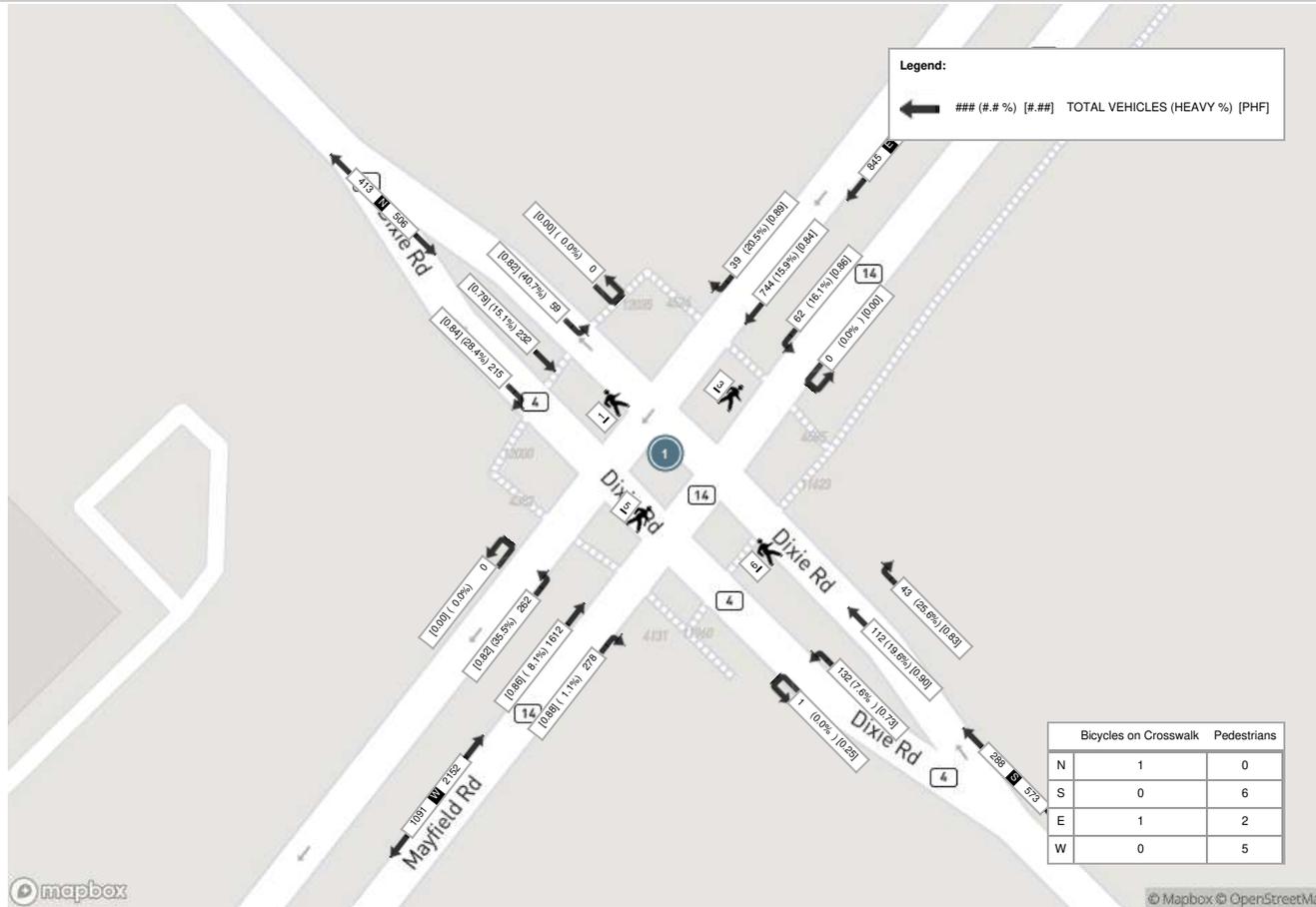
Start Time	N Approach DIXIE RD						E Approach MAYFIELD RD						S Approach DIXIE RD						W Approach MAYFIELD RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
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%	13.3%	1%	19.6%	1.6%	0%	22.3%	22.3%	1.1%	3%	3.5%	0%	7.6%	7.6%	42.5%	6.9%	0%	56.8%	56.8%	-	-
PHF	0.84	0.79	0.82	0	0.88	0.88	0.89	0.84	0.86	0	0.86	0.86	0.83	0.9	0.73	0.25	0.84	0.84	0.88	0.86	0.82	0	0.88	0.88	-
Heavy	61	35	24	0	120	120	8	118	10	0	136	136	11	22	10	0	43	43	3	130	93	0	226	226	-
Heavy %	28.4%	15.1%	40.7%	0%	23.7%	23.7%	20.5%	15.9%	16.1%	0%	16.1%	16.1%	25.6%	19.6%	7.6%	0%	14.9%	14.9%	1.1%	8.1%	35.5%	0%	10.5%	10.5%	-
Lights	154	197	35	0	386	386	31	626	52	0	709	709	32	90	122	1	245	245	275	1482	169	0	1926	1926	-
Lights %	71.6%	84.9%	59.3%	0%	76.3%	76.3%	79.5%	84.1%	83.9%	0%	83.9%	83.9%	74.4%	80.4%	92.4%	100%	85.1%	85.1%	98.9%	91.9%	64.5%	0%	89.5%	89.5%	-
Single-Unit Trucks	45	28	12	0	85	85	6	31	5	0	42	42	1	20	2	0	23	23	2	47	84	0	133	133	-
Single-Unit Trucks %	20.9%	12.1%	20.3%	0%	16.8%	16.8%	15.4%	4.2%	8.1%	0%	5%	5%	2.3%	17.9%	1.5%	0%	8%	8%	0.7%	2.9%	32.1%	0%	6.2%	6.2%	-
Buses	0	5	10	0	15	15	1	20	3	0	24	24	9	2	8	0	19	19	1	28	0	0	29	29	-
Buses %	0%	2.2%	16.9%	0%	3%	3%	2.6%	2.7%	4.8%	0%	2.8%	2.8%	20.9%	1.8%	6.1%	0%	6.6%	6.6%	0.4%	1.7%	0%	0%	1.3%	1.3%	-
Articulated Trucks	16	2	2	0	20	20	1	67	2	0	70	70	1	0	0	0	1	1	0	55	9	0	64	64	-
Articulated Trucks %	7.4%	0.9%	3.4%	0%	4%	4%	2.6%	9%	3.2%	0%	8.3%	8.3%	2.3%	0%	0%	0%	0.3%	0.3%	0%	3.4%	3.4%	0%	3%	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%	-	-



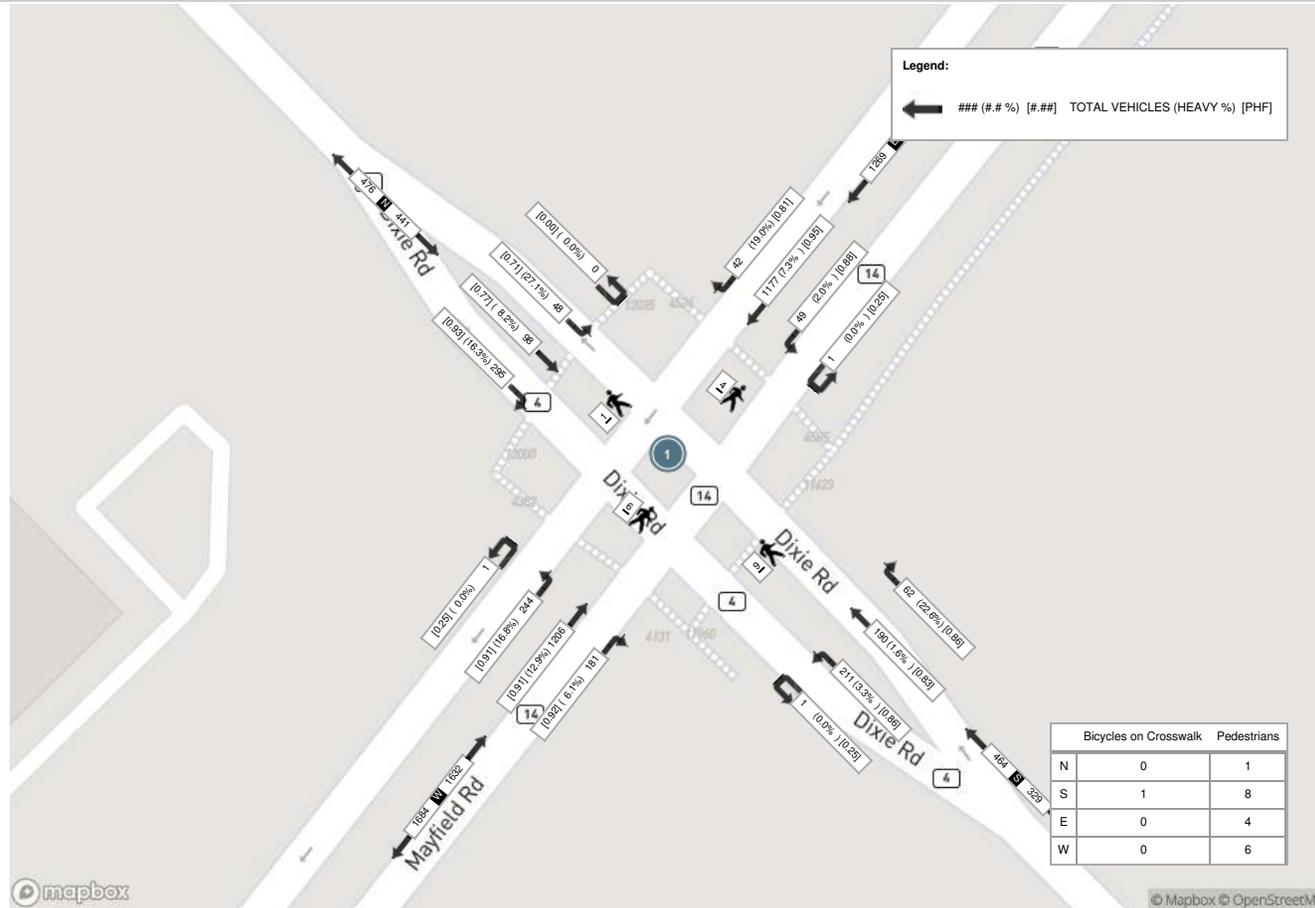
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

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%	11.6%	1.1%	30.9%	1.3%	0%	33.3%	33.3%	1.6%	5%	5.5%	0%	12.2%	12.2%	4.8%	31.7%	6.4%	0%	42.9%	42.9%	-
PHF	0.93	0.77	0.71	0	0.93	0.93	0.81	0.95	0.88	0.25	0.96	0.96	0.86	0.83	0.86	0.25	0.96	0.96	0.92	0.91	0.91	0.25	0.91	0.91	0.91
Heavy	48	8	13	0	69	69	8	86	1	0	95	95	14	3	7	0	24	24	11	155	41	0	207	207	-
Heavy %	16.3%	8.2%	27.1%	0%	15.6%	15.6%	19%	7.3%	2%	0%	7.5%	7.5%	22.6%	1.6%	3.3%	0%	5.2%	5.2%	6.1%	12.9%	16.8%	0%	12.7%	12.7%	-
Lights	247	90	35	0	372	372	34	1091	48	1	1174	1174	48	187	204	1	440	440	170	1051	203	1	1425	1425	-
Lights %	83.7%	91.8%	72.9%	0%	84.4%	84.4%	81%	92.7%	98%	100%	92.5%	92.5%	77.4%	98.4%	96.7%	100%	94.8%	94.8%	93.9%	87.1%	83.2%	100%	87.3%	87.3%	-
Single-Unit Trucks	35	5	13	0	53	53	2	41	0	0	43	43	3	2	0	0	5	5	1	61	26	0	88	88	-
Single-Unit Trucks %	11.9%	5.1%	27.1%	0%	12%	12%	4.8%	3.5%	0%	0%	3.4%	3.4%	4.8%	1.1%	0%	0%	1.1%	1.1%	0.6%	5.1%	10.7%	0%	5.4%	5.4%	-
Buses	2	1	0	0	3	3	1	7	1	0	9	9	8	1	6	0	15	15	10	31	0	0	41	41	-
Buses %	0.7%	1%	0%	0%	0.7%	0.7%	2.4%	0.6%	2%	0%	0.7%	0.7%	12.9%	0.5%	2.8%	0%	3.2%	3.2%	5.5%	2.6%	0%	0%	2.5%	2.5%	-
Articulated Trucks	11	2	0	0	13	13	5	38	0	0	43	43	3	0	1	0	4	4	0	63	15	0	78	78	-
Articulated Trucks %	3.7%	2%	0%	0%	2.9%	2.9%	11.9%	3.2%	0%	0%	3.4%	3.4%	4.8%	0%	0.5%	0%	0.9%	0.9%	0%	5.2%	6.1%	0%	4.8%	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%	85.6%	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)

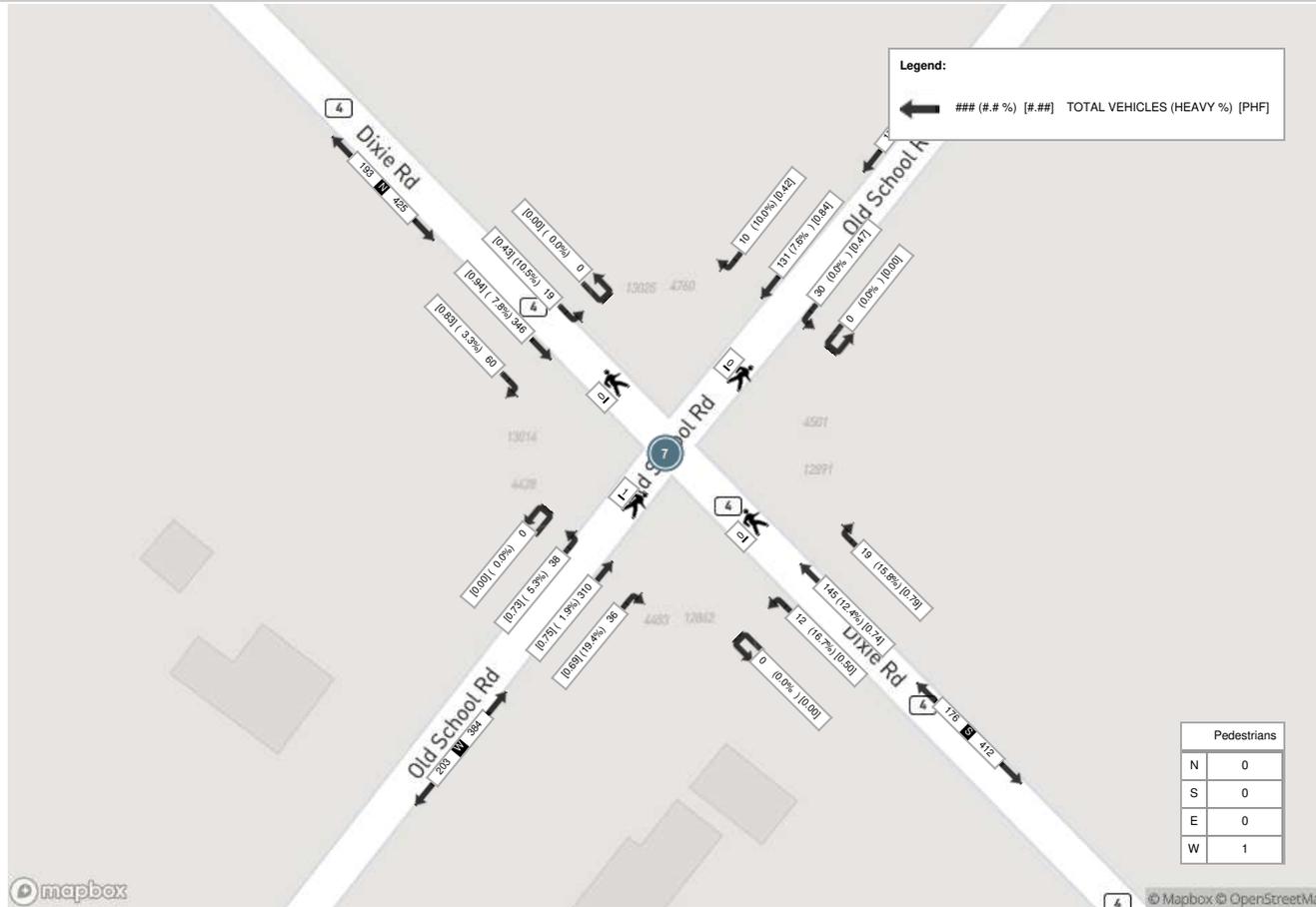
Start Time	N Approach DIXIE RD						E Approach OLD SCHOOL RD						S Approach DIXIE RD						W Approach OLD SCHOOL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach 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%	-	-



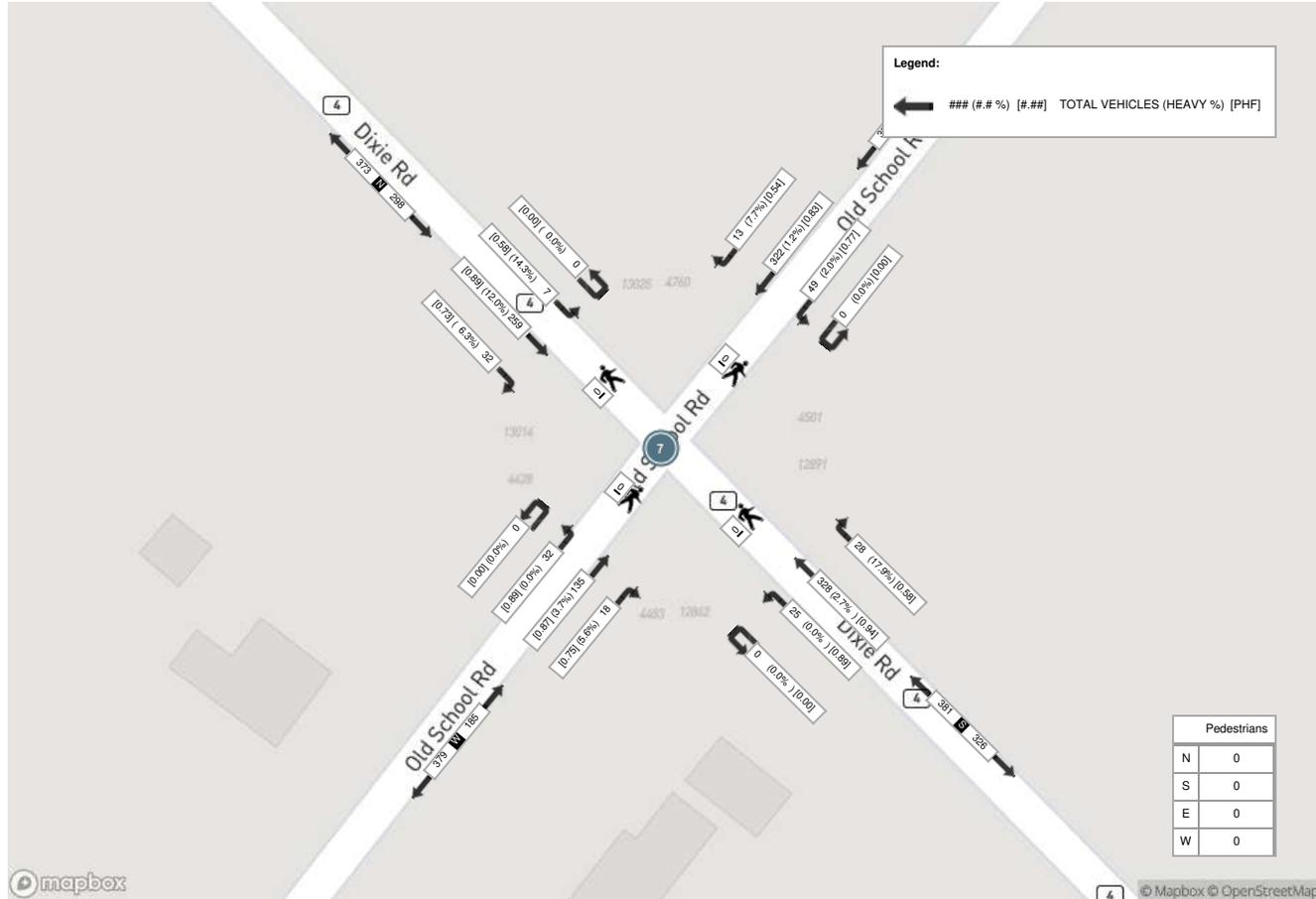
Peak Hour: 04:15 PM - 05:15 PM Weather: Few Clouds (7.51 °C)

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)

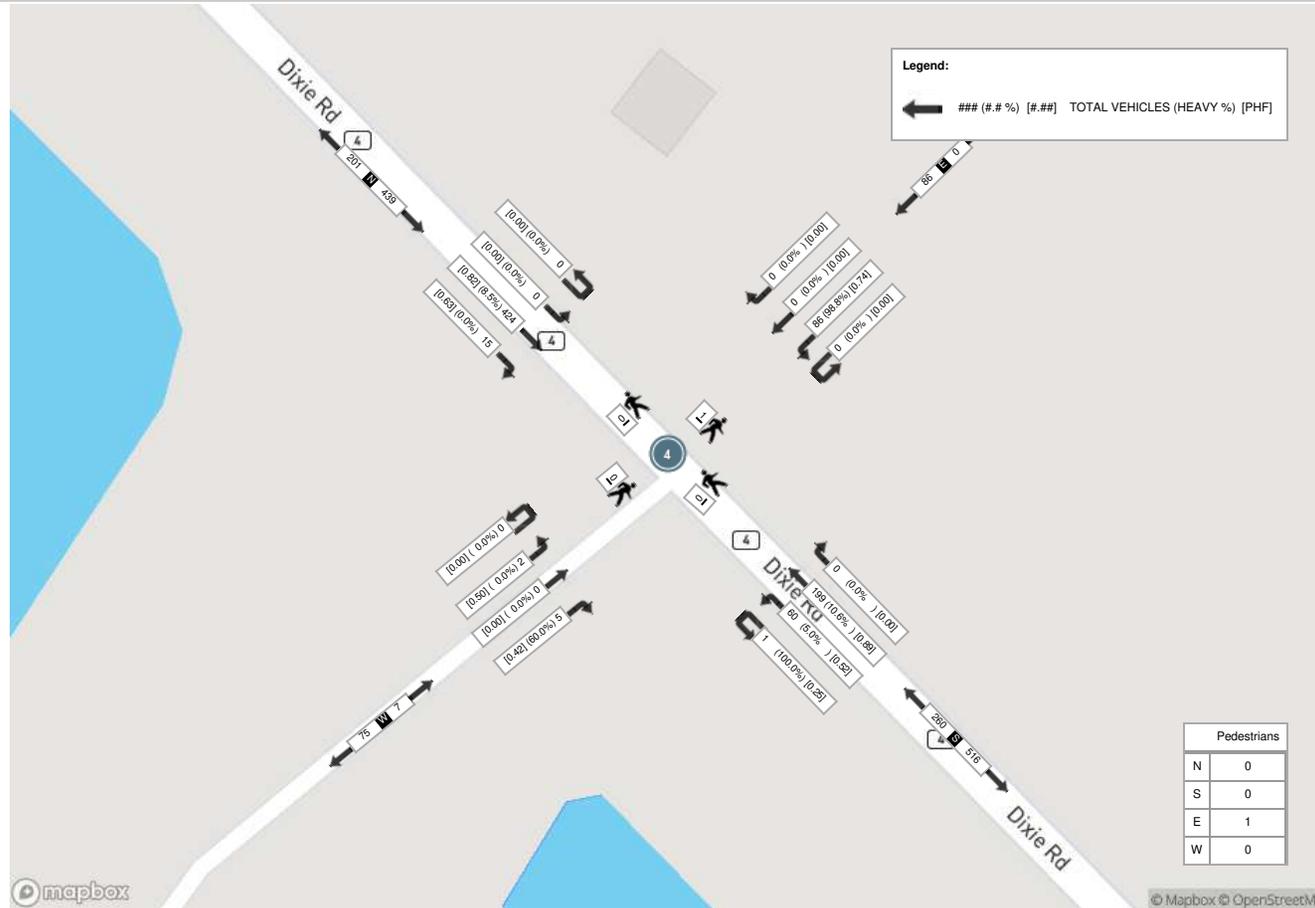
Start Time	N Approach DIXIE RD						E Approach CONSTRUCTION ACCESS						S Approach DIXIE RD						W Approach PARKING LOT NORTH ACCESS						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	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%	55.4%	0%	0%	10.9%	0%	10.9%	10.9%	0%	25.1%	7.6%	0.1%	32.8%	32.8%	0.6%	0%	0.3%	0%	0.9%	0.9%	-
PHF	0.63	0.82	0	0	0.84	0.84	0	0	0.74	0	0.74	0.74	0	0.89	0.52	0.25	0.82	0.82	0.42	0	0.5	0	0.58	0.58	-
Heavy	0	36	0	0	36	36	0	0	85	0	85	85	0	21	3	1	25	25	3	0	0	0	3	3	-
Heavy %	0%	8.5%	0%	0%	8.2%	8.2%	0%	0%	98.8%	0%	98.8%	98.8%	0%	10.6%	5%	100%	9.6%	9.6%	60%	0%	0%	0%	42.9%	42.9%	-
Lights	15	388	0	0	403	403	0	0	1	0	1	1	0	178	57	0	235	235	2	0	2	0	4	4	-
Lights %	100%	91.5%	0%	0%	91.8%	91.8%	0%	0%	1.2%	0%	1.2%	1.2%	0%	89.4%	95%	0%	90.4%	90.4%	40%	0%	100%	0%	57.1%	57.1%	-
Single-Unit Trucks	0	15	0	0	15	15	0	0	85	0	85	85	0	11	3	1	15	15	3	0	0	0	3	3	-
Single-Unit Trucks %	0%	3.5%	0%	0%	3.4%	3.4%	0%	0%	98.8%	0%	98.8%	98.8%	0%	5.5%	5%	100%	5.8%	5.8%	60%	0%	0%	0%	42.9%	42.9%	-
Buses	0	4	0	0	4	4	0	0	0	0	0	0	0	3	0	0	3	3	0	0	0	0	0	0	-
Buses %	0%	0.9%	0%	0%	0.9%	0.9%	0%	0%	0%	0%	0%	0%	0%	1.5%	0%	0%	1.2%	1.2%	0%	0%	0%	0%	0%	0%	-
Articulated Trucks	0	17	0	0	17	17	0	0	0	0	0	0	0	7	0	0	7	7	0	0	0	0	0	0	-
Articulated Trucks %	0%	4%	0%	0%	3.9%	3.9%	0%	0%	0%	0%	0%	0%	0%	3.5%	0%	0%	2.7%	2.7%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	100%	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-



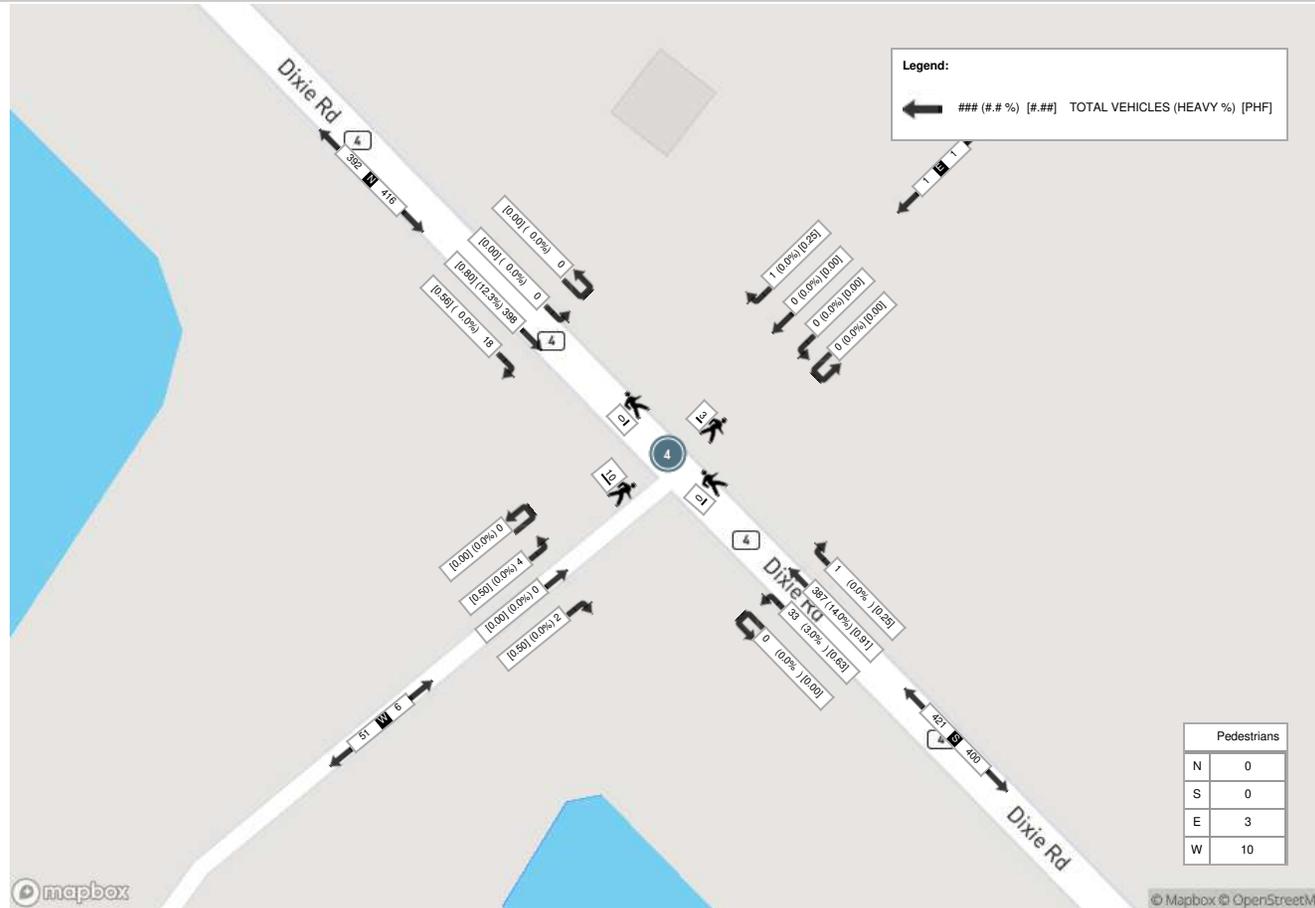
Peak Hour: 05:00 PM - 06:00 PM Weather: Few Clouds (7.51 °C)

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	0	54	1	0	55	0	0	0	0	0	0	0	-	
Heavy %	0%	12.3%	0%	0%	11.8%	0%	0%	0%	0%	0%	0%	0%	14%	3%	0%	13.1%	0%	0%	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)

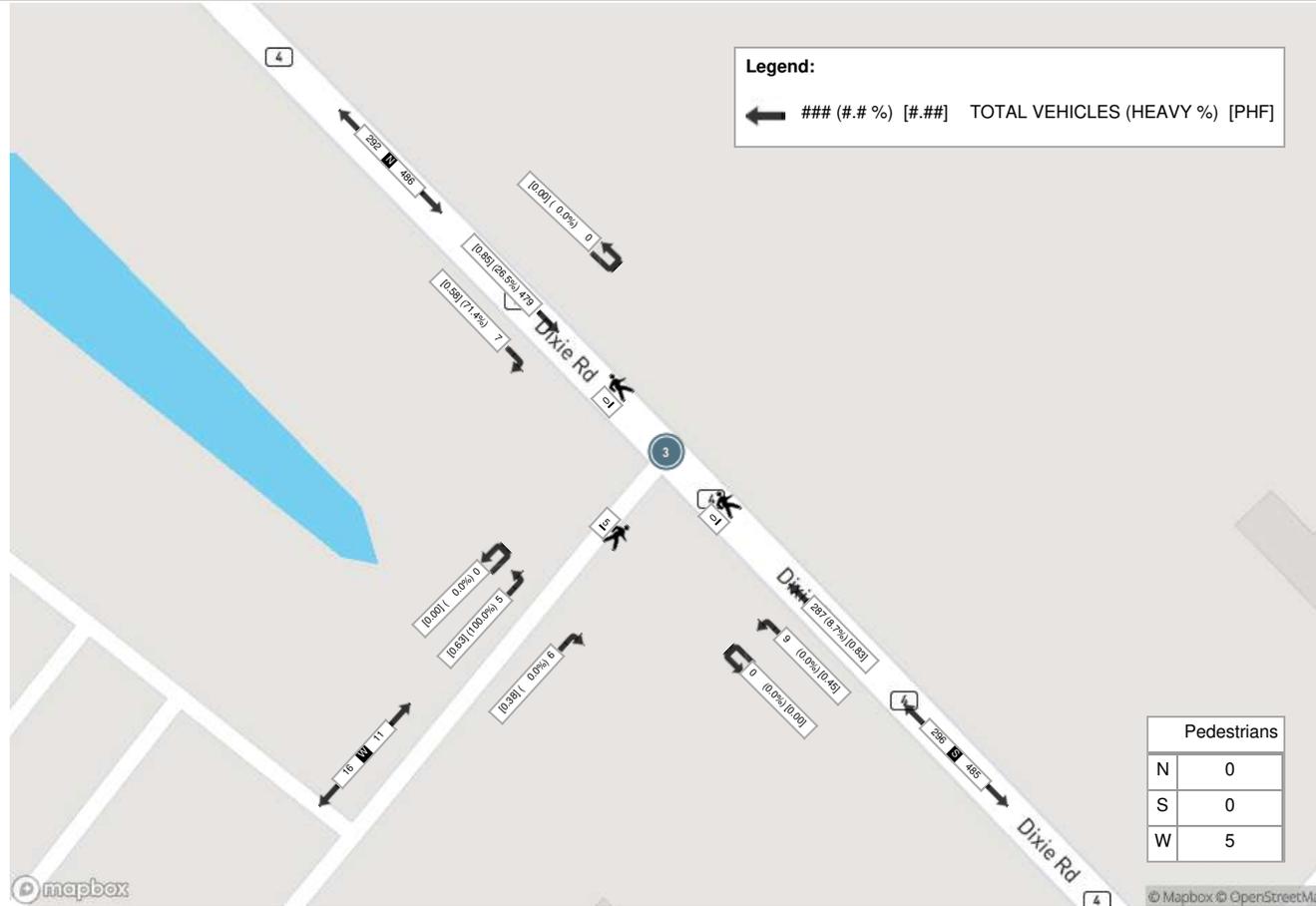
Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS PARKING LOT SOUTH ACCESS					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:00:00	2	116	0	0	118	54	0	0	0	54	0	1	0	0	1	173
08:15:00	3	141	0	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%	-	-



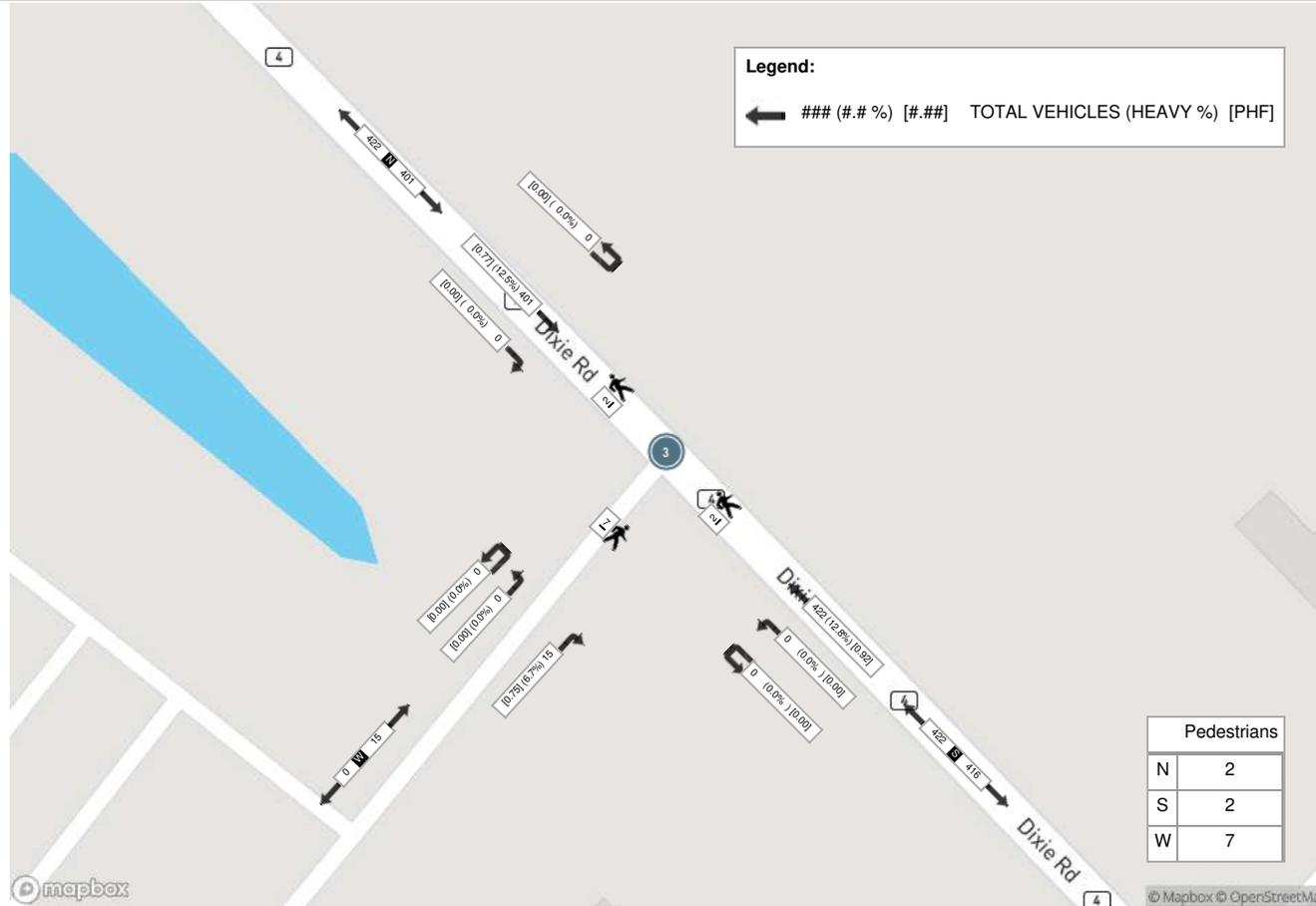
Peak Hour: 05:00 PM - 06:00 PM Weather: Few Clouds (7.51 °C)

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

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

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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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%	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 %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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

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%	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	0.58	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%	6.1%	3.8%	30.9%	0.3%	0.3%	35.3%	35.3%	8.6%	3.1%	2.3%	0.1%	14.1%	14.1%	3%	32.5%	8.9%	0%	44.4%	44.4%	-
PHF	0.5	0.8	0.63	0	0.8	0.8	0.77	0.93	0.42	0.42	0.91	0.91	0.93	0.6	0.83	0.25	0.92	0.92	0.81	0.95	0.86	0	0.95	0.95	-
Heavy	0	0	1	0	1	1	5	150	0	0	155	155	7	2	1	0	10	10	2	127	11	0	140	140	-
Heavy %	0%	0%	2.1%	0%	1%	1%	7.7%	28.3%	0%	0%	25.6%	25.6%	4.7%	3.8%	2.5%	0%	4.1%	4.1%	3.8%	22.8%	7.2%	0%	18.4%	18.4%	-
Lights	12	45	47	0	104	104	60	380	5	5	450	450	141	51	39	1	232	232	50	430	141	0	621	621	-
Lights %	100%	100%	97.9%	0%	99%	99%	92.3%	71.7%	100%	100%	74.4%	74.4%	95.3%	96.2%	97.5%	100%	95.9%	95.9%	96.2%	77.2%	92.8%	0%	81.6%	81.6%	-
Single-Unit Trucks	0	0	0	0	0	0	4	60	0	0	64	64	5	1	0	0	6	6	1	39	7	0	47	47	-
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	6.2%	11.3%	0%	0%	10.6%	10.6%	3.4%	1.9%	0%	0%	2.5%	2.5%	1.9%	7%	4.6%	0%	6.2%	6.2%	-
Buses	0	0	1	0	1	1	0	16	0	0	16	16	0	0	1	0	1	1	0	4	3	0	7	7	-
Buses %	0%	0%	2.1%	0%	1%	1%	0%	3%	0%	0%	2.6%	2.6%	0%	0%	2.5%	0%	0.4%	0.4%	0%	0.7%	2%	0%	0.9%	0.9%	-
Articulated Trucks	0	0	0	0	0	0	1	74	0	0	75	75	2	1	0	0	3	3	1	84	1	0	86	86	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	1.5%	14%	0%	0%	12.4%	12.4%	1.4%	1.9%	0%	0%	1.2%	1.2%	1.9%	15.1%	0.7%	0%	11.3%	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%	-	-

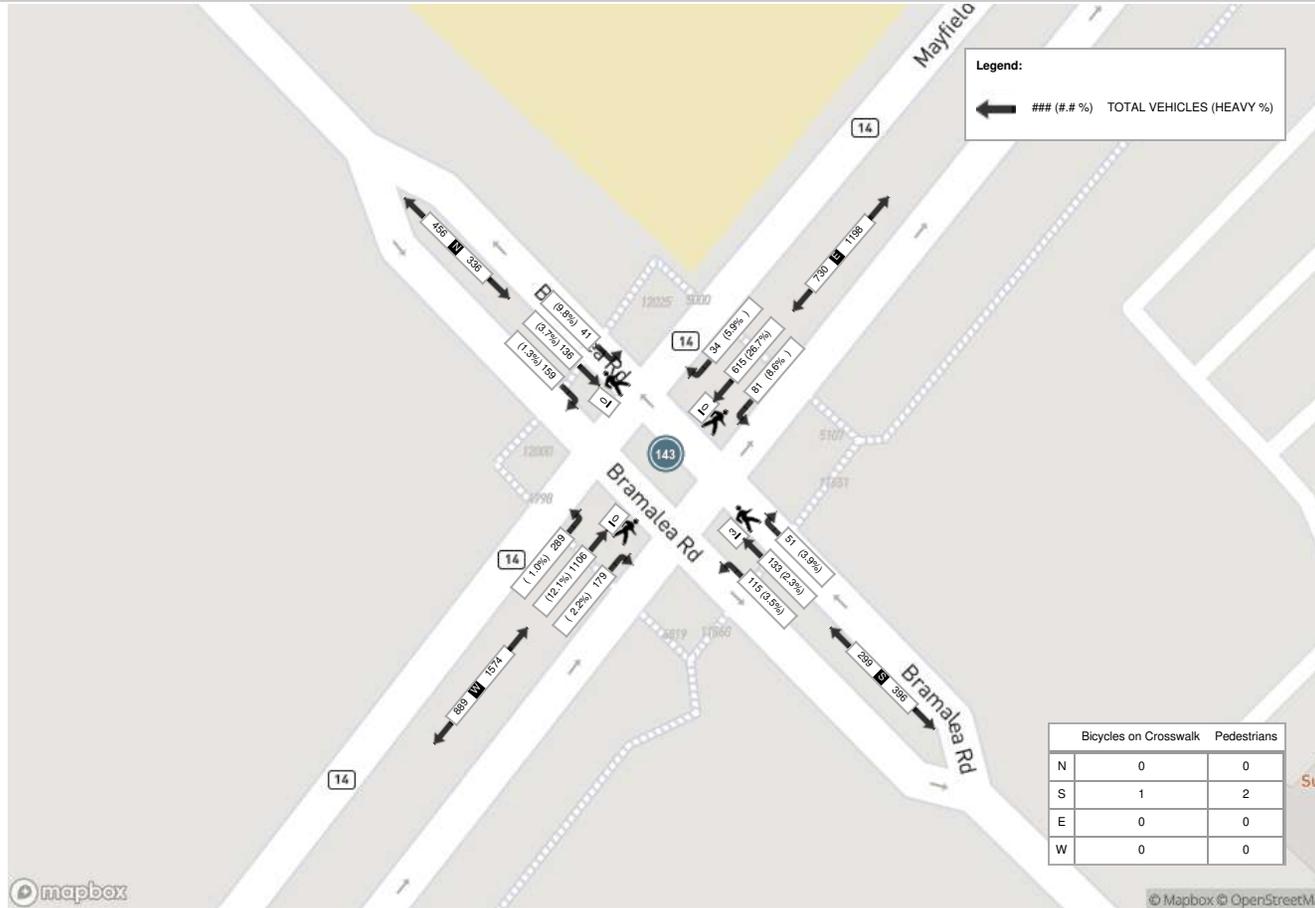


Turning Movement Count
 Location Name: MAYFIELD RD & BRAMALEA ROAD
 Date: Wed, Jun 01, 2022 Deployment Lead: Tasos Issaakidis

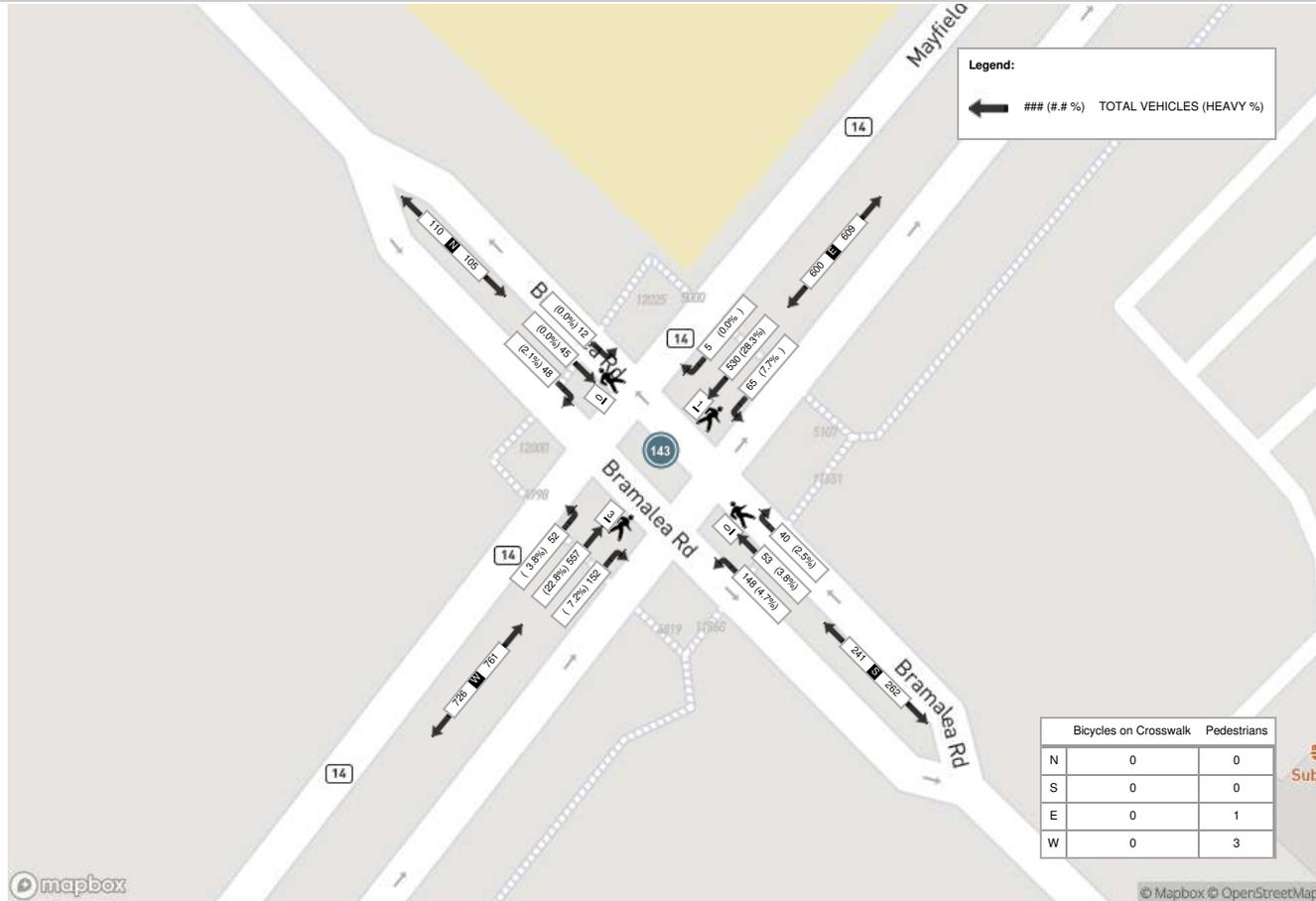
Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (24.05 °C)

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%	-	-	-	-	

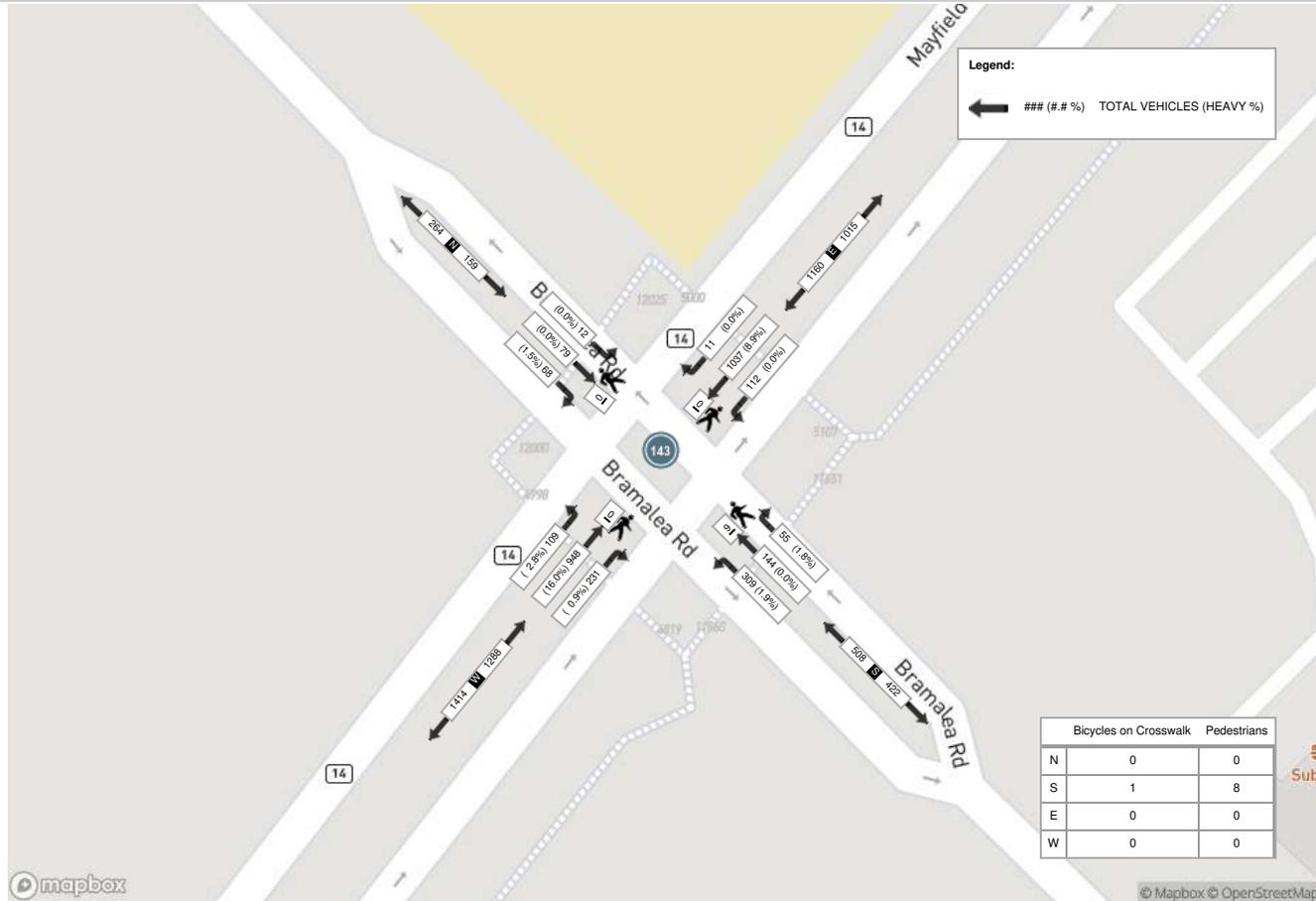
Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (23.15 °C)



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%	13.9%	2.7%	14.4%	5%	0%	22.1%	30.3%	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)

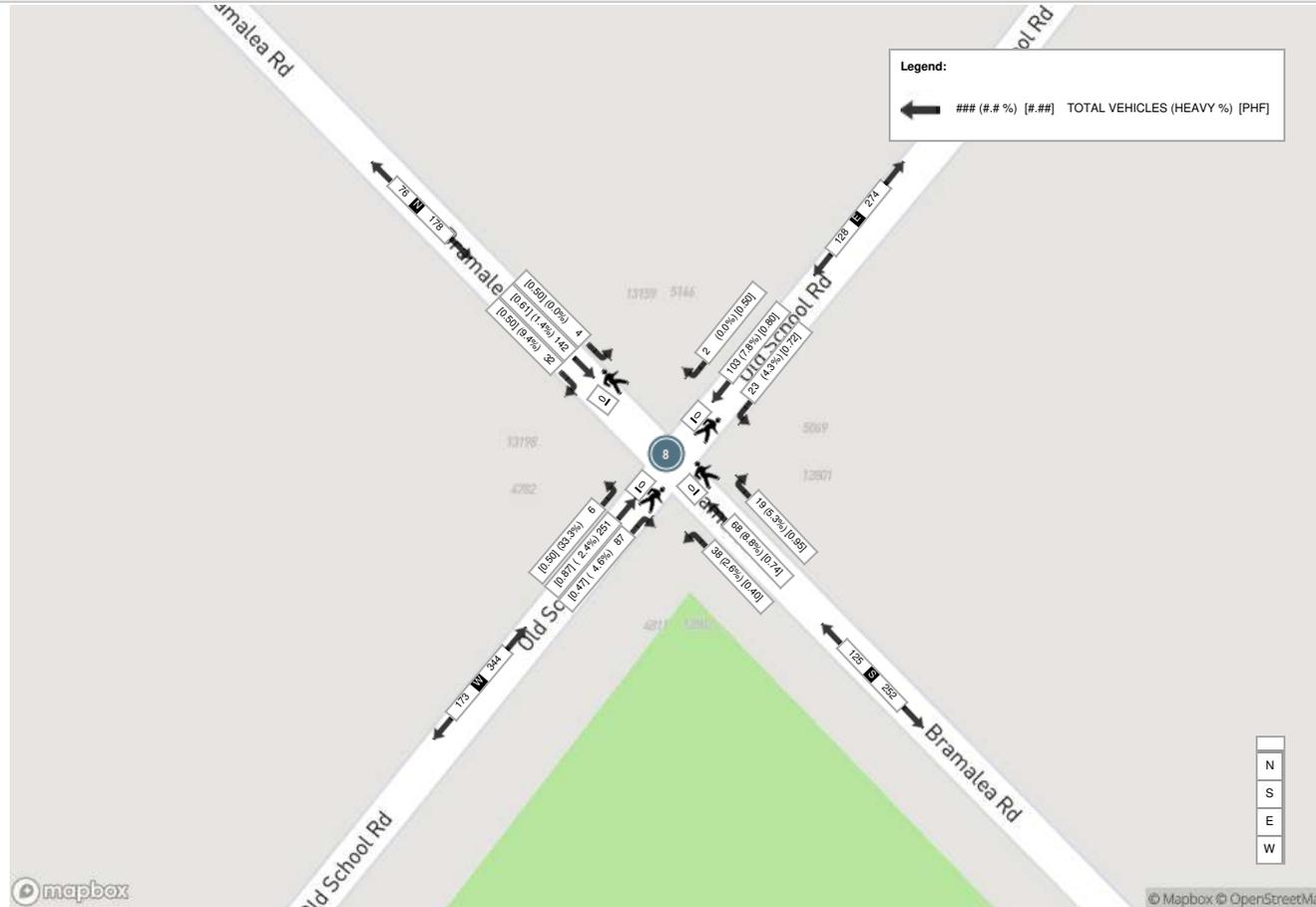
Start Time	N Approach BRAMALEA RD						E Approach OLD SCHOOL RD						S Approach BRAMALEA RD						W Approach OLD SCHOOL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	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	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%	-	-	-	-	%	-	-	-	-	%	-	-	-	-	%	-	-	-	-	%	-	-	-	-	



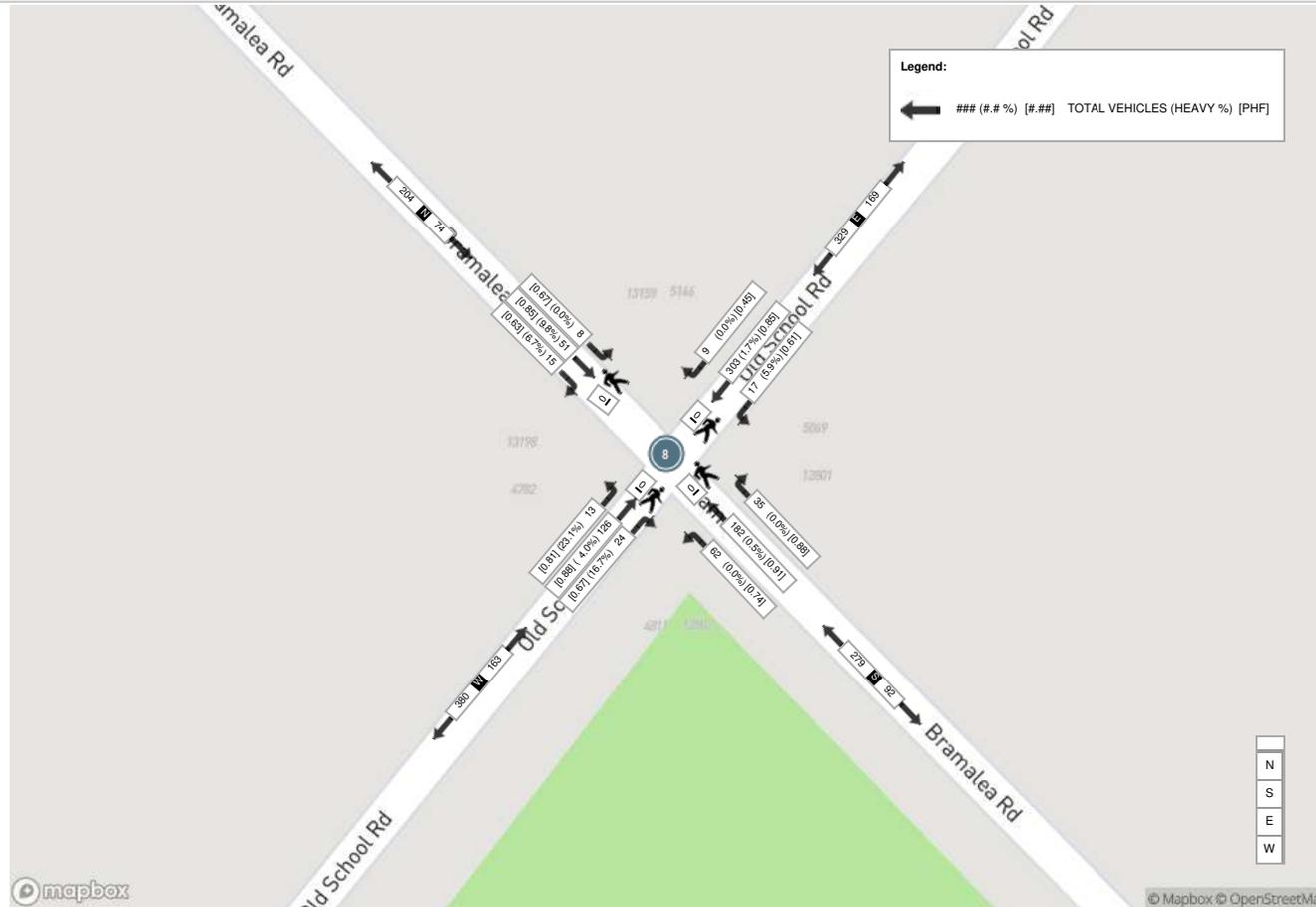
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

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 C:
Signal Timing Plans**

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
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		TIME (M-F)	PEAK	CYCLE LENGTH (s)	OFFSET (s)
No		07:00 - 09:00	AM	120	44
Semi-Actuated Mode		FREE	OFF	0	0
Yes		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		TIME (M-F)	PEAK	CYCLE LENGTH (s)	OFFSET (s)
No		06:00 - 09:00	AM	135	0
Semi-Actuated Mode		09:00 - 14:30	OFF	115	0
Yes		14:30 - 19:00	PM	135	16

APPENDIX D: Signal Warrant

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent
	1 Lanes		2 or More Lanes		Hour Ending									
Flow Condition	FREE FLOW <input type="checkbox"/>	RESTR. FLOW <input type="checkbox"/>	FREE FLOW <input type="checkbox"/>	RESTR. FLOW <input checked="" type="checkbox"/>	8:00	9:00	10:00	13:00	15:00	16:00	17:00	18:00		
1A	480	720	600	900	1,225	1,490	260	1,015	895	1,220	1,510	1,605		
	COMPLIANCE %				100	100	29	100	99	100	100	100	728	91
1B	120	170	120	170	40	110	60	235	210	105	175	235		
	COMPLIANCE %				24	65	35	100	100	62	100	100	585	73
Restricted 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
													Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent
	1 lanes		2 or More lanes		Hour Ending									
Flow Condition	FREE FLOW <input type="checkbox"/>	RESTR. FLOW <input type="checkbox"/>	FREE FLOW <input type="checkbox"/>	RESTR. FLOW <input checked="" type="checkbox"/>	8:00	9:00	10:00	13:00	15:00	16:00	17:00	18:00		
2A	480	720	600	900	1,185	1,380	200	780	685	1,115	1,335	1,370		
	COMPLIANCE %				100	100	22	87	76	100	100	100	685	86
2B	50	75	50	75	50	90	65	155	140	85	125	155		
	COMPLIANCE %				67	100	87	100	100	100	100	100	753	94
Restricted 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
													Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	X <input type="checkbox"/>	Y <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	X <input checked="" type="checkbox"/>	Y <input type="checkbox"/>	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
		X	Y (actual)	Y (warrant threshold)		
Justification 4	8:00	1,185	25	141	18 %	67 %
	9:00	1,380	65	115	57 %	
	17:00	1,335	110	115	96 %	
	18:00	1,370	145	115	100 %	

Input Data Sheet

[Analysis Sheet](#)

[Results Sheet](#)

[Proposed Collision](#)

GO TO Justification:

What are the intersecting roadways?

Dixie Road / Site Access 2

What is the direction of the Main Road street?

North-South

When was the data collected? 2022

Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road?

2 or more

b.- Number of lanes on the Minor Road?

1

c.- How many approaches?

4

d.- What is the operating environment?

Rural

Population < 10,000 AND Speed >= 70 km/hr

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

Hour Ending	Main Northbound Approach			Minor Eastbound Approach			Main Southbound Approach			Minor Westbound Approach			Pedestrians Crossing Main Road
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
7:00	25	290	20	15	0	20	15	335	10	35	0	20	60
8:00	25	290	20	15	0	20	15	335	10	35	0	20	60
9:00	25	290	20	15	0	20	15	335	10	35	0	20	60
10:00	25	290	20	15	0	20	15	335	10	35	0	20	60
11:00	25	290	20	15	0	20	15	335	10	35	0	20	60
12:00	25	290	20	15	0	20	15	335	10	35	0	20	60
13:00	25	290	20	15	0	20	15	335	10	35	0	20	60
14:00	25	290	20	15	0	20	15	335	10	35	0	20	60
Total	200	2,320	160	120	0	160	120	2,680	80	280	0	160	480

Justification 5: Collision Experience

Preceding Months	Number of Collisions*
1-12	0
13-24	0
25-36	0

* Include only collisions that are susceptible to correction through the installation of traffic signal control

Justification 6: Pedestrian Volume

a.- Please fill in table below summarizing total pedestrians crossing major roadway at the intersection or in proximity to the intersection (zones). Please reference Section 4.8 of the Manual for further explanation and graphical representation.

	Zone 1		Zone 2		Zone 3 (if needed)		Zone 4 (if needed)		Total
	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	
Total 8 hour pedestrian volume	10,000	5	10	5	0	0	0	0	
Factored 8 hour pedestrian volume	20,005		25		0		0		
% Assigned to crossing rate	23%		34%		30%		100%		
Net 8 Hour Pedestrian Volume at Crossing									4,610
Net 8 Hour Vehicular Volume on Street Being Crossed									2,000

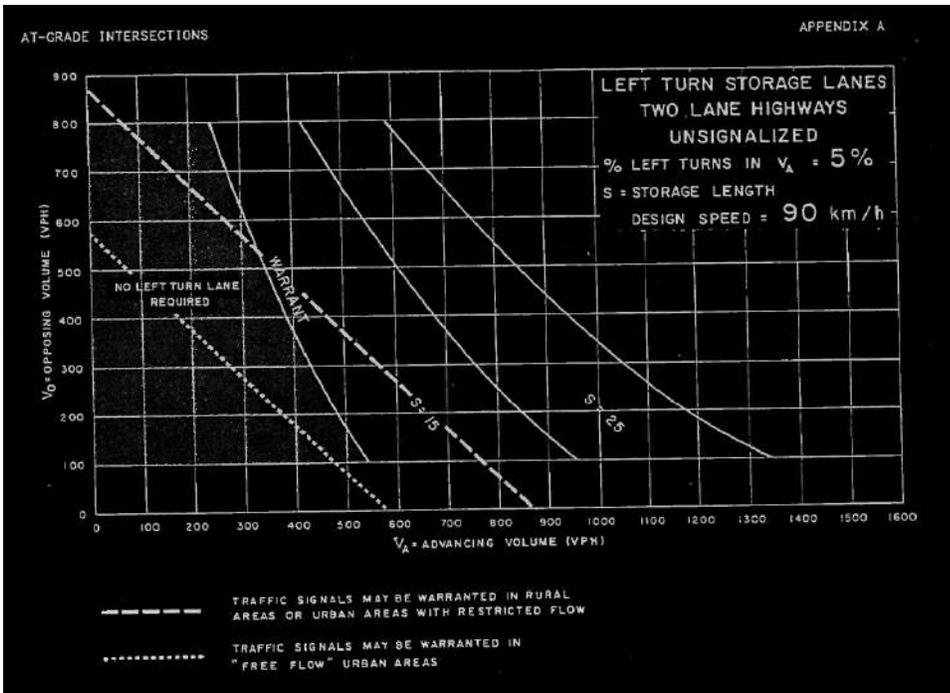
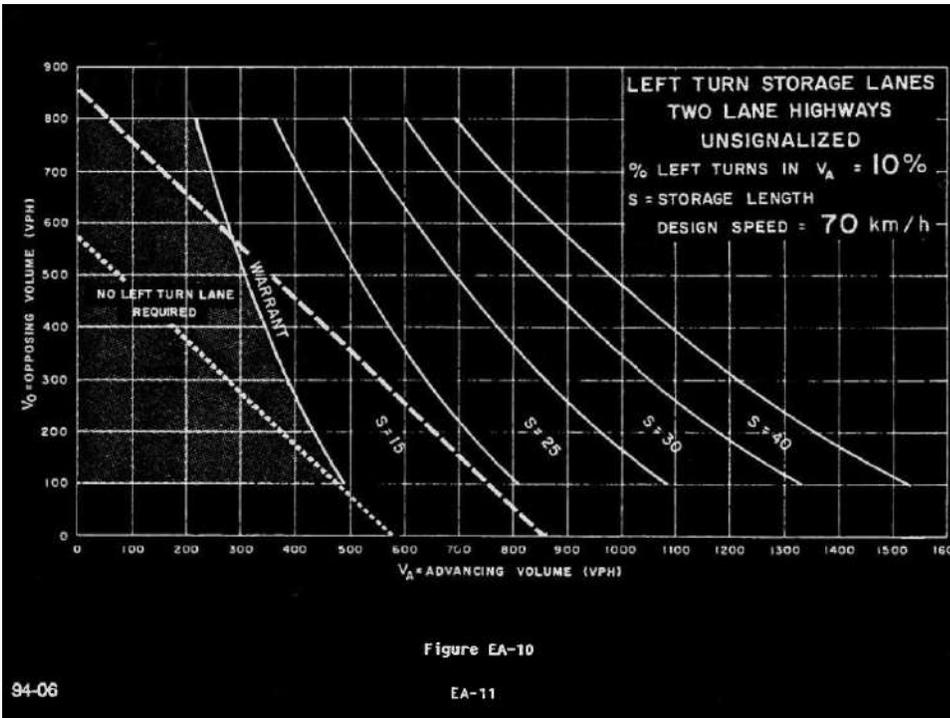
b.- Please fill in table below summarizing delay to pedestrians crossing major roadway at the intersection or in proximity to the intersection (zones). Please reference Section 4.8 of the Manual for further explanation and graphical representation.

	Zone 1		Zone 2		Zone 3 (if needed)		Zone 4 (if needed)		Total
	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	
Total 8 hour pedestrian volume	10,000	5	10	5	0	0	0	0	
Total 8 hour pedestrians delayed greater than 10 seconds	10	10	1	6	2	4	0	0	
Factored volume of total pedestrians	20,005		25		0		0		
Factored volume of delayed pedestrians	30		8		8		0		
% Assigned to Crossing Rate	23%		34%		30%		100%		
Net 8 Hour Volume of Total Pedestrians									4,610
Net 8 Hour Volume of Delayed Pedestrians									12

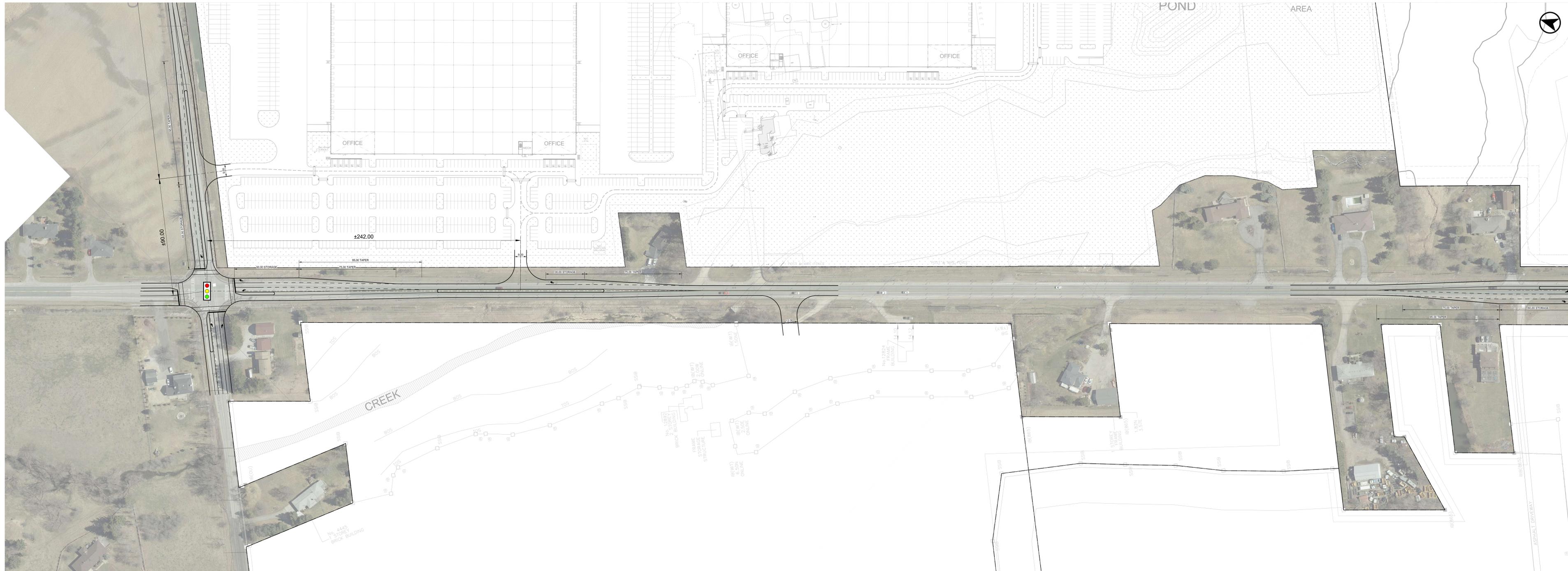
APPENDIX E: Lane Warrants

Volumes

	VA	VL	VO	%	Design Speed	
					60	70
					Future Total 2026	
Int 10 AM	695	50	685	5%	90 NA	0
int 10 PM	730	15	640	0%	90	0
Int 13 AM	295	30	410	10%	70 NA	0
Int 13 PM	440	0	265	0%	70	0
					Future Total 2031	
Int 13 AM	310	30	440	10%	70 NA	0
Int 13 PM	230	0	115	0%	70	0



APPENDIX F
Functional Design Plans



02	12-12-23	MSB	ISSUED FOR SUBMISSION
01	11-28-22	MSB	ISSUED FOR TEAM REVIEW
00	11-24-22	MSB	ISSUED FOR TEAM REVIEW

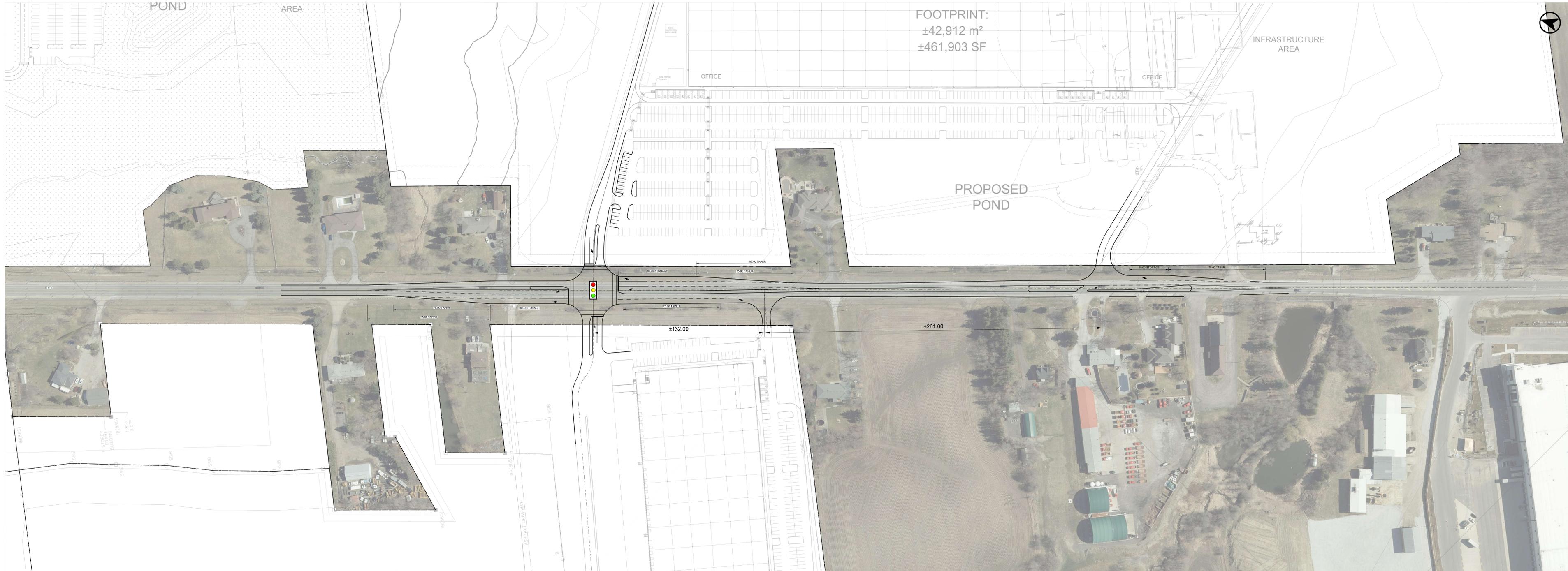


12489, 12861 & 12892 DIXIE ROAD

FUNCTIONAL ROAD PLAN
DIXIE ROAD - INTERIM CONDITION

Date: NOVEMBER 24, 2023
 Project No.: 7843-21
 Scale: 1:750

FD01



FOOTPRINT:
 ±42,912 m²
 ±461,903 SF



02	12-12-23	MSB	ISSUED FOR SUBMISSION
01	11-28-22	MSB	ISSUED FOR TEAM REVIEW
00	11-24-22	MSB	ISSUED FOR TEAM REVIEW



12489, 12861 & 12892 DIXIE ROAD

FUNCTIONAL ROAD PLAN
 DIXIE ROAD - INTERIM CONDITION

Date: NOVEMBER 24, 2023
 Project No.: 7843-21
 Scale: 1:750



02	12-12-23	MSB	ISSUED FOR SUBMISSION
01	11-28-22	MSB	ISSUED FOR TEAM REVIEW
00	11-24-22	MSB	ISSUED FOR TEAM REVIEW



12489, 12861 & 12892 DIXIE ROAD

FUNCTIONAL ROAD PLAN
OLD SCHOOL ROAD - INTERIM
CONDITION

Date: NOVEMBER 24, 2023
 Project No.: 7843-21
 Scale: 1:750

FD03

Date Plotted: December 12, 2023 | Filename: J:\7843-21\BA\Functional Road Plan\0231905-December 12-2023\BA-DWG-FD03-7843-18.dwg

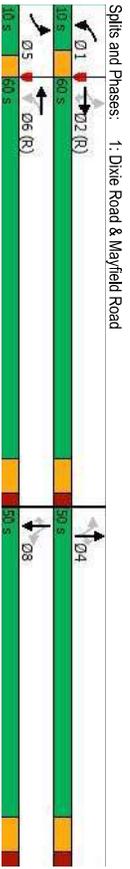
APPENDIX G: Synchro and Simtraffic Worksheets

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)	260	1610	280	60	785	130	110	45	60	230	215
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	2	1	6	4	4	4	8	8	8
Detector Phases	2	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 Spilt (%)	10.0	60.0	60.0	10.0	60.0	50.0	50.0	50.0	50.0	50.0	50.0
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	Lead	Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimizer?	Yes	Yes	Yes	Yes	Yes	Yes	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	0.53	0.26	0.28	0.33	0.96	0.36	0.15	0.35	0.73	0.53
Control Delay	12.4	15.3	2.3	10.5	17.6	113.3	44.0	4.8	45.7	58.8	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
Queue Length 50th (m)	12.4	15.3	2.3	10.5	17.6	113.3	44.0	4.8	45.7	58.8	9.9
Queue Length 95th (m)	18.8	79.2	0.0	3.7	38.8	32.3	24.1	0.0	13.1	54.5	0.0
Internal Link Dist (m)	40.0	120.2	13.7	10.2	57.7	#5816	37.9	5.2	24.5	75.1	20.0
Turn Bay Length (m)	155.0	980.1	115.0	150.0	140.0	844.0	65.0	100.0	481.5	170.0	170.0
Base Capacity (vph)	439	3018	1061	216	2391	261	579	494	329	600	578
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	0.53	0.26	0.28	0.33	0.50	0.19	0.09	0.18	0.38	0.37

Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 105
 Offset: 9.5 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



Trial/Lands Dixie

Synchro 11 Report
EX.svm

HCM Signalized Intersection Capacity Analysis
1: Dixie Road & Mayfield Road

Existing AM Peak Hour

Movement	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
Ideal Flow (vph/ft)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	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
Frt	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	1.00	1.00	0.85	1.00	0.99	1.00	0.85	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1322	4856	1537	1539	4516	1653	1614	1257	1270	1671	1227
Flt Permitted	0.31	1.00	1.00	0.13	1.00	0.41	1.00	0.69	1.00	1.00	1.00
Satd. Flow (perm)	428	4856	1537	215	4516	726	1614	1257	917	1671	1227
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
Adj. Flow (vph)	260	1610	280	60	745	130	110	45	60	230	215
RTOR Reduction (vph)	0	0	108	0	4	0	0	37	0	0	175
Lane Group Flow (vph)	260	1610	172	60	781	0	130	110	8	60	230
Confl. Peds. (#/hr)	35%	8%	1%	16%	15%	7%	19%	25%	40%	15%	28%
Heavy Vehicles (%)	5	5	5	5	5	5	5	5	5	5	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	2	1	6	4	4	4	8	8	8
Actuated Green, G (s)	83.6	73.9	73.9	69.7	63.5	22.6	22.6	22.6	22.6	22.6	22.6
Effective Green, g (s)	83.6	73.9	73.9	69.7	63.5	22.6	22.6	22.6	22.6	22.6	22.6
Actuated Q/C Ratio	0.70	0.62	0.62	0.58	0.53	0.19	0.19	0.19	0.19	0.19	0.19
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 Gap Cap (vph)	425	2990	946	193	2389	136	303	236	172	314	231
v/s Ratio Prot	60.09	0.33	0.02	0.17	0.07	0.07	0.07	0.07	0.07	0.14	0.14
v/s Ratio Perm	60.34	0.11	0.16	0.16	0.18	0.01	0.07	0.01	0.07	0.03	0.03
Uniform Delay, d1	0.61	0.54	0.18	0.31	0.33	0.96	0.36	0.04	0.35	0.73	0.18
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	2.6	0.7	0.4	0.9	0.4	63.1	0.7	0.1	1.2	8.5	0.4
Delay (s)	9.9	13.9	10.4	12.0	16.4	111.3	43.2	39.9	43.5	54.4	41.2
Level of Service	A	B	B	B	B	F	D	D	D	D	D
Approach Delay (s)	13.0				16.1				73.7		47.5
Approach LOS	B				B				D		D

Intersection Summary
 HCM 2000 Control Delay: 22.9
 HCM 2000 Level of Service: C
 HCM 2000 Volume to Capacity ratio: 0.70
 Actuated Cycle Length (s): 120.0
 Intersection Capacity Utilization: 79.1%
 ICU Level of Service: D
 Analysis Period (min): 15
 Critical Lane Group: e

Trial/Lands Dixie

Synchro 11 Report
EX.svm

HCM Unsignalized Intersection Capacity Analysis

Existing AM Peak Hour

5: Dixie Road & Abbotside Wy., Spokane St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	5	0	35	0	0	0	65	295	0	0	475	10
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	Stop	Stop	Stop	Free						
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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)	5	0	35	0	0	0	65	295	0	0	475	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right Turn Flare (Veh)												
Median storage (veh)												
Median Type												
Upstream signal (m)												
PX, platoon unblocked												
VC, conflicting volume	900	900	475	935	910	295	485			295		
WC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCU, unblocked vol	900	900	475	935	910	295	485			295		
IC, single (s)	7.4	6.5	6.5	7.1	6.5	6.2	4.2			4.1		
IC, 2 stage (s)												
IF (s)	3.8	4.0	3.5	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	98	100	94	100	100	100	94			100		
CM capacity (veh/h)	218	260	545	219	257	744	1014			1266		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	40	0	65	295	475	10						
Volume Left	5	0	65	0	0	0						
Volume Right	35	0	0	0	0	10						
ESH	459	1700	1014	1700	1700	1700						
Volume to Capacity	0.09	0.00	0.06	0.17	0.28	0.01						
Queue Length 95th (m)	2.3	0.0	1.6	0.0	0.0	0.0						
Control Delay (s)	13.6	0.0	8.8	0.0	0.0	0.0						
Lane LOS	B	A	A	A	A	A						
Approach Delay (s)	13.6	0.0	1.6		0.0							
Approach LOS	B		A									
Intersection Summary												
Average Delay	1.3											A
Intersection Capacity Utilization	41.9%											ICU Level of Service
Analysis Period (min)	15											

Tribal Lands Dixie

Synchro 11 Report
EX.s3yn

HCM Unsignalized Intersection Capacity Analysis

Existing AM Peak Hour

7: Dixie Road & UPS Facility Access/Construction Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	5	0	5	0	0	0	60	200	0	0	425	15
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	Stop	Stop	Stop	Free						
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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)	0	0	5	0	0	0	60	200	0	0	425	15
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right Turn Flare (Veh)												
Median storage (veh)												
Median Type												
Upstream signal (m)												
PX, platoon unblocked												
VC, conflicting volume	752	752	432	758	760	200	440			200		
WC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCU, unblocked vol	752	752	432	758	760	200	440			200		
IC, single (s)	7.1	6.5	6.8	7.1	6.5	6.2	4.1			4.1		
IC, 2 stage (s)												
IF (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	95			100		
CM capacity (veh/h)	315	321	517	307	317	841	1104			1372		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1							
Volume Total	0	5	0	260	440							
Volume Left	0	0	0	60	0							
Volume Right	0	5	0	0	15							
ESH	1700	517	1700	1104	1700							
Volume to Capacity	0.00	0.01	0.00	0.05	0.26							
Queue Length 95th (m)	0.0	0.2	0.0	1.4	0.0							
Control Delay (s)	0.0	12.0	0.0	2.3	0.0							
Lane LOS	A	B	A	A	A							
Approach Delay (s)	12.0		0.0	2.3	0.0							
Approach LOS	B		A									
Intersection Summary												
Average Delay	1.0											A
Intersection Capacity Utilization	43.8%											ICU Level of Service
Analysis Period (min)	15											

Tribal Lands Dixie

Synchro 11 Report
EX.s3yn

Queues
12: Dixie Road

Existing AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	4	3	4	3	4	3	4	3
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)	40	345	30	140	10	165	20	405
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	6	6
Detector Phases	4	4	8	8	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Minimum Split (s)	30.0	30.0	30.0	30.0	40.0	40.0	40.0	40.0
Total Spill (%)	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 Optimizer?	None	None	None	None	C-Min	C-Min	C-Min	C-Min
Recall Mode	0.13	0.72	0.16	0.31	0.02	0.18	0.03	0.41
v/c Ratio	18.6	31.3	19.9	20.3	9.5	8.9	9.3	11.4
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	18.6	31.3	19.9	20.3	9.5	8.9	9.3	11.4
Total Delay	4.2	42.0	3.2	14.8	0.6	9.3	1.1	28.0
Queue Length 80th (m)	9.9	60.3	8.5	25.0	3.1	22.9	5.0	58.9
Queue Length 95th (m)	118.0	65.0	135.5	2407.1	65.0	261.5	65.0	982
Internal Link Dist (m)	409	622	243	598	448	933	629	982
Turn Bay Length (m)	0	0	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0	0	0
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	0.10	0.55	0.12	0.23	0.02	0.18	0.03	0.41

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 12: Dixie Road

Trial/Lands Dixie

Synchro 11 Report
EX.syn

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	4	3	3	4	3	3	4	3	3	4	3	3
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	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	0.98	1.00	0.98
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95
Satd. Flow (prot)	1719	1820	1805	1753	1805	1753	1556	1660	1641	1746	1746	1641
Flt Permitted	0.67	1.00	0.38	1.00	0.38	1.00	0.49	1.00	0.65	1.00	0.65	1.00
Satd. Flow (perm)	1208	1820	718	1753	802	1660	1127	1746	1127	1746	1127	1746
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)	40	310	35	30	130	10	10	145	20	20	345	60
RTOR Reduction (vph)	0	7	0	4	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	40	338	0	30	136	0	10	159	0	20	397	0
Heavy Vehicles (%)	5%	1%	19%	0%	7%	10%	18%	12%	15%	10%	7%	3%
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	6	6	6	6	6	6
Permitted Phases	18.2	18.2	18.2	18.2	18.2	38.8	38.8	38.8	38.8	38.8	38.8	38.8
Actuated Green, G (s)	18.2	18.2	18.2	18.2	18.2	38.8	38.8	38.8	38.8	38.8	38.8	38.8
Effective Green, g (s)	0.26	0.26	0.26	0.26	0.26	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Actuated g/C Ratio	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Clearance Time (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
Vehicle Extension (s)	314	473	186	455	967	444	920	624	967	444	967	624
Lane Gp Cap (vph)	60.19	473	0.08	455	967	444	920	624	967	444	967	624
v/s Ratio Prot	0.03	0.72	0.04	0.16	0.30	0.02	0.17	0.02	0.17	0.02	0.17	0.02
v/s Ratio Perm	19.8	23.5	20.0	20.8	7.0	7.7	7.1	9.0	7.1	9.0	7.1	9.0
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.2	5.1	0.4	0.4	0.4	0.1	0.4	0.1	0.4	0.1	0.4	0.1
Incremental Delay, d2	20.0	28.6	20.4	21.1	7.1	8.1	7.2	10.3	7.2	10.3	7.2	10.3
Level of Service	C	C	C	C	C	A	A	B	A	A	B	B
Approach Delay (s)	27.7	27.7	21.0	21.0	21.0	8.0	8.0	10.1	8.0	10.1	8.0	10.1
Approach LOS	C	C	C	C	C	A	A	B	A	A	B	B

Intersection Summary

HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
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		
e Critical Lane Group			

Trial/Lands Dixie

Synchro 11 Report
EX.syn

HCM Unsignalized Intersection Capacity Analysis

17: Bramalea Road & Old School Road

Existing AM Peak Hour

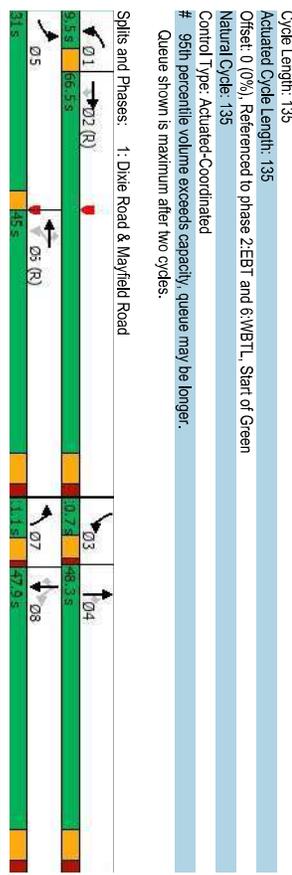
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	0	0	0	0								
Volume Left (vph)	0	0	0	0								
Volume Right (vph)	0	0	0	0								
Head (s)	0.00	0.00	0.00	0.00								
Departure Headway (s)	3.9	3.9	3.9	3.9								
Degree Utilization, x	0.00	0.00	0.00	0.00								
Capacity (veh/h)	917	917	917	917								
Control Delay (s)	6.9	6.9	6.9	6.9								
Approach Delay (s)	0.0	0.0	0.0	0.0								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	0.0											
Level of Service	A											
Intersection Capacity Utilization	0.0%											
Analysis Period (min)	15											

Queues

1: Dixie Road & Mayfield Road

Future Background (NES) 2033 AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		RT	RT									
Traffic Volume (vph)	575	1820	280	60	845	150	130	225	60	105	270	290
Future Volume (vph)	575	1820	280	60	845	150	130	225	60	105	270	290
Lane Group Flow (vph)	575	1820	280	60	845	150	130	225	60	105	270	290
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	1	6	6	7	4	4	3	8	8
Permitted Phases												
Detector Phases	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	9.5	44.9	44.9	9.5	44.9	44.9	9.5	47.9	47.9	9.5	47.9	47.9
Total Split (s)	31.0	66.5	66.5	9.5	45.0	45.0	11.1	48.3	48.3	10.7	47.9	47.9
Total Split (%)	23.0%	49.3%	49.3%	7.0%	33.3%	33.3%	8.2%	35.8%	35.8%	7.9%	35.5%	35.5%
Yellow Time (s)	3.0	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6
All-Red Time (s)	0.0	2.3	2.3	0.0	2.3	2.3	1.0	2.3	2.3	1.0	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	0.0
Lost Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	4.5	6.9	6.9	4.5	6.9	6.9
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.79	0.62	0.27	0.37	0.48	0.23	0.55	0.55	0.23	0.50	0.67	0.66
Control Delay	55.0	19.6	2.3	20.2	33.3	5.5	69.5	60.5	2.0	50.7	64.4	13.2
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	55.0	19.6	2.3	20.2	33.3	5.5	69.5	60.5	2.0	50.7	64.4	13.2
Queue Length 50th (m)	77.6	121.1	0.0	5.2	66.4	0.0	18.1	32.2	0.0	23.8	38.6	0.0
Queue Length 95th (m)	96.9	146.1	13.0	10.2	83.9	15.3	43.6	41.2	52.0	27.6	481.5	170.0
Internal Link Dist (m)	980.1			272.1			844.0					
Turn Bay Length (m)	155.0			150.0			65.0	140.0		65.0	100.0	170.0
Base Capacity (vph)	729	2933	1042	164	1760	642	235	1027	487	211	989	660
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	0.79	0.62	0.27	0.37	0.48	0.23	0.55	0.55	0.22	0.50	0.27	0.44
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, 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.												



HCM Signalized Intersection Capacity Analysis
 1: Dixie Road & Mayfield Road
 Future Background (NES) 2033 AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	575	1820	280	60	845	150	130	225	60	105	270	290
Future Volume (vph)	575	1820	280	60	845	150	130	225	60	105	270	290
Ideal Flow (vph/pl)	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	4.5	6.9	6.9	4.5	6.9	6.9
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frbp. 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
Frbp. 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
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.85	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	1.00
Satd. Flow (prot)	2815	4902	1554	1539	4961	1426	3236	3349	1319	1350	3259	1510
Flt Permitted	0.95	1.00	1.00	0.12	1.00	0.95	1.00	0.95	1.00	0.54	1.00	1.00
Satd. Flow (perm)	2815	4902	1554	186	4561	1426	3236	3349	1319	773	3259	1510
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	1820	280	60	845	150	130	225	60	105	270	290
RTOR Reduction (vph)	0	0	114	0	92	0	53	0	0	254	0	254
Lane Group Flow (vph)	575	1820	186	60	845	58	130	225	7	105	270	38
Confl. Peds. (#/hr)	23%	7%	1%	16%	15%	12%	7%	9%	19%	32%	12%	4%
Heavy Vehicles (%)	23%	7%	1%	16%	15%	12%	7%	9%	19%	32%	12%	4%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	1	6	6	7	4	4	8	8	8
Permitted Green, G (s)	35.0	80.1	80.1	58.6	52.1	52.1	9.8	16.4	16.4	27.0	16.8	16.8
Effective Green, g (s)	35.0	80.1	80.1	58.6	52.1	52.1	9.8	16.4	16.4	27.0	16.8	16.8
Actuated Q/C Ratio	0.26	0.59	0.59	0.43	0.39	0.39	0.07	0.12	0.12	0.20	0.12	0.12
Clearance Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	4.5	6.9	6.9	4.5	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	3.0
Lane Gap Cap (vph)	729	2908	922	145	1760	550	234	406	180	198	405	187
v/s Ratio Prot	60.20	60.37	0.11	0.16	0.02	0.19	60.04	0.07	0.04	60.08	0.04	0.08
v/s Ratio Perm	0.79	0.63	0.18	0.41	0.48	0.11	0.56	0.55	0.05	0.53	0.67	0.19
Uniform Delay, d1	46.6	17.8	12.5	22.5	31.2	26.5	60.5	55.9	52.4	46.9	56.4	53.0
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	5.7	1.0	0.4	1.9	0.9	0.4	2.8	1.6	0.1	2.7	4.1	0.5
Delay (s)	52.2	18.8	12.9	24.4	32.2	26.9	63.3	57.5	52.5	49.6	60.5	53.5
Level of Service	D	B	B	C	C	C	E	E	D	D	E	D
Approach Delay (s)		25.4			31.0			58.6			55.8	
Approach LOS		C			C			E			E	
Intersection Summary												
HCM 2000 Control Delay	33.7			HCM 2000 Level of Service			C					
HCM 2000 Volume to Capacity ratio	0.69			Sum of lost time (s)			21.8					
Actuated Cycle Length (s)	135.0			ICU Level of Service			D					
Intersection Capacity Utilization	74.6%			Analysis Period (min)			15					
e Critical Lane Group												

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

Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Traffic Volume (vph)	5	35	35	0	65	770	15	595	10
Future Volume (vph)	5	35	35	0	65	770	15	595	10
Lane Group Flow (vph)	5	35	35	5	65	805	0	610	10
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4		8	8	2		6	6	6
Permitted Phases	4	4	8	8	2	2	6	6	6
Detector Phase									
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)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	55.0	55.0	55.0	55.0	55.0
Total Split (%)	22.5%	22.5%	22.5%	22.5%	55.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
LeadLag									
Lead-Lag Optimizer?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/s Ratio	0.06	0.08	0.41	0.01	0.13	0.56	0.44	0.01	0.01
Control Delay	45.6	0.3	55.5	0.0	5.9	8.7	6.9	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	0.3	55.5	0.0	5.9	8.7	6.9	0.0	0.0
Queue Length 50th (m)	1.0	0.0	6.9	0.0	3.6	73.3	47.7	0.0	0.0
Queue Length 95th (m)	4.7	0.0	16.4	0.0	10.6	137.8	85.6	0.0	0.0
Internal Link Dist (m)				96.6		481.5	358.1		
Turn Bay Length (m)					95.0		50.0		
Base Capacity (vph)	241	554	183	607	514	1446	1377	1308	
Saturation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/s Ratio	0.02	0.06	0.21	0.01	0.13	0.56	0.44	0.01	0.01
Intersection Summary									
Cycle Length: 100									
Actuated Cycle Length: 100									
Offset: 0 (0%), Referenced to phase 2NBT, Start of Green									
Natural Cycle: 90									
Control Type: Actuated-Coordinated									
m Volume for 95th percentile queue is metered by upstream signal.									
Spills and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3									

HCM Signalized Intersection Capacity Analysis

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	5	0	35	35	0	5	65	770	35	15	595	10
Future Volume (vph)	5	0	35	35	0	5	65	770	35	15	595	10
Ideal Flow (vph/ft)	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	1.00
Fpb. 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
Ft	1.00	1.00	0.85	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.85	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.99	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1342	1278	1137	1633	1552	1782	1552	1782	1733	1597	1597	1597
Flt Permitted	0.95	1.00	0.76	1.00	0.39	1.00	0.98	1.00	0.98	1.00	0.98	1.00
Satd. Flow (perm)	1342	1278	906	1633	635	1782	1697	1597	1597	1597	1597	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)	5	0	35	35	0	5	65	770	35	15	595	10
RTOR Reduction (vph)	0	0	34	0	5	0	0	1	0	0	0	2
Lane Group Flow (vph)	5	0	1	35	0	0	65	804	0	0	610	8
Cont. Peds. (#/hr)	33%	0%	25%	57%	0%	0%	15%	6%	28%	0%	11%	0%
Heavy Vehicles (%)	33%	0%	25%	57%	0%	0%	15%	6%	28%	0%	11%	0%
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6
Permitted Phases	4	4	8	8	8	2	2	2	2	6	6	6
Actuated Green, G (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8
Effective Green, g (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8
Actuated G/C Ratio	0.04	0.04	0.07	0.07	0.07	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	50	48	62	112	481	1350	1286	1210	1286	1210	1286	1210
v/s Ratio Prot	60.00	0.00	60.04	0.00	0.10	60.45	0.36	0.00	0.36	0.00	0.36	0.00
v/s Ratio Perm	0.10	0.03	0.56	0.00	0.14	0.60	0.47	0.01	0.47	0.01	0.47	0.01
Uniform Delay, d1	46.4	46.3	45.1	43.3	3.3	5.3	4.6	2.9	4.6	2.9	4.6	2.9
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	0.9	0.2	11.2	0.0	0.6	1.9	1.2	0.0	1.2	0.0	1.2	0.0
Delay (s)	47.3	46.6	56.3	43.4	3.8	7.3	5.6	3.0	5.6	3.0	5.6	3.0
Level of Service	D	D	E	D	A	A	A	A	A	A	A	A
Approach Delay (s)	46.7	46.7	54.7	46.7	46.7	54.7	46.7	46.7	46.7	46.7	46.7	46.7
Approach LOS	D	D	D	D	D	A	A	A	A	A	A	A
Intersection Summary												
HCM 2000 Control Delay	8.7		HCM 2000 Level of Service		A							
HCM 2000 Volume to Capacity ratio	0.57		Sum of lost time (s)		13.5							
Actuated Cycle Length (s)	100.0		ICU Level of Service		C							
Intersection Capacity Utilization	70.1%		Analysis Period (min)		15							
e Critical Lane Group												

Trial/Lands Dixie

Synchro 11 Report
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Queues

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

Lane Group	EBR	NBL	NBT	SBL	SBT	Ø8
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	5	60	660	15	645	645
Future Volume (vph)	5	60	660	15	645	645
Lane Group Flow (vph)	5	0	730	0	675	675
Turn Type	Perm	Perm	NA	Perm	NA	NA
Protected Phases	4	2	2	6	8	8
Permitted Phases	4	2	2	6	8	8
Detector Phase	4	2	2	6	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	22.5	77.5	77.5	77.5	77.5	22.5
Total Split (s)	22.5%	77.5%	77.5%	77.5%	77.5%	23%
Total Split (%)	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimizer?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
v/s Ratio	0.01	0.46	1.0	0.40	1.3	0.40
Control Delay	0.0	0.0	0.0	0.0	1.3	0.0
Queue Delay	0.0	0.0	1.0	0.0	1.3	0.0
Total Delay	0.0	0.0	1.0	0.0	1.3	0.0
Queue Length 50th (m)	0.0	0.0	0.0	0.0	30.7	0.0
Queue Length 95th (m)	0.0	0.0	10.1	0.0	30.7	0.0
Internal Link Dist (m)	358.1 696.2					
Turn Bay Length (m)	358.1 696.2					
Base Capacity (vph)	464	1582	1682	1682	1682	1682
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/s Ratio	0.01	0.46	1.0	0.40	1.3	0.40
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 0 (0%), Referenced to phase 2:NBLT and 6:SBTL, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						
Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1						

Trial/Lands Dixie

Synchro 11 Report
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HCM Signalized Intersection Capacity Analysis
 7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background (NES) 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	660	10	15	645	15
Future Volume (vph)	0	0	5	0	0	0	60	660	10	15	645	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	3.5	3.7	3.5
Total Lost time (s)			4.5				4.5				4.5	
Lane Util. Factor			1.00				1.00				1.00	
Flt Protected			0.85				1.00				1.00	
Satd. Flow (prot)			998				1769				1762	
Flt Permitted			1.00				0.91				0.98	
Satd. Flow (perm)			998				1630				1732	
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	660	10	15	645	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	730	0	0	675	0	0
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	7%	0%	9%	0%	0%
Turn Type	Prot	Perm	Perm	Perm	Perm	Perm	NA	NA	Perm	Perm	NA	Perm
Protected Phases	4			8			8	2			6	
Actuated Green, G (s)			1.1				89.9				89.9	
Effective Green, g (s)			1.1				89.9				89.9	
Actuated Q/C Ratio			0.01				0.90				0.90	
Clearance Time (s)			4.5				4.5				4.5	
Vehicle Extension (s)			3.0				3.0				3.0	
Lane Grp Cap (vph)			10				1465				1557	
v/s Ratio Prot												
v/s Ratio Perm			c0.00				c0.45				0.39	
v/c Ratio			0.01				0.50				0.43	
Uniform Delay, d1			48.9				0.9				0.8	
Progression Factor			1.00				0.28				1.00	
Incremental Delay, d2			0.2				1.0				0.9	
Delay (s)			49.1				1.3				1.7	
Level of Service			D				A				A	
Approach Delay (s)			49.1				0.0				1.3	
Approach LOS			D				A				A	
Intersection Summary												
HCM 2000 Control Delay			1.7			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.49			Sum of lost time (s)			9.0			
Actuated Cycle Length (s)			100.0			ICU Level of Service			C			
Intersection Capacity Utilization			70.0%			Analysis Period (min)			15			
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 8: Dixie Road & 12489 Site Access 1 Future Background (NES) 2033 AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑	↓	↔	↔
Traffic Volume (veh/h)	0	0	635	0	645	645
Future Volume (veh/h)	0	0	635	0	645	645
Sign Control	Stop	Stop	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	635	0	645	645
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Upstream signal (m)						394
pX, platoon unblocked			0.93			
vC, conflicting volume			1280			635
wC1, stage 1 conf vol						635
vC2, stage 2 conf vol						
vCn, unblocked vol			1263			635
IC, single (s)			6.4			6.2
IC, 2 stage (s)						
FF (s)			3.5			3.3
p0 queue free %			100			100
CM capacity (veh/h)			176			482
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	635	0	645		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
SSH	1700	1700	1700	958		
Volume to Capacity	0.00	0.37	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	A	A	A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A	A		A		
Intersection Summary						
Average Delay			0.0			A
Intersection Capacity Utilization			37.3%			
Analysis Period (min)			15			

Queues

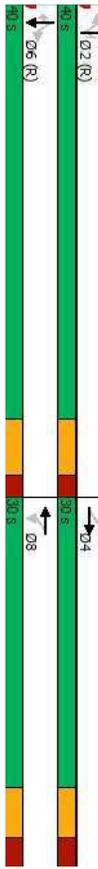
10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Future Background (NES) 2033 AM Peak Hour

Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	08
Lane Configurations	15	0	70	565	620	25	
Traffic Volume (vph)	15	0	70	565	620	25	
Future Volume (vph)	15	0	70	565	620	25	
Lane Group Flow (vph)	15	30	70	565	620	25	
Turn Type	Perm	NA	Perm	NA	NA	Perm	
Protected Phases	4	4	2	2	6	6	8
Detector Phases	4	4	2	2	6	6	
Switch Phase							
Minimum Initial (s)	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
Total Split (s)	30.0	30.0	40.0	40.0	40.0	30.0	30.0
Total Split (%)	42.9%	42.9%	57.1%	57.1%	57.1%	43%	43%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5	4.0
All-Red Time (s)	2.5	2.5	2.0	2.0	2.0	2.0	2.5
Lost Time Adjust (s)	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
Lead/Lag							
Lead-Lag Optimizer?	None	None	C-Max	C-Max	C-Max	C-Max	None
Recall Mode	0.09	0.09	0.11	0.38	0.43	0.02	
v/c Ratio	29.8	0.5	3.4	4.1	3.3	0.1	
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Queue Delay	29.8	0.5	3.4	4.1	3.3	0.1	
Total Delay	2.0	0.0	2.3	24.3	18.7	0.0	
Queue Length 50th (m)	7.1	0.0	6.3	43.9	22.5	m0.1	
Queue Length 95th (m)	161.0		369.7	813.5			
Internal Link Dist (m)	15.0		60.0		60.0		
Turn Bay Length (m)	600	681	636	1487	1446	1332	
Base Capacity (vph)	0	0	0	0	0	0	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillover Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.03	0.04	0.11	0.38	0.43	0.02	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Natural Cycle: 60
 Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
 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



Tribal Lands Dixie

HCM Signalized Intersection Capacity Analysis

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	15	0	30	0	0	0	70	565	0	0	620	25
Traffic Volume (vph)	15	0	30	0	0	0	70	565	0	0	620	25
Future Volume (vph)	15	0	30	0	0	0	70	565	0	0	620	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.5	3.7	3.5	3.5	3.5
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	0.85
Flt	1.00	0.85					1.00	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00					0.95	1.00	1.00	1.00	1.00	0.85
Satd. Flow (prot)	1785	1633					1785	1795	1746	1597	1597	1597
Flt Permitted	0.95	1.00					0.41	1.00	1.00	1.00	1.00	0.85
Satd. Flow (perm)	1789	1633					789	1795	1746	1597	1597	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	0	0	0	70	565	0	0	620	25
RTOR Reduction (vph)	0	28	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	15	2	0	0	0	0	70	565	0	0	620	19
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	10%	0%
Turn Type	Perm	NA	Perm	Perm	Perm	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4					8	2	2	6	6	6
Permitted Phases	4	4					8	2	2	6	6	6
Actuated Green, G (s)	4.2	4.2					52.8	52.8	52.8	52.8	52.8	52.8
Effective Green, g (s)	4.2	4.2					52.8	52.8	52.8	52.8	52.8	52.8
Actuated G/C Ratio	0.06	0.06					0.75	0.75	0.75	0.75	0.75	0.75
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 Gp Cap (vph)	107	97					590	1316	1204			
v/s Ratio Prot		0.00						0.31				
v/s Ratio Perm	c0.01	0.14	0.02				0.09	0.12	0.42	0.47	0.02	0.01
Uniform Delay, d1	31.2	31.0					2.3	3.1	3.3	3.3	2.1	2.1
Progression Factor	1.00	1.00					1.00	1.00	0.89	0.29	0.29	0.29
Incremental Delay, d2	0.6	0.1					0.4	1.0	1.1	1.1	0.0	0.0
Delay (s)	31.8	31.0					2.8	4.0	3.4	3.4	0.6	0.6
Level of Service	C	C					A	A	A	A	A	A
Approach Delay (s)		31.3					0.0	3.9		3.3		
Approach LOS		C					A	A		A		

Intersection Summary

HCM 2000 Control Delay: 4.5
 HCM 2000 Volume to Capacity ratio: 0.45
 Actuated Cycle Length (s): 70.0
 Intersection Capacity Utilization: 57.2%
 Analysis Period (min): 15
 Critical Lane Group: c

Tribal Lands Dixie

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Background (NES) 2033 AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	0	20	430	150	0	645
Traffic Volume (Veh/h)	0	20	430	150	0	645
Future Volume (Veh/h)	0	20	430	150	0	645
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	20	430	150	0	645
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		0.86		430		580
VC, conflicting volume		1075		430		580
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCU, unblocked vol		1004		430		580
IC, single (s)		6.4		6.2		4.1
IC, 2 stage (s)						
FF (s)		3.5		3.3		2.2
p0 queue free %		100		97		100
CM capacity (veh/h)		232		629		1004
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	20	430	150	645		
Volume Left	0	0	0	0		
Volume Right	20	0	150	0		
ESH	629	1700	1700	1700		
Volume to Capacity	0.03	0.25	0.09	0.38		
Queue Length 95th (m)	0.8	0.0	0.0	0.0		
Control Delay (s)	10.9	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	10.9	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.2			A		
Intersection Capacity Utilization	37.3%			ICU Level of Service		
Analysis Period (min)	15			A		

Tribal Lands Dixie

Synchro 11 Report
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Queues

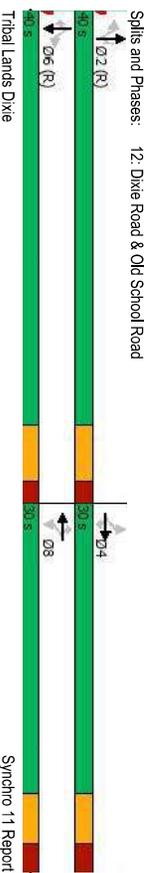
12: Dixie Road & Old School Road

Future Background (NES) 2033 AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	45	340	50	150	140	10	30	180	45	60	445
Traffic Volume (vph)	45	340	50	150	140	10	30	180	45	60	445
Future Volume (vph)	45	340	50	150	140	10	30	180	45	60	445
Lane Group Flow (vph)	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Turn Type											
Protected Phases	4	4	4	8	8	8	2	2	2	6	6
Permitted Phases	4	4	4	8	8	8	2	2	2	6	6
Detector Phases											
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)	24.5	24.5	24.5	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	30.0	30.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
LeadLag											
Lead-Lag Optimizer?											
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.14	0.69	0.14	0.79	0.30	0.02	0.11	0.18	0.05	0.09	0.44
Control Delay	18.6	30.0	5.6	64.3	28.0	2.1	8.2	7.6	1.0	9.8	12.4
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	18.6	30.0	5.6	64.3	28.0	2.1	8.2	7.6	1.0	9.8	12.4
Queue Length 50th (m)	4.8	42.6	0.0	22.7	20.6	0.0	1.6	10.0	0.0	3.5	32.4
Queue Length 95th (m)	10.5	58.3	5.9	#23.8	9.4	0.3	m-3.8	17.0	0.7	11.2	69.2
Internal Link Dist (m)		371.4		41.8			216.1				251.5
Turn Bay Length (m)	30.0		30.0	30.0	65.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	412	649	446	247	613	531	285	986	859	657	1014
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	0.11	0.52	0.11	0.61	0.23	0.02	0.11	0.18	0.05	0.09	0.44
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											
# 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.											

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn



HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background (NES) 2033 AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	3	4	3	4	3	4	3	4	3	4	3
Traffic Volume (vph)	45	340	50	150	140	10	30	180	45	60	445	95
Future Volume (vph)	45	340	50	150	140	10	30	180	45	60	445	95
Ideal Flow (vph/pl)	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	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	1.00
Flt	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)	1716	1902	1201	1785	1795	1452	1062	1762	1493	1733	1812	1566
Flt Permitted	0.67	1.00	1.00	0.39	1.00	1.00	0.46	1.00	1.00	0.64	1.00	1.00
Satd. Flow (perm)	1206	1902	1201	726	1795	1452	510	1762	1493	1174	1812	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)	45	340	50	150	140	10	30	180	45	60	445	95
RTOR Reduction (vph)	0	0	37	0	0	7	0	0	20	0	0	42
Lane Group Flow (vph)	45	340	13	150	140	3	180	25	60	445	53	53
Heavy Vehicles (%)	4%	1%	33%	0%	7%	10%	68%	9%	7%	3%	6%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	2	2	6	6	6	6	6
Actuated Green, G (s)	18.2	18.2	18.2	18.2	18.2	38.8	38.8	38.8	38.8	38.8	38.8	38.8
Effective Green, g (s)	18.2	18.2	18.2	18.2	18.2	38.8	38.8	38.8	38.8	38.8	38.8	38.8
Actuated Q/C Ratio	0.26	0.26	0.26	0.26	0.26	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Clearance Time (s)	6.5	6.5	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	3.0
Lane Grp Cap (vph)	313	494	312	188	466	377	282	976	827	660	1004	868
v/s Ratio Prot	0.18	0.18	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
v/s Ratio Perm	0.04	0.01	0.01	0.21	0.00	0.01	0.06	0.02	0.05	0.05	0.05	0.03
v/c Ratio	0.14	0.69	0.04	0.80	0.30	0.01	0.11	0.18	0.03	0.09	0.44	0.06
Uniform Delay, d1	19.9	23.3	19.4	24.2	20.8	19.2	7.4	7.7	7.1	7.3	9.2	7.2
Progression Factor	1.00	1.00	1.00	1.53	1.37	1.00	0.73	0.76	0.31	1.00	1.00	1.00
Incremental Delay, d2	0.2	4.0	0.1	20.4	0.4	0.0	0.7	0.4	0.1	0.3	1.4	0.1
Delay (s)	20.1	27.3	19.4	57.5	28.8	19.2	6.1	6.3	2.2	7.6	10.6	7.3
Level of Service	C	C	B	E	C	B	A	A	A	A	B	A
Approach Delay (s)	25.7			42.9			5.5			9.8		
Approach LOS	C			D			A			A		
Intersection Summary												
HCM 2000 Control Delay	19.7			HCM 2000 Level of Service			B					
HCM 2000 Volume to Capacity ratio	0.56											
Actuated Cycle Length (s)	70.0			Sum of lost time (s)			13.0					
Intersection Capacity Utilization	75.5%			ICU Level of Service			D					
Analysis Period (min)	15											

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background (NES) 2033 AM Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4	4	0	3	0	5
Traffic Volume (veh/h)	400	40	0	310	0	5
Future Volume (veh/h)	400	40	0	310	0	5
Sign Control	Free	Free	Free	Stop	0%	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	400	40	0	310	0	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream signal (m)	66					
PX, platoon unblocked						
WC, conflicting volume			440		575	220
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol			440		575	220
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
CM capacity (veh/h)			1131		453	790
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	267	173	155	155	5	
Volume Left	0	0	0	0	0	
Volume Right	0	40	0	0	5	
SSH	1700	1700	1700	1700	790	
Volume to Capacity	0.16	0.10	0.09	0.09	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		A		A	
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	22.3%		ICU Level of Service		A	
Analysis Period (min)	15					

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

HCM Signalized Intersection Capacity Analysis
 1: Dixie Road & Mayfield Road
 Future Background 2033 (NES) AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	455	2005	280	60	930	110	130	165	60	95	230	245
Future Volume (vph)	455	2005	280	60	930	110	130	165	60	95	230	245
Ideal Flow (vph/pl)	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)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frbp. 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
Frbp. 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	0.85	1.00	1.00	0.85	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	2684	4902	1554	1539	4561	1377	3236	3230	1319	1370	3380	1390
Flt Permitted	0.95	1.00	1.00	0.08	1.00	0.95	1.00	1.00	0.65	1.00	1.00	1.00
Satd. Flow (perm)	2684	4902	1554	135	4561	1377	3236	3230	1319	934	3380	1390
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)	455	2005	280	60	930	110	130	165	60	95	230	245
RTOR Reduction (vph)	0	106	0	0	59	0	0	53	0	0	218	0
Lane Group Flow (vph)	455	2005	174	60	930	51	130	165	7	95	230	27
Cont. Peds. (#/hr)	29%	7%	1%	16%	15%	16%	7%	13%	19%	30%	8%	13%
Heavy Vehicles (%)	29%	7%	1%	16%	15%	16%	7%	13%	19%	30%	8%	13%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	6	6	6	7	4	4	8	8	8
Permitted Green, G (s)	27.9	83.7	83.7	68.9	62.6	62.6	8.4	14.9	14.9	23.1	14.8	14.8
Effective Green, g (s)	28.9	83.7	83.7	70.9	62.6	62.6	9.4	14.9	14.9	23.1	14.8	14.8
Actuated Q/C Ratio	0.21	0.62	0.62	0.53	0.46	0.46	0.07	0.11	0.19	0.19	0.11	0.11
Clearance Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	4.5	6.9	6.9	4.5	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	3.0
Lane Gap Cap (vph)	574	3039	963	146	2114	638	225	356	145	203	370	152
v/s Ratio Prot	60.17	60.41	0.11	0.19	0.02	0.20	60.04	0.05	0.03	60.07	0.02	0.02
v/s Ratio Perm	0.79	0.66	0.18	0.41	0.44	0.08	0.58	0.46	0.05	0.47	0.62	0.18
Uniform Delay, d1	50.2	16.5	11.0	16.2	24.4	20.2	60.9	56.3	48.1	57.4	54.6	54.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.4	1.1	0.4	1.9	0.7	0.2	3.6	1.0	0.1	1.7	3.2	0.6
Level of Service	E	B	B	B	C	C	E	E	D	D	E	E
Approach Delay (s)	23.6	23.6	23.6	24.2	24.2	24.2	59.3	59.3	59.3	56.5	56.5	56.5
Approach LOS	C	C	C	C	C	C	E	E	E	E	E	E
Intersection Summary												
HCM 2000 Control Delay	30.4			HCM 2000 Level of Service			C					
HCM 2000 Volume to Capacity ratio	0.69			Sum of lost time (s)			19.8					
Actuated Cycle Length (s)	135.0			ICU Level of Service			D					
Intersection Capacity Utilization	77.2%			Analysis Period (min)			15					
e Critical Lane Group												

Trial/Lands Dixie

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

Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Traffic Volume (vph)	5	35	35	0	65	550	15	500	10
Future Volume (vph)	5	35	35	0	65	550	15	500	10
Lane Group Flow (vph)	5	35	35	5	65	585	0	515	10
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	2	2	6	6	6
Permitted Phases	4	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase	4	4	8	8	2	2	6	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	55.0	55.0	55.0	55.0	55.0
Total Split (%)	22.5%	22.5%	22.5%	22.5%	55.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
LeadLag									
Lead-Lag Optimizer?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/s Ratio	0.06	0.07	0.41	0.01	0.11	0.42	0.38	0.01	0.01
Control Delay	45.6	0.3	55.5	0.0	5.7	6.7	6.3	0.0	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	0.3	55.5	0.0	5.7	6.7	6.3	0.0	6.3
Queue Length 50th (m)	1.0	0.0	6.9	0.0	3.6	44.0	37.3	0.0	37.3
Queue Length 95th (m)	4.7	0.0	16.4	0.0	10.3	82.5	70.5	0.0	70.5
Internal Link Dist (m)					96.6	481.5	358.1		358.1
Turn Bay Length (m)					95.0		50.0		50.0
Base Capacity (vph)	241	595	163	676	585	1400	1357	1308	1308
Saturation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/s Ratio	0.02	0.06	0.21	0.01	0.11	0.42	0.38	0.01	0.01
Intersection Summary									
Cycle Length: 100									
Actuated Cycle Length: 100									
Offset: 0 (0%), Referenced to phase 2NBLT and 6SBTL Start of Green									
Natural Cycle: 80									
Control Type: Actuated-Coordinated									
m Volume for 95th percentile queue is metered by upstream signal.									
Spills and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3									

HCM Signalized Intersection Capacity Analysis

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	5	0	35	35	0	5	65	550	35	15	500	10
Future Volume (vph)	5	0	35	35	0	5	65	550	35	15	500	10
Ideal Flow (vph/ln)	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	1.00
Frpb, 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
Flt	1.00	1.00	0.85	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.85	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1342	1278	1137	1633	1552	1725	1703	1597	1673	1597	1673	1597
Flt Permitted	0.95	1.00	0.76	1.00	0.44	1.00	0.98	1.00	0.98	1.00	0.98	1.00
Satd. Flow (perm)	1342	1278	906	1633	721	1725	1673	1597	1673	1597	1673	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)	5	0	35	35	0	5	65	550	35	15	500	10
RTOR Reduction (vph)	0	0	34	0	5	0	0	1	0	0	0	2
Lane Group Flow (vph)	5	0	1	35	0	0	65	584	0	0	515	8
Cont. Peds. (#/hr)	33%	0%	25%	57%	0%	0%	15%	9%	28%	0%	13%	0%
Heavy Vehicles (%)	33%	0%	25%	57%	0%	0%	15%	9%	28%	0%	13%	0%
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6
Permitted Green, G (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8
Effective Green, g (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8
Actuated Q/C Ratio	0.04	0.04	0.07	0.07	0.07	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	50	48	62	112	546	1307	1268	1210	1268	1268	1210	1210
v/s Ratio Prot	60.00	0.00	60.04	0.00	0.09	60.34	0.31	0.00	0.31	0.00	0.00	0.00
v/s Ratio Perm	0.10	0.03	0.56	0.00	0.12	0.45	0.41	0.01	0.41	0.01	0.01	0.01
Uniform Delay, d1	46.4	46.3	45.1	43.3	3.2	4.4	4.2	2.9	4.2	2.9	2.9	2.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	0.99	1.00	1.00
Incremental Delay, d2	0.9	0.2	11.2	0.0	0.4	1.1	0.9	0.0	0.9	0.0	0.0	0.0
Delay (s)	47.3	46.6	56.3	43.4	3.7	5.5	5.1	3.0	5.1	3.0	3.0	3.0
Level of Service	D	D	E	D	A	A	A	A	A	A	A	A
Approach Delay (s)	46.7	46.7	54.7	46.7	46.7	54.7	46.7	46.7	54.7	46.7	46.7	46.7
Approach LOS	D	D	D	D	D	D	A	A	A	A	A	A
Intersection Summary												
HCM 2000 Control Delay	8.1		HCM 2000 Level of Service		A							
HCM 2000 Volume to Capacity ratio	0.44		Sum of lost time (s)		13.5							
Actuated Cycle Length (s)	100.0		ICU Level of Service		C							
Intersection Capacity Utilization	70.1%		Analysis Period (min)		15							
e Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

Queues

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

Lane Group	EBR	NBL	NBT	SBL	SBT	Ø8
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	5	60	440	15	550	550
Future Volume (vph)	5	60	440	15	550	550
Lane Group Flow (vph)	5	0	510	0	580	580
Turn Type	Perm	Perm	NA	Perm	NA	NA
Protected Phases	4	2	2	6	6	8
Permitted Phases	4	2	2	6	6	6
Detector Phase	4	2	2	6	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	22.5	77.5	77.5	77.5	77.5	22.5
Total Split (s)	22.5%	77.5%	77.5%	77.5%	77.5%	23%
Total Split (%)	22.5%	77.5%	77.5%	77.5%	77.5%	23%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimizer?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
v/s Ratio	0.01	0.34	0.34	0.36	0.36	0.36
Control Delay	0.0	0.0	0.7	1.1	0.0	0.0
Queue Delay	0.0	0.0	0.7	1.1	0.0	0.0
Total Delay	0.0	0.0	0.7	1.1	0.0	0.0
Queue Length 50th (m)	0.0	0.0	7.5	24.7	0.0	0.0
Queue Length 95th (m)	0.0	0.0	358.1	696.2	0.0	0.0
Internal Link Dist (m)						
Turn Bay Length (m)						
Base Capacity (vph)	517	1514	1623	1623	1623	1623
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/s Ratio	0.01	0.34	0.34	0.36	0.36	0.36
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 0 (0%), Referenced to phase 2:NBT, and 6:SBTL, Start of Green						
Natural Cycle: 55						
Control Type: Actuated-Coordinated						
Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1						
Ø2 (R)	Ø4	Ø8	Ø8	Ø8	Ø8	Ø8
77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s
Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)
77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s

Tribal Lands Dixie

Synchro 11 Report
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HCM Signalized Intersection Capacity Analysis
 7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background 2033 (NES) 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	440	10	15	550	15
Future Volume (vph)	0	0	5	0	0	0	60	440	10	15	550	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)			4.5				4.5			4.5		4.5
Lane Util. Factor			1.00				1.00			1.00		1.00
Flt Protected			1.00				0.85			1.00		1.00
Satd. Flow (prot)			998				1744			1693		1693
Flt Permitted			1.00				0.89			0.99		0.99
Satd. Flow (perm)			998				1560			1671		1671
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	440	10	15	550	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	510	0	0	580	0	0
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	10%	0%	11%	0%	0%
Turn Type	Prot	Perm	Perm	Perm	Perm	Perm	NA	NA	Perm	NA	Perm	NA
Protected Phases	4			8			8	2		6		6
Actuated Green, G (s)			1.1				89.9			89.9		89.9
Effective Green, g (s)			1.1				89.9			89.9		89.9
Actuated Q/C Ratio			0.01				0.90			0.90		0.90
Clearance Time (s)			4.5				4.5			4.5		4.5
Vehicle Extension (s)			3.0				3.0			3.0		3.0
Lane Grp Cap (vph)			10				1402			1502		1502
v/s Ratio Prot												
v/s Ratio Perm			c0.00				0.33			c0.35		0.33
v/c Ratio			0.01				0.36			0.39		0.36
Uniform Delay, d1			48.9				0.8			0.8		0.8
Progression Factor			1.00				0.36			1.00		1.00
Incremental Delay, d2			0.2				0.7			0.8		0.8
Delay (s)			49.1				1.0			1.5		1.5
Level of Service			D				A			A		A
Approach Delay (s)			49.1				0.0			1.0		1.5
Approach LOS			D				A			A		A
Intersection Summary												
HCM 2000 Control Delay	1.5			HCM 2000 Level of Service			A					
HCM 2000 Volume to Capacity ratio	0.38			Sum of lost time (s)			9.0					
Actuated Cycle Length (s)	100.0			ICU Level of Service			B					
Intersection Capacity Utilization	57.4%			Analysis Period (min)			15					
c Critical Lane Group												

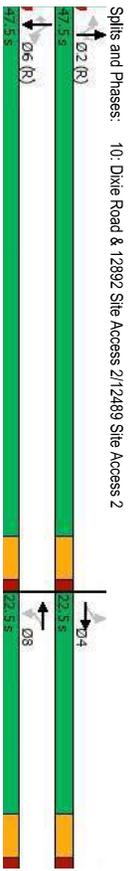
HCM Unsignalized Intersection Capacity Analysis
 8: Dixie Road & 12489 Site Access 1 Future Background 2033 (NES) AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑	↓	↔	↔
Traffic Volume (veh/h)	0	0	415	0	0	550
Future Volume (veh/h)	0	0	415	0	0	550
Sign Control	Stop	Stop	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	415	0	0	550
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream signal (m)				394		
pX, platoon unblocked	0.86			415		
WC, conflicting volume	965			415		
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol	878	415		415		
IC, single (s)	6.4	6.2		4.1		
IC, 2 stage (s)						
FF (s)	3.5	3.3		2.2		
p0 queue free %	100	100		100		
CM capacity (veh/h)	276	642		1155		
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	415	0	550		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
SSH	1700	1700	1700	1155		
Volume to Capacity	0.00	0.24	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	A	A	A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A	A		A		
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	32.3%					
ICU Level of Service	A					
Analysis Period (min)	15					

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

Lane Group	NBT	SBT	04	08
Lane Configurations	415	550		
Traffic Volume (vph)	415	550		
Future Volume (vph)	415	550		
Lane Group Flow (vph)	415	550		
Turn Type	NA	NA		
Protected Phases	2	6	4	8
Permitted Phases				
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	47.5	47.5	22.5	22.5
Total Split (%)	67.9%	67.9%	32%	32%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		
Total Lost Time (s)	4.5	4.5		
Lead/Lag				
Lead-Lag Optimizer?	0.37	0.49		
v/c Ratio	8.0	12.5		
Control Delay	0.0	0.0		
Queue Delay	8.0	12.5		
Queue Length 50th (m)	25.1	57.6		
Queue Length 95th (m)	40.8	78.1		
Internal Link Dist (m)	369.7	813.5		
Turn Bay Length (m)				
Base Capacity (vph)	1113	1134		
Starvation Cap Reductn	0	0		
Spillback Cap Reductn	0	0		
Storage Cap Reductn	0	0		
Reduced v/c Ratio	0.37	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: Prelimed



HCM Signalized Intersection Capacity Analysis
 10: Dixie Road & 12892 Site Access 2/12489 Site Access 2 Future Background 2033 (NES) AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	0	0	0	0	0	0	0	415	0	0	550	0
Traffic Volume (vph)	0	0	0	0	0	0	0	415	0	0	550	0
Future Volume (vph)	0	0	0	0	0	0	0	415	0	0	550	0
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)								4.5			4.5	
Lane Util. Factor								1.00			1.00	
Flt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								1812			1847	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								1812			1847	
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	0	0	0	0	0	415	0	0	550	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	415	0	0	550	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	4%	0%	0%
Turn Type	Perm	NA	Perm	Perm	NA	Perm						
Protected Phases	4	4	8	8	8	8	2	2	2	6	6	6
Actuated Green, G (s)								43.0			43.0	
Effective Green, g (s)								43.0			43.0	
Actuated Q/C Ratio								0.61			0.61	
Clearance Time (s)								4.5			4.5	
Lane Gp Cap (vph)								1113			1134	
v/s Ratio, Prot								0.23			0.30	
v/s Ratio, Perm								0.37			0.49	
Uniform Delay, d1								6.8			7.4	
Progression Factor								1.00			1.44	
Incremental Delay, d2								1.0			1.4	
Delay (s)								7.7			12.1	
Level of Service								A			B	
Approach Delay (s)	0.0						0.0				7.7	
Approach LOS	A						A				B	

Intersection Summary
 HCM 2000 Control Delay: 10.2 HCM 2000 Level of Service: B
 HCM 2000 Volume to Capacity ratio: 0.34
 Actuated Cycle Length (s): 70.0 Sum of lost time (s): 9.0
 Intersection Capacity Utilization: 32.7% ICU Level of Service: A
 Analysis Period (min): 15
 e Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 11: Dixie Road & 12861 Site Access 1

Future Background 2033 (NES) AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	0	0	415	0	0	550
Traffic Volume (Veh/h)	0	0	415	0	0	550
Future Volume (Veh/h)	0	0	415	0	0	550
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	415	0	0	550
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median storage (veh)			None			None
Upstream signal (m)					240	
pk, platoon unblocked	0.91					
vc, conflicting volume	965	415			415	
vc1, stage 1 conf vol						
vc2, stage 2 conf vol						
vcu, unblocked vol	913	415			415	
tc, single (s)	6.4	6.2			4.1	
tc, 2 stage (s)						
FF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
CM capacity (veh/h)	279	642			1155	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	415	0	550		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
ESH	1700	1700	1700	1700		
Volume to Capacity	0.00	0.24	0.00	0.32		
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			0.0		
Intersection Capacity Utilization	32.3%			ICU Level of Service		
Analysis Period (min)	15			A		

Trial Lands Dixie

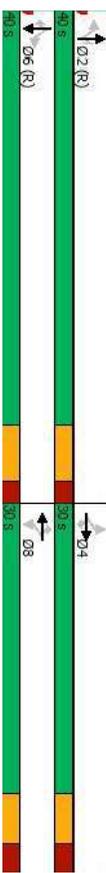
Synchro 11 Report
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Queues
 12: Dixie Road & Old School Road

Future Background 2033 (NES) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	45	45	50	75	155	10	30	155	35	20	425
Traffic Volume (vph)	45	365	50	75	155	10	30	155	35	20	425
Future Volume (vph)	45	365	50	75	155	10	30	155	35	20	425
Lane Group Flow (vph)	45	365	50	75	155	10	30	155	35	20	425
Turn Type	Perm	NA	Perm	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8	8		8	8		2	6
Permitted Phases	4	4	4	4	8	8	8	8	2	2	6
Detector Phases											
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)	24.5	24.5	24.5	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	30.0	30.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag											
Lead-Lag Optimizer?											
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.21	0.56	0.19	0.43	0.25	0.03	0.08	0.14	0.04	0.03	0.37
Control Delay	25.8	29.3	8.4	52.9	43.5	15.3	7.4	7.5	1.5	5.9	7.8
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	25.8	29.3	8.4	52.9	43.5	15.3	7.4	7.5	1.5	5.9	7.8
Queue Length 50th (m)	5.4	24.4	0.0	11.7	12.6	0.0	1.9	9.9	0.0	23.9	0.0
Queue Length 95th (m)	13.0	34.4	7.3	24.8	22.3	0.4	m4.9	m16.9	m2.0	47.2	5.3
Internal Link Dist (m)		371.4		41.8			216.1			281.5	
Turn Bay Length (m)	30.0		30.0	30.0	65.0	50.0	50.0	50.0	50.0	50.0	50.0
Base Capacity (vph)	396	1213	439	326	1145	523	354	1099	950	715	1150
Saturation 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	0.11	0.30	0.11	0.23	0.14	0.02	0.08	0.14	0.04	0.03	0.37
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											
m Volume for 95th percentile queue is metered by upstream signal.											

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



Trial Lands Dixie

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HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background 2033 (NES) AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	4	4	4	4	4	4	4	4	4	4	4	4	
Traffic Volume (vph)	45	365	50	75	155	10	30	155	35	20	425	95	
Future Volume (vph)	45	365	50	75	155	10	30	155	35	20	425	95	
Ideal Flow (vph/pl)	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.85	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)	1716	3614	1201	1785	3411	1452	1062	1731	1465	1623	1812	1566	
Flt Permitted	0.65	1.00	1.00	0.52	1.00	1.00	0.50	1.00	1.00	0.66	1.00	1.00	
Satd. Flow (perm)	1181	3614	1201	974	3411	1452	538	1731	1465	1125	1812	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)	45	365	50	75	155	10	30	155	35	20	425	95	
RTOR Reduction (vph)	0	0	41	0	0	8	0	0	13	0	0	35	
Lane Group Flow (vph)	45	365	9	75	155	2	30	155	22	20	425	60	
Heavy Vehicles (%)	4%	1%	33%	0%	7%	10%	68%	11%	9%	10%	6%	2%	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6	
Permitted Green, G (s)	12.5	12.5	12.5	12.5	12.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	
Effective Green, g (s)	12.5	12.5	12.5	12.5	12.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	
Actuated Q/C Ratio	0.18	0.18	0.18	0.18	0.18	0.64	0.64	0.64	0.64	0.64	0.64	0.64	
Clearance Time (s)	6.5	6.5	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	3.0	
Lane Gap Cap (vph)	210	645	214	173	609	259	354	1100	931	715	1151	995	
v/s Ratio Prot	0.10	0.10	0.01	0.08	0.05	0.00	0.05	0.09	0.02	0.02	0.02	0.04	
v/s Ratio Perm	0.21	0.57	0.04	0.43	0.25	0.01	0.08	0.14	0.02	0.03	0.37	0.06	
v/c Ratio	0.21	0.57	0.04	0.43	0.25	0.01	0.08	0.14	0.02	0.03	0.37	0.06	
Uniform Delay, d1	24.6	28.3	23.8	25.6	24.7	23.6	4.9	5.1	4.7	4.7	6.1	4.8	
Progression Factor	1.00	1.00	1.00	1.81	1.00	1.12	1.24	1.22	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	1.1	0.1	1.7	0.2	0.0	0.4	0.3	0.1	0.9	0.1	0.1	
Delay (s)	25.1	27.4	23.9	48.0	44.2	23.7	6.0	6.6	5.8	4.8	7.0	4.9	
Level of Service	C	C	C	D	D	C	A	A	A	A	A	A	
Approach Delay (s)		26.8			44.5			6.4				6.5	
Approach LOS		C			D			A				A	
Intersection Summary													
HCM 2000 Control Delay	19.1						HCM 2000 Level of Service						B
HCM 2000 Volume to Capacity ratio	0.41												
Actuated Cycle Length (s)	70.0						Sum of lost time (s)						13.0
Intersection Capacity Utilization	55.4%						ICU Level of Service						B
Analysis Period (min)	15												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background 2033 (NES) AM Peak Hour

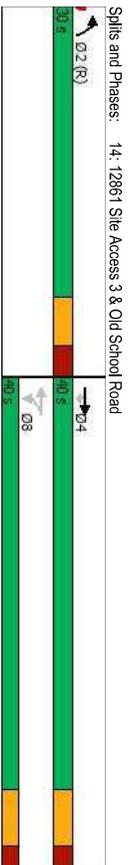
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	4	4	4	4	4	4	
Traffic Volume (veh/h)	415	0	0	250	0	0	
Future Volume (veh/h)	415	0	0	250	0	0	
Sign Control	Free	0%	Free	Stop	0%	0%	
Grade	0%	0%	0%	0%	0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	415	0	0	250	0	0	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Upstream signal (m)	66						
PX, platform unblocked			0.91		0.91	0.91	
WC1, conflicting volume			415		540	208	
WC1, stage 1 conf vol							
WC2, stage 2 conf vol							
VCU, unblocked vol			165		302	0	
IC, single (s)			4.1		6.8	6.9	
IC, 2 stage (s)			2.2		3.5	3.3	
FF (s)			100		100	100	
p0 queue free %			1300		612	995	
CM capacity (veh/h)							
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1		
Volume Total	277	138	125	125	0		
Volume Left	0	0	0	0	0		
Volume Right	0	0	0	0	0		
SSH	1700	1700	1700	1700	1700		
Volume to Capacity	0.16	0.08	0.07	0.07	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	14.8%						
Analysis Period (min)	15						
	ICU Level of Service						A

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

Lane Group	EBT	WBT	02
Lane Configurations	↔↔	↔↔	
Traffic Volume (vph)	415	250	
Future Volume (vph)	415	250	
Lane Group Flow (vph)	415	250	
Turn Type	NA	NA	2
Protected Phases	4		2
Permitted Phases		8	
Detector Phases	4	8	
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5
Total Split (s)	40.0	40.0	30.0
Total Split (%)	57.1%	57.1%	43%
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 Optimizer?			
Recall Mode	None	None	C-Min
v/c Ratio	0.59	0.36	
Control Delay	26.0	25.3	
Queue Delay	0.0	0.0	
Total Delay	26.0	25.3	
Queue Length 50th (m)	33.6	15.3	
Queue Length 95th (m)	46.4	24.1	
Internal Link Dist (m)	433.3	157.0	
Turn Bay Length (m)			
Base Capacity (vph)	1746	1746	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.24	0.14	

Intersection Summary
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔	↔↔	↔	↔
Traffic Volume (vph)	415	0	0	250	0	0
Future Volume (vph)	415	0	0	250	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		
Flt	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)	415	0	0	250	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	415	0	0	250	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	NA	Perm	custom	NA	Prot	Prot
Protected Phases	4		4	8	8	2
Permitted Phases						
Actuated Green, G (s)	13.4			13.4		
Effective Green, g (s)	13.4			13.4		
Actuated g/C Ratio	0.19			0.19		
Clearance Time (s)	6.5			6.5		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	698			698		
v/s Ratio Prot	0.11			0.07		
v/s Ratio Perm						
v/c Ratio	0.59			0.36		
Uniform Delay, d1	25.8			24.6		
Progression Factor	0.89			1.00		
Incremental Delay, d2	1.3			0.3		
Delay (s)	24.2			24.9		
Level of Service	C			C		
Approach Delay (s)	24.2			24.9		
Approach LOS	C			C		A

Intersection Summary
 HCM 2000 Control Delay: 24.5
 HCM 2000 Volume to Capacity ratio: 0.14
 Actuated Cycle Length (s): 70.0
 Intersection Capacity Utilization: 16.9%
 Analysis Period (min): 15
 ICU Level of Service: A
 Critical Lane Group: c

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Background 2033 (NES) AM Peak Hour

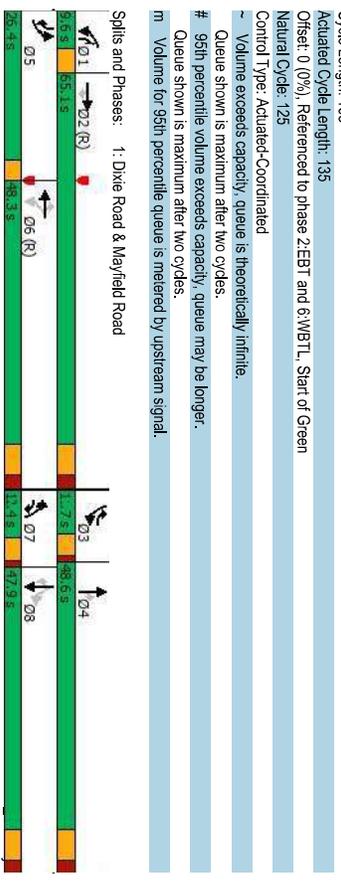
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop		Stop		Stop		Stop		Stop
Traffic Volume (vph)	5	320	85	25	180	0	40	85	20	5	170	30
Future Volume (vph)	5	320	85	25	180	0	40	85	20	5	170	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate (vph)	5	320	85	25	180	0	40	85	20	5	170	30
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	410	205	145	205								
Volume Left (vph)	5	25	40	5								
Volume Right (vph)	85	0	20	30								
Head (s)	-0.07	0.09	0.07	-0.05								
Departure Headway (s)	5.3	5.7	6.1	5.8								
Degree Utilization, x	0.60	0.33	0.25	0.33								
Capacity (veh/h)	652	573	515	551								
Control Delay (s)	15.8	11.5	11.1	11.7								
Approach Delay (s)	15.8	11.5	11.1	11.7								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay	13.3											
Level of Service	B											
Intersection Capacity Utilization	54.3%											
ICU Level of Service	A											
Analysis Period (min)	15											

Queues

1: Dixie Road & Mayfield Road

Future Background (NES) 2033 PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Prohibit										
Traffic Volume (vph)	420	1355	180	60	1350	90	210	215	60	140	205	595
Future Volume (vph)	420	1355	180	60	1350	90	210	215	60	140	205	595
Lane Group Flow (vph)	420	1355	180	60	1350	90	210	215	60	140	205	595
Turn Type	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases				2	6	6	6	6	4	8	8	8
Detector Phases	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)	26.4	65.1	12.4	9.6	48.3	11.7	12.4	48.6	9.6	11.7	47.9	26.4
Total Split (%)	19.6%	48.2%	9.2%	7.1%	35.8%	8.7%	9.2%	36.0%	7.1%	8.7%	35.5%	19.6%
Yellow Time (s)	3.0	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.0
All-Red Time (s)	0.0	2.3	1.0	0.0	2.3	1.0	1.0	2.3	0.0	1.0	2.3	0.0
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	0.0
Total Lost Time (s)	3.0	6.9	4.5	3.5	6.9	4.5	4.5	6.9	3.5	4.5	6.9	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
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						
v/c Ratio	0.52	0.46	0.16	0.26	0.73	0.13	0.81	0.53	0.19	0.66	0.59	0.96
Control Delay	41.8	14.3	1.2	15.8	40.0	5.9	84.0	61.6	3.8	64.2	66.6	52.1
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	41.8	14.3	1.2	15.8	40.0	5.9	84.0	61.6	3.8	64.2	66.6	52.1
Queue Length 50th (m)	51.8	67.8	0.0	4.2	112.3	0.8	-33.5	30.7	0.0	39.7	31.1	91.4
Queue Length 95th (m)	61.9	87.6	6.8	9.8	153.6	12.1	#60.5	43.5	4.6	m61.2	44.7	110.0
Internal Link Dist (m)	980.1											
Turn Bay Length (m)	155.0											
Base Capacity (vph)	803	2929	1114	231	1843	701	260	1116	318	213	1066	621
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	0.52	0.46	0.16	0.26	0.73	0.13	0.81	0.19	0.66	0.59	0.96	0.96
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT_L, Start of Green												
Natural Cycle: 125												
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.												
m Queue shown is maximum after two cycles.												
m Volume for 95th percentile queue is metered by upstream signal.												



HCM Signalized Intersection Capacity Analysis

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	10	0	50	70	0	5	15	660	15	5	810	0	
Traffic Volume (vph)	10	0	50	70	0	5	15	660	15	5	810	0	
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Ideal Flow (vphpl)	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	
Lane Width	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	1.00	
Frbp. 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	
Ft	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1785	1426	1394	1633	1291	1688	1731	1731	1731	1731	1731	1731	
Flt Permitted	0.95	1.00	0.76	1.00	0.23	1.00	0.23	1.00	0.23	1.00	1.00	1.00	
Satd. Flow (perm)	1785	1426	1111	1633	311	1688	1727	1727	1727	1727	1727	1727	
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)	10	0	50	70	0	5	15	660	15	5	810	0	
RTOR Reduction (vph)	0	0	47	0	4	0	0	1	0	0	0	0	
Lane Group Flow (vph)	10	0	3	70	1	0	15	674	0	0	815	0	
Cont. Ped. (#/hr)	0%	0%	12%	28%	0%	0%	38%	13%	33%	0%	11%	0%	
Heavy Vehicles (%)	0%	0%	12%	28%	0%	0%	38%	13%	33%	0%	11%	0%	
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6	
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6	
Actuated Green, G (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2	
Effective Green, g (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2	
Actuated G/C Ratio	0.06	0.06	0.10	0.10	0.10	0.64	0.64	0.64	0.64	0.64	0.64	0.64	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	100	80	115	169	199	1080	1105	1105	1105	1105	1105	1105	
v/s Ratio Prot	60.01	0.00	60.06	0.00	0.08	0.40	0.40	0.40	0.40	0.40	0.40	0.40	
v/s Ratio Perm	0.10	0.04	0.61	0.00	0.08	0.62	0.62	0.62	0.62	0.62	0.62	0.62	
Uniform Delay, d1	30.2	30.1	28.9	27.1	27.1	4.6	7.3	8.3	8.3	8.3	8.3	8.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	0.95	2.59	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.2	8.8	0.0	0.7	2.6	4.4	4.4	4.4	4.4	4.4	4.4	
Delay (s)	30.7	30.3	37.8	27.1	27.1	5.1	21.5	12.7	12.7	12.7	12.7	12.7	
Level of Service	C	C	C	D	C	A	C	B	C	C	C	C	
Approach Delay (s)	30.4	30.4	37.0	37.0	37.0	21.1	12.7	12.7	12.7	12.7	12.7	12.7	
Approach LOS	C	C	D	D	C	C	B	C	C	C	C	C	
Intersection Summary													
HCM 2000 Control Delay	18.0						HCM 2000 Level of Service						B
HCM 2000 Volume to Capacity ratio	0.88												
Actuated Cycle Length (s)	67.5						Sum of lost time (s)						13.5
Intersection Capacity Utilization	66.1%						ICU Level of Service						C
Analysis Period (min)	15												
e Critical Lane Group													

Tribal Lands Dixie

Synchro 11 Report
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Queues

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

Lane Group	EBL	WBR	NBL	NBT	SBT
Lane Configurations	10	10	35	610	835
Traffic Volume (vph)	5	10	35	610	835
Future Volume (vph)	5	10	35	610	835
Lane Group Flow (vph)	5	10	0	650	855
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases	4	8	2	2	6
Detector Phases	4	8	2	2	6
Switch Phase	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	50.0%	50.0%	50.0%	50.0%	50.0%
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Lead-Lag Optimizer?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.02	0.03	0.45	0.52	0.52
Control Delay	17.2	0.2	2.9	3.6	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.2	2.9	3.6	3.6
Queue Length 50th (m)	0.4	0.0	0.0	0.0	0.0
Queue Length 95th (m)	2.5	0.0	46.6	69.2	69.2
Internal Link Dist (m)			358.1	696.2	696.2
Turn Bay Length (m)					
Base Capacity (vph)	714	723	1444	1640	1640
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	0.01	0.45	0.52	0.52
Intersection Summary					
Cycle Length: 45					
Actuated Cycle Length: 45					
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBT, Start of Green					
Natural Cycle: 60					
Control Type: Actuated-Coordinated					
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 Background (NES) 2033 PM Peak Hour

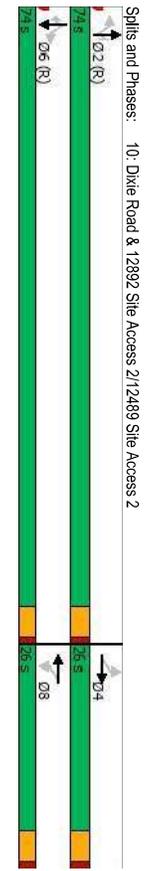
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	0	0	0	0	0	0	0	0	0	0	4
Traffic Volume (vph)	5	0	0	0	0	10	35	610	5	0	835	20
Future Volume (vph)	5	0	0	0	0	10	35	610	5	0	835	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	4.5					4.5		4.5			4.5	
Lane Util. Factor	1.00					1.00		1.00			1.00	
Frbp. ped/bikes	1.00					1.00		1.00			1.00	
Ft	1.00					0.85		1.00			1.00	
Fl Protected	0.95					1.00		1.00			1.00	
Satd. Flow (prot)	1785					1597		1638			1759	
Fl Permitted	0.95					1.00		0.94			1.00	
Satd. Flow (perm)	1785					1597		1548			1759	
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	610	5	0	835	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	1	0
Lane Group Flow (vph)	5	0	0	0	0	0	0	650	0	0	854	0
Confl. Peds. (#/hr)	0%	0%	0%	0%	0%	0%	2%	17%	100%	0%	9%	0%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	NA	NA	NA	NA	NA
Protected Phases												2
Permitted Phases	4		4	8		8	2					6
Actuated Green, G (s)	1.2		1.2	1.2		1.2	34.8				34.8	2.0
Effective Green, g (s)	1.2		1.2	1.2		1.2	34.8				34.8	2.0
Actuated G/C Ratio	0.03		0.03	0.03		0.03	0.77				0.77	0.03
Clearance Time (s)	4.5		4.5	4.5		4.5	3.0				3.0	4.5
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0				3.0	3.0
Lane Gap Cap (vph)	47		47	42		42	1197				1360	60.49
v/s Ratio Prot												
v/s Ratio Perm	60.00		60.00	0.00		0.00	0.42				0.63	0.63
v/c Ratio	0.11		0.11	0.01		0.01	0.54				2.2	2.2
Uniform Delay, d1	21.4		21.4	21.3		21.3	2.0				1.00	1.00
Progression Factor	1.00		1.00	1.00		1.00	1.00				1.00	1.00
Incremental Delay, d2	1.0		1.0	0.1		0.1	1.8				2.2	2.2
Delay (s)	22.4		22.4	21.4		21.4	3.8				4.5	4.5
Level of Service	C		C	C		C	A				A	A
Approach Delay (s)	22.4		22.4	21.4		21.4	3.8				4.5	4.5
Approach LOS	C		C	C		C	A				A	A
Intersection Summary												
HCM 2000 Control Delay	4.3		4.3	HCM 2000 Level of Service			A					
HCM 2000 Volume to Capacity ratio	0.61		0.61									
Actuated Cycle Length (s)	45.0		45.0	Sum of lost time (s)			9.0					
Intersection Capacity Utilization	71.5%		71.5%	ICU Level of Service			C					
Analysis Period (min)	15		15									
e Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 8: Dixie Road & 12489 Site Access 1 Future Background (NES) 2033 PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	4	0	0	0	0	4
Traffic Volume (veh/h)	0	0	615	0	0	760
Future Volume (veh/h)	0	0	615	0	0	760
Sign Control	Stop	0%	Free	0%	Free	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	615	0	0	760
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median Type			None			None
Median storage (veh)						
Upstream signal (m)	0.91					394
pX, platoon unblocked	1375		615			615
vC, conflicting volume						
wC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCn, unblocked vol	1363		615			615
IC, single (s)	6.4		6.2			4.1
IC, 2 stage (s)						
IF (s)	3.5		3.3			2.2
p0 queue free %	100		100			100
CM capacity (veh/h)	150		495			974
Direction, Lane #						
Volume Total	0	615	0	760		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
SSH	1700	1700	1700	974		
Volume to Capacity	0.00	0.36	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	A	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0		
Approach LOS	A	A	A	A		
Intersection Summary						
Average Delay	0.0		0.0			A
Intersection Capacity Utilization	43.3%		43.3%			A
Analysis Period (min)	15		15			

Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	08
Lane Configurations	35	0	20	595	710	5	
Traffic Volume (vph)	35	0	20	595	710	5	
Future Volume (vph)	35	0	20	595	710	5	
Lane Group Flow (vph)	35	55	20	595	710	5	
Turn Type	Perm	NA	Perm	NA	NA	Perm	
Protected Phases	4	4	2	2	6	6	8
Detector Phases	4	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)	22.5	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	26.0	26.0	74.0	74.0	74.0	26.0	
Total Split (%)	26.0%	26.0%	74.0%	74.0%	74.0%	26%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag							
Lead-Lag Optimizer?	None	None	C-Max	C-Max	C-Max	C-Max	None
Recall Mode	0.31	0.14	0.03	0.41	0.46	0.00	
v/c Ratio	49.7	0.7	1.9	3.2	3.5	0.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Queue Delay	49.7	0.7	1.9	3.2	3.5	0.4	
Queue Length 50th (m)	6.9	0.0	0.5	22.3	28.5	0.0	
Queue Length 95th (m)	16.5	0.0	2.0	42.7	53.8	0.3	
Internal Link Dist (m)		161.0		369.7	813.5		
Turn Bay Length (m)	15.0		60.0			60.0	
Base Capacity (vph)	305	577	593	1435	1528	1374	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillover Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.11	0.10	0.03	0.41	0.46	0.00	

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Natural Cycle: 60
 Offset: 0 (0%), Referenced to phase 2:NBLT and 6:SRTL, Start of Green
 Control Type: Actuated-Coordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	55	0	0	0	20	595	0	0	710	5
Traffic Volume (vph)	35	0	55	0	0	0	20	595	0	0	710	5
Future Volume (vph)	35	0	55	0	0	0	20	595	0	0	710	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.85
Flt	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Satd. Flow (prot)	1785	1633	1785	1633	1785	1633	1785	1633	1785	1633	1785	1597
Flt Permitted	0.76	1.00	1.00	1.00	1.00	1.00	0.37	1.00	1.00	1.00	1.00	0.85
Satd. Flow (perm)	1423	1633	1423	1633	1423	1633	691	1671	1423	1633	1423	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	0	0	0	20	595	0	0	710	5
RTOR Reduction (vph)	0	51	0	0	0	0	0	0	0	0	0	1
Lane Group Flow (vph)	35	4	0	0	0	0	20	595	0	0	710	4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	8%	0%
Turn Type	Perm	NA	Perm	Perm	Perm	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4	8	8	8	8	2	2	6	6	6	6
Permitted Phases	4	4	8	8	8	8	2	2	6	6	6	6
Actuated Green, G (s)	6.9	6.9	6.9	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1
Effective Green, g (s)	6.9	6.9	6.9	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1
Actuated v/c Ratio	0.07	0.07	0.07	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gp Cap (vph)	98	112	112	581	1405	1496	1496	1343	1496	1343	1496	1343
v/s Ratio Prot												
v/s Ratio Perm	c0.02	0.36	0.03	0.03	0.03	0.03	0.03	0.42	0.03	0.03	0.47	0.00
Uniform Delay, d1	44.4	43.4	44.4	1.3	1.3	2.0	2.1	1.3	1.3	2.1	1.3	1.3
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	2.2	0.1	0.9	0.1	0.9	1.1	1.1	0.0	0.1	0.9	1.1	0.0
Delay (s)	46.7	43.6	46.7	1.4	2.9	3.2	3.2	1.3	1.4	3.2	1.3	1.3
Level of Service	D	D	D	A	A	A	A	A	A	A	A	A
Approach Delay (s)	44.8			0.0			2.9				3.2	
Approach LOS	D			A			A				A	

Intersection Summary
 HCM 2000 Control Delay: 5.7
 HCM 2000 Volume to Capacity ratio: 0.47
 Actuated Cycle Length (s): 100.0
 Intersection Capacity Utilization: 49.0%
 Analysis Period (min): 15
 ICU Level of Service: A
 Critical Lane Group: c

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Background (NES) 2033 PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	0	45	580	50	0	715
Traffic Volume (Veh/h)	0	45	580	50	0	715
Future Volume (Veh/h)	0	45	580	50	0	715
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	45	580	50	0	715
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right Turn Lane (Veh)						
Median Type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (m)	0.93	580			240	
pk, platoon unblocked						
vc, conflicting volume	1295	580			630	
vc1, stage 1 conf vol						
vc2, stage 2 conf vol						
vcU, unblocked vol	1279	580			630	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
FF (s)	3.5	3.3			2.2	
p0 queue free %	100	91			100	
CM capacity (veh/h)	172	518			962	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	45	580	50	715		
Volume Left	0	0	0	0		
Volume Right	45	0	50	0		
ESH	518	1700	1700	1700		
Volume to Capacity	0.09	0.34	0.03	0.42		
Queue Length 95th (m)	2.3	0.0	0.0	0.0		
Control Delay (s)	12.6	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	12.6	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.4			0.4		
Intersection Capacity Utilization	41.0%			ICU Level of Service		
Analysis Period (min)	15			A		

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

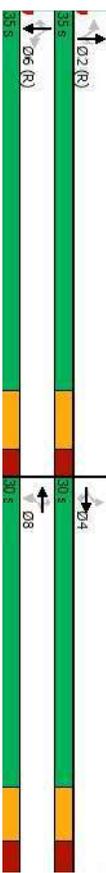
Queues

12: Dixie Road & Old School Road

Future Background (NES) 2033 PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	65	150	30	190	350	15	70	480	85	20	285	35
Traffic Volume (vph)	65	150	30	190	350	15	70	480	85	20	285	35
Future Volume (vph)	65	150	30	190	350	15	70	480	85	20	285	35
Lane Group Flow (vph)	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Turn Type												
Protected Phases	4		4	8	8	8	2	2	2	6	6	6
Permitted Phases	4	4	4	4	8	8	2	2	2	6	6	6
Detector Phases												
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	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	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	30.0	30.0	35.0	35.0	35.0	35.0	35.0	35.0
Total Spilt (%)	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	53.8%	53.8%	53.8%	53.8%	53.8%	53.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	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	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	6.5	6.5
Lead/Lag												
Lead-Lag Optimizer?												
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.33	0.30	0.08	0.57	0.69	0.03	0.18	0.47	0.10	0.05	0.31	0.04
Control Delay	22.2	19.2	2.3	40.9	43.4	5.2	11.4	12.7	3.2	9.9	10.9	1.8
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	22.2	19.2	2.3	40.9	43.4	5.2	11.4	12.7	3.2	9.9	10.9	1.8
Queue Length 50th (m)	6.6	15.2	0.0	25.7	47.8	0.1	4.2	34.5	0.0	1.1	18.4	0.0
Queue Length 95th (m)	14.7	25.0	2.3	35.0	57.5	m0.4	13.4	70.4	6.7	5.1	40.1	2.6
Internal Link Dist (m)		371.4			41.8		216.1				281.5	
Turn Bay Length (m)	30.0		30.0	30.0		65.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	286	674	459	449	687	577	380	1013	842	412	930	838
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	0.24	0.22	0.07	0.42	0.51	0.03	0.18	0.47	0.10	0.05	0.31	0.04
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: 50												
Control Type: Actuated-Coordinated												
m Volume for 95th percentile queue is metered by upstream signal.												

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



Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background (NES) 2033 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	65	150	30	190	350	15	70	480	85	20	285	35
Future Volume (vph)	65	150	30	190	350	15	70	480	85	20	285	35
Ideal Flow (vph/pl)	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	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	1.00
Flt	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)	1785	1865	1166	1785	1902	1493	1159	1902	1507	1733	1746	1521
Flt Permitted	0.39	1.00	1.00	0.66	1.00	1.00	0.59	1.00	1.00	0.42	1.00	1.00
Satd. Flow (perm)	739	1865	1166	1243	1902	1493	714	1902	1507	775	1746	1521
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)	65	150	30	190	350	15	70	480	85	20	285	35
RTOR Reduction (vph)	0	0	22	0	0	11	0	0	40	0	0	16
Lane Group Flow (vph)	65	150	8	190	350	4	70	480	45	20	285	19
Heavy Vehicles (%)	0%	3%	37%	0%	1%	7%	54%	1%	6%	3%	10%	5%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	2	2	6	6	6	6	6
Actuated Green, G (s)	17.4	17.4	17.4	17.4	17.4	34.6	34.6	34.6	34.6	34.6	34.6	34.6
Effective Green, g (s)	17.4	17.4	17.4	17.4	17.4	34.6	34.6	34.6	34.6	34.6	34.6	34.6
Actuated Q/C Ratio	0.27	0.27	0.27	0.27	0.27	0.53	0.53	0.53	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	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	3.0
Lane Grp Cap (vph)	197	499	312	332	509	399	380	1012	802	412	929	809
v/s Ratio Prot	0.08	0.08	0.01	0.15	0.01	0.10	0.47	0.06	0.05	0.31	0.02	0.16
v/s Ratio Perm	0.33	0.30	0.03	0.57	0.69	0.01	0.18	0.47	0.06	0.05	0.31	0.02
v/c Ratio	19.1	19.0	17.5	20.6	21.4	17.5	7.9	9.5	7.3	7.3	8.5	7.2
Uniform Delay, d1	1.00	1.00	1.00	1.72	1.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	1.0	0.3	0.0	2.3	3.8	0.0	1.1	1.6	0.1	0.2	0.9	0.1
Incremental Delay, d2	20.1	19.3	17.6	37.8	41.1	17.5	8.9	11.1	7.5	7.5	9.4	7.2
Delay (s)	C	B	B	D	D	B	A	B	A	A	A	A
Level of Service	C	B	B	D	D	B	A	B	A	A	A	A
Approach Delay (s)	19.3	19.3	19.3	39.3	39.3	10.4	10.4	9.0	9.0	9.0	9.0	9.0
Approach LOS	B	B	B	D	D	B	A	B	A	A	A	A
Intersection Summary												
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service										
HCM 2000 Volume to Capacity ratio	0.35	C										
Actuated Cycle Length (s)	65.0	Sum of lost time (s)										
Intersection Capacity Utilization	73.7%	ICU Level of Service										
Analysis Period (min)	15	D										

Tribal Lands Dixie

Synchro 11 Report
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HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background (NES) 2033 PM Peak Hour

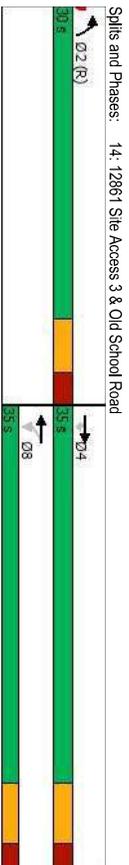
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Volume (veh/h)	235	15	0	550	0	10
Future Volume (veh/h)	235	15	0	550	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	235	15	0	550	0	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream signal (m)	66					
pX, platoon unblocked						
WC, conflicting volume			250		518	125
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol	250			518	125	
IC, single (s)	4.1			6.8	6.9	
IC, 2 stage (s)	2.2			3.5	3.3	
FC (s)	100			100	99	
p0 queue free %	1327			492	909	
CM capacity (veh/h)						
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	157	93	275	275	10	
Volume Left	0	0	0	0	0	
Volume Right	0	15	0	0	10	
SSH	1700	1700	1700	1700	909	
Volume to Capacity	0.09	0.05	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	9.0	
Lane LOS	A	A	A	A	A	
Approach Delay (s)	0.0	0.0	0.0	9.0	9.0	
Approach LOS	A	A	A	A	A	
Intersection Summary						
Average Delay	0.1	HCM 2000 Level of Service				
Intersection Capacity Utilization	18.5%	A				
Analysis Period (min)	15	ICU Level of Service				

Tribal Lands Dixie

Synchro 11 Report
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Lane Group	EBT	WBL	WBT	NBL
Lane Configurations	↔↔	↔	↔↔	↔↔
Traffic Volume (vph)	245	10	420	130
Future Volume (vph)	245	10	420	130
Lane Group Flow (vph)	245	0	430	150
Turn Type	NA	Perm	NA	Prot
Protected Phases	4	8	8	2
Detector Phases	4	8	8	2
Switch Phase	5.0	5.0	5.0	5.0
Minimum Initial (s)	25.0	25.0	25.0	24.5
Minimum Split (s)	35.0	35.0	35.0	30.0
Total Split (%)	53.8%	53.8%	53.8%	46.2%
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 Optimizer?	None	None	None	C-Min
Recall Mode	0.32	0.60	0.14	
v/c Ratio	16.7	26.7	6.5	
Control Delay	0.0	0.0	6.5	
Queue Delay	16.7	26.7	6.5	
Total Delay	14.7	26.1	6.8	
Queue Length 50th (m)	24.7	36.6	16.3	
Queue Length 95th (m)	433.3	157.0	183.7	
Internal Link Dist (m)				
Turn Bay Length (m)	1600	1507	1053	
Base Capacity (vph)	0	0	0	
Starvation Cap Reductn	0	0	0	
Spillback Cap Reductn	0	0	0	
Storage Cap Reductn	0	0	0	
Reduced v/c Ratio	0.15	0.29	0.14	

Intersection Summary
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔	↔↔	↔↔	↔↔
Traffic Volume (vph)	245	0	10	420	130	20
Future Volume (vph)	245	0	10	420	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	6.5	6.5
Lane Util. Factor	0.95	1.00	0.95	1.00	0.98	1.00
Flt	1.00	1.00	1.00	1.00	0.96	1.00
Flt Protected	1.00	1.00	1.00	1.00	0.96	1.00
Satd. Flow (prot)	3650	3650	3646	3646	1768	1768
Flt Permitted	1.00	1.00	0.94	0.94	0.96	1.00
Satd. Flow (perm)	3690	3690	3439	3439	1768	1768
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	245	0	10	420	130	20
RTOR Reduction (vph)	0	0	0	0	5	0
Lane Group Flow (vph)	245	0	0	430	145	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	NA	Perm	Perm	NA	Prot	Prot
Protected Phases	4	4	8	8	2	2
Actuated Green, G (s)	13.5	13.5	13.5	38.5	38.5	38.5
Effective Green, g (s)	13.5	13.5	13.5	38.5	38.5	38.5
Actuated g/C Ratio	0.21	0.21	0.21	0.59	0.59	0.59
Clearance Time (s)	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
Lane Grp Cap (vph)	758	758	714	1047	1047	1047
v/s Ratio Prot	0.07	0.07	0.07	0.08	0.08	0.08
v/s Ratio Perm	0.32	0.32	0.60	0.14	0.14	0.14
Uniform Delay, d1	21.9	21.9	23.3	5.9	5.9	5.9
Progression Factor	0.73	0.73	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	1.4	1.4	0.3	0.3	0.3
Delay (s)	16.3	16.3	24.8	6.2	6.2	6.2
Level of Service	B	B	C	C	A	A
Approach Delay (s)	16.3	16.3	24.8	6.2	6.2	6.2
Approach LOS	B	B	C	C	A	A

Intersection Summary
 HCM 2000 Control Delay: 18.9
 HCM 2000 Volume to Capacity ratio: 0.28
 Actuated Cycle Length (s): 65.0
 Intersection Capacity Utilization: 38.0%
 Analysis Period (min): 15
 ICU Level of Service: A
 Critical Lane Group: c

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Background (NES) 2033 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	45	195	25	15	345	10	60	200	35	10	55	25
Future Volume (vph)	45	195	25	15	345	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	195	25	15	345	10	60	200	35	10	55	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	265	370	295	90								
Volume Left (vph)	45	15	60	10								
Volume Right (vph)	25	10	35	25								
Head (s)	0.05	0.01	-0.03	-0.04								
Departure Headway (s)	5.8	5.6	5.9	6.3								
Degree Utilization, x	0.43	0.57	0.48	0.16								
Capacity (veh/h)	572	611	563	470								
Control Delay (s)	13.0	15.8	14.2	10.5								
Approach Delay (s)	13.0	15.8	14.2	10.5								
Approach LOS	B	C	B	B								
Intersection Summary												
Delay	14.1											
Level of Service	B											
Intersection Capacity Utilization	60.3%											
ICU Level of Service	B											
Analysis Period (min)	15											

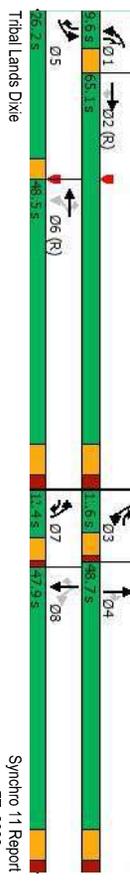
Queues

1: Dixie Road & Mayfield Road

Future Background 2033 (NES) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		RT	RT		RT	RT		RT	RT		RT	RT
Traffic Volume (vph)	420	1495	180	60	1485	90	210	215	60	140	205	595
Future Volume (vph)	420	1495	180	60	1485	90	210	215	60	140	205	595
Lane Group Flow (vph)	420	1495	180	60	1485	90	210	215	60	140	205	595
Turn Type	Prot	NA	pmt+ov	Prot	NA	pmt+ov	Prot	NA	pmt+ov	Prot	NA	pmt+ov
Protected Phases	1	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases	5	2	7	2	6	6	6	6	4	4	8	8
Detector Phases	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	47.9	9.5	47.9	9.5	47.9	9.5
Total Split (s)	26.2	65.1	12.4	9.6	48.5	11.6	12.4	48.7	9.6	11.6	47.9	26.2
Total Split (%)	19.4%	48.2%	9.2%	7.1%	35.9%	8.6%	9.2%	36.1%	7.1%	8.6%	35.5%	19.4%
Yellow Time (s)	3.0	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.0
All-Red Time (s)	0.0	2.3	1.0	0.0	2.3	1.0	1.0	2.3	0.0	1.0	2.3	0.0
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)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
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	0.51	0.50	0.16	0.26	0.78	0.13	0.87	0.56	0.19	0.64	0.59	0.96
Control Delay	40.7	14.2	0.0	15.4	40.7	5.0	93.4	62.8	3.9	62.9	66.6	52.1
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	40.7	14.2	1.1	15.4	40.7	5.0	93.4	62.8	3.9	62.9	66.6	52.1
Queue Length 50th (m)	51.2	78.2	0.0	4.0	128.5	0.0	30.8	30.7	0.0	39.7	31.1	91.2
Queue Length 95th (m)	61.3	100.0	6.8	9.5	#186.8	11.0	#56.8	43.5	4.6	m#1.2	44.7	110.0
Internal Link Dist (m)		980.1		272.1		844.0					481.5	
Turn Bay Length (m)	210.0	184.0	180.0	180.0	150.0	160.0	160.0	65.0	210.0	180.0	180.0	180.0
Base Capacity (vph)	825	2991	1114	230	1904	711	242	1119	311	220	1066	621
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	0.51	0.50	0.16	0.26	0.78	0.13	0.87	0.19	0.64	0.19	0.64	0.96
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green												
Natural Cycle: 125												
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: 1: Dixie Road & Mayfield Road



HCM Signalized Intersection Capacity Analysis

Future Background 2033 (NES) PM Peak Hour

1: Dixie Road & Mayfield Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	420	1495	180	60	1485	90	210	215	60	140	205	595
Future Volume (vph)	420	1495	180	60	1485	90	210	215	60	140	205	595
Ideal Flow (vph/ft)	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)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	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	0.99	1.00	1.00	1.00
Flt	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85
Satd. Flow (prot)	2770	4683	1476	1767	4902	1342	3362	3614	1293	1535	3510	1395
Flt Permitted	0.95	1.00	1.00	0.16	1.00	0.95	1.00	0.61	1.00	0.61	1.00	1.00
Satd. Flow (perm)	2770	4683	1476	303	4902	1342	3362	3614	1293	981	3510	1395
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)	420	1495	180	60	1485	90	210	215	60	140	205	595
RTOR Reduction (vph)	0	0	54	0	0	50	0	0	51	0	0	42
Lane Group Flow (vph)	420	1495	126	60	1485	40	210	215	9	140	205	553
Confl. Peds. (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Heavy Vehicles (%)	25%	12%	6%	1%	7%	19%	3%	1%	22%	16%	4%	14%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	5	2	2	7	1	6	3	7	4	3	8	5
Permitted Phases	2	2	2	6	6	6	6	6	4	8	8	8
Actuated Green, G (s)	39.2	85.5	94.3	58.0	52.4	60.1	8.8	14.4	20.0	21.0	13.3	52.5
Effective Green, g (s)	40.2	85.5	94.3	60.0	52.4	60.1	9.8	14.4	20.0	23.0	13.3	52.5
Actuated G/C Ratio	0.30	0.63	0.70	0.44	0.39	0.45	0.07	0.11	0.15	0.10	0.39	0.39
Clearance Time (s)	3.0	6.9	4.5	3.5	6.9	4.5	4.5	6.9	3.5	4.5	6.9	3.0
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 Gap Cap (vph)	824	2965	1031	206	1902	597	244	385	191	203	345	542
v/s Ratio Prot	0.15	0.32	0.01	0.01	0.30	0.00	0.06	0.06	0.04	0.06	0.06	0.30
v/s Ratio Perm	0.51	0.50	0.12	0.29	0.78	0.07	0.86	0.56	0.05	0.69	0.59	1.02
Uniform Delay, d1	39.2	13.3	6.7	21.6	36.3	21.4	61.9	57.3	49.3	51.3	58.3	41.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.05	0.87
Incremental Delay, d2	0.5	0.6	0.1	0.8	3.3	0.0	25.2	1.8	0.1	7.7	2.2	40.3
Delay (s)	39.7	13.9	6.8	22.4	39.5	21.5	87.1	59.0	49.4	64.3	63.3	76.3
Level of Service	D	B	A	C	D	C	F	E	D	E	E	E
Approach Delay (s)	18.5			37.9			70.0			71.7		
Approach LOS	B			D			E			E		
Intersection Summary												
HCM 2000 Control Delay	39.2	HCM 2000 Level of Service										D
HCM 2000 Volume to Capacity ratio	0.91											
Actuated Cycle Length (s)	135.0	Sum of lost time (s)										21.8
Intersection Capacity Utilization	84.5%	ICU Level of Service										E
Analysis Period (min)	15											
e Critical Lane Group												

Tribal Lands Dixie

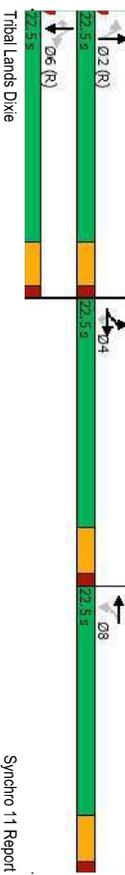
Synchro 11 Report
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Queues

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

Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Traffic Volume (vph)	10	50	70	0	15	660	5	810
Future Volume (vph)	10	50	70	0	15	660	5	810
Lane Group Flow (vph)	10	50	70	5	15	675	0	815
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8	8	2		6	
Detector Phases	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)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead-Lag Optimizer?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/s Ratio	0.06	0.10	0.44	0.01	0.07	0.56	0.66	0.66
Control Delay	28.7	0.4	34.1	0.0	8.3	25.6	15.6	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	0.4	34.1	0.0	8.3	25.6	15.6	15.6
Queue Length 50th (m)	1.3	0.0	8.6	0.0	1.4	191.4	78.7	78.7
Queue Length 95th (m)	5.3	0.0	18.8	0.0	m3.4	232.3	#/75.1	#/75.1
Internal Link Dist (m)					96.6	481.5	358.1	358.1
Turn Bay Length (m)					95.0			
Base Capacity (vph)	476	672	296	830	224	1216	1243	1243
Saturation 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/s Ratio	0.02	0.07	0.24	0.01	0.07	0.56	0.66	0.66
Intersection Summary								
Cycle Length: 67.5								
Actuated Cycle Length: 67.5								
Offset: 0 (0%), Referenced to phase 2NBLT and 6SBTL Start of Green								
Natural Cycle: 90								
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: 5: Dixie Road & Spiers Grifgen Avenue/12173 Site Access 3



Synchro 11 Report
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Tribal Lands Dixie

HCM Signalized Intersection Capacity Analysis

5: Dixie Road & Spliers Griggsen Avenue/12173 Site Access 3 Future Background 2033 (NES) PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	10	0	50	70	0	5	15	660	15	5	810	0	
Traffic Volume (vph)	10	0	50	70	0	5	15	660	15	5	810	0	
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Ideal Flow (vph/ln)	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	
Lane Width	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	1.00	
Frbp. 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	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1785	1426	1394	1633	1291	1688	1731	1731	1731	1731	1731	1731	
Flt Permitted	0.95	1.00	0.76	1.00	0.23	1.00	0.23	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1785	1426	1111	1633	311	1688	1727	1727	1727	1727	1727	1727	
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)	10	0	50	70	0	5	15	660	15	5	810	0	
RTOR Reduction (vph)	0	0	47	0	4	0	0	1	0	0	0	0	
Lane Group Flow (vph)	10	0	3	70	1	0	15	674	0	0	815	0	
Cont. Peds. (#/hr)	0%	0%	12%	28%	0%	0%	38%	13%	33%	0%	11%	0%	
Heavy Vehicles (%)	0%	0%	12%	28%	0%	0%	38%	13%	33%	0%	11%	0%	
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6	
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6	
Permitted Green, G (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2	
Effective Green, g (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2	
Actuated G/C Ratio	0.06	0.06	0.10	0.10	0.10	0.64	0.64	0.64	0.64	0.64	0.64	0.64	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	100	80	115	169	199	1080	1105	1105	1105	1105	1105	1105	
v/s Ratio Prot	60.01	0.00	60.06	0.00	0.08	0.40	0.40	0.40	0.40	0.40	0.40	0.40	
v/s Ratio Perm	0.10	0.04	0.61	0.00	0.08	0.62	0.62	0.62	0.62	0.62	0.62	0.62	
Uniform Delay, d1	30.2	30.1	28.9	27.1	4.6	7.3	8.3	8.3	8.3	8.3	8.3	8.3	
Progression Factor	1.00	1.00	1.00	1.00	0.95	2.58	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.2	8.8	0.0	0.7	2.6	4.4	4.4	4.4	4.4	4.4	4.4	
Delay (s)	30.7	30.3	37.8	27.1	5.1	21.4	12.7	12.7	12.7	12.7	12.7	12.7	
Level of Service	C	C	C	D	C	A	C	C	C	C	C	C	
Approach Delay (s)	30.4	30.4	37.0	37.0	21.0	12.7	12.7	12.7	12.7	12.7	12.7	12.7	
Approach LOS	C	C	D	D	C	C	C	C	C	C	C	C	
Intersection Summary													
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service					B						
HCM 2000 Volume to Capacity ratio	0.68												
Actuated Cycle Length (s)	67.5	Sum of lost time (s)					13.5						
Intersection Capacity Utilization	66.1%	ICU Level of Service					C						
Analysis Period (min)	15												
e Critical Lane Group													

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

Queues

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

Lane Group	EBL	WBR	NBL	NBT	SBT
Lane Configurations	10	10	35	610	835
Traffic Volume (vph)	5	10	35	610	835
Future Volume (vph)	5	10	35	610	835
Lane Group Flow (vph)	5	10	0	650	855
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases	2	2	2	6	6
Detector Phases	4	8	2	2	6
Switch Phase	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	50.0%	50.0%	50.0%	50.0%	50.0%
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Lead-Lag Optimizer?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/s Ratio	0.02	0.03	0.45	0.53	0.53
Control Delay	17.2	0.2	2.9	4.0	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.2	2.9	4.0	4.0
Queue Length 50th (m)	0.4	0.0	0.0	0.0	0.0
Queue Length 95th (m)	2.5	0.0	46.6	#77.5	46.6
Internal Link Dist (m)			358.1	696.2	
Turn Bay Length (m)					
Base Capacity (vph)	714	723	1444	1605	1605
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/s Ratio	0.01	0.01	0.45	0.53	0.53
Intersection Summary					
Cycle Length: 45					
Actuated Cycle Length: 45					
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBT, Start of Green					
Natural Cycle: 65					
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					

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 Background 2033 (NES) PM Peak Hour

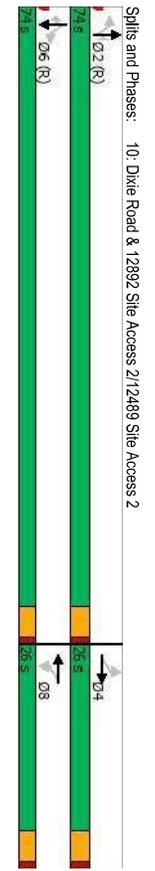
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	0	0	0	0	10	35	610	5	0	835	20
Future Volume (vph)	5	0	0	0	0	10	35	610	5	0	835	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	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)	4.5					4.5	4.5	4.5			4.5	
Lane Util. Factor	1.00					1.00	1.00	1.00			1.00	
Frbp. ped/bikes	1.00					1.00	1.00	1.00			1.00	
Ft	1.00					0.85	1.00	1.00			1.00	
Fl Protected	0.95					1.00	1.00	1.00			1.00	
Satd. Flow (prot)	1785					1597	1638	1720			1720	
Fl Permitted	0.95					1.00	0.94	1.00			1.00	
Satd. Flow (perm)	1785					1597	1548	1720			1720	
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	610	5	0	835	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	1	0
Lane Group Flow (vph)	5	0	0	0	0	0	650	0	0	0	854	0
Confl. Peds. (#/hr)	0%	0%	0%	0%	0%	0%	2%	17%	100%	0%	9%	0%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	17%	100%	0%	9%	0%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	NA	NA	NA	NA	NA
Protected Phases								2			6	
Actuated Green, G (s)	4		4	8		8	2				34.8	34.8
Effective Green, g (s)	1.2		1.2	1.2		1.2	34.8				34.8	34.8
Actuated G/C Ratio	0.03		0.03	0.03		0.03	0.77				0.77	0.77
Clearance Time (s)	4.5		4.5	4.5		4.5	3.0				4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0				3.0	3.0
Lane Gap Cap (vph)	47		47	42		42	1197				1330	1330
v/s Ratio Prot											60.50	60.50
v/s Ratio Perm	60.00		60.00	0.00		0.00	0.42				0.64	0.64
v/c Ratio	0.11		0.11	0.01		0.01	0.54				2.3	2.3
Uniform Delay, d1	21.4		21.4	2.3		2.3	2.0				1.00	1.00
Progression Factor	1.00		1.00	1.00		1.00	1.8				2.4	2.4
Incremental Delay, d2	1.0		1.0	0.1		0.1	3.8				4.7	4.7
Delay (s)	22.4		22.4	21.4		21.4	3.8				4.7	4.7
Level of Service	C		C	C		C	A				A	A
Approach Delay (s)	22.4		22.4	21.4		21.4	3.8				4.7	4.7
Approach LOS	C		C	C		C	A				A	A
Intersection Summary												
HCM 2000 Control Delay	4.5		4.5	HCM 2000 Level of Service		A					A	A
HCM 2000 Volume to Capacity ratio	0.62		0.62	Sum of lost time (s)		9.0					C	C
Actuated Cycle Length (s)	45.0		45.0	ICU Level of Service		15					15	15
Intersection Capacity Utilization	71.5%		71.5%	Analysis Period (min)		15					15	15
Analysis Period (min)	15		15									
e Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 8: Dixie Road & 12489 Site Access 1 Future Background 2033 (NES) PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (veh/h)	0	0	615	0	0	760
Future Volume (veh/h)	0	0	615	0	0	760
Sign Control	Stop	Stop	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	615	0	0	760
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median Type			None			None
Median storage (veh)						
Upstream signal (m)	0.91					394
pX, platoon unblocked	1375		615			615
vC, conflicting volume						
wC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCn, unblocked vol	1363		615			615
IC, single (s)	6.4		6.2			4.1
IC, 2 stage (s)						
IF (s)	3.5		3.3			2.2
p0 queue free %	100		100			100
CM capacity (veh/h)	150		495			974
Direction, Lane #						
Volume Total	0	615	0	760		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
SSH	1700	1700	1700	974		
Volume to Capacity	0.00	0.36	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	A	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0		
Approach LOS	A	A	A	A		
Intersection Summary						
Average Delay	0.0		0.0			A
Intersection Capacity Utilization	43.3%		43.3%			A
Analysis Period (min)	15		15			15

Lane Group	EBL	EBT	NBL	NBT	SBT	SBR	08
Lane Configurations	35	0	20	595	710	5	
Traffic Volume (vph)	35	0	20	595	710	5	
Future Volume (vph)	35	0	20	595	710	5	
Lane Group Flow (vph)	35	55	20	595	710	5	
Turn Type	Perm	NA	Perm	NA	NA	Perm	
Protected Phases	4	4	2	2	6	6	8
Detector Phases	4	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)	22.5	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	26.0	26.0	74.0	74.0	74.0	26.0	
Total Split (%)	26.0%	26.0%	74.0%	74.0%	74.0%	26%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag							
Lead-Lag Optimizer?	None	None	C-Max	C-Max	C-Max	C-Max	None
Recall Mode	0.31	0.14	0.03	0.41	0.46	0.00	
v/c Ratio	49.7	0.7	1.9	3.2	3.5	0.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Queue Delay	49.7	0.7	1.9	3.2	3.5	0.4	
Queue Length 50th (m)	6.9	0.0	0.5	22.3	28.5	0.0	
Queue Length 95th (m)	16.5	0.0	2.0	42.7	53.8	0.3	
Internal Link Dist (m)		161.0		369.7	813.5		
Turn Bay Length (m)	15.0		60.0			60.0	
Base Capacity (vph)	305	577	593	1435	1528	1374	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillover Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.11	0.10	0.03	0.41	0.46	0.00	

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Natural Cycle: 60
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SPTL, Start of Green
 Control Type: Actuated-Coordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	55	0	0	0	20	595	0	0	710	5
Traffic Volume (vph)	35	0	55	0	0	0	20	595	0	0	710	5
Future Volume (vph)	35	0	55	0	0	0	20	595	0	0	710	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)	4.5	4.5	4.5	3.0	3.7	3.5	3.5	4.5	4.5	4.5	4.5	4.5
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	0.85
Flt Protected	1.00	0.85	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Satd. Flow (prot)	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Flt Permitted	0.76	1.00	1.00	1.00	0.76	1.00	1.00	1.00	1.00	1.00	1.00	0.76
Satd. Flow (perm)	1423	1633	1633	1423	1633	1633	1423	1633	1633	1633	1633	1423
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	0	0	0	20	595	0	0	710	5
RTOR Reduction (vph)	0	51	0	0	0	0	0	0	0	0	0	1
Lane Group Flow (vph)	35	4	0	0	0	0	20	595	0	0	710	4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	8%	0%
Turn Type	Perm	NA	Perm	Perm	Perm	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4	8	8	8	8	2	2	6	6	6	6
Permitted Phases	4	4	8	8	8	8	2	2	6	6	6	6
Actuated Green, G (s)	6.9	6.9	6.9	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1
Effective Green, g (s)	6.9	6.9	6.9	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1	84.1
Actuated v/c Ratio	0.07	0.07	0.07	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gp Cap (vph)	98	112	112	581	1405	1496	1496	1343	1496	1496	1343	98
v/s Ratio Prot												
v/s Ratio Perm	c0.02	0.36	0.03	0.03	0.03	0.03	0.03	0.42	0.47	0.00	0.00	0.00
Uniform Delay, d1	44.4	43.4	44.4	1.3	1.3	2.0	2.1	1.3	2.1	1.3	1.3	1.3
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	2.2	0.1	0.9	0.1	0.9	1.1	1.1	0.0	1.1	0.0	0.0	0.0
Delay (s)	46.7	43.6	46.7	1.4	2.9	3.2	3.2	1.3	3.2	1.3	1.3	1.3
Level of Service	D	D	D	A	A	A	A	A	A	A	A	A
Approach Delay (s)												
Approach LOS	D	D	D	A	A	A	A	A	A	A	A	A

Intersection Summary
 HCM 2000 Control Delay: 5.7
 HCM 2000 Volume to Capacity ratio: 0.47
 Actuated Cycle Length (s): 100.0
 Intersection Capacity Utilization: 49.0%
 Analysis Period (min): 15
 ICU Level of Service: A
 Critical Lane Group: c

HCM Unsignalized Intersection Capacity Analysis
 11: Dixie Road & 12861 Site Access 1

Future Background 2033 (NES) PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	0	45	580	50	0	715
Traffic Volume (Veh/h)	0	45	580	50	0	715
Future Volume (Veh/h)	0	45	580	50	0	715
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	45	580	50	0	715
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right Turn Flare (Veh)						
Median Type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (m)						240
pk, platoon unblocked	0.93	580				
vc, conflicting volume	1295	580				630
vc1, stage 1 conf vol						
vc2, stage 2 conf vol						
vcu, unblocked vol	1280	580				630
tc, single (s)	6.4	6.2				4.1
tc, 2 stage (s)						
ff (s)	3.5	3.3				2.2
p0 queue free %	100	91				100
cm capacity (veh/h)	172	518				962
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	45	580	50	715		
Volume Left	0	0	0	0		
Volume Right	45	0	50	0		
ESH	518	1700	1700	1700		
Volume to Capacity	0.09	0.34	0.03	0.42		
Queue Length 95th (m)	2.3	0.0	0.0	0.0		
Control Delay (s)	12.6	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	12.6	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.4			A		
Intersection Capacity Utilization	41.0%			ICU Level of Service		
Analysis Period (min)	15					

Tribal Lands Dixie

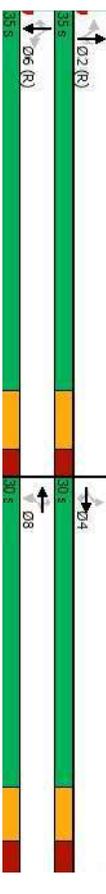
Synchro 11 Report
 FT_2033.syn

Queues
 12: Dixie Road & Old School Road

Future Background 2033 (NES) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Traffic Volume (vph)	65	160	30	190	385	15	70	480	85	20	285
Future Volume (vph)	65	160	30	190	385	15	70	480	85	20	285
Lane Group Flow (vph)	65	160	30	190	385	15	70	480	85	20	285
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases		4		8		8		2		2	
Permitted Phases	4	4	4	8	8	8	2	2	2	6	6
Detector Phases											
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)	24.5	24.5	24.5	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	30.0	30.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	53.8%	53.8%	53.8%	53.8%	53.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag											
Lead-Lag Optimizer?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.27	0.19	0.09	0.64	0.44	0.04	0.18	0.45	0.10	0.05	0.29
Control Delay	20.6	18.3	2.4	46.8	37.0	6.1	10.8	11.8	3.1	9.4	10.1
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	20.6	18.3	2.4	46.8	37.0	6.1	10.8	11.8	3.1	9.4	10.1
Queue Length 50th (m)	6.8	8.5	0.0	26.8	28.2	0.1	3.9	32.0	0.0	1.0	17.0
Queue Length 95th (m)	13.8	12.8	2.3	35.9	30.7	m0.3	13.3	70.1	6.7	5.0	40.0
Internal Link Dist (m)				371.4			41.8			216.1	
Turn Bay Length (m)	30.0		30.0	30.0		65.0	50.0		50.0	50.0	50.0
Base Capacity (vph)	356	1281	459	442	1306	577	397	1059	876	442	972
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	0.12	0.07	0.43	0.29	0.03	0.18	0.45	0.10	0.05	0.29
Intersection Summary											
Cycle Length: 65											
Actuated Cycle Length: 65											
Offset: 0 (0%), Referenced to phase 2(NBTL) and 6(SRTL, Start of Green											
Natural Cycle: 50											
Control Type: Actuated-Coordinated											
m Volume for 95th percentile queue is metered by upstream signal.											

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



Tribal Lands Dixie

Synchro 11 Report
 FT_2033.syn

HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background 2033 (NES) PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	65	160	30	190	385	15	70	480	85	20	285	35
Future Volume (vph)	65	160	30	190	385	15	70	480	85	20	285	35
Ideal Flow (vph/pl)	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	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)	1785	3544	1166	1785	3614	1493	1159	1902	1507	1733	1746	1521
Flt Permitted	0.52	1.00	1.00	0.65	1.00	1.00	0.59	1.00	1.00	0.44	1.00	1.00
Satd. Flow (perm)	994	3544	1166	1222	3614	1493	714	1902	1507	794	1746	1521
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)	65	160	30	190	385	15	70	480	85	20	285	35
RTOR Reduction (vph)	0	0	23	0	0	11	0	0	38	0	0	16
Lane Group Flow (vph)	65	160	7	190	385	4	70	480	47	20	285	19
Heavy Vehicles (%)	0%	3%	37%	0%	1%	7%	54%	1%	6%	3%	10%	5%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6
Actuated Green, G (s)	15.8	15.8	15.8	15.8	15.8	36.2	36.2	36.2	36.2	36.2	36.2	36.2
Effective Green, g (s)	15.8	15.8	15.8	15.8	15.8	36.2	36.2	36.2	36.2	36.2	36.2	36.2
Actuated Q/C Ratio	0.24	0.24	0.24	0.24	0.24	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Clearance Time (s)	6.5	6.5	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	3.0
Lane Grp Cap (vph)	239	861	283	297	878	362	397	1059	839	442	972	847
v/s Ratio Prot	0.05	0.05	0.01	0.11	0.11	0.00	0.10	0.45	0.06	0.03	0.16	0.01
v/s Ratio Perm	0.27	0.19	0.03	0.64	0.44	0.01	0.18	0.45	0.06	0.05	0.29	0.02
v/c Ratio	1.99	19.5	18.7	22.0	20.8	18.7	7.1	8.5	6.6	6.5	7.6	6.5
Uniform Delay, d1	1.00	1.00	1.00	1.77	1.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.6	0.1	0.0	4.4	0.3	0.0	1.0	1.4	0.1	0.2	0.8	0.1
Incremental Delay, d2	20.6	19.6	18.8	43.3	37.6	18.7	8.0	9.9	6.7	6.7	8.4	6.5
Delay (s)	C	B	B	D	D	B	A	A	A	A	A	A
Level of Service	C	B	B	D	D	B	A	A	A	A	A	A
Approach Delay (s)	19.8			39.0			9.3				8.1	
Approach LOS	B			D			A				A	
Intersection Summary												
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service										
HCM 2000 Volume to Capacity ratio	0.31	C										
Actuated Cycle Length (s)	65.0	Sum of lost time (s)										
Intersection Capacity Utilization	66.0%	ICU Level of Service										
Analysis Period (min)	15	C										
c Critical Lane Group												

Tribal Lands Dixe

Synchro 11 Report
FT_2033.syn

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background 2033 (NES) PM Peak Hour

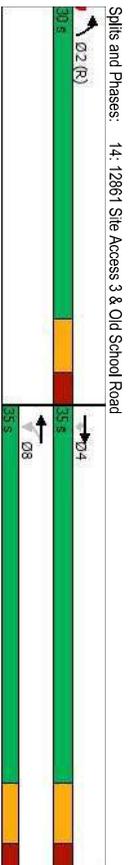
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	245	15	0	585	0	10
Future Volume (veh/h)	245	15	0	585	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	245	15	0	585	0	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream signal (m)	66					
pX, platoon unblocked			0.98		0.98	0.98
vC, conflicting volume			280		545	130
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCv, unblocked vol			201		492	68
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)						
FF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
CM capacity (veh/h)			1354		500	967
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	163	97	292	292	10	
Volume Left	0	0	0	0	0	
Volume Right	0	15	0	0	10	
SSH	1700	1700	1700	1700	967	
Volume to Capacity	0.10	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	8.8	
Lane LOS	A	A	A	A	A	
Approach Delay (s)	0.0		0.0		8.8	
Approach LOS	A		A		A	
Intersection Summary						
Average Delay	0.1	HCM 2000 Level of Service				
Intersection Capacity Utilization	19.5%	A				
Analysis Period (min)	15	ICU Level of Service				

Tribal Lands Dixe

Synchro 11 Report
FT_2033.syn

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations	↔	↔	↔	↔
Traffic Volume (vph)	255	10	455	130
Future Volume (vph)	255	10	455	130
Lane Group Flow (vph)	255	10	455	150
Turn Type	NA	Perm	NA	Prot
Protected Phases	4	8	8	2
Permitted Phases	4	8	8	2
Detector Phases	4	8	8	2
Switch Phase	5.0	5.0	5.0	5.0
Minimum Initial (s)	25.0	25.0	25.0	24.5
Minimum Split (s)	35.0	35.0	35.0	30.0
Total Split (s)	53.8%	53.3%	53.8%	46.2%
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				
Recall Mode	None	None	None	C-Min
v/c Ratio	0.33	0.04	0.59	0.14
Control Delay	17.0	19.0	26.1	6.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.0	19.0	26.1	6.6
Queue Length 50th (m)	15.8	1.0	27.6	6.8
Queue Length 95th (m)	25.3	4.2	37.4	16.8
Internal Link Dist (m)	433.3	157.0	183.7	
Turn Bay Length (m)	95.0			
Base Capacity (vph)	1600	489	1600	1048
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	0.16	0.02	0.28	0.14

Intersection Summary
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	255	0	10	455	130	20
Future Volume (vph)	255	0	10	455	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	6.5	
Lane Util. Factor	0.95	1.00	0.95	1.00	0.98	
Flt	1.00	1.00	1.00	1.00	0.96	
Flt Protected	1.00	0.95	1.00	0.96		
Satd. Flow (prot)	3650	1785	3650	1768		
Flt Permitted	1.00	0.59	1.00	0.96		
Satd. Flow (perm)	3650	1116	3650	1768		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	255	0	10	455	130	20
RTOR Reduction (vph)	0	0	0	0	5	0
Lane Group Flow (vph)	255	0	10	455	145	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	NA	Perm	Perm	NA	Prot	
Protected Phases	4	8	8	8	2	
Actuated Green, G (s)	13.7	13.7	13.7	38.3		
Effective Green, g (s)	13.7	13.7	13.7	38.3		
Actuated G/C Ratio	0.21	0.21	0.21	0.59		
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)	769	235	769	1041		
v/s Ratio Prot	0.07		0.12	0.08		
v/s Ratio Perm		0.01			0.14	
v/c Ratio	0.33	0.04	0.59	0.14		
Uniform Delay, d1	21.8	20.4	23.1	6.0		
Progression Factor	0.75	1.00	1.00	1.00		
Incremental Delay, d2	0.1	1.2	0.3	0.3		
Delay (s)	16.6	20.5	24.4	6.3		
Level of Service	B	C	C	A		
Approach Delay (s)	16.6		24.3	6.3		
Approach LOS	B		C	A		

Intersection Summary
 HCM 2000 Control Delay: 18.9 HCM 2000 Level of Service: B
 HCM 2000 Volume to Capacity ratio: 0.28
 Actuated Cycle Length (s): 65.0
 Intersection Capacity Utilization: 31.8% ICU Level of Service: A
 Analysis Period (min): 15
 Critical Lane Group: c

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Background 2033 (NES) PM Peak Hour

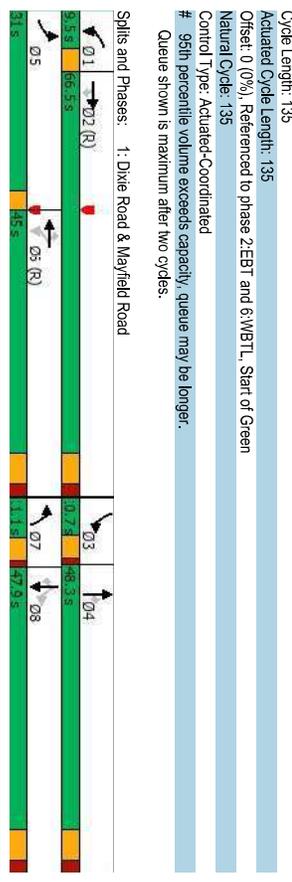
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop		Stop		Stop		Stop		Stop
Traffic Volume (vph)	45	205	25	15	380	10	60	220	35	10	60	25
Future Volume (vph)	45	205	25	15	380	10	60	220	35	10	60	25
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow rate (vph)	45	205	25	15	380	10	60	220	35	10	60	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	275	405	315	95								
Volume Left (vph)	45	15	60	10								
Volume Right (vph)	25	10	35	25								
Head (s)	0.05	0.01	-0.03	-0.03								
Departure Headway (s)	6.1	5.8	6.1	6.7								
Degree Utilization, x	0.46	0.65	0.53	0.18								
Capacity (veh/h)	549	596	545	441								
Control Delay (s)	14.2	18.9	15.9	11.1								
Approach Delay (s)	14.2	18.9	15.9	11.1								
Approach LOS	B	C	C	B								
Intersection Summary												
Delay	16.2											
Level of Service	C											
Intersection Capacity Utilization	62.6%											
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		RT	TH		TH	TH		TH	TH	TH	TH	TH
Traffic Volume (vph)	635	1820	280	60	845	170	130	285	60	110	280	320
Future Volume (vph)	635	1820	280	60	845	170	130	285	60	110	280	320
Lane Group Flow (vph)	635	1820	280	60	845	170	130	285	60	110	280	320
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	1	6	6	7	4	4	3	8	8
Permitted Phases												
Detector Phases	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	9.5	44.9	44.9	9.5	44.9	44.9	9.5	47.9	47.9	9.5	47.9	47.9
Total Split (s)	31.0	66.5	66.5	9.5	45.0	45.0	11.1	48.3	48.3	10.7	47.9	47.9
Total Split (%)	23.0%	49.3%	49.3%	7.0%	33.3%	33.3%	8.2%	35.8%	35.8%	7.9%	35.5%	35.5%
Yellow Time (s)	3.0	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6
All-Red Time (s)	0.0	2.3	2.3	0.0	2.3	2.3	1.0	2.3	2.3	1.0	2.3	2.3
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
Lost Time (s)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.71	0.63	0.27	0.37	0.59	0.31	0.53	0.62	0.22	0.49	0.67	0.71
Control Delay	44.8	20.3	2.4	24.2	41.8	6.6	68.3	61.6	1.8	48.2	63.4	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	20.3	2.4	24.2	41.8	6.6	68.3	61.6	1.8	48.2	63.4	14.5
Queue Length 50th (m)	82.4	124.6	0.0	5.3	73.2	0.0	18.1	36.6	0.0	24.3	39.7	0.0
Queue Length 95th (m)	102.0	150.1	13.4	12.4	91.9	17.8	33.9	48.6	0.0	41.7	53.5	30.4
Internal Link Dist (m)	980.1			272.1			844.0				481.5	
Turn Bay Length (m)	155.0	115.0	150.0		65.0	140.0		65.0	100.0		170.0	
Base Capacity (vph)	890	2900	1033	162	1432	553	245	981	487	224	931	613
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	0.63	0.27	0.37	0.59	0.31	0.53	0.26	0.12	0.49	0.30	0.52
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT_L, 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.												



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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	635	1820	280	60	845	170	130	255	60	110	280	320
Future Volume (vph)	635	1820	280	60	845	170	130	255	60	110	280	320
Ideal Flow (vph/pl)	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)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	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	0.98	1.00	1.00	1.00	0.98
Flt	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00
Satd. Flow (prot)	2643	4902	1554	1539	4641	1413	3236	3202	1319	1360	3067	1287
Flt Permitted	0.95	1.00	1.00	0.12	1.00	0.95	1.00	1.00	0.49	1.00	1.00	1.00
Satd. Flow (perm)	2643	4902	1554	186	4641	1413	3236	3202	1319	697	3067	1287
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)	635	1820	280	60	845	170	130	255	60	110	280	320
RTOR Reduction (vph)	0	0	116	0	117	0	0	52	0	0	277	0
Lane Group Flow (vph)	635	1820	184	60	845	53	130	255	8	110	280	43
Confl. Peds. (#/hr)	31%	7%	1%	16%	13%	13%	7%	14%	19%	31%	19%	22%
Heavy Vehicles (%)	31%	7%	1%	16%	13%	13%	7%	14%	19%	31%	19%	22%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	6	6	6	7	4	4	8	8	8
Actuated Green, G (s)	44.5	79.2	79.2	48.2	41.7	41.7	9.2	17.4	17.4	28.4	18.3	18.3
Effective Green, g (s)	45.5	79.2	79.2	50.2	41.7	41.7	10.2	17.4	17.4	30.4	18.3	18.3
Actuated C/R Ratio	0.34	0.59	0.59	0.37	0.31	0.31	0.08	0.13	0.13	0.23	0.14	0.14
Clearance Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	4.5	6.9	6.9	4.5	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	3.0
Lane Gap Cap (vph)	890	2875	911	144	1433	436	244	412	170	211	415	174
v/s Ratio Prot	60.24	60.37	0.11	0.13	0.04	0.04	0.04	0.08	0.01	60.04	60.09	0.03
v/s Ratio Perm	0.71	0.63	0.18	0.42	0.59	0.12	0.53	0.62	0.05	0.52	0.67	0.25
Uniform Delay, d1	39.1	18.3	12.9	27.7	39.4	33.5	60.1	55.7	51.5	44.1	55.5	52.2
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	2.7	1.1	0.4	1.9	1.8	0.6	2.2	2.8	0.1	2.3	4.3	0.8
Level of Service	D	B	B	C	D	C	E	D	D	D	E	D
Approach Delay (s)	24.0			C			D			E		
Approach LOS	C			D			E			D		
Intersection Summary	HCM 2000 Control Delay			HCM 2000 Level of Service			C			C		
HCM 2000 Volume to Capacity ratio	0.88			135.0			Sum of lost time (s)			19.8		
Actuated Cycle Length (s)	74.8%			ICU Level of Service			D			D		
Intersection Capacity Utilization	15											
Analysis Period (min)	15											
Critical Lane Group	e											

Trial Lands Dixie

Synchro 11 Report
FT_2028.syn

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	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Traffic Volume (vph)	5	35	35	0	65	880	15	640	10
Future Volume (vph)	5	35	35	0	65	880	15	640	10
Lane Group Flow (vph)	5	35	35	5	65	915	0	655	10
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	2	2	6	6	6
Detector Phases	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)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	22.5%	22.5%	22.5%	22.5%	55.0%	55.0%	55.0%	55.0%	55.0%
Total Spill (%)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead-Lag Optimizer?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.06	0.08	0.41	0.01	0.13	0.68	0.53	0.01	0.01
Control Delay	45.6	0.4	55.5	0.0	6.0	12.4	8.0	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	0.4	55.5	0.0	6.0	12.4	8.0	0.0	0.0
Queue Length 50th (m)	1.0	0.0	6.9	0.0	3.7	102.4	57.4	0.0	0.0
Queue Length 95th (m)	4.7	0.0	16.4	0.0	10.7	#21510	91.0	m0.0	0.0
Internal Link Dist (m)				96.6			358.1		
Turn Bay Length (m)				95.0			50.0		
Base Capacity (vph)	241	539	183	584	483	1340	1242	1308	
Saturation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.06	0.21	0.01	0.13	0.68	0.53	0.01	0.01
Intersection Summary	Cycle Length: 100			Actuated Cycle Length: 100			Natural Cycle: 110		
Control Type: Actuated-Coordinated	Control Type: Actuated-Coordinated			Control Type: Actuated-Coordinated			Control Type: Actuated-Coordinated		
# 95th percentile volume exceeds capacity, queue may be longer.	# 95th percentile volume exceeds capacity, queue may be longer.			# 95th percentile volume exceeds capacity, queue may be longer.			# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.	Queue shown is maximum after two cycles.			Queue shown is maximum after two cycles.			Queue shown is maximum after two cycles.		
m Volume for 95th percentile queue is metered by upstream signal.	m Volume for 95th percentile queue is metered by upstream signal.			m Volume for 95th percentile queue is metered by upstream signal.			m Volume for 95th percentile queue is metered by upstream signal.		
Splits and Phases:	5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3			5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3			5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3		

Trial Lands Dixie

Synchro 11 Report
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HCM Signalized Intersection Capacity Analysis
 5: Dixie Road & Spiers Griggs 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)	5	0	35	35	0	5	65	880	35	15	640	10	
Future Volume (vph)	5	0	35	35	0	5	65	880	35	15	640	10	
Ideal Flow (vph/ln)	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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	1.00	
Frpb. 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	
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.99	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1342	1278	1137	1633	1567	1597	1567	1597	1567	1597	1567	1597	
Flt Permitted	0.95	1.00	0.76	1.00	0.36	1.00	0.98	1.00	0.98	1.00	0.98	1.00	
Satd. Flow (perm)	1342	1278	906	1633	1633	596	1652	1531	1597	1531	1597	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)	5	0	35	35	0	5	65	880	35	15	640	10	
RTOR Reduction (vph)	0	0	34	0	5	0	0	1	0	0	0	2	
Lane Group Flow (vph)	5	0	1	35	0	0	65	914	0	0	655	8	
Cont. Peds. (#/hr)	33%	0%	25%	57%	0%	0%	15%	15%	28%	0%	23%	0%	
Heavy Vehicles (%)	33%	0%	25%	57%	0%	0%	15%	15%	28%	0%	23%	0%	
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6	
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6	
Actuated Green, G (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8	
Effective Green, g (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8	
Actuated G/C Ratio	0.04	0.04	0.07	0.07	0.07	0.76	0.76	0.76	0.76	0.76	0.76	0.76	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	50	48	62	112	112	451	1252	60.55	1160	1210	1210	1210	
v/s Ratio Prot	60.00	0.00	60.04	0.00	0.00	0.11	0.73	0.43	0.43	0.00	0.00	0.00	
v/s Ratio Perm	0.10	0.03	0.56	0.00	0.14	0.73	0.73	0.56	0.01	0.56	0.01	0.01	
Uniform Delay, d1	46.4	46.3	45.1	43.3	3.3	6.6	5.1	2.9	2.9	6.6	2.9	2.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.2	11.2	0.0	0.7	3.8	1.8	1.8	1.8	3.8	1.8	1.8	
Delay (s)	47.3	46.6	56.3	43.4	4.0	10.3	6.6	6.6	6.6	10.3	6.6	6.6	
Level of Service	D	D	E	D	A	B	A	A	A	B	A	A	
Approach Delay (s)	46.7	46.7	54.7	46.7	46.7	54.7	46.7	46.7	46.7	54.7	46.7	46.7	
Approach LOS	D	D	D	D	D	A	A	A	A	B	A	A	
Intersection Summary													
HCM 2000 Control Delay	10.5						HCM 2000 Level of Service						B
HCM 2000 Volume to Capacity ratio	0.89						Sum of lost time (s)						13.5
Actuated Cycle Length (s)	100.0						ICU Level of Service						C
Intersection Capacity Utilization	70.1%						Analysis Period (min)						15
e Critical Lane Group													

Trial Lands Dixie

Synchro 11 Report
 FT_2028.syn

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	770	15	690	0
Future Volume (vph)	5	60	770	15	690	0
Lane Group Flow (vph)	5	0	840	0	720	0
Turn Type	Perm	Perm	NA	Perm	NA	NA
Protected Phases	2	2	2	6	8	8
Permitted Phases	4	2	2	6	6	6
Detector Phase	4	2	2	6	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	22.5	77.5	77.5	77.5	77.5	22.5
Total Split (s)	22.5%	77.5%	77.5%	77.5%	77.5%	23%
Total Split (%)	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimizer?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
v/s Ratio	0.01	0.57	0.57	0.47	0.47	0.47
Control Delay	0.0	2.3	0.0	1.7	1.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	2.3	0.0	1.7	1.7	1.7
Queue Length 50th (m)	0.0	0.0	0.0	0.0	0.0	0.0
Queue Length 95th (m)	0.0	22.0	0.0	38.3	38.3	38.3
Internal Link Dist (m)		358.1		696.2	696.2	696.2
Turn Bay Length (m)						
Base Capacity (vph)	442	1466	1531	1531	1531	1531
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/s Ratio	0.01	0.57	0.57	0.47	0.47	0.47
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 0 (0%), Referenced to phase 2:NBLT and 6:SBTL, Start of Green						
Natural Cycle: 75						
Control Type: Actuated-Coordinated						
Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1						
Ø2 (R)	Ø4 (R)	Ø6 (R)	Ø8 (R)	Ø8 (R)	Ø8 (R)	Ø8 (R)
77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s
Ø6 (R)	Ø4 (R)	Ø6 (R)	Ø8 (R)	Ø8 (R)	Ø8 (R)	Ø8 (R)
77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s

Trial Lands Dixie

Synchro 11 Report
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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	770	10	15	690	15
Future Volume (vph)	0	0	5	0	0	0	60	770	10	15	690	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	3.5	3.5	3.5
Total Lost time (s)			4.5					4.5			4.5	
Lane Util. Factor			1.00				1.00	1.00			1.00	
Flt Protected			0.85				1.00	1.00			1.00	
Satd. Flow (prot)			998				1648	1606			1606	
Flt Permitted			1.00				0.91	0.98			0.98	
Satd. Flow (perm)			998				1510	1576			1576	
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	770	10	15	690	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	840	0	0	720	0	
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	17%	0%	20%	0%	
Turn Type	Prot	Perm	Perm	Perm	Perm	Perm	NA	NA	Perm	NA	NA	
Protected Phases	4			8			8	2		6		
Actuated Green, G (s)			1.1				89.9	89.9		89.9		
Effective Green, g (s)			1.1				89.9	89.9		89.9		
Actuated Q/C Ratio			0.01				0.90	0.90		0.90		
Clearance Time (s)			4.5				4.5	4.5		4.5		
Vehicle Extension (s)			3.0				3.0	3.0		3.0		
Lane Grp Cap (vph)			10				1357	1416		1416		
v/s Ratio Prot												
v/s Ratio Perm			c0.00				c0.56	0.46		0.46		
v/c Ratio			0.01				0.62	0.51		0.51		
Uniform Delay, d1			48.9				1.1	0.9		0.9		
Progression Factor			1.00				1.28	1.00		1.00		
Incremental Delay, d2			0.2				1.6	1.3		1.3		
Delay (s)			49.1				3.0	2.2		2.2		
Level of Service			D				A	A		A		
Approach Delay (s)			49.1				0.0	3.0		2.2		
Approach LOS			D				A	A		A		
Intersection Summary												
HCM 2000 Control Delay	2.8		HCM 2000 Level of Service		A							
HCM 2000 Volume to Capacity ratio	0.61		Sum of lost time (s)		9.0							
Actuated Cycle Length (s)	100.0		ICU Level of Service		D							
Intersection Capacity Utilization	76.2%		Analysis Period (min)		15							
c Critical Lane Group												

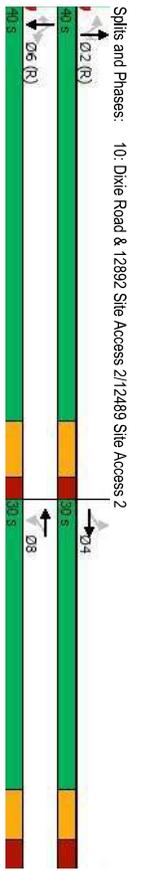
HCM Unsignalized Intersection Capacity Analysis
 8: Dixie Road & 12489 Site Access 1

Future Total 2028 AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←	↔	→	↔	←	↔
Traffic Volume (veh/h)	0	0	685	60	0	690
Future Volume (Veh/h)	0	0	685	60	0	690
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	685	60	0	690
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median type			None			None
Upstream signal (m)						394
PX, platoon unblocked			0.89			
VC, conflicting volume			1375	685		745
WC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol			1359	685		745
IC, single (s)			6.4	6.2		4.1
IC, 2 stage (s)						
FF (s)			3.5	3.3		2.2
p0 queue free %			100	100		100
CM capacity (veh/h)			147	452		872
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	685	60	690		
Volume Left	0	0	0	0		
Volume Right	0	0	60	0		
SSH	1700	1700	1700	872		
Volume to Capacity	0.00	0.40	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	A	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0		
Approach LOS	A	A	A	A		
Intersection Summary						
Average Delay	0.0		ICU Level of Service		A	
Intersection Capacity Utilization	46.7%		Analysis Period (min)		15	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	15	0	45	0	70	565	50	50	620	25
Traffic Volume (vph)	15	0	45	0	70	565	50	50	620	25
Future Volume (vph)	15	0	45	0	70	565	50	50	620	25
Lane Group Flow (vph)	15	30	45	20	70	565	50	50	620	25
Turn Type	Perm	Perm	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4	8	8	2	2	2	2	6	6
Permitted Phases	4	4	8	8	2	2	2	2	6	6
Detector Phases	4	4	8	8	2	2	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Minimum Split (s)	30.0	30.0	30.0	30.0	40.0	40.0	40.0	40.0	40.0	40.0
Total Spill (%)	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%	57.1%	57.1%
Total Spill (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead-Lag										
Lead-Lag Optimizer?	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Recall Mode	0.11	0.10	0.38	0.05	0.15	0.42	0.06	0.09	0.48	0.02
v/c Ratio	26.6	0.6	36.1	0.2	5.6	6.2	1.7	3.0	3.9	0.2
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	26.6	0.6	36.1	0.2	5.6	6.2	1.7	3.0	3.9	0.2
Total Delay	1.9	0.0	5.8	0.0	2.8	30.1	0.0	1.9	26.0	0.0
Queue Length 50th (m)	6.5	0.0	14.3	0.0	9.5	63.9	3.2	m2.9	37.6	m0.1
Queue Length 95th (m)	161.0		124.2		369.7			813.5		
Internal Link Dist (m)	15.0	15.0	15.0	593	462	1336	803	582	1291	1278
Turn Bay Length (m)	352	498	300	593	462	1336	803	582	1291	1278
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Saturation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Shrinkback 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	0.04	0.06	0.15	0.03	0.15	0.42	0.06	0.09	0.48	0.02

Intersection Summary
 Cycle Length: 70
 Actuated Cycle Length: 70
 Natural Cycle: 60
 Offset: 0 (0%), Referenced to phase 2:NBLT and 6:SRTL Start of Green
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	15	0	30	45	0	20	70	565	50	50	620	25
Traffic Volume (vph)	15	0	30	45	0	20	70	565	50	50	620	25
Future Volume (vph)	15	0	30	45	0	20	70	565	50	50	620	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.5	3.5	3.7	3.5	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	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	1.00
Flt	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)	1342	1089	1152	1306	1342	1089	1394	1685	998	1623	1628	1597
Flt Permitted	0.74	1.00	0.74	1.00	0.74	1.00	0.40	1.00	0.43	1.00	1.00	0.43
Satd. Flow (perm)	1052	1089	894	894	1306	582	1685	998	734	1628	1597	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	565	50	50	620	25
RTOR Reduction (vph)	0	27	0	0	18	0	0	14	0	0	0	7
Lane Group Flow (vph)	15	3	0	45	2	0	70	565	36	50	620	18
Heavy Vehicles (%)	33%	0%	50%	55%	0%	25%	14%	60%	10%	18%	0%	0%
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	2	2	6	6	6	6
Permitted Phases	4	4	8	8	2	2	2	2	6	6	6	6
Actuated Green, G (s)	6.7	6.7	6.7	6.7	6.7	6.7	50.3	50.3	50.3	50.3	50.3	50.3
Effective Green, g (s)	6.7	6.7	6.7	6.7	6.7	6.7	50.3	50.3	50.3	50.3	50.3	50.3
Actuated Q/C Ratio	0.10	0.10	0.10	0.10	0.10	0.10	0.72	0.72	0.72	0.72	0.72	0.72
Clearance Time (s)	6.5	6.5	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	3.0
Lane Grp Cap (vph)	100	104	85	125	418	1210	527	1169	1147			
v/s Ratio Prot	0.00		0.00		0.00		0.34		0.04	0.07		
v/s Ratio Perm	0.01	0.03	0.53	0.02	0.17	0.47	0.05	0.09	0.53	0.02		
v/c Ratio	0.15	0.03	0.53	0.02	0.17	0.47	0.05	0.09	0.53	0.02		
Uniform Delay, d1	29.0	28.7	30.1	28.7	3.2	4.2	2.9	3.0	4.5	2.8		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.50	0.27	
Incremental Delay, d2	0.7	0.1	5.8	0.0	0.9	1.3	0.1	0.3	1.5	0.0		
Delay (s)	29.7	28.8	36.0	28.7	4.0	5.5	3.0	2.1	3.7	0.8		
Level of Service	C	C	D	C	A	A	A	A	A	A		
Approach Delay (s)	29.1		33.8		5.1		3.5		3.5			
Approach LOS	C		C		A		A		A			

Intersection Summary
 HCM 2000 Control Delay: 6.3
 HCM 2000 Volume to Capacity ratio: 0.53
 Actuated Cycle Length (s): 70.0
 Intersection Capacity Utilization: 62.2%
 Analysis Period (min): 15
 ICU Level of Service: B
 Critical Lane Group: C

HCM Unsignalized Intersection Capacity Analysis

Future Total 2028 AM Peak Hour

11: Dixie Road & 12861 Site Access 1

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	0	20	450	150	0	695
Traffic Volume (Veh/h)	0	20	450	150	0	695
Future Volume (Veh/h)	0	20	450	150	0	695
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	20	450	150	0	695
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		0.82				
VC, conflicting volume		1145		450		600
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol		1070		450		600
IC, single (s)		6.4		6.5		4.1
IC, 2 stage (s)						
F (s)		3.5		3.5		2.2
p0 queue free %		100		96		100
CM capacity (veh/h)		204		564		987
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	20	450	150	695		
Volume Left	0	0	0	0		
Volume Right	20	0	150	0		
ESH	564	1700	1700	1700		
Volume to Capacity	0.04	0.26	0.09	0.41		
Queue Length 95th (m)	0.9	0.0	0.0	0.0		
Control Delay (s)	11.6	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	11.6	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.2			ICU Level of Service		
Intersection Capacity Utilization	39.9%			A		
Analysis Period (min)	15					

Tribal Lands Dixie

Synchro 11 Report
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Queues

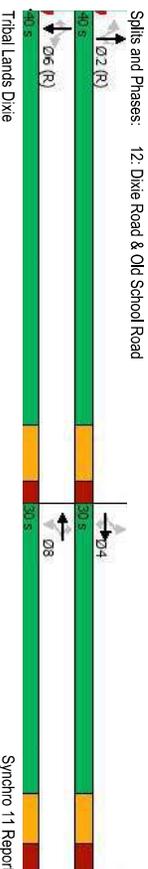
Future Total 2028 AM Peak Hour

12: Dixie Road & Old School Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	45	340	50	170	140	10	30	195	50	60	475
Traffic Volume (Veh)	45	340	50	170	140	10	30	195	50	60	475
Future Volume (Veh)	45	340	50	170	140	10	30	195	50	60	475
Lane Group Flow (Veh/h)	Perm	NA	Perm	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Turn Type											
Protected Phases		4		8	8	8	8	2	2	2	6
Permitted Phases	4	4	4	8	8	8	8	2	2	6	6
Detector Phases											
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)	24.5	24.5	24.5	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	30.0	30.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag											
Lead-Lag Optimizer?											
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.12	0.60	0.12	0.86	0.26	0.02	0.13	0.23	0.07	0.11	0.52
Control Delay	16.5	24.6	5.3	71.5	19.5	0.3	7.9	7.7	0.7	11.5	15.3
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	16.5	24.6	5.3	71.5	19.5	0.3	7.9	7.7	0.7	11.5	15.3
Queue Length 50th (m)	4.2	37.4	0.0	26.0	20.6	0.0	1.6	10.2	0.1	4.3	43.7
Queue Length 95th (m)	10.8	60.2	6.0	#43.2	9.7	0.1	m1.9	8.6	m0.4	10.9	73.0
Internal Link Dist (m)		371.4		41.8			216.1				261.5
Turn Bay Length (m)	30.0		30.0	30.0	65.0	50.0		50.0		50.0	50.0
Base Capacity (vph)	421	657	454	228	632	541	242	884	749	564	942
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	0.11	0.52	0.11	0.75	0.22	0.02	0.12	0.22	0.07	0.11	0.50
Intersection Summary											
Cycle Length: 70											
Actuated Cycle Length: 70											
Offset: 0 (0%), Referenced to phase 2(NBTL) and 6(SRTL, Start of Green											
Natural Cycle: 50											
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.											

Tribal Lands Dixie

Synchro 11 Report
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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	4	4	4	4	4	4	4	4	4	4	4	4	
Traffic Volume (vph)	45	340	50	170	140	10	30	195	50	60	475	95	
Future Volume (vph)	45	340	50	170	140	10	30	195	50	60	475	95	
Ideal Flow (vph/pl)	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	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	1.00	
Flt	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)	1716	1883	1201	1451	1812	1452	1062	1685	1377	1608	1795	1566	
Flt Permitted	0.67	1.00	1.00	0.43	1.00	1.00	0.41	1.00	1.00	0.64	1.00	1.00	
Satd. Flow (perm)	1206	1883	1201	655	1812	1452	461	1685	1377	1075	1795	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)	45	340	50	170	140	10	30	195	50	60	475	95	
RTOR Reduction (vph)	0	0	35	0	0	7	0	0	24	0	0	46	
Lane Group Flow (vph)	45	340	15	170	140	3	30	195	26	60	475	49	
Heavy Vehicles (%)	4%	2%	33%	23%	6%	10%	68%	14%	16%	11%	7%	2%	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6	
Actuated Green, G (s)	21.2	21.2	21.2	21.2	21.2	35.8	35.8	35.8	35.8	35.8	35.8	35.8	
Effective Green, g (s)	21.2	21.2	21.2	21.2	21.2	35.8	35.8	35.8	35.8	35.8	35.8	35.8	
Actuated Q/C Ratio	0.30	0.30	0.30	0.30	0.30	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Clearance Time (s)	6.5	6.5	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	3.0	
Lane Gap Cap (vph)	365	570	363	198	548	439	235	861	704	549	918	800	
v/s Ratio Prot	0.18			0.08			0.12			0.06		0.03	
v/s Ratio Perm	0.04	0.01	0.01	0.26	0.00	0.07	0.23	0.04	0.11	0.52	0.06	0.03	
v/c Ratio	0.12	0.60	0.04	0.86	0.26	0.01	0.13	0.23	0.04	0.11	0.52	0.06	
Uniform Delay, d1	17.7	20.8	17.2	23.0	18.4	17.0	8.9	9.4	8.5	8.8	11.4	8.6	
Progression Factor	1.00	1.00	1.00	1.56	1.08	1.00	0.59	0.64	0.15	1.00	1.00	1.00	
Incremental Delay, d2	0.2	1.7	0.0	28.7	0.2	0.0	1.1	0.6	0.1	0.4	2.1	0.1	
Delay (s)	17.8	22.4	17.3	64.5	20.1	17.1	6.3	6.6	1.4	9.3	13.4	8.8	
Level of Service	B	C	B	E	C	B	A	A	A	A	B	A	
Approach Delay (s)		21.4			43.6			5.6		12.3			
Approach LOS		C			D			A		B			
Intersection Summary													
HCM 2000 Control Delay	19.6					HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio	0.64												
Actuated Cycle Length (s)	70.0					Sum of lost time (s)					13.0		
Intersection Capacity Utilization	78.1%					ICU Level of Service					D		
Analysis Period (min)	15												

Tribal Lands Dixie

Synchro 11 Report
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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	4	4	4	4	4	4
Traffic Volume (veh/h)	405	40	0	330	0	5
Future Volume (veh/h)	405	40	0	330	0	5
Sign Control	Free	Free	Free	Stop	0%	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	405	40	0	330	0	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream signal (m)	66					
pX, platoon unblocked						
WC, conflicting volume			445		590	222
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol		445		590	222	
IC, single (s)		4.1		6.8	6.9	
IC, 2 stage (s)						
IF (s)		2.2		3.5	3.3	
p0 queue free %		100		100	99	
CM capacity (veh/h)		1126		443	787	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	270	175	165	165	5	
Volume Left	0	0	0	0	0	
Volume Right	0	40	0	0	5	
SSH	1700	1700	1700	1700	787	
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	22.5%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					

Tribal Lands Dixie

Synchro 11 Report
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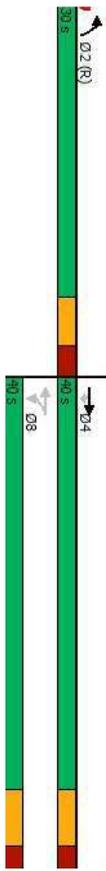
Queues
14: 12861 Site Access 3 & Old School Road

Future Total 2028 AM Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	405	5	30	265	65
Future Volume (vph)	405	5	30	265	65
Lane Group Flow (vph)	405	5	0	295	70
Turn Type	NA	Perm	custom	NA	Prot
Protected Phases	4				2
Permitted Phases	4	4	8	8	2
Detector Phases					
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5
Total Split (s)	40.0	40.0	40.0	40.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	57.1%	42.9%
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
Lead/Lag					
Lead-Lag Optimizer?					
Recall Mode	None	None	None	C-Min	
v/c Ratio	0.59	0.03		0.51	0.10
Control Delay	22.0	7.6		28.1	6.2
Queue Delay	0.0	0.0		0.0	0.0
Total Delay	22.0	7.6		28.1	6.2
Queue Length 50th (m)	29.7	0.4		19.3	3.1
Queue Length 95th (m)	32.6	m0.3		28.8	9.0
Internal Link Dist (m)	433.3			157.0	183.7
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1729	394		1459	710
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	0.23	0.01		0.20	0.10

Intersection Summary
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 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



Tribal Lands Dixie

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)	405	5	30	265	65	5
Future Volume (vph)	405	5	30	265	65	5
Ideal Flow (vph/pl)	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	
Flt	1.00	0.85		1.00	0.99	
Flt Protected	1.00	1.00		0.99	0.96	
Satd. Flow (prot)	3614	799		3574	1135	
Flt Permitted	1.00	1.00		0.85	0.96	
Satd. Flow (perm)	3614	799		3050	1135	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	405	5	30	265	65	5
RTOR Reduction (vph)	0	4	0	0	2	0
Lane Group Flow (vph)	405	1	0	295	68	0
Heavy Vehicles (%)	1%	100%	16%	0%	61%	0%
Turn Type	NA	Perm	custom	NA	Prot	
Protected Phases	4				2	
Permitted Phases						
Actuated Green, G (s)	13.3	13.3		13.3	43.7	
Effective Green, g (s)	13.3	13.3		13.3	43.7	
Actuated g/C Ratio	0.19	0.19		0.19	0.52	
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)	686	151		579	708	
v/s Ratio Prot	60.11				60.06	
v/s Ratio Perm		0.00		0.10		
v/c Ratio	0.59	0.01		0.51	0.10	
Uniform Delay, d1	25.9	23.0		25.4	5.3	
Progression Factor	0.73	0.53		1.00	1.00	
Incremental Delay, d2	1.3	0.0		0.7	0.3	
Delay (s)	20.2	12.2		26.1	5.5	
Level of Service	C	B		C	A	
Approach Delay (s)	20.1			26.1	5.5	
Approach LOS	C			C	A	

Intersection Summary
 HCM 2000 Control Delay: 21.1
 HCM 2000 Volume to Capacity ratio: 0.21
 Actuated Cycle Length (s): 70.0
 Intersection Capacity Utilization: 39.8%
 Analysis Period (min): 15
 ICU Level of Service: A
 c Critical Lane Group

Tribal Lands Dixie

HCM Unsignalized Intersection Capacity Analysis

Future Total 2028 AM Peak Hour

Queues

Future Total 2033 AM Peak Hour

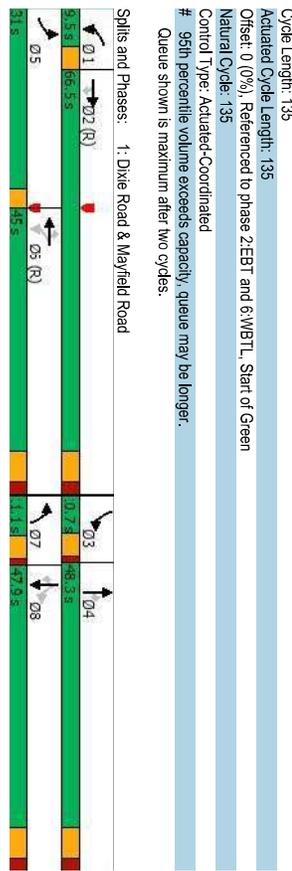
15: Bramalea Road & Old School Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop	Stop		Stop	Stop		Stop	Stop	
Traffic Volume (vph)	20	300	85	25	195	0	40	75	20	5	155	60
Future Volume (vph)	20	300	85	25	195	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	300	85	25	195	0	40	75	20	5	155	60
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	405	220	135	220								
Volume Left (vph)	20	25	40	5								
Volume Right (vph)	85	0	20	60								
Head (s)	-0.06	0.08	0.06	-0.09								
Departure Headway (s)	5.3	5.7	6.2	5.8								
Degree Utilization, x	0.60	0.35	0.23	0.36								
Capacity (veh/h)	645	574	506	555								
Control Delay (s)	15.9	11.8	11.0	12.0								
Approach Delay (s)	15.9	11.8	11.0	12.0								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay	13.4											
Level of Service	B											
Intersection Capacity Utilization	54.4%											
Analysis Period (min)	15											
	ICU Level of Service											
	A											

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		RT	RT									
Traffic Volume (vph)	635	2005	280	60	930	170	130	285	60	105	265	340
Future Volume (vph)	635	2005	280	60	930	170	130	285	60	105	265	340
Lane Group Flow (vph)	635	2005	280	60	930	170	130	285	60	105	265	340
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	1	6	6	7	4	4	3	8	8
Permitted Phases	5	2	2	1	6	6	7	4	4	3	8	8
Detector Phase												
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	9.5	44.9	44.9	9.5	44.9	44.9	9.5	47.9	47.9	9.5	47.9	47.9
Total Split (s)	31.0	66.5	66.5	9.5	45.0	45.0	11.1	48.3	48.3	10.7	47.9	47.9
Total Split (%)	23.0%	49.3%	49.3%	7.0%	33.3%	33.3%	8.2%	35.8%	35.8%	7.9%	35.5%	35.5%
Yellow Time (s)	3.0	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6
All-Red Time (s)	0.0	2.3	2.3	0.0	2.3	2.3	1.0	2.3	2.3	1.0	2.3	2.3
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)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.71	0.68	0.27	0.41	0.66	0.31	0.59	0.62	0.22	0.49	0.63	0.75
Control Delay	44.2	20.8	2.3	28.7	43.5	6.6	72.5	61.3	1.8	49.6	61.5	16.1
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	44.2	20.8	2.3	28.7	43.5	6.6	72.5	61.3	1.8	49.6	61.5	16.1
Queue Length 50th (m)	81.9	137.6	0.0	4.9	81.3	0.0	18.2	36.3	0.0	23.8	38.0	0.0
Queue Length 95th (m)	105.3	181.3	13.9	15.7	103.5	17.9	33.9	47.8	0.0	39.1	49.6	32.1
Internal Link Dist (m)	980.1			272.1			844.0				481.5	
Turn Bay Length (m)	210.0	184.0	180.0		1400	540	221	956	487	213	963	600
Base Capacity (vph)	894	2954	1047	149	1400	540	221	956	487	213	963	600
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	0.68	0.27	0.40	0.66	0.31	0.59	0.62	0.27	0.49	0.63	0.75

1: Dixie Road & Mayfield Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		RT	RT									
Traffic Volume (vph)	85.8	66.5	5.3	0.7	114	47.9	0.4	0.8	0.8	0.4	0.8	0.8
Future Volume (vph)	85.8	66.5	5.3	0.7	114	47.9	0.4	0.8	0.8	0.4	0.8	0.8
Lane Group Flow (vph)	85.8	66.5	5.3	0.7	114	47.9	0.4	0.8	0.8	0.4	0.8	0.8
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	1	6	6	7	4	4	3	8	8
Permitted Phases	5	2	2	1	6	6	7	4	4	3	8	8
Detector Phase												
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	9.5	44.9	44.9	9.5	44.9	44.9	9.5	47.9	47.9	9.5	47.9	47.9
Total Split (s)	31.0	66.5	66.5	9.5	45.0	45.0	11.1	48.3	48.3	10.7	47.9	47.9
Total Split (%)	23.0%	49.3%	49.3%	7.0%	33.3%	33.3%	8.2%	35.8%	35.8%	7.9%	35.5%	35.5%
Yellow Time (s)	3.0	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6
All-Red Time (s)	0.0	2.3	2.3	0.0	2.3	2.3	1.0	2.3	2.3	1.0	2.3	2.3
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)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.71	0.68	0.27	0.41	0.66	0.31	0.59	0.62	0.22	0.49	0.63	0.75
Control Delay	44.2	20.8	2.3	28.7	43.5	6.6	72.5	61.3	1.8	49.6	61.5	16.1
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	44.2	20.8	2.3	28.7	43.5	6.6	72.5	61.3	1.8	49.6	61.5	16.1
Queue Length 50th (m)	81.9	137.6	0.0	4.9	81.3	0.0	18.2	36.3	0.0	23.8	38.0	0.0
Queue Length 95th (m)	105.3	181.3	13.9	15.7	103.5	17.9	33.9	47.8	0.0	39.1	49.6	32.1
Internal Link Dist (m)	980.1			272.1			844.0				481.5	
Turn Bay Length (m)	210.0	184.0	180.0		1400	540	221	956	487	213	963	600
Base Capacity (vph)	894	2954	1047	149	1400	540	221	956	487	213	963	600
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	0.68	0.27	0.40	0.66	0.31	0.59	0.62	0.27	0.49	0.63	0.75



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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	635	2005	280	60	930	170	130	255	60	105	265	340
Future Volume (vph)	635	2005	280	60	930	170	130	255	60	105	265	340
Ideal Flow (vph/pl)	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)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	1.00	1.00	0.95	1.00	0.98
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
Flt	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00
Satd. Flow (prot)	2665	4902	1554	1539	4961	1377	3236	3120	1319	1381	3174	1199
Flt Permitted	0.95	1.00	1.00	0.09	1.00	0.95	1.00	0.51	1.00	1.00	1.00	1.00
Satd. Flow (perm)	2565	4902	1554	153	4561	1377	3236	3120	1319	744	3174	1199
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)	635	2005	280	60	930	170	130	255	60	105	265	340
RTOR Reduction (vph)	0	113	0	0	118	0	0	52	0	0	295	0
Lane Group Flow (vph)	635	2005	167	60	930	52	130	265	8	105	265	45
Cont. Peds. (#/hr)	35%	7%	1%	16%	15%	16%	7%	17%	19%	29%	15%	31%
Heavy Vehicles (%)	35%	7%	1%	16%	15%	16%	7%	17%	19%	29%	15%	31%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	6	1	6	7	4	3	8	8	8
Permitted Green, G (s)	46.1	80.6	80.6	47.8	41.4	41.4	8.2	17.9	17.9	26.3	18.0	18.0
Effective Green, g (s)	47.1	80.6	80.6	49.8	41.4	41.4	9.2	17.9	17.9	28.3	18.0	18.0
Actuated G/C Ratio	0.35	0.60	0.60	0.37	0.31	0.31	0.07	0.13	0.13	0.21	0.13	0.13
Clearance Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	4.5	6.9	6.9	4.5	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	3.0
Lane Gap Cap (vph)	894	2926	927	132	1398	422	220	413	174	199	423	159
v/s Ratio Prot	60.25	60.41	0.11	0.14	0.20	0.04	60.04	0.08	0.04	0.04	60.08	0.04
v/s Ratio Perm	0.71	0.69	0.18	0.45	0.67	0.12	0.59	0.62	0.05	0.53	0.63	0.29
Uniform Delay, d1	38.0	18.5	12.3	28.0	40.8	33.7	61.1	55.3	51.1	45.7	55.3	52.7
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	2.7	1.3	0.4	2.5	2.5	0.6	4.2	2.7	0.1	2.5	2.9	1.0
Delay (s)	40.7	19.9	12.7	30.5	43.3	34.3	65.3	58.1	51.2	48.2	58.2	53.7
Level of Service	D	B	B	C	D	C	E	E	D	D	E	D
Approach Delay (s)	23.7			C			D			E		
Approach LOS	C			D			E			D		
Intersection Summary	HCM 2000 Control Delay			HCM 2000 Level of Service			C			C		
HCM 2000 Volume to Capacity ratio	0.89			135.0			Sum of lost time (s)			19.8		
Actuated Cycle Length (s)	78.1%			ICU Level of Service			D			D		
Intersection Capacity Utilization	15			Analysis Period (min)			15			15		
Analysis Period (min)	15			Critical Lane Group			e			e		

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	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR			
Traffic Volume (vph)	5	35	35	0	65	880	15	640	10			
Future Volume (vph)	5	35	35	0	65	880	15	640	10			
Lane Group Flow (vph)	5	35	35	5	65	915	0	655	10			
Turn Type	Spill	Perm	Perm	NA	Perm	NA	Perm	NA	Perm			
Protected Phases	4	4	8	8	2	2	6	6	6			
Permitted Phases	4	4	8	8	2	2	6	6	6			
Detector Phase	4	4	8	8	2	2	6	6	6			
Switch Phase	4	4	8	8	2	2	6	6	6			
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5			
Total Split (s)	22.5	22.5	22.5	22.5	55.0	55.0	55.0	55.0	55.0			
Total Spill (%)	22.5%	22.5%	22.5%	22.5%	55.0%	55.0%	55.0%	55.0%	55.0%			
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5			
Lead-Lag Optimizer?	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max			
Recall Mode	0.06	0.08	0.41	0.01	0.13	0.70	0.54	0.54	0.01			
v/s Ratio	0.06	0.08	0.41	0.01	0.13	0.70	0.54	0.54	0.01			
Control Delay	45.6	0.4	55.5	0.0	6.0	13.1	8.2	8.2	0.0			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay	45.6	0.4	55.5	0.0	6.0	13.1	8.2	8.2	0.0			
Queue Length 50th (m)	1.0	0.0	6.9	0.0	3.7	105.6	58.2	58.2	0.0			
Queue Length 95th (m)	4.7	0.0	16.4	0.0	10.7	242.0	91.0	91.0	0.0			
Internal Link Dist (m)	96.6		96.6		481.5		358.1		50.0			
Turn Bay Length (m)	96.6		96.6		481.5		358.1		50.0			
Base Capacity (vph)	241	539	163	584	483	1307	1223	1308	1308			
Saturation Cap Reductn	0	0	0	0	0	0	0	0	0			
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0	0	0	0	0			
Reduced v/s Ratio	0.02	0.06	0.21	0.01	0.13	0.70	0.54	0.54	0.01			
Intersection Summary	Cycle Length: 100			Actuated Cycle Length: 100			Natural Cycle: 110			Control Type: Actuated-Coordinated		
Offset: 0 (0%), Referenced to phase 2NBT, Start of Green												
# 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:	5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3			04			08			08		
Diagram	55 s			22.5 s			22.5 s			22.5 s		
Diagram	06 (R)			04			08			08		

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	770	10	15	690	15
Future Volume (vph)	0	0	5	0	0	0	60	770	10	15	690	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)			4.5				4.5			4.5		4.5
Lane Util. Factor			1.00				1.00			1.00		1.00
Flt Protected			0.85				1.00			1.00		1.00
Satd. Flow (prot)			998				1598			1546		1546
Flt Permitted			1.00				0.91			0.98		0.98
Satd. Flow (perm)			998				1464			1517		1517
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	770	10	15	690	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	840	0	0	720	0	0
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	21%	0%	22%	0%	0%
Turn Type	Prot	Perm	Perm	Perm	Perm	Perm	NA	NA	Perm	NA	Perm	NA
Protected Phases	4			8			2			6		
Actuated Green, G (s)	1.1			89.9			89.9			89.9		
Effective Green, g (s)	1.1			89.9			89.9			89.9		
Actuated Q/C Ratio	0.01			0.90			0.90			0.90		
Clearance Time (s)	4.5			4.5			4.5			4.5		
Vehicle Extension (s)	3.0			3.0			3.0			3.0		
Lane Grp Cap (vph)				1363			1363			1363		
v/s Ratio Prot												
v/s Ratio Perm				c0.00			c0.57			0.47		0.47
v/c Ratio				0.01			0.64			0.53		0.53
Uniform Delay, d1				48.9			1.2			1.0		1.0
Progression Factor				1.00			1.62			1.00		1.00
Incremental Delay, d2				0.2			1.7			1.5		1.5
Delay (s)				49.1			3.6			2.4		2.4
Level of Service				D			A			A		A
Approach Delay (s)				49.1			3.6			2.4		2.4
Approach LOS				D			A			A		A
Intersection Summary												
HCM 2000 Control Delay	3.2			HCM 2000 Level of Service			A					
HCM 2000 Volume to Capacity ratio	0.63			Sum of lost time (s)			9.0					
Actuated Cycle Length (s)	100.0			ICU Level of Service			D					
Intersection Capacity Utilization	76.2%			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	685	60	0	690
Future Volume (Veh/h)	0	0	685	60	0	690
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	685	60	0	690
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median type			None			None
Upstream signal (m)			0.89			394
pX, platoon unblocked			1375			745
WC, conflicting volume			1359			685
WC1, stage 1 conf vol			6.4			6.2
WC2, stage 2 conf vol			6.4			6.2
VCU, unblocked vol			6.4			6.2
IC, single (s)			3.5			3.3
IC, 2 stage (s)			100			100
FC (s)			147			452
p0 queue free %						
CM capacity (veh/h)						
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	685	60	690		
Volume Left	0	0	0	0		
Volume Right	0	0	60	0		
SSH	1700	1700	1700	872		
Volume to Capacity	0.00	0.40	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	A	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0		
Approach LOS	A	A	A	A		
Intersection Summary						
Average Delay	0.0			A		
Intersection Capacity Utilization	46.7%			ICU Level of Service		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

Future Total 2033 AM Peak Hour

11: Dixie Road & 12861 Site Access 1

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	0	20	450	150	0	695
Traffic Volume (Veh/h)	0	20	450	150	0	695
Future Volume (Veh/h)	0	20	450	150	0	695
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	20	450	150	0	695
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		0.83				
VC, conflicting volume		1145		450		600
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCU, unblocked vol		1073		450		600
IC, single (s)		6.4		6.2		4.1
IC, 2 stage (s)						
F (s)		3.5		3.3		2.2
p0 queue free %		100		97		100
CM capacity (veh/h)		205		613		987
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	20	450	150	695		
Volume Left	0	0	0	0		
Volume Right	20	0	150	0		
ESH	613	1700	1700	1700		
Volume to Capacity	0.03	0.26	0.09	0.41		
Queue Length 95th (m)	0.8	0.0	0.0	0.0		
Control Delay (s)	11.1	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	11.1	0.0				
Approach LOS	B					
Intersection Summary						
Average Delay	0.2			A		
Intersection Capacity Utilization	39.9%			15		
Analysis Period (min)	15			15		

Tribal Lands Dixie

Synchro 11 Report
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Queues

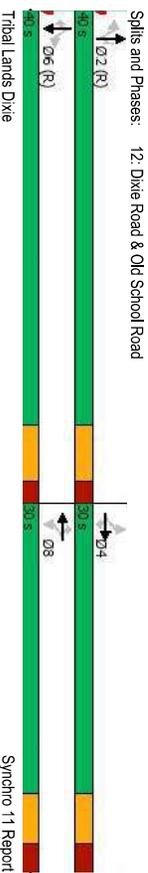
Future Total 2033 AM Peak Hour

12: Dixie Road & Old School Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	45	370	50	170	155	10	30	195	50	60	475
Traffic Volume (vph)	45	370	50	170	155	10	30	195	50	60	475
Future Volume (vph)	45	370	50	170	155	10	30	195	50	60	475
Lane Group Flow (vph)	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Turn Type											
Protected Phases		4			8		8		2		2
Permitted Phases	4	4	4	4	8	8	8	2	2	2	6
Detector Phases											
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)	24.5	24.5	24.5	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	30.0	30.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag											
Lead-Lag Optimizer?											
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.13	0.36	0.13	0.81	0.16	0.02	0.12	0.22	0.07	0.13	0.51
Queue Delay	16.9	19.6	5.4	61.1	18.9	0.4	7.6	7.4	0.7	11.6	14.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	16.9	19.6	5.4	61.1	18.9	0.4	7.6	7.4	0.7	11.6	14.7
Total Delay	4.3	20.1	0.0	25.8	11.9	0.0	1.6	10.4	0.1	4.2	42.3
Queue Length 50th (m)	10.9	29.2	6.0	#33.3	5.1	0.2	m1.9	8.6	m0.4	11.3	73.0
Queue Length 95th (m)											
Internal Link Dist (m)		371.4			41.8		216.1				261.5
Turn Bay Length (m)	30.0		30.0	30.0		65.0	50.0		50.0	50.0	50.0
Base Capacity (vph)	409	1227	451	250	1181	538	248	889	758	470	955
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	0.11	0.30	0.11	0.68	0.13	0.02	0.12	0.22	0.07	0.13	0.50
Intersection Summary											
Cycle Length: 70											
Actuated Cycle Length: 70											
Offset: 0 (0%), Referenced to phase 2(NBTL) and 6(SRTL, Start of Green											
Natural Cycle: 55											
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.											

Tribal Lands Dixie

Synchro 11 Report
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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	4	4	4	4	4	4	4	4	4	4	4	4
Traffic Volume (vph)	45	370	50	170	155	10	30	195	50	60	475	95
Future Volume (vph)	45	370	50	170	155	10	30	195	50	60	475	95
Ideal Flow (vph/pl)	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	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)	1716	3544	1201	1293	3411	1452	1062	1671	1377	1322	1795	1566
Flt Permitted	0.65	1.00	1.00	0.53	1.00	1.00	0.42	1.00	1.00	0.84	1.00	1.00
Satd. Flow (perm)	1181	3544	1201	724	3411	1452	467	1671	1377	884	1795	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)	45	370	50	170	155	10	30	195	50	60	475	95
RTOR Reduction (vph)	0	0	35	0	0	7	0	0	24	0	0	45
Lane Group Flow (vph)	45	370	15	170	155	3	30	195	26	60	475	50
Heavy Vehicles (%)	4%	3%	33%	38%	7%	10%	68%	15%	16%	35%	7%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	8	2	2	6	6	6	6
Actuated Green, G (s)	20.5	20.5	20.5	20.5	20.5	20.5	36.5	36.5	36.5	36.5	36.5	36.5
Effective Green, g (s)	20.5	20.5	20.5	20.5	20.5	20.5	36.5	36.5	36.5	36.5	36.5	36.5
Actuated Q/C Ratio	0.29	0.29	0.29	0.29	0.29	0.29	0.52	0.52	0.52	0.52	0.52	0.52
Clearance Time (s)	6.5	6.5	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	3.0
Lane Gap Cap (vph)	345	1037	361	212	998	425	243	871	718	460	935	816
v/s Ratio Prot	0.10	0.01	0.01	0.05	0.00	0.06	0.12	0.02	0.07	0.07	0.06	0.03
v/s Ratio Perm	0.13	0.36	0.04	0.80	0.16	0.01	0.12	0.22	0.04	0.13	0.51	0.06
v/c Ratio	0.13	0.36	0.04	0.80	0.16	0.01	0.12	0.22	0.04	0.13	0.51	0.06
Uniform Delay, d1	18.2	19.5	17.7	22.9	18.3	17.5	8.6	9.1	8.2	8.6	10.9	8.3
Progression Factor	1.00	1.00	1.00	1.52	1.10	1.00	0.58	0.64	0.15	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.0	19.2	0.1	0.0	0.6	0.1	0.6	2.0	2.0	0.1
Delay (s)	18.4	19.8	17.8	53.8	20.3	17.5	5.9	6.3	1.3	9.2	12.9	8.4
Level of Service	B	B	B	D	C	B	A	A	A	A	B	A
Approach Delay (s)	19.4			37.2			5.4				11.9	
Approach LOS	B			D			A				B	
Intersection Summary												
HCM 2000 Control Delay	17.9											
HCM 2000 Volume to Capacity ratio	0.61											
Actuated Cycle Length (s)	70.0											
Intersection Capacity Utilization	70.5%											
Analysis Period (min)	15											
c Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

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	4	4	4	4	4	4
Traffic Volume (veh/h)	435	40	0	345	0	5
Future Volume (veh/h)	435	40	0	345	0	5
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	435	40	0	345	0	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream signal (m)	66					
Px, platform unblocked			0.92		0.92	0.92
wC, conflicting volume			475		628	238
wC1, stage 1 conf vol						
wC2, stage 2 conf vol						
vC1, unblocked vol			284		430	7
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)			2.2		3.5	3.3
FF (s)			100		100	99
p0 queue free %			1210		516	997
CM capacity (veh/h)						
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	290	185	172	172	5	
Volume Left	0	0	0	0	0	
Volume Right	0	40	0	0	5	
SSH	1700	1700	1700	1700	997	
Volume to Capacity	0.17	0.11	0.10	0.10	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.1	
Control Delay (s)	0.0	0.0	0.0	0.0	8.6	
Lane LOS	A	A	A	A	A	
Approach Delay (s)	0.0			8.6		
Approach LOS	A			A		
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	23.3%					
Analysis Period (min)	15					
A						

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Unsignalized Intersection Capacity Analysis

Future Total 2033 AM Peak Hour

15: Bramalea Road & Old School Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop			Stop		Stop		Stop	
Traffic Volume (vph)	20	330	85	25	210	0	40	85	20	5	170	60
Future Volume (vph)	20	330	85	25	210	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	330	85	25	210	0	40	85	20	5	170	60
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	435	235	145	235								
Volume Left (vph)	20	25	40	5								
Volume Right (vph)	85	0	20	60								
Head (s)	-0.02	0.09	0.07	-0.02								
Departure Headway (s)	5.6	6.0	6.5	6.2								
Degree Utilization, x	0.67	0.39	0.26	0.40								
Capacity (veh/h)	620	539	477	527								
Control Delay (s)	19.3	12.9	11.8	13.3								
Approach Delay (s)	19.3	12.9	11.8	13.3								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay	15.5											
Level of Service	C											
Intersection Capacity Utilization	57.5%											
ICU Level of Service	B											
Analysis Period (min)	15											

Queues

Future Total 2028 PM Peak Hour

1: Dixie Road & Mayfield Road

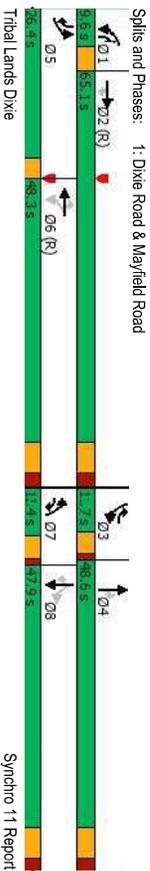
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Prohibit										
Traffic Volume (vph)	440	1355	180	60	1350	100	210	220	60	155	225	650
Future Volume (vph)	440	1355	180	60	1350	100	210	220	60	155	225	650
Lane Group Flow (vph)	440	1355	180	60	1350	100	210	220	60	155	225	650
Turn Type	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases				2	6	6	6	6	4	4	8	8
Detector Phases	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	47.9	9.5	47.9	9.5	47.9	9.5
Total Spill (s)	26.4	65.1	12.4	9.6	48.3	11.7	12.4	48.6	9.6	11.7	47.9	26.4
Total Spill (%)	19.6%	48.2%	9.2%	7.1%	35.8%	8.7%	9.2%	36.0%	7.1%	8.7%	35.5%	19.6%
Yellow Time (s)	3.0	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.0
All-Red Time (s)	0.0	2.3	1.0	0.0	2.3	1.0	1.0	2.3	0.0	1.0	2.3	0.0
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)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
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						
v/c Ratio	0.49	0.45	0.16	0.26	0.83	0.17	0.87	0.55	0.19	0.72	0.62	0.98
Control Delay	36.1	13.9	1.2	17.0	47.5	7.6	94.0	61.9	3.8	66.5	65.8	54.2
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	36.1	13.9	1.2	17.0	47.5	7.6	94.0	61.9	3.8	66.5	65.8	54.2
Queue Length 50th (m)	47.2	68.9	0.0	5.5	132.4	2.6	30.8	31.2	0.0	44.7	34.2	97.4
Queue Length 95th (m)	66.2	89.2	7.0	9.2	152.8	14.5	45.8	43.8	4.5	55.6	44.6	186.2
Internal Link Dist (m)		980.1			272.1			844.0				481.5
Turn Bay Length (m)	155.0		115.0	150.0		65.0	140.0		65.0	100.0		170.0
Base Capacity (vph)	906	2989	1106	230	1631	600	241	1116	315	216	1055	661
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	0.49	0.45	0.16	0.26	0.83	0.17	0.87	0.55	0.19	0.72	0.62	0.98
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green												
Natural Cycle: 125												
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.												

Trials Lands Dixie

Synchro 11 Report
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Trials Lands Dixie

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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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	440	1355	180	60	1350	100	210	220	60	155	225	650
Future Volume (vph)	440	1355	180	60	1350	100	210	220	60	155	225	650
Ideal Flow (vph/trl)	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)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	1.00	0.95	1.00	0.95	1.00
Frbp. ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
Frbp. 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
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.85	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	0.85
Satd. Flow (prot)	2584	4725	1476	1767	4948	1258	3362	3614	1293	1472	3476	1315
Flt Permitted	0.95	1.00	1.00	0.19	1.00	0.95	1.00	1.00	0.59	1.00	1.00	1.00
Satd. Flow (perm)	2584	4725	1476	352	4948	1258	3362	3614	1293	917	3476	1315
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)	440	1355	180	60	1350	100	210	220	60	155	225	650
RTOR Reduction (vph)	0	0	55	0	0	51	0	0	51	0	0	38
Lane Group Flow (vph)	440	1355	125	60	1350	49	210	220	9	155	225	612
Confl. Peds. (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Heavy Vehicles (%)	34%	11%	6%	1%	6%	27%	3%	1%	22%	21%	5%	21%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	5	2	7	1	6	3	7	4	4	8	5	8
Permitted Phases	2	6	6	6	6	6	6	6	6	6	6	6
Actuated Green, G (s)	46.3	84.7	93.4	50.3	44.6	52.5	8.7	14.9	20.6	22.0	14.1	60.4
Effective Green, g (s)	47.3	84.7	93.4	52.3	44.6	52.5	9.7	14.9	20.6	24.0	14.1	60.4
Actuated G/C Ratio	0.35	0.63	0.69	0.39	0.33	0.39	0.07	0.11	0.15	0.18	0.10	0.45
Clearance Time (s)	3.0	6.9	4.5	3.5	6.9	4.5	3.5	6.9	3.5	4.5	6.9	3.0
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 Gap Cap (vph)	905	2964	1021	206	1634	489	241	398	197	199	363	588
v/s Ratio Prot	0.17	0.29	0.01	0.01	0.27	0.01	0.06	0.06	0.00	0.05	0.06	0.36
v/s Ratio Perm	0.49	0.46	0.12	0.29	0.83	0.10	0.87	0.55	0.05	0.78	0.62	1.04
v/c Ratio	34.3	13.1	7.0	30.5	41.6	26.2	62.0	56.9	48.8	51.5	57.9	37.3
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.11	1.05	0.94
Progression Factor	0.4	0.5	0.1	0.8	4.9	0.1	27.2	1.7	0.1	12.7	2.2	42.5
Incremental Delay, d2	34.7	13.6	7.1	31.3	46.6	26.3	89.3	58.6	48.9	69.9	77.7	77.7
Level of Service	C	B	A	C	D	C	F	E	D	E	E	E
Approach Delay (s)	17.7			44.6			70.5			73.3		
Approach LOS	B			D			E			E		
Intersection Summary												
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service										D
HCM 2000 Volume to Capacity ratio	0.96											
Actuated Cycle Length (s)	135.0	Sum of lost time (s)										21.8
Intersection Capacity Utilization	85.3%	ICU Level of Service										E
Analysis Period (min)	15											
e 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
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Traffic Volume (vph)	10	50	70	0	15	695	5	900
Future Volume (vph)	10	50	70	0	15	695	5	900
Lane Group Flow (vph)	10	50	70	5	15	710	0	905
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8	8	2		2	6
Detector Phases	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)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead-Lag Optimizer?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.06	0.10	0.44	0.01	0.09	0.62	0.77	21.0
Control Delay	28.7	0.4	34.1	0.0	9.4	27.3	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	0.4	34.1	0.0	9.4	27.3	21.0	21.0
Queue Length 50th (m)	1.3	0.0	8.6	0.0	1.4	193.3	104.3	104.3
Queue Length 95th (m)	5.3	0.0	18.8	0.0	m3.3	#26338	#209.5	#209.5
Internal Link Dist (m)				96.6		481.5	358.1	358.1
Turn Bay Length (m)				95.0				
Base Capacity (vph)	476	689	296	828	172	1147	1170	1170
Saturation 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	0.02	0.07	0.24	0.01	0.09	0.62	0.77	0.77
Intersection Summary								
Cycle Length: 67.5								
Actuated Cycle Length: 67.5								
Offset: 0 (0%), Referenced to phase 2NBLT and 6SBTL Start of Green								
Natural Cycle: 110								
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: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3								
Tribal Lands Dixie								

HCM Signalized Intersection Capacity Analysis
 5: Dixie Road & Spiers Griggs 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	10	0	50	70	0	5	15	695	15	5	900	0
Traffic Volume (vph)	10	0	50	70	0	5	15	695	15	5	900	0
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Lane Width	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1.00
Frbp. 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	0.85	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1785	1426	1394	1633	1293	1592	1293	1592	1629	1629	1629	1629
Flt Permitted	0.95	1.00	0.76	1.00	0.18	1.00	0.18	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1785	1426	1111	1633	240	1592	240	1592	1625	1625	1625	1625
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)	10	0	50	70	0	5	15	695	15	5	900	0
RTOR Reduction (vph)	0	0	47	0	4	0	0	1	0	0	0	0
Lane Group Flow (vph)	10	0	3	70	1	0	15	709	0	0	905	0
Cont. Peds. (#/hr)	0%	0%	12%	28%	0%	0%	38%	20%	33%	0%	18%	0%
Heavy Vehicles (%)	0%	0%	12%	28%	0%	0%	38%	20%	33%	0%	18%	0%
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6
Permitted Phases	4	4	4	8	8	8	2	2	2	6	6	6
Actuated Green, G (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Effective Green, g (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Actuated G/C Ratio	0.06	0.06	0.10	0.10	0.10	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	100	80	115	169	153	1018	1018	1018	1018	1018	1018	1018
v/s Ratio Prot	60.01	0.00	60.06	0.00	0.06	0.45	0.45	0.45	0.45	0.45	0.45	0.45
v/s Ratio Perm	0.10	0.04	0.61	0.00	0.10	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Uniform Delay, d1	30.2	30.1	28.9	27.1	4.7	7.9	9.9	9.9	9.9	9.9	9.9	9.9
Progression Factor	1.00	1.00	1.00	1.00	0.99	2.54	2.54	2.54	2.54	2.54	2.54	2.54
Incremental Delay, d2	0.4	0.2	8.8	0.0	1.2	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Delay (s)	30.7	30.3	37.8	27.1	5.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
Level of Service	C	C	C	D	C	A	C	C	C	C	B	B
Approach Delay (s)	30.4	30.4	37.0	37.0	23.4	19.8	19.8	19.8	19.8	19.8	19.8	19.8
Approach LOS	C	C	D	D	C	C	C	C	C	C	B	B
Intersection Summary												
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service										
HCM 2000 Volume to Capacity ratio	0.78	C										
Actuated Cycle Length (s)	67.5	Sum of lost time (s)										
Intersection Capacity Utilization	69.4%	ICU Level of Service										
Analysis Period (min)	15	C										
e Critical Lane Group												

Tribal Lands Dixie

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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	10	10	35	645	925
Traffic Volume (vph)	5	10	35	645	925
Future Volume (vph)	5	10	35	645	925
Lane Group Flow (vph)	5	10	0	685	945
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases	2	2	2	6	6
Permitted Phases	4	8	2	2	6
Detector Phase	4	8	2	2	6
Switch Phase	4	8	2	2	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5
Total Spilt (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Lead-Lag Optimizer?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.02	0.03	0.50	0.50	0.61
Control Delay	17.2	0.2	3.8	6.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.2	3.8	6.1	6.1
Queue Length 50th (m)	0.4	0.0	0.0	0.0	0.0
Queue Length 95th (m)	2.5	0.0	58.1	#130.6	130.6
Internal Link Dist (m)	358.1 696.2				
Turn Bay Length (m)					
Base Capacity (vph)	714	713	1361	1543	1543
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	0.01	0.50	0.61	0.61
Intersection Summary					
Cycle Length: 45					
Actuated Cycle Length: 45					
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBT, Start of Green					
Natural Cycle: 75					
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					

Tribal Lands Dixie

Synchro 11 Report
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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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	0	0	0	0	10	35	645	5	0	925	20
Future Volume (vph)	5	0	0	0	0	10	35	645	5	0	925	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	3.5	3.7	3.5
Total Lost time (s)	4.5					4.5					4.5	
Lane Util. Factor	1.00					1.00					1.00	
Frbp. ped/bikes	1.00					1.00					1.00	
Ft	1.00					0.85					1.00	
Flt Protected	0.95					1.00					1.00	
Satd. Flow (prot)	1785					1597					1550	
Fl Permitted	0.95					1.00					0.94	
Satd. Flow (perm)	1785					1597					1460	
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	645	5	0	925	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	1	0
Lane Group Flow (vph)	5	0	0	0	0	0	0	685	0	0	944	0
Confl. Peds. (#/hr)	0%	0%	0%	0%	0%	0%	2%	24%	100%	0%	16%	0%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	NA	NA	NA	NA	NA
Protected Phases												6
Permitted Phases	4		4	8		8	2					2
Actuated Green, G (s)	1.2		1.2	1.2		1.2	34.8				34.8	34.8
Effective Green, g (s)	1.2		1.2	1.2		1.2	34.8				34.8	34.8
Actuated G/C Ratio	0.03		0.03	0.03		0.03	0.77				0.77	0.77
Clearance Time (s)	4.5		4.5	4.5		4.5	3.0				4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0		3.0	11.29				3.0	3.0
Lane Gap Cap (vph)	47		47	42		42	1279				60.57	60.57
v/s Ratio Prot	60.00		60.00	0.00		0.00	0.47				0.74	0.74
v/s Ratio Perm	0.11		0.11	0.01		0.01	0.61				2.7	2.7
Uniform Delay, d1	21.4		21.4	21.3		21.3	2.2				1.00	1.00
Progression Factor	1.00		1.00	1.00		1.00	2.4				3.8	3.8
Incremental Delay, d2	1.0		1.0	0.1		0.1	2.4				6.5	6.5
Delay (s)	22.4		22.4	21.4		21.4	4.6				6.5	6.5
Level of Service	C		C	C		C	A				A	A
Approach Delay (s)	22.4		22.4	21.4		21.4	4.6				6.5	6.5
Approach LOS	C		C	C		C	A				A	A
Intersection Summary												
HCM 2000 Control Delay	5.9			HCM 2000 Level of Service			A					
HCM 2000 Volume to Capacity ratio	0.72			Sum of lost time (s)			9.0					
Actuated Cycle Length (s)	45.0			ICU Level of Service			D					
Intersection Capacity Utilization	73.3%			Analysis Period (min)			15					
e Critical Lane Group												

Tribal Lands Dixie

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HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Future Total 2028 PM Peak Hour

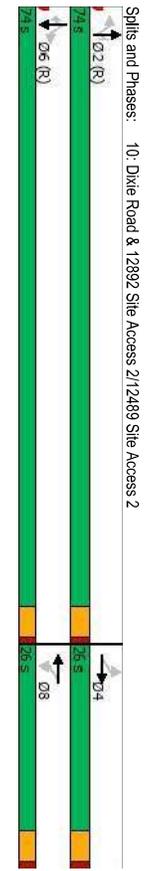
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (veh/h)	0	0	640	10	0	850
Future Volume (veh/h)	0	0	640	10	0	850
Sign Control	Stop	0	Free	0	Free	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	640	10	0	850
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median Type			None			None
Median storage (veh)						
Upstream signal (m)	0.85					394
pX, platoon unblocked	1490		640			650
vC, conflicting volume						
wC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCn, unblocked vol	1488		640			650
IC, single (s)	6.4		6.2			4.1
IC, 2 stage (s)						
IF (s)	3.5		3.3			2.2
p0 queue free %	100		100			100
CM capacity (veh/h)	118		479			946
Direction, Lane #						
Volume Total	0	640	10	850		
Volume Left	0	0	0	0		
Volume Right	0	0	10	0		
SSH	1700	1700	1700	946		
Volume to Capacity	0.00	0.38	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			A		
Intersection Summary						
Average Delay	0.0			A		
Intersection Capacity Utilization	54.7%			ICU Level of Service		
Analysis Period (min)	15			A		

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	90	0	20	595	25	15	710	5
Traffic Volume (vph)	35	0	90	0	20	595	25	15	710	5
Future Volume (vph)	35	55	90	55	20	595	25	15	710	5
Lane Group Flow (vph)	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Turn Type	4	4	8	8	2	2	2	2	6	6
Protected Phases	4	4	8	8	2	2	2	2	6	6
Permitted Phases	4	4	8	8	2	2	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	26.0	26.0	26.0	26.0	74.0	74.0	74.0	74.0	74.0	74.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%
Total Spill (%)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
LeadLag										
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.23	0.13	0.61	0.11	0.06	0.46	0.03	0.04	0.52	0.00
Control Delay	39.8	0.7	57.0	0.5	4.1	5.8	1.6	4.0	6.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	0.7	57.0	0.5	4.1	5.8	1.6	4.0	6.5	0.6
Queue Length 50th (m)	6.5	0.0	17.6	0.0	0.8	34.3	0.0	0.6	44.9	0.0
Queue Length 95th (m)	14.9	0.0	32.2	0.0	3.4	71.4	2.2	2.7	92.6	0.4
Internal Link Dist (m)	161.0		124.2		369.7		813.5			
Turn Bay Length (m)	15.0		15.0		60.0		60.0		60.0	
Base Capacity (vph)	295	503	238	580	353	1304	721	372	1361	1293
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Starvation 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	0.14	0.11	0.38	0.09	0.06	0.46	0.03	0.04	0.52	0.00

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Natural Cycle: 60
 Offset: 0 (0%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green
 Control Type: Actuated-Coordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	55	90	0	55	20	595	25	15	710	5
Traffic Volume (vph)	35	0	55	90	0	55	20	595	25	15	710	5
Future Volume (vph)	35	55	90	55	20	595	25	15	710	5	710	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	1.00
Flt	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1566	1286	1566	1286	1463	1384	1190	1614	887	1075	1685	1597
Flt Permitted	0.72	1.00	0.72	1.00	0.72	1.00	0.35	1.00	1.00	0.41	1.00	1.00
Satd. Flow (perm)	1189	1286	1189	1286	1111	1384	438	1614	887	461	1685	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	595	25	15	710	5
RTOR Reduction (vph)	0	48	0	0	48	0	0	0	5	0	0	1
Lane Group Flow (vph)	35	7	0	90	7	0	20	595	20	15	710	4
Heavy Vehicles (%)	14%	0%	27%	0%	22%	0%	18%	19%	80%	66%	14%	0%
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4	4	8	8	8	2	2	6	6	6	6
Permitted Phases	4	4	4	8	8	8	2	2	6	6	6	6
Actuated Green, G (s)	12.0	12.0	12.0	12.0	12.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0
Effective Green, g (s)	12.0	12.0	12.0	12.0	12.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0
Actuated Q/C Ratio	0.12	0.12	0.12	0.12	0.12	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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)	142	154	133	166	133	346	1275	700	364	1331	1261	1261
v/s Ratio Prot	0.01		0.00		0.00		0.37			0.42		
v/s Ratio Perm	0.03	0.04	0.03	0.08	0.04	0.06	0.47	0.03	0.04	0.53	0.00	0.00
Uniform Delay, d1	39.9	38.9	42.1	38.9	2.3	3.5	2.3	2.3	3.8	2.2	2.2	2.2
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	0.9	0.1	1.2	0.1	0.3	1.2	0.1	0.2	1.5	0.0	0.0	0.0
Delay (s)	40.8	39.0	43.3	39.0	2.6	4.7	2.3	2.5	5.3	2.2	2.2	2.2
Level of Service	D	D	D	D	D	A	A	A	A	A	A	A
Approach Delay (s)												
Approach LOS	D	D	D	D	D	A	A	A	A	A	A	A

Intersection Summary
 HCM 2000 Control Delay: 10.9
 HCM 2000 Volume to Capacity ratio: 0.55
 Actuated Cycle Length (s): 100.0
 Intersection Capacity Utilization: 56.5%
 Analysis Period (min): 15
 ICU Level of Service: B
 Level of Service: B

HCM Unsignalized Intersection Capacity Analysis

Future Total 2028 PM Peak Hour

Queues

Future Total 2028 PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	0	45	635	50	0	730
Traffic Volume (Veh/h)	0	45	635	50	0	730
Future Volume (Veh/h)	0	45	635	50	0	730
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	45	635	50	0	730
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						
VC, conflicting volume		1365	635			685
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol		1365	635			685
IC, single (s)		6.4	6.3			4.1
IC, 2 stage (s)						
FF (s)		3.5	3.4			2.2
p0 queue free %		100	90			100
CM capacity (veh/h)		155	463			918
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	45	635	50	730		
Volume Left	0	0	0	0		
Volume Right	45	0	50	0		
ESH	463	1700	1700	1700		
Volume to Capacity	0.10	0.37	0.03	0.43		
Queue Length 95th (m)	2.6	0.0	0.0	0.0		
Control Delay (s)	13.6	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	13.6	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			43.4%			
ICU Level of Service			15			A
Analysis Period (min)						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	65	150	30	200	350	15	70	515	105	20	290
Traffic Volume (vph)	65	150	30	200	350	15	70	515	105	20	290
Future Volume (vph)	65	150	30	200	350	15	70	515	105	20	290
Lane Group Flow (vph)	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Turn Type											
Protected Phases											
Permitted Phases	4	4	4	8	8	8	2	2	2	6	6
Detector Phases											
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)	24.5	24.5	24.5	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	30.0	30.0	35.0	35.0	35.0	35.0	35.0
Total Spilt (%)	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	53.8%	53.8%	53.8%	53.8%	53.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Leadlag											
Lead-Lag Optimizer?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.32	0.30	0.08	0.71	0.67	0.03	0.19	0.53	0.13	0.08	0.33
Control Delay	21.4	18.8	2.3	50.7	42.8	6.8	11.8	14.0	3.1	11.0	11.5
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	21.4	18.8	2.3	50.7	42.8	6.8	11.8	14.0	3.1	11.0	11.5
Queue Length 50th (m)	6.5	15.0	0.0	27.6	48.1	0.1	4.3	39.4	0.0	1.2	19.4
Queue Length 95th (m)	14.6	24.9	2.3	43.1	64.4	m1.0	13.4	79.1	7.4	5.4	21.4
Internal Link Dist (m)		371.4			41.8			216.1			261.5
Turn Bay Length (m)	30.0		30.0	30.0		65.0	50.0		50.0		50.0
Base Capacity (vph)	270	674	459	374	694	577	374	973	821	254	888
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	0.24	0.22	0.07	0.53	0.50	0.03	0.19	0.53	0.13	0.08	0.33
Intersection Summary											
Cycle Length: 65											
Actuated Cycle Length: 65											
Offset: 0 (0%), Referenced to phase 2(NBT) and 6(SBT), Start of Green											
Natural Cycle: 55											
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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Traffic Volume (vph)	65	150	30	200	350	15	70	515	105	20	290	35	
Future Volume (vph)	65	150	30	200	350	15	70	515	105	20	290	35	
Ideal Flow (vph/pl)	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	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	1.00	
Flt	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)	1785	1865	1166	1487	1921	1493	1159	1847	1465	1167	1885	1521	
Flt Permitted	0.40	1.00	1.00	0.66	1.00	1.00	0.58	1.00	1.00	0.39	1.00	1.00	
Satd. Flow (perm)	748	1865	1166	1036	1921	1493	710	1847	1465	483	1685	1521	
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)	65	150	30	200	350	15	70	515	105	20	290	35	
RTOR Reduction (vph)	0	0	22	0	0	11	0	0	50	0	0	17	
Lane Group Flow (vph)	65	150	8	200	350	4	70	515	55	20	290	18	
Heavy Vehicles (%)	0%	3%	37%	20%	0%	7%	54%	4%	9%	53%	14%	5%	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Protected Phases	4	4	8	8	8	2	2	6	6	6	6	6	
Actuated Green, G (s)	17.7	17.7	17.7	17.7	17.7	34.3	34.3	34.3	34.3	34.3	34.3	34.3	
Effective Green, g (s)	17.7	17.7	17.7	17.7	17.7	34.3	34.3	34.3	34.3	34.3	34.3	34.3	
Actuated Q/C Ratio	0.27	0.27	0.27	0.27	0.27	0.53	0.53	0.53	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	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	3.0	
Lane Grp Cap (vph)	203	507	317	282	523	406	374	974	773	254	889	802	
v/s Ratio Prot	0.08	0.08	0.01	0.19	0.00	0.10	0.10	0.04	0.04	0.04	0.17	0.01	
v/s Ratio Perm	0.32	0.30	0.03	0.71	0.67	0.01	0.19	0.53	0.07	0.08	0.33	0.02	
v/c Ratio	18.9	18.7	17.3	21.3	21.0	17.3	8.0	10.1	7.5	7.6	8.8	7.3	
Uniform Delay, d1	1.00	1.00	1.00	1.80	1.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Progression Factor	0.9	0.3	0.0	7.8	3.2	0.0	1.1	2.1	0.2	0.6	1.0	0.1	
Incremental Delay, d2	19.8	19.0	17.4	46.2	41.0	17.3	9.1	12.1	7.7	8.2	9.7	7.4	
Delay (s)	B	B	B	D	D	B	A	B	A	A	A	A	
Level of Service	B	B	B	D	D	B	A	B	A	A	A	A	
Approach Delay (s)	19.0	42.2	11.1	9.4	9.4	11.1	9.4	9.4	9.4	9.4	9.4	9.4	
Approach LOS	B	D	B	D	D	B	A	B	A	A	A	A	
Intersection Summary													
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service					C						
HCM 2000 Volume to Capacity ratio	0.39												
Actuated Cycle Length (s)	65.0	Sum of lost time (s)					13.0						
Intersection Capacity Utilization	75.5%	ICU Level of Service					D						
Analysis Period (min)	15												
c Critical Lane Group													

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

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	EBT	EBR	WBL	WBT	NBL	NBR	
Traffic Volume (veh/h)	255	15	0	560	0	10	
Future Volume (veh/h)	255	15	0	560	0	10	
Sign Control	Free	Free	Free	Free	Stop	Stop	
Grade	0%	0%	0%	0%	0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	255	15	0	560	0	10	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Upstream signal (m)	66						
pX, platoon unblocked							
WC, conflicting volume			270		542	135	
WC1, stage 1 conf vol							
WC2, stage 2 conf vol							
VCU, unblocked vol			270		542	135	
IC, single (s)			4.1		6.8	6.9	
IC, 2 stage (s)			2.2		3.5	3.3	
FF (s)			100		100	99	
p0 queue free %			1305		475	895	
CM capacity (veh/h)							
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1		
Volume Total	170	100	280	280	10		
Volume Left	0	0	0	0	0		
Volume Right	0	15	0	0	10		
SSH	1700	1700	1700	1700	895		
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	A	A	A	A		
Approach Delay (s)	0.0	0.0	9.1	9.1	9.1		
Approach LOS	A	A	A	A	A		
Intersection Summary							
Average Delay	0.1	HCM 2000 Level of Service					A
Intersection Capacity Utilization	18.8%	ICU Level of Service					A
Analysis Period (min)	15						

Tribal Lands Dixie

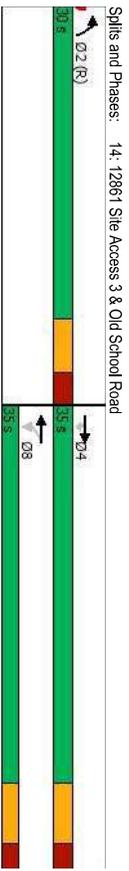
Synchro 11 Report
FT_2028.syn

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)	265	10	430	130
Future Volume (vph)	265	10	430	130
Lane Group Flow (vph)	265	0	440	150
Turn Type	NA	Perm	NA	Prot
Protected Phases	4	8	8	2
Detector Phases	4	8	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	24.5
Total Split (s)	35.0	35.0	35.0	30.0
Total Split (%)	53.8%	53.3%	53.8%	46.2%
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 Optimizer?				
Recall Mode	None	None	None	C-Min
v/c Ratio	0.34	0.61	0.61	0.18
Control Delay	18.0	26.6	26.6	7.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.0	26.6	26.6	7.1
Queue Length 50th (m)	16.1	26.6	7.1	7.1
Queue Length 95th (m)	26.7	37.1	17.4	17.4
Internal Link Dist (m)	433.3	157.0	183.7	
Turn Bay Length (m)				
Base Capacity (vph)	1584	1476	828	828
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	0.30	0.18	0.18

Intersection Summary
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated



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)	265	0	10	430	130	20
Future Volume (vph)	265	0	10	430	130	20
Ideal Flow (vph/pl)	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	6.5
Lane Util. Factor	0.95	1.00	0.95	1.00	0.98	1.00
Flt	1.00	1.00	1.00	0.96	1.00	0.96
Flt Protected						
Satd. Flow (prot)	3614	3571	1405	3571	1405	1405
Flt Permitted	1.00	0.94	0.96	0.94	0.96	0.96
Satd. Flow (perm)	3614	3368	1405	3368	1405	1405
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	265	0	10	430	130	20
RTOR Reduction (vph)	0	0	0	0	5	0
Lane Group Flow (vph)	265	0	0	440	145	0
Heavy Vehicles (%)	1%	0%	50%	1%	26%	25%
Turn Type	NA	Perm	Perm	NA	Prot	Prot
Protected Phases	4	4	8	8	2	2
Permitted Phases						
Actuated Green, G (s)	13.9	13.9	13.9	38.1	38.1	38.1
Effective Green, g (s)	13.9	13.9	13.9	38.1	38.1	38.1
Actuated G/C Ratio	0.21	0.21	0.21	0.59	0.59	0.59
Clearance Time (s)	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
Lane Grp Cap (vph)	772	823	720	823	823	823
v/s Ratio Prot	0.07			0.10		
v/s Ratio Perm				0.13		
v/c Ratio	0.34	0.61	0.61	0.18	0.18	0.18
Uniform Delay, d1	21.7	23.1	23.1	6.2	6.2	6.2
Progression Factor	0.80	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	1.5	1.5	0.5	0.5	0.5
Delay (s)	17.5	24.6	24.6	6.7	6.7	6.7
Level of Service	B	C	C	A	A	A
Approach Delay (s)	17.5	24.6	6.7	6.7	6.7	6.7
Approach LOS	B	C	C	A	A	A

Intersection Summary
 HCM 2000 Control Delay: 19.3
 HCM 2000 Volume to Capacity ratio: 0.29
 Actuated Cycle Length (s): 65.0
 Intersection Capacity Utilization: 38.3%
 Analysis Period (min): 15
 ICU Level of Service: A
 c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

Future Total 2028 PM Peak Hour

15: Bramalea Road & Old School Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop			Stop		Stop		Stop	
Traffic Volume (vph)	45	215	25	15	355	10	60	200	35	10	55	25
Future Volume (vph)	45	215	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	215	25	15	355	10	60	200	35	10	55	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	285	380	295	90								
Volume Left (vph)	45	15	60	10								
Volume Right (vph)	25	10	35	25								
Head (s)	0.10	0.03	-0.03	0.05								
Departure Headway (s)	5.9	5.7	6.0	6.6								
Degree Utilization, x	0.47	0.60	0.49	0.17								
Capacity (veh/h)	563	602	590	448								
Control Delay (s)	14.1	17.0	14.7	10.9								
Approach Delay (s)	14.1	17.0	14.7	10.9								
Approach LOS	B	C	B	B								
Intersection Summary												
Delay	15.0											
Level of Service	C											
Intersection Capacity Utilization	61.4%											
ICU Level of Service	B											
Analysis Period (min)	15											

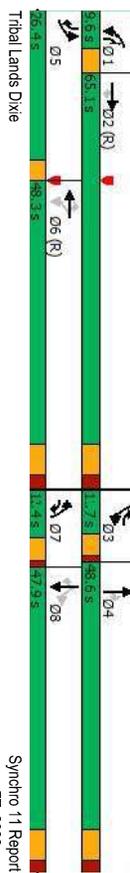
Queues

Future Total 2033 PM Peak Hour

1: Dixie Road & Mayfield Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		RT	RT		RT	RT		RT	RT		RT	RT
Traffic Volume (vph)	440	1495	180	60	1485	100	210	220	60	155	225	650
Future Volume (vph)	440	1495	180	60	1485	100	210	220	60	155	225	650
Lane Group Flow (vph)	440	1495	180	60	1485	100	210	220	60	155	225	650
Turn Type	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases				2	6	6	6	6	4	8	8	8
Detector Phases	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	8.0	9.5	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	12.4	9.5	44.9	9.5	47.9	9.5	47.9	9.5	47.9	9.5
Total Split (s)	26.4	65.1	12.4	9.6	48.3	11.7	12.4	48.6	9.6	11.7	47.9	26.4
Total Split (%)	19.6%	48.2%	9.2%	7.1%	35.8%	8.7%	9.2%	36.0%	7.1%	8.7%	35.5%	19.6%
Yellow Time (s)	3.0	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.0
All-Red Time (s)	0.0	2.3	1.0	0.0	2.3	1.0	1.0	2.3	0.0	1.0	2.3	0.0
Lost Time Adjust (s)	-1.0	0.0	0.0	-1.0	0.0	0.0	-1.0	0.0	-1.0	0.0	0.0	0.0
Total Lost Time (s)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
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	0.48	0.50	0.16	0.29	0.94	0.17	0.95	0.55	0.19	0.76	0.62	0.99
Control Delay	35.2	14.5	1.2	18.3	57.2	5.2	11.1	61.9	3.8	69.3	68.5	60.7
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	35.2	14.5	1.2	18.3	57.2	5.2	11.1	61.9	3.8	69.3	68.5	60.7
Queue Length 50th (m)	47.5	79.7	0.0	5.5	151.9	0.0	30.8	31.2	0.0	39.4	32.2	91.6
Queue Length 95th (m)	66.7	102.6	7.1	9.2	#187.6	11.6	#58.8	43.8	4.5	#50.8	#41.5	#254.2
Internal Link Dist (m)		980.1		272.1			844.0				481.5	
Turn Bay Length (m)	210.0	184.0	180.0		150.0	160.0		65.0	210.0		180.0	
Base Capacity (vph)	919	2987	1105	210	1579	381	221	1116	315	203	1045	638
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	0.48	0.50	0.16	0.29	0.94	0.17	0.95	0.55	0.19	0.76	0.62	0.99
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, 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.												
m Volume for 95th percentile queue is metered by upstream signal.												

Splits and Phases: 1: Dixie Road & Mayfield Road



HCM Signalized Intersection Capacity Analysis

Future Total 2033 PM Peak Hour

1: Dixie Road & Mayfield Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	440	1495	180	60	1485	100	210	220	60	155	225	650
Future Volume (vph)	440	1495	180	60	1485	100	210	220	60	155	225	650
Ideal Flow (vph/pl)	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)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frbp. ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00
Frbp. 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
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2628	4683	1476	1767	4902	1229	3362	3614	1293	1437	3444	1273
Flt Permitted	0.95	1.00	1.00	0.16	1.00	0.95	1.00	0.95	1.00	0.59	1.00	1.00
Satd. Flow (perm)	2628	4683	1476	303	4902	1229	3362	3614	889	3444	1273	
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)	440	1495	180	60	1485	100	210	220	60	155	225	650
RTOR Reduction (vph)	0	0	56	0	0	62	0	0	51	0	0	37
Lane Group Flow (vph)	440	1495	124	60	1485	38	210	220	9	155	225	613
Confl. Peds. (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Heavy Vehicles (%)	37%	12%	6%	1%	7%	30%	3%	1%	22%	24%	6%	25%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	5	2	2	7	1	6	3	7	4	3	8	5
Permitted Phases	2	6	6	6	6	6	6	6	4	8	8	8
Actuated Green, G (s)	48.1	88.4	93.3	49.2	43.5	50.7	7.9	14.9	20.6	21.4	14.2	62.3
Effective Green, g (s)	49.1	85.4	93.3	51.2	43.5	50.7	8.9	14.9	20.6	23.4	14.2	62.3
Actuated Q/C Ratio	0.36	0.63	0.69	0.38	0.32	0.38	0.07	0.11	0.15	0.17	0.11	0.46
Clearance Time (s)	3.0	6.9	4.5	3.5	6.9	4.5	4.5	6.9	3.5	4.5	6.9	3.0
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 Gap Cap (vph)	919	2962	1020	187	1579	461	221	398	197	187	362	587
v/s Ratio Prot	0.17	0.32	0.01	0.02	0.30	0.00	0.06	0.06	0.06	0.05	0.07	0.37
v/s Ratio Perm	0.48	0.50	0.12	0.32	0.94	0.08	0.35	0.55	0.05	0.83	0.62	1.04
v/c Ratio	33.1	13.4	7.0	32.4	44.5	27.2	62.8	56.9	48.8	52.5	57.8	36.4
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.08	1.10	1.17
Progression Factor	0.4	0.6	0.1	1.0	12.3	0.1	46.5	1.7	0.1	18.4	2.3	43.1
Incremental Delay, d2	33.5	14.0	7.1	33.4	56.8	27.2	108.3	58.6	48.9	75.2	65.8	85.8
Level of Service	C	B	A	C	E	C	F	E	D	E	E	F
Approach Delay (s)	17.5			54.2			79.1			79.9		
Approach LOS	B			D			E			E		
Intersection Summary												
HCM 2000 Control Delay	46.8			HCM 2000 Level of Service			D					
HCM 2000 Volume to Capacity ratio	1.01											
Actuated Cycle Length (s)	135.0			Sum of lost time (s)			21.8					
Intersection Capacity Utilization	87.9%			ICU Level of Service			E					
Analysis Period (min)	15											
e Critical Lane Group												

Tribal Lands Dixie

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Queues

Future Total 2033 PM Peak Hour

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

Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Traffic Volume (vph)	10	50	70	0	15	695	5	900
Future Volume (vph)	10	50	70	0	15	695	5	900
Lane Group Flow (vph)	10	50	70	5	15	710	0	905
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Detector Phases	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)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead-Lag								
Lead-Lag Optimizer?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.06	0.10	0.44	0.01	0.09	0.63	0.79	0.79
Control Delay	28.7	0.4	34.1	0.0	10.8	30.7	22.2	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	0.4	34.1	0.0	10.8	30.7	22.2	22.2
Queue Length 50th (m)	1.3	0.0	8.6	0.0	1.6	183.4	107.5	107.5
Queue Length 95th (m)	5.3	0.0	18.8	0.0	m5.9	#250.2	#212.4	#212.4
Internal Link Dist (m)					96.6		358.1	
Turn Bay Length (m)					95.0			
Base Capacity (vph)	476	689	296	828	172	1128	1140	1140
Saturation 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	0.02	0.07	0.24	0.01	0.09	0.63	0.79	0.79
Intersection Summary								
Cycle Length: 67.5								
Actuated Cycle Length: 67.5								
Offset: 0 (0%), Referenced to phase 2NBT, Start of Green								
Natural Cycle: 110								
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: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3								

Tribal Lands Dixie

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HCM Signalized Intersection Capacity Analysis
 5: Dixie Road & Spiers Griggs 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	10	0	50	70	0	5	15	695	15	5	900	0
Traffic Volume (vph)	10	0	50	70	0	5	15	695	15	5	900	0
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Lane Width	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1.00
Frbp. 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
Frbp. 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
Flt	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt Protected	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1785	1426	1394	1633	1293	1567	1589	1589	1589	1589	1589	1589
Flt Permitted	0.95	1.00	0.76	1.00	0.18	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1785	1426	1111	1633	240	1567	1585	1585	1585	1585	1585	1585
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)	10	0	50	70	0	5	15	695	15	5	900	0
RTOR Reduction (vph)	0	0	47	0	4	0	0	1	0	0	0	0
Lane Group Flow (vph)	10	0	3	70	1	0	15	709	0	0	905	0
Cont. Ped. (#/hr)	0%	0%	12%	28%	0%	0%	38%	22%	33%	0%	21%	0%
Heavy Vehicles (%)	0%	0%	12%	28%	0%	0%	38%	22%	33%	0%	21%	0%
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6
Actuated Green, G (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Effective Green, g (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Actuated G/C Ratio	0.06	0.06	0.10	0.10	0.10	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	100	80	115	169	153	1002	4.45	1014	1014	1014	1014	1014
v/s Ratio Prot	60.01	0.00	60.06	0.00	0.06	0.89	60.57	60.57	60.57	60.57	60.57	60.57
v/s Ratio Perm	0.10	0.04	0.61	0.00	0.10	0.71	0.89	0.89	0.89	0.89	0.89	0.89
Uniform Delay, d1	30.2	30.1	28.9	27.1	4.7	8.0	10.2	10.2	10.2	10.2	10.2	10.2
Progression Factor	1.00	1.00	1.00	1.00	1.15	2.88	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2	8.8	0.0	1.2	4.0	11.8	11.8	11.8	11.8	11.8	11.8
Delay (s)	30.7	30.3	37.8	27.1	6.6	27.0	22.0	22.0	22.0	22.0	22.0	22.0
Level of Service	C	C	C	D	C	A	C	C	C	C	C	C
Approach Delay (s)	30.4	30.4	37.0	37.0	26.6	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Approach LOS	C	C	D	D	C	C	C	C	C	C	C	C
Intersection Summary												
HCM 2000 Control Delay	24.8		HCM 2000 Level of Service	C								
HCM 2000 Volume to Capacity ratio	0.80		Sum of lost time (s)	13.5								
Actuated Cycle Length (s)	67.5		ICU Level of Service	C								
Intersection Capacity Utilization	69.4%											
Analysis Period (min)	15											
e Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

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	10	10	35	645	925
Traffic Volume (vph)	5	10	35	645	925
Future Volume (vph)	5	10	35	645	925
Lane Group Flow (vph)	5	10	0	685	945
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases	2	2	2	6	6
Permitted Phases	4	8	2	2	6
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)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Lead-Lag Optimizer?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/s Ratio	0.02	0.03	0.51	0.54	0.54
Control Delay	17.2	0.2	4.2	6.9	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.2	4.2	6.9	6.9
Queue Length 50th (m)	0.4	0.0	0.0	0.0	0.0
Queue Length 95th (m)	2.5	0.0	#63.3	#134.7	358.1
Internal Link Dist (m)			358.1	696.2	
Turn Bay Length (m)					
Base Capacity (vph)	714	713	1331	1485	1485
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/s Ratio	0.01	0.01	0.51	0.64	0.64
Intersection Summary					
Cycle Length: 45					
Actuated Cycle Length: 45					
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBT, Start of Green					
Natural Cycle: 80					
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					

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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	0	0	0	0	10	35	645	5	0	925	20
Future Volume (vph)	5	0	0	0	0	10	35	645	5	0	925	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)	4.5					4.5					4.5	
Lane Util. Factor	1.00					1.00					1.00	
Frbp. ped/bikes	1.00					1.00					1.00	
Ft	1.00					0.85					1.00	
Flt Protected	0.95					1.00					1.00	
Satd. Flow (prot)	1785					1597					1516	
Fl Permitted	0.95					1.00					0.94	
Satd. Flow (perm)	1785					1597					1427	
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	645	5	0	925	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	1	0
Lane Group Flow (vph)	5	0	0	0	0	0	0	685	0	0	944	0
Confl. Peds. (#/hr)	0%	0%	0%	0%	0%	0%	2%	27%	100%	0%	18%	0%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	NA	NA	NA	NA	NA
Protected Phases												6
Permitted Phases	4		4	8		8	2					2
Actuated Green, G (s)	1.2		1.2	1.2		1.2	34.8				34.8	
Effective Green, g (s)	1.2		1.2	1.2		1.2	34.8				34.8	
Actuated G/C Ratio	0.03		0.03	0.03		0.03	0.77				0.77	
Cheerance Time (s)	4.5		4.5	4.5		4.5	4.5				4.5	
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0				3.0	
Lane Gap Cap (vph)	47		47	42		42	1103				1231	
v/s Ratio Prot											60.59	
v/s Ratio Perm	60.00		60.00	0.00		0.00	0.48				0.77	
v/c Ratio	0.11		0.11	0.01		0.01	0.62				0.77	
Uniform Delay, d1	21.4		21.4	21.3		21.3	2.2				2.8	
Progression Factor	1.00		1.00	1.00		1.00	1.00				1.00	
Incremental Delay, d2	1.0		1.0	0.1		0.1	2.6				4.6	
Delay (s)	22.4		22.4	21.4		21.4	4.9				7.5	
Level of Service	C		C	C		C	A				A	
Approach Delay (s)	22.4		22.4	21.4		21.4	4.9				7.5	
Approach LOS	C		C	C		C	A				A	
Intersection Summary												
HCM 2000 Control Delay	6.5			HCM 2000 Level of Service			A					
HCM 2000 Volume to Capacity ratio	0.74			Sum of lost time (s)			9.0					
Actuated Cycle Length (s)	45.0			ICU Level of Service			D					
Intersection Capacity Utilization	73.3%			Analysis Period (min)			15					
e Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (veh/h)	0	0	640	10	0	850
Future Volume (veh/h)	0	0	640	10	0	850
Sign Control	Stop	0	Free	0	Free	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	640	10	0	850
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median Type			None			None
Median storage (veh)						
Upstream signal (m)	0.83					394
pX, platoon unblocked	1490		640			650
vC, conflicting volume						
wC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCn, unblocked vol	1488		640			650
IC, single (s)	6.4		6.2			4.1
IC, 2 stage (s)						
IF (s)	3.5		3.3			2.2
p0 queue free %	100		100			100
CM capacity (veh/h)	115		479			946
Direction, Lane #						
Volume Total	0	640	10	850		
Volume Left	0	0	0	0		
Volume Right	0	0	10	0		
SSH	1700	1700	1700	946		
Volume to Capacity	0.00	0.38	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			A		
Intersection Summary						
Average Delay	0.0			A		
Intersection Capacity Utilization	54.7%			ICU Level of Service		
Analysis Period (min)	15			A		

Tribal Lands Dixie

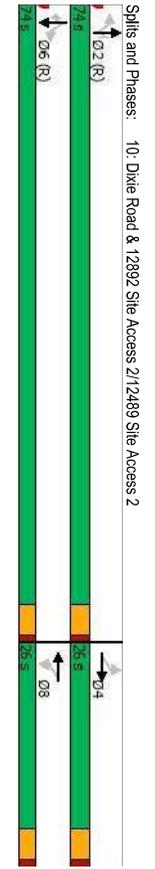
Synchro 11 Report
FT_2033.syn

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	90	0	20	595	25	15	710	5
Traffic Volume (vph)	35	0	90	0	20	595	25	15	710	5
Future Volume (vph)	35	55	90	55	20	595	25	15	710	5
Lane Group Flow (vph)	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Turn Type	4	8	8	8	2	2	2	6	6	6
Protected Phases	4	4	8	8	2	2	2	6	6	6
Detector Phases	4	4	8	8	2	2	2	6	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	26.0	26.0	26.0	26.0	74.0	74.0	74.0	74.0	74.0	74.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5

Lead-Lag Optimizer?

Recall Mode	None	None	None	C-Max						
v/c Ratio	0.22	0.13	0.62	0.11	0.06	0.47	0.03	0.04	0.54	0.00
Control Delay	39.1	0.6	58.1	0.4	4.3	6.1	1.7	4.2	7.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	0.6	58.1	0.4	4.3	6.1	1.7	4.2	7.0	0.6
Queue Length 50th (m)	6.4	0.0	17.6	0.0	0.8	35.6	0.0	0.6	46.8	0.0
Queue Length 95th (m)	14.7	0.0	32.2	0.0	3.5	75.1	2.3	2.8	98.6	0.4
Internal Link Dist (m)	161.0		124.2		369.7		813.5			
Turn Bay Length (m)	15.0	15.0	580	350	1276	718	370	1320	1287	60.0
Base Capacity (vph)	295	503	225	580	350	1276	718	370	1320	1287
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Starvation 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	0.14	0.11	0.40	0.09	0.06	0.47	0.03	0.04	0.54	0.00

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Natural Cycle: 60
 Offset: 0 (0%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green
 Control Type: Actuated-Coordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	55	90	0	55	20	595	25	15	710	5
Traffic Volume (vph)	35	0	55	90	0	55	20	595	25	15	710	5
Future Volume (vph)	35	55	90	55	20	595	25	15	710	5	710	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	3.5	3.5	3.5	3.7	3.5
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	1.00
Flt	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1566	1286	1381	1384	1190	1588	887	1075	1642	1597		
Flt Permitted	0.72	1.00	0.72	1.00	0.35	1.00	1.00	0.41	1.00	1.00		
Satd. Flow (perm)	1189	1286	1048	1384	436	1588	887	459	1642	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	595	25	15	710	5
RTOR Reduction (vph)	0	48	0	0	48	0	0	0	5	0	0	1
Lane Group Flow (vph)	35	7	0	90	7	0	20	595	20	15	710	4
Heavy Vehicles (%)	14%	0%	27%	22%	0%	18%	50%	21%	80%	66%	17%	0%
Turn Type	Perm	NA										
Protected Phases	4	4	8	8	2	2	6	6	6	6	6	6

Permitted Phases	4	8	8	2	2	2	6	6
Actuated Green, G (s)	12.4	12.4	12.4	78.6	78.6	78.6	78.6	78.6
Effective Green, g (s)	12.4	12.4	12.4	78.6	78.6	78.6	78.6	78.6
Actuated G/C Ratio	0.12	0.12	0.12	0.79	0.79	0.79	0.79	0.79
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	147	159	129	342	1248	697	360	1255
v/s Ratio Prot	0.01		0.00		0.37			
v/s Ratio Perm	0.03	0.04	0.70	0.06	0.48	0.03	0.04	0.55
Uniform Delay, d1	39.5	38.6	42.0	38.6	2.4	3.7	2.3	2.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.1	15.2	0.1	1.3	0.1	0.2	1.7
Delay (s)	40.4	38.7	57.2	38.7	2.7	5.0	2.4	2.6
Level of Service	D	D	E	D	A	A	A	A
Approach Delay (s)	39.3		50.2		4.8		5.6	
Approach LOS	D		D		A		A	

Intersection Summary	11.2	HCM 2000 Level of Service	B
HCM 2000 Control Delay	11.2		
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis

Future Total 2033 PM Peak Hour

11: Dixie Road & 12861 Site Access 1

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	0	45	635	50	0	730
Traffic Volume (Veh/h)	0	45	635	50	0	730
Future Volume (Veh/h)	0	45	635	50	0	730
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	45	635	50	0	730
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right Turn Lane (Veh)						
Median storage (veh)			None			None
Upstream signal (m)						240
PX, platoon unblocked						
VC, conflicting volume		1365	635			685
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol		1344	635			685
IC, single (s)		6.4	6.2			4.1
IC, 2 stage (s)						
FF (s)		3.5	3.3			2.2
p0 queue free %		100	91			100
CM capacity (veh/h)		146	482			918
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	45	635	50	730		
Volume Left	0	0	0	0		
Volume Right	45	0	50	0		
ESH	482	1700	1700	1700		
Volume to Capacity	0.09	0.37	0.03	0.43		
Queue Length 95th (m)	2.5	0.0	0.0	0.0		
Control Delay (s)	13.2	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	13.2	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.4			A		
Intersection Capacity Utilization	43.4%			ICU Level of Service		
Analysis Period (min)	15			A		

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

Queues

Future Total 2033 PM Peak Hour

12: Dixie Road & Old School Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	65	160	30	200	385	15	70	515	105	20	290
Traffic Volume (Vph)	65	160	30	200	385	15	70	515	105	20	290
Future Volume (Vph)	65	160	30	200	385	15	70	515	105	20	290
Lane Group Flow (Vph)	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Turn Type											
Protected Phases	4		4	8	8	8	2	2	2	6	6
Permitted Phases	4	4	4	8	8	8	2	2	2	6	6
Detector Phases											
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)	24.5	24.5	24.5	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	30.0	30.0	35.0	35.0	35.0	35.0	35.0
Total Spilt (%)	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	53.8%	53.8%	53.8%	53.8%	53.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Leadlag											
Lead-Lag Optimizer?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.21	0.15	0.07	0.84	0.35	0.03	0.20	0.57	0.14	0.18	0.35
Control Delay	16.9	15.3	2.2	58.7	19.9	3.0	13.1	16.1	3.2	16.6	12.9
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	16.9	15.3	2.2	58.7	19.9	3.0	13.1	16.1	3.2	16.6	12.9
Queue Length 50th (m)	5.6	7.1	0.0	15.9	8.1	0.0	5.2	47.3	0.0	1.5	23.2
Queue Length 95th (m)	13.8	12.8	2.3	#44.5	27.2	m0.0	13.4	79.4	7.4	6.6	41.4
Internal Link Dist (m)				371.4			41.8			216.1	
Turn Bay Length (m)	30.0		30.0	30.0	65.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	356	1281	459	279	1306	577	349	900	774	110	828
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	0.12	0.07	0.72	0.29	0.03	0.20	0.57	0.14	0.18	0.35
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											
# 95th percentile volume exceeds capacity, queue may be longer.											
Queue shown its maximum after two cycles.											
m Volume for 95th percentile queue is metered by upstream signal.											

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

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)	65	160	30	200	385	15	70	515	105	20	290	35
Future Volume (vph)	65	160	30	200	385	15	70	515	105	20	290	35
Ideal Flow (vph/pl)	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00
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)	1785	3544	1166	1130	3614	1493	1159	1830	1465	568	1685	1521
Flt Permitted	0.52	1.00	1.00	0.65	1.00	1.00	0.58	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	994	3544	1166	774	3614	1493	710	1830	1465	224	1685	1521
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)	65	160	30	200	385	15	70	515	105	20	290	35
RTOR Reduction (vph)	0	0	21	0	0	10	0	0	53	0	0	18
Lane Group Flow (vph)	65	160	9	200	385	5	70	515	52	20	290	17
Heavy Vehicles (%)	0%	3%	37%	58%	1%	7%	54%	5%	9%	214%	14%	5%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	2	2	6	6	6	6	6
Actuated Green, G (s)	20.0	20.0	20.0	20.0	20.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
Effective Green, g (s)	20.0	20.0	20.0	20.0	20.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
Actuated Q/C Ratio	0.31	0.31	0.31	0.31	0.31	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Clearance Time (s)	6.5	6.5	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	3.0
Lane Gap Cap (vph)	302	1090	358	238	1112	459	349	900	721	110	829	748
v/s Ratio Prot	0.05	0.05	0.01	0.11	0.11	0.00	0.10	0.04	0.09	0.17	0.04	0.17
v/s Ratio Perm	0.22	0.15	0.03	0.84	0.35	0.01	0.20	0.57	0.07	0.18	0.35	0.02
v/c Ratio	16.7	16.3	15.7	21.0	17.4	15.6	9.3	11.7	8.7	9.2	10.1	8.5
Uniform Delay, d1	1.00	1.00	1.00	1.43	1.15	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.4	0.1	0.0	22.2	0.2	0.0	1.3	2.6	0.2	3.6	1.2	0.1
Incremental Delay, d2	17.0	16.4	15.7	52.2	20.2	15.6	10.6	14.3	8.9	12.8	11.3	8.5
Level of Service	B	B	B	D	C	B	B	B	A	B	B	A
Approach Delay (s)	16.5	16.5	16.5	30.7	30.7	13.1	13.1	11.1	11.1	11.1	11.1	11.1
Approach LOS	B	B	B	C	C	B	B	B	A	B	B	A
Intersection Summary												
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service										
HCM 2000 Volume to Capacity ratio	0.67	B										
Actuated Cycle Length (s)	65.0	Sum of lost time (s)										
Intersection Capacity Utilization	68.4%	ICU Level of Service										
Analysis Period (min)	15	C										

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

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)	265	15	0	595	0	10
Future Volume (veh/h)	265	15	0	595	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	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	595	0	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream signal (m)	66					
PX, platform unblocked			0.98		0.98	0.98
WC, conflicting volume			280		570	140
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol			233		528	90
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)						
FF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
CM capacity (veh/h)			1324		477	940
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	177	103	298	298	10	
Volume Left	0	0	0	0	0	
Volume Right	0	15	0	0	10	
SSH	1700	1700	1700	1700	940	
Volume to Capacity	0.10	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	8.9	
Lane LOS	A	A	A	A	A	
Approach Delay (s)	0.0	0.0	8.9	8.9	11.1	
Approach LOS	A	A	B	B	B	
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	19.8%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					

Tribal Lands Dixie

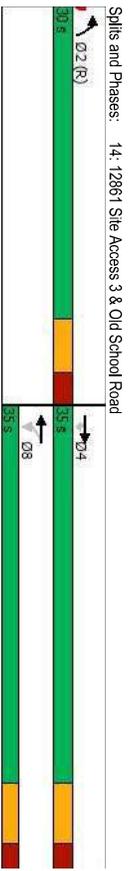
Synchro 11 Report
FT_2033.syn

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)	275	10	465	130
Future Volume (vph)	275	10	465	130
Lane Group Flow (vph)	275	10	465	150
Turn Type	NA	Perm	NA	Prot
Protected Phases	4		8	2
Permitted Phases		8		2
Detector Phases	4	8	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	24.5
Total Split (s)	35.0	35.0	35.0	30.0
Total Split (%)	53.8%	53.8%	53.8%	46.2%
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 Optimizer?				
Recall Mode	None	None	None	C-Min
v/c Ratio	0.35	0.04	0.60	0.14
Control Delay	19.2	18.7	26.0	6.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.2	18.7	26.0	6.8
Queue Length 50th (m)	17.3	1.0	28.2	6.9
Queue Length 95th (m)	24.8	4.1	38.1	17.0
Internal Link Dist (m)	433.3		157.0	183.7
Turn Bay Length (m)		95.0		
Base Capacity (vph)	1584	480	1584	1040
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	0.02	0.29	0.14

Intersection Summary
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated



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)	275	0	10	465	130	20
Future Volume (vph)	275	0	10	465	130	20
Ideal Flow (vph/pl)	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	0.98	1.00
Flt Protected	1.00		1.00	1.00	0.96	
Satd. Flow (prot)	3614		1785	3614	1768	
Flt Permitted	1.00		0.58	1.00	0.96	
Satd. Flow (perm)	3614		1095	3614	1768	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	275	0	10	465	130	20
RTOR Reduction (vph)	0	0	0	0	5	0
Lane Group Flow (vph)	275	0	10	465	145	0
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Turn Type	NA	Perm	Perm	NA	Prot	Prot
Protected Phases	4		8		8	2
Permitted Phases		4		8		2
Actuated Green, G (s)	13.9		13.9	13.9	38.1	
Effective Green, g (s)	13.9		13.9	13.9	38.1	
Actuated G/C Ratio	0.21		0.21	0.21	0.59	
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)	772		234	772	1036	
v/s Ratio Prot	0.08		0.13	0.13	0.08	
v/s Ratio Perm		0.01				0.14
Uniform Delay, d1	0.36		0.04	0.60	0.14	
Progression Factor	0.85		1.00	1.00	1.00	
Incremental Delay, d2	0.3		0.1	1.3	0.3	
Delay (s)	18.8		20.3	24.4	6.3	
Level of Service	B		C	C	A	
Approach Delay (s)	18.8		24.3	6.3		
Approach LOS	B		C	A		

Intersection Summary
 HCM 2000 Control Delay: 19.6 HCM 2000 Level of Service: B
 HCM 2000 Volume to Capacity ratio: 0.28
 Actuated Cycle Length (s): 65.0
 Intersection Capacity Utilization: 32.1% ICU Level of Service: A
 Analysis Period (min): 15
 Critical Lane Group: c

HCM Unsignalized Intersection Capacity Analysis

Future Total 2033 PM Peak Hour

15: Bramalea Road & Old School Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop			Stop			Stop			Stop	
Sign Control												
Traffic Volume (vph)	45	225	25	15	390	10	60	220	35	10	60	25
Future Volume (vph)	45	225	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	225	25	15	390	10	60	220	35	10	60	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	295	415	315	95								
Volume Left (vph)	45	15	60	10								
Volume Right (vph)	25	10	35	25								
Head (s)	0.20	0.03	-0.03	0.13								
Departure Headway (s)	6.3	5.9	6.3	7.0								
Degree Utilization	0.52	0.88	0.55	0.19								
Capacity (veh/h)	532	573	531	414								
Control Delay (s)	15.8	20.6	16.6	11.6								
Approach Delay (s)	15.8	20.6	16.6	11.6								
Approach LOS	C	C	C	B								
Intersection Summary												
Delay	17.5											
Level of Service	C											
Intersection Capacity Utilization	63.7%											
ICU Level of Service	B											
Analysis Period (min)	15											

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	1.8	0.2	1.8	1.6	0.5	1.7	0.1	0.0	0.1
Total Del/Veh (s)	78.5	26.9	16.1	30.6	28.0	12.8	66.2	26.0	15.2	38.8	31.9	8.7
Stop Del/Veh (s)	67.7	17.2	9.3	27.4	22.1	9.4	62.9	20.3	13.1	33.8	23.7	5.2

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	30.5
Stop Del/Veh (s)	22.8

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

Movement	EBL	EER	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.4	0.0	0.1	0.0	0.1
Total Del/Veh (s)	11.6	5.0	6.5	2.6	1.5	0.4	2.4
Stop Del/Veh (s)	9.7	4.8	2.1	0.4	0.0	0.0	0.5

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	0.0	0.2	0.0
Total Del/Veh (s)	6.0	3.4	1.1	12.3	15.5	8.2
Stop Del/Veh (s)	5.6	2.2	0.1	0.1	0.1	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)	3.9	0.5	0.4	3.5	0.3	0.4	0.0	0.0	0.0	4.0	0.4	0.4
Total Del/Veh (s)	16.7	20.0	17.1	34.0	16.2	8.9	25.6	11.7	11.3	19.0	12.6	9.2
Stop Del/Veh (s)	16.6	19.8	17.2	26.7	10.9	4.2	15.1	4.7	2.5	12.4	6.7	3.8

12: Dixie Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	15.6
Stop Del/Veh (s)	11.5

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	35.6
Stop Del/Veh (s)	22.3

Queuing and Blocking Report
Existing AM Peak Hour

12-15-2023

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	T	T	R
Maximum Queue (m)	162.4	219.2	196.3	113.9	64.8	35.8	90.0	102.4	72.5	68.8	46.0	45.5	45.5
Average Queue (m)	87.4	83.5	83.7	75.2	26.1	14.7	55.1	59.2	43.5	38.4	18.2	8.1	8.1
95th Queue (m)	169.0	169.8	142.4	109.9	49.5	27.7	85.2	92.0	81.2	63.2	41.2	27.5	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 (%)	6		2		0	0			5	0		0	
Queuing Penalty (veh)	33		5		0	0			14	1		1	

Intersection: 1: Dixie Road & Mayfield Road

Movement	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	TR	L	T	T	TR	L
Maximum Queue (m)	38.2	89.6	89.6	55.5	15.7	45.4	19.4						
Average Queue (m)	15.7	45.4	45.4	19.4	7.0	20.5	29.1						
95th Queue (m)	33.9	79.8	79.8	38.3	16.2	72.0	29.1						
Link Distance (m)		476.5				130.2	147.7			2408.8		273.7	
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (m)	100.0			170.0					65.0	65.0		65.0	
Storage Blk Time (%)									1	1		1	
Queuing Penalty (veh)									1	1		0	

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

Movement	EB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Directions Served	LTR	L	L	L	L	L	L	L	L	L	L	L	L
Maximum Queue (m)	25.5	14.7											
Average Queue (m)	8.0	4.0											
95th Queue (m)	18.0	10.9											
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

12-15-2023

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

Movement	EB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Directions Served	R	LT	LT	L	TR								
Maximum Queue (m)	20.1	17.2											
Average Queue (m)	3.8	2.5											
95th Queue (m)	14.3	9.7											
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	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	TR
Maximum Queue (m)	20.9	77.5	26.3	39.6	28.8	49.6	13.2	104.4					
Average Queue (m)	7.0	46.3	8.3	15.3	2.9	11.5	2.7	27.0					
95th Queue (m)	16.2	72.0	20.5	29.1	14.6	29.9	9.3	58.7					
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		65.0		65.0		
Storage Blk Time (%)			1						1				
Queuing Penalty (veh)			1						1				

Intersection: 17: Bramalea Road & Old School Road

Movement	EB	NB											
Directions Served	L	L	L	L	L	L	L	L	L	L	L	L	L
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)													

Network Summary

Network wide Queuing Penalty: 53

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	0.2	1.9	0.2	1.9	1.0	0.1	0.8	0.0	0.0	0.0
Total Del/Veh (s)	211.3	21.5	6.8	43.5	93.2	42.4	175.8	51.3	11.4	118.1	48.2	32.6
Stop Del/Veh (s)	201.8	13.4	2.2	34.6	77.8	33.5	170.2	47.1	9.3	113.8	42.9	23.3

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	71.5
Stop Del/Veh (s)	61.8

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

Movement	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	57.3	9.4	36.9	4.5	28.2	8.6	6.0	11.7	8.2
Stop Del/Veh (s)	55.5	8.8	33.2	4.4	23.1	3.2	2.6	5.1	2.3

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	0.1	0.0	0.3	0.1	0.2
Total Del/Veh (s)	31.4	6.4	11.7	4.7	6.4	6.1	8.1	5.7
Stop Del/Veh (s)	29.7	6.2	4.9	0.7	2.8	0.1	0.2	0.5

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

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	5.0	3.3	4.1
Stop Del/Veh (s)	0.0	0.1	0.1

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	4.1	0.2	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	57.3	11.2	19.6	4.6	6.7	2.2	7.2
Stop Del/Veh (s)	54.4	10.6	14.6	0.7	0.5	0.0	2.2

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

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.3	0.2
Total Del/Veh (s)	4.7	5.1	2.2	1.6	3.1
Stop Del/Veh (s)	4.6	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)	3.0	0.4	3.4	0.0	0.0	0.0	0.1	0.0	0.1	3.5	0.5	3.6
Total Del/Veh (s)	31.7	13.4	6.5	36.3	24.7	7.7	22.0	13.6	3.5	19.5	10.5	4.3
Stop Del/Veh (s)	29.0	10.0	5.2	33.2	21.0	6.4	18.4	8.7	2.3	17.3	7.2	3.7

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	18.3
Stop Del/Veh (s)	14.8

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)	1.2	1.0	7.8	2.5	5.6
Stop Del/Veh (s)	0.4	0.4	3.2	2.3	2.3

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

Movement	EBT	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.3	0.1	0.2	0.1	0.1
Total Del/Veh (s)	11.1	23.9	20.2	8.0	4.5	15.5
Stop Del/Veh (s)	8.5	19.7	15.3	6.4	3.8	11.8

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)	0.3	0.3	0.2	0.2	0.5	0.3	0.3	0.2	0.3	0.1	0.1	0.2
Total Del/Veh (s)	8.1	8.8	6.0	7.9	11.2	7.4	8.0	9.2	5.9	5.3	7.5	4.2
Stop Del/Veh (s)	4.5	3.9	3.8	4.4	6.3	6.0	4.5	4.4	4.0	3.3	3.7	3.6

15: Bramalea Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	9.2
Stop Del/Veh (s)	4.9

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	68.8
Stop Del/Veh (s)	50.7

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB
Directions Served	L	L	T	T	R	R	L	L	R	R	L	L	T	T	R	R
Maximum Queue (m)	158.6	162.4	444.5	433.8	98.1	47.3	157.4	243.3	230.2	190.6	72.5	86.2	125.6	129.5	129.0	82.5
Average Queue (m)	177.6	184.9	320.8	233.3	93.0	28.8	170.9	245.7	219.2	187.0	93.6	77.7	177.6	184.9	320.8	233.3
95th Queue (m)																
Link Distance (m)			966.0	966.0	966.0											
Upstream Blk Time (%)																
Queuing Penalty (veh)																
Storage Bay Dist (m)	155.0	155.0				115.0	150.0				65.0	140.0				
Storage Blk Time (%)	1	18		3			0	28			47	0				
Queuing Penalty (veh)	4	82		11			0	17			43	1				

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	SB	SB	NB	NB	SB	SB	NB	NB	SB	SB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	L	T	T	R	R	L	L	T	T	R	R
Maximum Queue (m)	89.8	32.2	37.2	32.1	106.4	38.3	38.4	173.4	52.2	18.3	21.0	9.6	54.0	21.7	24.6	91.5
Average Queue (m)	81.2	28.1	34.0	20.1	98.7	33.9	37.3	150.4	84.3.2	84.3.2	84.3.2	465.3	465.3	465.3	465.3	465.3
95th Queue (m)																
Link Distance (m)																
Upstream Blk Time (%)																
Queuing Penalty (veh)																
Storage Bay Dist (m)	140.0			65.0	100.0		170.0									
Storage Blk Time (%)					1		0									
Queuing Penalty (veh)					1		0									

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

Movement	EB	EB	WB	WB	NB	NB	SB	SB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	R	L	TR	L	TR	L	TR	L	L	TR	TR	L	TR	LT	
Maximum Queue (m)	7.8	26.8	52.5	8.0	26.3	80.4	105.2	105.2	1.8	8.5	18.1	1.0	3.9	33.5	38.0	
Average Queue (m)	6.5	18.6	41.1	5.0	16.0	74.3	80.9	80.9	233.4	233.4	108.4	108.4	465.3	465.3	465.3	
95th Queue (m)																
Link Distance (m)																
Upstream Blk Time (%)																
Queuing Penalty (veh)																
Storage Bay Dist (m)					95.0										2	
Storage Blk Time (%)															0	
Queuing Penalty (veh)															0	

Queuing and Blocking Report
 Future Background (NES) 2033 PM Peak Hour

12-15-2023

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

Movement	EB	WB	NB	SB
Directions Served	L	R	LTR	TR
Maximum Queue (m)	8.9	8.8	86.0	28.1
Average Queue (m)	1.2	3.0	14.7	2.2
95th Queue (m)	5.8	9.3	47.0	13.9
Link Distance (m)	105.2	78.6	300.1	699.6
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	EB	WB	NB	SB
Directions Served	L	TR	L	T
Maximum Queue (m)	21.6	26.7	34.5	79.6
Average Queue (m)	7.8	8.6	6.1	16.1
95th Queue (m)	17.2	18.6	18.4	50.2
Link Distance (m)	171.5			375.0
Upstream Blk Time (%)				819.7
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	WB	NB	SB
Directions Served	L	TR	L	T
Maximum Queue (m)	21.6	26.7	34.5	79.6
Average Queue (m)	7.8	8.6	6.1	16.1
95th Queue (m)	17.2	18.6	18.4	50.2
Link Distance (m)	171.5			375.0
Upstream Blk Time (%)				819.7
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
 Future Background (NES) 2033 PM Peak Hour

12-15-2023

Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	WB
Directions Served	R
Maximum Queue (m)	14.7
Average Queue (m)	5.5
95th Queue (m)	11.4
Link Distance (m)	87.3
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	WB	EB	WB	NB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (m)	28.3	34.7	23.4	43.1	54.9	14.0	46.5	83.4	19.2	15.7	42.3	12.9
Average Queue (m)	12.7	15.7	4.0	29.6	39.6	2.4	20.2	37.0	6.1	5.3	24.4	3.7
95th Queue (m)	23.6	27.7	15.0	45.7	56.7	9.7	40.9	67.0	15.1	12.4	39.4	10.5
Link Distance (m)		382.3			43.2			215.0				270.6
Upstream Blk Time (%)				1	11							
Queuing Penalty (veh)				0	62							
Storage Bay Dist (m)				30.0	30.0			50.0		50.0		50.0
Storage Blk Time (%)				0	0			10		18		3
Queuing Penalty (veh)				0	0			38		37		4

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

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (m)	31.2	22.0	8.2
Average Queue (m)	10.7	8.2	2.6
95th Queue (m)	27.6	21.3	8.4
Link Distance (m)	439.6	439.6	166.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

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

Movement	EB	WB	WB	WB	NB	NB
Directions Served	T	T	LT	T	LR	
Maximum Queue (m)	22.4	22.1	71.3	46.5	26.5	
Average Queue (m)	9.7	11.0	36.9	16.0	10.7	
95th Queue (m)	20.1	21.8	57.1	36.3	22.4	
Link Distance (m)	439.6	439.6	174.8	174.8	190.9	
Upstream Blk Time (%)						
Queuing Penalty Veh						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty Veh						

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	LTR	
Maximum Queue (m)	31.7	53.8	28.4	20.9	
Average Queue (m)	18.3	20.6	16.4	9.8	
95th Queue (m)	28.5	32.2	23.8	16.8	
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: 307

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)	41.7	43.2	37.4	2.6	0.2	2.2	0.9	0.1	0.9	0.0	0.0	0.1
Total Del/Veh (s)	767.9	51.4	29.7	36.3	72.5	27.2	101.3	51.7	15.6	415.8	46.5	40.3
Stop Del/Veh (s)	758.7	31.6	16.2	31.0	60.3	21.3	96.4	47.2	13.9	416.5	39.4	27.6

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	16.6
Total Del/Veh (s)	132.9
Stop Del/Veh (s)	120.7

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

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	35.9	11.9	31.5	5.2	22.3	8.2	6.2	18.1	14.2	12.7
Stop Del/Veh (s)	33.8	11.3	27.9	5.2	18.4	3.0	1.6	7.7	4.3	5.2

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	0.1	0.0	0.3	0.0	0.2
Total Del/Veh (s)	23.6	9.3	10.7	4.3	4.1	6.1	4.4	5.6
Stop Del/Veh (s)	21.6	9.3	5.0	0.5	0.0	0.1	0.0	0.5

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)	4.4	2.7	3.3	3.7
Stop Del/Veh (s)	0.0	0.1	0.2	0.1

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)	3.7	0.3	3.9	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.3
Total Del/Veh (s)	53.1	12.9	50.2	11.3	19.1	5.4	1.8	14.8	8.7	6.7	11.0
Stop Del/Veh (s)	50.5	12.2	46.5	9.4	14.0	1.6	0.5	7.1	1.8	0.0	5.9

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

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.4	0.2
Total Del/Veh (s)	5.3	4.7	2.3	1.8	3.1
Stop Del/Veh (s)	5.2	0.1	0.1	0.2	0.3

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	0.3	3.1	0.6	0.0	0.0	0.1	0.0	0.2	3.2	0.4	3.7
Total Del/Veh (s)	37.7	14.3	7.0	40.3	28.4	10.5	26.9	13.3	4.3	21.0	10.9	2.8
Stop Del/Veh (s)	35.0	10.7	6.0	37.2	24.2	8.2	23.8	8.6	3.0	18.3	7.3	2.4

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	19.6
Stop Del/Veh (s)	15.9

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)	1.2	1.9	15.6	1.8	10.9
Stop Del/Veh (s)	0.4	0.9	10.4	1.9	7.2

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

Movement	EBT	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.1	0.1	0.2	0.1	0.1
Total Del/Veh (s)	11.4	24.4	20.8	8.9	6.7	15.9
Stop Del/Veh (s)	8.6	21.6	15.8	6.8	5.0	12.1

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)	0.3	0.5	0.4	0.2	0.4	0.6	0.3	0.3	0.3	0.1	0.2	0.2
Total Del/Veh (s)	7.7	9.3	5.2	7.2	10.4	7.1	8.7	9.5	5.8	7.3	7.8	4.1
Stop Del/Veh (s)	4.1	4.4	3.1	3.9	5.3	4.5	5.4	4.9	3.7	4.6	3.8	3.0

15: Bramalea Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	9.1
Stop Del/Veh (s)	4.7

Total Network Performance

Denied Del/Veh (s)	120
Total Del/Veh (s)	112.3
Stop Del/Veh (s)	92.2

Queuing and Blocking Report
 Future Total 2028 PM Peak Hour

12-15-2023

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB
Directions Served	L	L	T	T	R	R	L	L	T	T	R	R	L	L	T	T
Maximum Queue (m)	158.7	162.5	1005.2	1000.6	997.9	28.5	27.2	210.3	199.4	160.9	72.5	42.9	156.1	160.5	800.5	768.5
Average Queue (m)	156.1	160.5	800.5	768.5	606.8	11.1	9.6	148.6	138.2	108.5	36.0	26.8	156.1	160.5	1291.2	1311.7
95th Queue (m)	169.1	173.5	1291.2	1311.7	1170.5	25.0	20.3	196.4	187.0	157.5	86.5	43.5	169.1	173.5	986.0	986.0
Link Distance (m)			38	24	3											
Upstream Blk Time (%)			0	0	0											
Queuing Penalty (veh)			0	0	0											
Storage Bay Dist (m)	155.0	155.0				115.0	150.0						155.0	155.0		
Storage Blk Time (%)	10	75				12							11			
Queuing Penalty (veh)	45	340				54							6			

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	SB	SB	NB	NB	SB	SB	NB	NB	SB	SB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	L	T	T	R	L	L	T	R	L	T	T
Maximum Queue (m)	53.1	44.6	44.6	40.8	107.4	350.6	245.2	177.5	34.5	21.4	25.5	11.0	102.4	194.2	55.9	115.0
Average Queue (m)	48.8	36.9	43.1	26.1	126.0	360.8	161.8	182.3	48.8	36.9	43.1	26.1	126.0	360.8	161.8	182.3
95th Queue (m)			843.2	843.2		465.3	465.3						465.3	465.3		
Link Distance (m)																
Upstream Blk Time (%)																
Queuing Penalty (veh)																
Storage Bay Dist (m)	140.0			65.0	100.0		170.0									
Storage Blk Time (%)				77	10		2									
Queuing Penalty (veh)				86	16		3									

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

Movement	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB
Directions Served	L	R	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	13.5	26.8	46.8	8.8	18.7	515.6	195.6	3.0	9.8	17.1	0.5	3.0	43.5	72.0	10.1	20.2
Average Queue (m)	10.1	20.2	39.0	3.7	11.9	198.5	153.7	0	233.4	108.4	108.4	465.3	360.1	0	233.4	108.4
95th Queue (m)																
Link Distance (m)																
Upstream Blk Time (%)																
Queuing Penalty (veh)																
Storage Bay Dist (m)						95.0										
Storage Blk Time (%)							9									
Queuing Penalty (veh)							0									

Queuing and Blocking Report
 Future Total 2028 PM Peak Hour

12-15-2023

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

Movement	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
Directions Served	L	R	L	TR	L	L	TR	TR	L	L	L	TR	L	L	L	TR
Maximum Queue (m)	6.9	8.5	92.6	36.6	1.4	1.5	12.5	3.2	6.5	6.7	38.6	17.2	105.2	78.6	360.1	699.6
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: 8: Dixie Road & 12489 Site Access 1

Movement	NB	NB	SB	SB	NB	NB	SB	SB	NB	NB	SB	SB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	L	T	T	R	L	L	T	R	L	T	T
Maximum Queue (m)	22.1	31.2	23.2	87.1	20.1	65.5	13.9	20.2	84.0	7.5	13.3	16.6	24.9	4.3	20.7	1.1
Average Queue (m)	19.2	25.6	25.2	56.7	14.7	51.9	6.5	15.6	72.0	171.5	134.2					
95th Queue (m)																
Link Distance (m)																
Upstream Blk Time (%)																
Queuing Penalty (veh)																
Storage Bay Dist (m)	15.0			15.0		60.0		60.0								
Storage Blk Time (%)	14			6		34		3								
Queuing Penalty (veh)	8			2		19		3								

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

Movement	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB
Directions Served	L	TR	L	TR	L	TR	L	TR								
Maximum Queue (m)	22.1	31.2	23.2	87.1	20.1	65.5	13.9	20.2	84.0	7.5	13.3	16.6	24.9	4.3	20.7	1.1
Average Queue (m)	19.2	25.6	25.2	56.7	14.7	51.9	6.5	15.6	72.0	171.5	134.2					
95th Queue (m)																
Link Distance (m)																
Upstream Blk Time (%)																
Queuing Penalty (veh)																
Storage Bay Dist (m)	15.0			15.0		60.0		60.0								
Storage Blk Time (%)	14			6		34		3								
Queuing Penalty (veh)	8			2		19		3								

Queuing and Blocking Report
 Future Total 2028 PM Peak Hour

12-15-2023

Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	WB												
Directions Served	R												
Maximum Queue (m)	18.7												
Average Queue (m)	6.4												
95th Queue (m)	14.0												
Link Distance (m)	87.3												
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	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R	L	T
Maximum Queue (m)	34.2	36.5	33.1	43.2	59.3	43.2	53.9	83.8	20.4	23.1	66.5	7.4		
Average Queue (m)	12.9	17.4	6.6	36.7	47.8	7.2	14.9	38.3	9.0	5.7	27.9	2.9		
95th Queue (m)	28.3	30.8	18.5	51.6	58.6	28.2	34.9	66.0	18.6	19.5	49.5	8.5		
Link Distance (m)		382.3		43.2			215.0				270.6			
Upstream Blk Time (%)			5	24	0									
Queuing Penalty (veh)			0	134	0									
Storage Bay Dist (m)	30.0		30.0	30.0	65.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0		
Storage Blk Time (%)	1		1	0	32	26	0	1	3			1		
Queuing Penalty (veh)	2		1	0	118	56	1	6	6			0		

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

Movement	WB	WB	NB												
Directions Served	T	T	R												
Maximum Queue (m)	101.9	102.6	8.2												
Average Queue (m)	25.5	20.7	1.9												
95th Queue (m)	65.4	57.9	7.3												
Link Distance (m)	439.6	439.6	166.0												
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

12-15-2023

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

Movement	EB	EB	WB	WB	WB	NB					
Directions Served	T	T	LT	T	T	LR					
Maximum Queue (m)	22.2	28.1	66.1	63.6	44.4						
Average Queue (m)	7.0	13.5	39.1	23.9	18.0						
95th Queue (m)	18.4	25.2	59.2	52.1	38.2						
Link Distance (m)	439.6	439.6	174.8	174.8	190.9						
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB					
Directions Served	LTR	LTR	LTR	LTR					
Maximum Queue (m)	35.2	54.2	33.1	15.8					
Average Queue (m)	18.1	23.9	16.5	9.6					
95th Queue (m)	29.1	38.6	27.7	15.2					
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: 934

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)	446.7	418.9	402.4	2.8	0.2	2.6	0.8	0.2	0.1	0.1	0.0	0.2
Total Del/Veh (s)	925.7	102.7	67.7	35.4	45.8	27.2	155.5	46.1	18.1	73.3	38.7	17.0
Stop Del/Veh (s)	913.5	63.9	32.0	32.0	38.4	24.6	151.1	41.4	16.5	68.1	33.7	13.4

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	234.1
Total Del/Veh (s)	160.2
Stop Del/Veh (s)	142.7

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)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	40.9	8.0	51.8	8.7	12.8	6.5	6.0	19.3	6.4	2.7	8.3
Stop Del/Veh (s)	40.1	7.4	46.9	5.8	7.0	2.2	2.1	14.3	2.0	0.0	4.0

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	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.3	10.4	4.7	3.3	12.8	5.7	3.0	5.4
Stop Del/Veh (s)	4.4	5.4	0.9	0.1	2.7	0.0	0.0	0.6

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)	4.4	5.1	3.4	3.9
Stop Del/Veh (s)	0.0	0.0	0.2	0.1

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	4.0	0.4	0.1	0.0	0.9	0.1	0.1	0.0	0.2
Total Del/Veh (s)	43.0	9.8	34.2	9.2	14.5	4.5	2.7	13.8	7.0	5.3	7.9
Stop Del/Veh (s)	39.8	5.8	30.2	5.4	9.5	1.3	0.6	5.4	0.9	0.2	3.0

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

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.6	4.1	2.9	2.9	3.3
Stop Del/Veh (s)	4.2	0.1	0.1	0.3	0.3

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)	2.7	0.4	2.6	0.0	0.0	0.1	0.0	0.0	0.0	3.1	0.7	3.4
Total Del/Veh (s)	21.1	21.5	10.2	45.8	18.9	8.3	40.0	5.5	5.8	14.8	13.6	4.9
Stop Del/Veh (s)	16.7	16.1	5.6	42.7	16.9	6.9	35.6	3.7	3.1	10.0	8.8	2.1

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.9
Total Del/Veh (s)	15.0
Stop Del/Veh (s)	10.9

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	1.7	3.7	6.2	2.1
Stop Del/Veh (s)	0.2	0.2	0.8	2.7	0.3

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	0.0	1630.5	1749.9	0.1	0.1	623.7
Total Del/Veh (s)	7.0	2.2	3600.0	3591.0	29.4	13.9	338.0
Stop Del/Veh (s)	4.2	0.6	3600.0	3590.8	24.8	10.1	336.2

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)	0.7	0.4	0.4	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.3
Total Del/Veh (s)	10.5	9.7	9.7	8.7	7.8	7.8	7.5	7.9	8.8	8.1	7.9	8.7
Stop Del/Veh (s)	5.1	4.1	4.4	3.9	3.4	3.6	3.2	3.6	5.0	3.7	3.4	3.8

Total Network Performance

Denied Del/Veh (s)	234.8
Total Del/Veh (s)	133.9
Stop Del/Veh (s)	132.8

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	T	T	R	L	T	T	R
Maximum Queue (m)	158.7	162.5	1005.2	1005.2	1001.9	122.3	43.1	114.5	109.2	87.9	72.5	74.6	157.3	162.3
Average Queue (m)	157.3	162.3	939.3	937.0	821.7	17.8	13.8	92.3	79.0	50.7	29.9	32.8	162.8	162.4
95th Queue (m)	162.8	162.4	1161.9	1162.6	1294.9	53.8	29.9	117.4	101.3	75.2	60.1	69.5	986.0	986.0
Link Distance (m)			986.0	986.0	986.0			278.7	278.7	278.7				
Upstream Blk Time (%)			75	58	12									
Queuing Penalty (veh)			0	0	0									
Storage Bay Dist (m)	155.0	155.0				115.0	150.0							
Storage Blk Time (%)	8	77	6		2	0	0			1	0			
Queuing Penalty (veh)	48	464	39		7	0	0			1	1			

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	L	T	T	T	R	L	T	T	R
Maximum Queue (m)	78.2	63.6	55.5	32.2	78.8	55.7	57.2	84.5	35.0	28.7	31.9	9.3	34.9	27.9
Average Queue (m)	70.7	51.7	50.5	22.4	64.3	46.9	52.3	70.3	843.2	843.2			465.3	465.3
95th Queue (m)														
Link Distance (m)														
Upstream Blk Time (%)														
Queuing Penalty (veh)														
Storage Bay Dist (m)	140.0			65.0	100.0		170.0							
Storage Blk Time (%)														
Queuing Penalty (veh)														

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

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB	SB	SB	SB
Directions Served	L	R	L	TR	L	TR	L	TR	L	TR	L	TR	LT
Maximum Queue (m)	7.7	22.6	43.2	8.8	19.8	508.3	107.8						
Average Queue (m)	0.5	9.0	17.4	0.9	5.3	40.0	23.8						
95th Queue (m)	3.2	18.9	36.8	5.3	13.7	193.2	81.1						
Link Distance (m)	233.4	233.4	108.4			465.3	360.1						
Upstream Blk Time (%)													
Queuing Penalty (veh)							1						
Storage Bay Dist (m)						95.0							3
Storage Blk Time (%)													0
Queuing Penalty (veh)													0

Queuing and Blocking Report
 Future Total 2028 AM Peak Hour

12-15-2023

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

Movement	EB	NB	SB
Directions Served	R	LTR	LTR
Maximum Queue (m)	14.9	89.9	29.1
Average Queue (m)	1.8	22.6	1.3
95th Queue (m)	9.3	63.5	10.5
Link Distance (m)	105.2	360.1	699.6
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	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)	22.0	27.2	22.3	41.0	33.7	42.1	20.1	27.9	51.5	8.5
Average Queue (m)	3.0	7.8	12.8	10.1	10.3	14.5	2.2	7.3	17.0	0.3
95th Queue (m)	12.2	20.5	23.3	26.1	24.0	35.4	11.7	19.7	42.5	2.9
Link Distance (m)		171.5		134.2		375.0			819.7	
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)	22.0	27.2	22.3	41.0	33.7	42.1	20.1	27.9	51.5	8.5
Average Queue (m)	3.0	7.8	12.8	10.1	10.3	14.5	2.2	7.3	17.0	0.3
95th Queue (m)	12.2	20.5	23.3	26.1	24.0	35.4	11.7	19.7	42.5	2.9
Link Distance (m)		171.5		134.2		375.0			819.7	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Queuing and Blocking Report
 Future Total 2028 AM Peak Hour

12-15-2023

Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	WB
Directions Served	R
Maximum Queue (m)	15.0
Average Queue (m)	4.6
95th Queue (m)	13.3
Link Distance (m)	87.3
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	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (m)	22.0	84.9	20.8	34.6	31.5	15.5	26.1	66.0	12.9	28.0	100.8	26.0
Average Queue (m)	7.4	43.2	8.3	18.3	6.7	0.6	8.5	15.0	3.7	8.0	44.6	8.6
95th Queue (m)	18.3	71.1	18.2	30.5	19.7	5.3	23.4	39.2	10.0	17.8	82.5	16.6
Link Distance (m)		382.3			43.2			215.0				270.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)		30.0		30.0		30.0		65.0		50.0		50.0
Storage Blk Time (%)		16		5		0		0		0		4
Queuing Penalty (veh)		16		7		0		0		7		7

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

Movement	NB
Directions Served	R
Maximum Queue (m)	8.4
Average Queue (m)	1.5
95th Queue (m)	6.7
Link Distance (m)	166.0
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
 Future Total 2028 AM Peak Hour

12-15-2023

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

Movement	EB	EB	EB	WB	WB	WB	NB
Directions Served	T	T	R	LT	T	LR	
Maximum Queue (m)	47.1	41.7	19.4	178.7	179.3	45.3	
Average Queue (m)	17.1	18.4	0.7	174.7	177.1	16.9	
95th Queue (m)	35.5	35.2	6.6	176.0	177.8	34.8	
Link Distance (m)	439.6	439.6		174.8	174.8	190.9	
Upstream Blk Time (%)			98	98	98		
Queuing Penalty (veh)				0	0		
Storage Bay Dist (m)				50.0			
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	34.7	27.1	21.0	26.4
Average Queue (m)	21.7	14.1	10.6	13.1
95th Queue (m)	31.4	22.4	17.0	20.5
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: 597

SimTraffic Performance Report
 Existing PM Peak Hour

12-15-2023

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	0.2	1.3	0.2	1.5	1.0	0.5	1.0	0.1	0.0	0.2
Total Del/Veh (s)	31.7	20.3	6.2	22.3	29.0	16.5	48.2	35.5	10.4	38.1	34.8	12.6
Stop Del/Veh (s)	23.9	13.5	2.8	18.0	21.4	11.3	42.3	29.5	6.3	33.9	29.0	9.3

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	25.4
Stop Del/Veh (s)	19.0

5: Dixie Road & Abbotside Wy./Spokane 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)	8.9	3.4	5.5	3.1	1.0	2.3
Stop Del/Veh (s)	6.2	3.0	1.4	0.3	0.0	0.4

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	0.0	0.1	0.1	0.1
Total Del/Veh (s)	6.7	4.8	0.9	10.7	8.8	6.0
Stop Del/Veh (s)	3.9	1.1	0.1	0.2	0.0	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)	3.6	0.2	0.3	3.5	0.5	0.6	0.0	0.0	0.0	4.8	0.2	0.4
Total Del/Veh (s)	40.0	22.3	8.9	28.6	23.0	14.8	16.7	19.1	16.4	11.2	7.4	4.2
Stop Del/Veh (s)	37.4	18.2	7.4	25.0	17.5	12.0	8.2	5.3	4.2	9.7	4.6	3.5

12: Dixie Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	18.0
Stop Del/Veh (s)	11.0

SimTraffic Performance Report
Existing PM Peak Hour

12-15-2023

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	32.1
Stop Del/Veh (s)	19.0

Queuing and Blocking Report
Existing PM Peak Hour

12-15-2023

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T
Maximum Queue (m)	93.5	101.3	96.6	91.6	30.7	39.0	102.2	113.6	72.5	73.6
Average Queue (m)	42.5	50.2	54.2	52.5	12.3	8.2	72.6	75.2	57.7	48.8
95th Queue (m)	75.7	78.8	83.0	77.5	23.2	14.9	104.8	106.8	88.5	88.6
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 (%)								8	1	
Queuing Penalty (veh)								35	5	

Intersection: 1: Dixie Road & Mayfield Road

Movement	SB	SB	SB
Directions Served	L	T	R
Maximum Queue (m)	43.5	40.0	45.3
Average Queue (m)	13.5	18.1	26.9
95th Queue (m)	30.9	32.7	43.9
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	8.4
Average Queue (m)	8.3	0.6
95th Queue (m)	16.3	4.1
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

12-15-2023

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

Movement	EB	NB	EB	WB	NB	NB	SB	SB
Directions Served	L	L/T						
Maximum Queue (m)	8.8	11.0						
Average Queue (m)	1.5	1.5						
95th Queue (m)	6.9	6.7						
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)	14.8	46.1	14.6	74.8	14.0	58.9	8.1	40.0
Average Queue (m)	6.1	19.3	7.8	40.5	4.5	23.5	0.9	19.7
95th Queue (m)	14.7	38.9	15.3	66.1	12.4	47.4	4.9	36.6
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 (%)					1			
Queuing Penalty (veh)					0			

Intersection: 17: Bramalea Road & Old School Road

Movement	EB	EB	WB	WB	NB	NB	SB	SB
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)								

Network Summary

Network wide Queuing Penalty: 40

SimTraffic Performance Report
Future Background (NES) 2033 AM Peak Hour

12-15-2023

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)	86.0	77.5	71.8	2.6	0.2	2.6	0.9	0.1	1.0	0.1	0.0	0.1
Total Del/Veh (s)	710.8	80.0	61.7	37.7	44.9	22.6	87.7	45.7	22.4	61.5	44.9	15.5
Stop Del/Veh (s)	698.5	46.1	31.1	34.7	37.7	19.7	82.9	41.2	20.8	56.9	40.1	12.8

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	44.6
Total Del/Veh (s)	136.7
Stop Del/Veh (s)	118.9

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)	0.1	0.1	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	70.8	5.5	64.0	11.8	12.2	6.0	6.7	10.8	6.3	4.4	8.1
Stop Del/Veh (s)	69.2	5.2	58.9	8.0	7.4	2.2	2.7	4.4	2.1	0.6	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)	0.2	0.0	0.0	0.0	0.8	0.1	0.2	0.1
Total Del/Veh (s)	9.5	6.5	3.4	3.8	11.3	5.3	5.1	4.5
Stop Del/Veh (s)	9.3	2.0	0.2	0.6	2.6	0.0	0.5	0.2

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

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	4.8	2.6	3.7
Stop Del/Veh (s)	0.0	0.0	0.0

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	3.8	0.1	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	47.7	11.3	8.7	4.0	4.7	7.7	5.4
Stop Del/Veh (s)	44.0	7.8	3.8	0.7	0.2	0.0	1.4

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

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	7.7	4.2	2.5	2.2	3.0
Stop Del/Veh (s)	4.3	0.0	0.0	0.2	0.2

12: Dixie Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.6	0.6	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.8	3.2
Total Del/Veh (s)	26.9	24.9	9.8	43.2	22.0	4.5	22.8	5.0	4.1	11.2	10.6	4.1	4.1
Stop Del/Veh (s)	22.3	19.0	5.6	39.8	20.1	3.1	18.2	3.2	2.0	7.2	6.7	1.8	1.8

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.9
Total Del/Veh (s)	13.9
Stop Del/Veh (s)	10.1

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	1.6	3.0	5.8	1.8
Stop Del/Veh (s)	0.2	0.1	0.5	2.2	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	0.0	1884.5	1784.1	0.2	0.1	651.2
Total Del/Veh (s)	5.8	1.8	3589.9	3593.0	27.0	35.9	376.9
Stop Del/Veh (s)	3.2	0.3	3589.7	3592.8	23.2	30.9	374.5

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.3	0.2	0.3
Total Del/Veh (s)	9.5	9.4	9.5	8.0	7.6	8.1	7.4	7.9	7.8	8.2	7.8	8.2	8.5
Stop Del/Veh (s)	4.5	4.0	4.3	3.9	3.3	3.8	3.1	3.3	3.3	3.5	3.3	3.3	3.7

Total Network Performance

Denied Del/Veh (s)	103.8
Total Del/Veh (s)	139.0
Stop Del/Veh (s)	118.3

Queuing and Blocking Report
 Future Background (NES) 2033 AM Peak Hour

12-15-2023

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	NB
Maximum Queue (m)	158.7	162.5	997.9	1006.2	996.4	122.4	39.5	122.0	119.7	110.7	72.5	41.3
Average Queue (m)	158.3	162.3	812.4	792.5	671.8	29.0	13.2	85.6	76.5	55.0	26.3	18.4
95th Queue (m)	159.6	162.5	1219.7	1253.6	1246.5	84.0	30.1	118.1	107.5	91.4	59.4	32.9
Link Distance (m)			966.0	986.0	986.0			278.7	278.7	278.7		
Upstream Blk Time (%)			47	31	6							
Queuing Penalty (veh)			0	0	0			115.0	150.0		65.0	140.0
Storage Bay Dist (m)	155.0	155.0				3	0				1	0
Storage Blk Time (%)	19	78				8	0				2	1
Queuing Penalty (veh)	113	472				44	8	0			8	1

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	T	R			
Maximum Queue (m)	45.1	58.2	51.3	40.0	79.0	39.1	44.5	45.1				
Average Queue (m)	24.8	22.0	21.0	12.1	29.0	25.6	25.4	25.6				
95th Queue (m)	38.4	40.9	38.2	30.7	57.1	37.7	40.8	42.9				
Link Distance (m)			843.2	843.2		465.3	465.3					
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	140.0			65.0	100.0			170.0				
Storage Blk Time (%)												
Queuing Penalty (veh)												

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

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	R	L	TR	L	TR	L	TR	LT	R		
Maximum Queue (m)	13.3	23.4	44.4	8.8	32.0	516.9	94.5	5.8				
Average Queue (m)	1.1	10.4	19.6	0.7	7.6	33.4	19.2	0.2				
95th Queue (m)	6.1	22.2	38.8	4.5	21.6	190.1	38.3	2.0				
Link Distance (m)		233.4	108.4			465.3	360.1					
Upstream Blk Time (%)						0						
Queuing Penalty (veh)						1						
Storage Bay Dist (m)					95.0			50.0				
Storage Blk Time (%)									1			
Queuing Penalty (veh)										0		

Queuing and Blocking Report
 Future Background (NES) 2033 AM Peak Hour

12-15-2023

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

Movement	EB	NB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
Directions Served		R	LTR	LTR								
Maximum Queue (m)		26.9	34.3	28.6								
Average Queue (m)		2.1	8.5	3.9								
95th Queue (m)		12.6	24.3	16.1								
Link Distance (m)		105.2	360.1	699.6								
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)					60.0							
Storage Blk Time (%)					3	1						
Queuing Penalty (veh)					1	0						

Intersection: 8: Dixie Road & 12489 Site Access 1

Movement	EB	EB	NB	NB	NB	SB	SB	SB	SB	SB	SB	SB
Directions Served	L	TR	L	T	T							
Maximum Queue (m)	16.7	16.9	21.8	52.9	28.3							
Average Queue (m)	4.1	4.5	6.2	8.8	2.5							
95th Queue (m)	12.5	13.0	15.7	33.6	14.0							
Link Distance (m)			171.5	375.0	819.7							
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)						60.0						
Storage Blk Time (%)						3	1					
Queuing Penalty (veh)						1	0					

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

Movement	EB	EB	NB	NB	NB	SB	SB	SB	SB	SB	SB	SB
Directions Served	L	TR	L	T	T							
Maximum Queue (m)	16.7	16.9	21.8	52.9	28.3							
Average Queue (m)	4.1	4.5	6.2	8.8	2.5							
95th Queue (m)	12.5	13.0	15.7	33.6	14.0							
Link Distance (m)			171.5	375.0	819.7							
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)						60.0						
Storage Blk Time (%)						3	1					
Queuing Penalty (veh)						1	0					

Queuing and Blocking Report
 Future Background (NES) 2033 AM Peak Hour
 12-15-2023

Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	WB	R		L		T		SB	
Directions Served									
Maximum Queue (m)	7.6								
Average Queue (m)	4.0								
95th Queue (m)	10.2								
Link Distance (m)	87.3								
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	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R	T
Maximum Queue (m)	26.9	72.7	35.5	21.7	29.5	15.5	33.3	39.8	20.2	28.0	64.2	25.9	25.9
Average Queue (m)	10.5	45.7	10.5	5.8	8.6	1.9	5.7	13.3	3.2	8.2	31.2	6.3	6.3
95th Queue (m)	23.7	66.1	22.4	15.3	23.0	9.5	18.7	30.8	11.6	20.0	52.8	15.6	15.6
Link Distance (m)		382.3			43.2			215.0			270.6		270.6
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (m)	30.0		30.0		30.0		65.0	50.0		50.0	50.0		50.0
Storage Blk Time (%)	0	19	0	0	0	0	0	0	0	0	0	0	2
Queuing Penalty (veh)	0	18	1	1	1	1	1	1	1	1	1	1	3

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

Movement	NB	R		L		T		SB	
Directions Served									
Maximum Queue (m)	8.3								
Average Queue (m)	0.6								
95th Queue (m)	4.1								
Link Distance (m)	166.0								
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Queuing and Blocking Report
 Future Background (NES) 2033 AM Peak Hour
 12-15-2023

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

Movement	EB	EB	EB	WB	WB	WB	NB	LR
Directions Served	T	T	R	LT	T	T	LR	
Maximum Queue (m)	24.0	29.2	9.2	179.3	176.0	25.7	25.7	
Average Queue (m)	12.4	15.9	0.3	177.5	171.8	9.2	9.2	
95th Queue (m)	24.2	32.5	3.1	178.1	173.1	18.1	18.1	
Link Distance (m)	439.6	439.6		174.8	174.8	190.9	190.9	
Upstream Blk Time (%)				99	97			
Queuing Penalty (veh)				0	0			
Storage Bay Dist (m)				50.0				
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	30.1	29.6	21.1	27.7
Average Queue (m)	20.3	13.2	10.8	13.5
95th Queue (m)	29.6	20.7	17.6	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: 664

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	14.3	10.2	15.3	0.8	0.1	1.0	0.0	0.0	0.0
Total Del/Veh (s)	520.6	35.0	8.2	78.2	178.2	57.8	237.4	46.8	2.8	86.2	50.2	20.1
Stop Del/Veh (s)	510.5	20.7	0.3	67.5	154.7	45.4	231.8	42.3	0.9	81.3	45.3	11.5

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	3.6
Total Del/Veh (s)	126.7
Stop Del/Veh (s)	112.6

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

Movement	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	31.0	11.0	33.6	5.2	15.2	10.7	15.9	25.3	12.2
Stop Del/Veh (s)	29.3	10.2	30.4	5.1	9.9	4.5	8.7	17.6	4.7

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	0.1	1.2	0.2	0.3	0.2
Total Del/Veh (s)	47.0	7.3	12.8	4.1	0.4	6.2	4.0	5.5
Stop Del/Veh (s)	45.3	6.9	6.1	0.4	0.0	0.1	0.0	0.4

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

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	4.9	3.3	4.0
Stop Del/Veh (s)	0.0	0.1	0.1

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	4.0	0.2	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	46.0	9.5	7.4	4.1	7.5	5.8	7.3
Stop Del/Veh (s)	43.4	8.5	3.3	0.6	0.9	0.0	2.3

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

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.1	0.2	0.1
Total Del/Veh (s)	6.6	5.1	1.9	1.9	3.4
Stop Del/Veh (s)	6.3	0.0	0.1	0.2	0.4

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)	3.0	0.1	3.0	0.0	0.0	0.0	0.1	0.0	0.3	3.9	0.4	3.7
Total Del/Veh (s)	26.9	15.7	7.4	38.4	22.6	5.8	17.4	12.8	3.2	20.6	10.8	4.1
Stop Del/Veh (s)	24.4	12.4	6.3	36.2	19.8	5.3	14.4	7.9	1.8	18.8	7.2	3.6

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	17.3
Stop Del/Veh (s)	14.0

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)	1.4	1.0	3.2	1.9	2.6
Stop Del/Veh (s)	0.3	0.3	0.2	2.0	0.3

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

Movement	EBT	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	3.0	0.2	0.2	0.1	0.2
Total Del/Veh (s)	10.2	19.7	20.7	8.8	5.8	15.5
Stop Del/Veh (s)	7.3	16.9	15.8	6.9	5.0	11.8

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)	0.3	0.3	0.1	0.5	0.4	0.4	0.4	0.3	0.4	0.1	0.2	0.1
Total Del/Veh (s)	9.1	8.5	5.4	8.1	10.0	7.5	9.4	10.7	8.6	6.6	8.3	4.3
Stop Del/Veh (s)	5.5	3.6	3.4	4.5	4.9	6.0	5.8	5.7	6.8	4.2	4.2	3.1

15: Bramalea Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	9.3
Stop Del/Veh (s)	4.8

Total Network Performance

Denied Del/Veh (s)	28
Total Del/Veh (s)	108.2
Stop Del/Veh (s)	87.0

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB
Directions Served	L	L	T	T	L	L	L	L	T	T	T	T	R	R	L	L
Maximum Queue (m)	213.8	217.5	661.8	646.9	638.9	187.4	292.6	296.1	298.1	157.5	116.4	120.5	193.1	195.6	448.7	437.2
Average Queue (m)	193.1	196.6	448.7	437.2	316.7	81.7	272.4	264.4	251.2	84.2	69.5	72.7	256.2	261.7	807.6	795.1
95th Queue (m)	256.2	261.7	807.6	795.1	688.0	222.1	325.9	321.4	323.9	213.6	121.1	122.5	Link Distance (m)	986.9	986.9	986.9
Link Distance (m)													Upstream Blk Time (%)	986.9	986.9	986.9
Upstream Blk Time (%)													Queuing Penalty Veh	35	25	22
Queuing Penalty Veh													Storage Bay Dist (m)	210.0	210.0	180.0
Storage Bay Dist (m)													Storage Blk Time (%)	18	53	13
Storage Blk Time (%)													Queuing Penalty Veh	88	266	54
Queuing Penalty Veh																

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	SB	SB	NB	SB	SB	SB	NB	SB	SB	NB	SB
Directions Served	T	T	R	L	T	T	T	T	R	R	R	L	L
Maximum Queue (m)	38.5	45.5	30.7	98.3	38.5	38.5	186.4	186.4	17.8	20.3	1.2	49.1	20.9
Average Queue (m)	17.8	20.3	1.2	49.1	20.9	22.1	76.3	76.3	30.4	37.1	8.3	89.0	33.5
95th Queue (m)	30.4	37.1	8.3	89.0	33.5	35.9	131.8	131.8	Link Distance (m)	847.3	847.3	469.3	469.3
Link Distance (m)	847.3	847.3	469.3	469.3	469.3	469.3	469.3	469.3	Upstream Blk Time (%)	847.3	847.3	469.3	469.3
Upstream Blk Time (%)									Queuing Penalty Veh	65.0	210.0	180.0	180.0
Queuing Penalty Veh									Storage Bay Dist (m)	65.0	210.0	180.0	180.0
Storage Bay Dist (m)									Storage Blk Time (%)	0	0	0	0
Storage Blk Time (%)									Queuing Penalty Veh	0	0	0	0
Queuing Penalty Veh													

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

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	R	L	TR	L	TR	TR	LT
Maximum Queue (m)	7.7	27.7	44.6	8.6	22.2	94.2	216.4	216.4
Average Queue (m)	2.9	12.4	15.4	1.3	4.0	34.1	53.1	53.1
95th Queue (m)	8.8	22.4	31.4	6.2	15.4	77.8	138.8	138.8
Link Distance (m)	233.4	233.4	108.4	108.4	469.3	469.3	360.1	360.1
Link Distance (m)	233.4	233.4	108.4	108.4	469.3	469.3	360.1	360.1
Upstream Blk Time (%)								
Upstream Blk Time (%)								
Queuing Penalty Veh								
Storage Bay Dist (m)					95.0	0	7	7
Storage Bay Dist (m)					95.0	0	7	7
Storage Blk Time (%)					0	0	0	0
Storage Blk Time (%)					0	0	0	0
Queuing Penalty Veh					0	0	0	0
Queuing Penalty Veh					0	0	0	0

Queuing and Blocking Report
 Future Background 2033 (NES) PM Peak Hour
 12-15-2023

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

Movement	EB	WB	NB	SB
Directions Served	L	R	LTR	TR
Maximum Queue (m)	9.0	8.7	59.4	74.2
Average Queue (m)	0.6	2.0	10.2	2.7
95th Queue (m)	4.4	7.8	38.0	25.4
Link Distance (m)	105.4	78.5	300.1	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	EB	WB	NB	SB
Directions Served	L	TR	L	T
Maximum Queue (m)	21.7	32.4	9.1	53.0
Average Queue (m)	7.0	7.9	1.8	7.7
95th Queue (m)	17.0	17.0	7.4	30.0
Link Distance (m)		171.5		375.1
Upstream Blk Time (%)				819.7
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	WB	NB	SB
Directions Served	L	TR	L	T
Maximum Queue (m)	21.7	32.4	9.1	53.0
Average Queue (m)	7.0	7.9	1.8	7.7
95th Queue (m)	17.0	17.0	7.4	30.0
Link Distance (m)		171.5		375.1
Upstream Blk Time (%)				819.7
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
 Future Background 2033 (NES) PM Peak Hour
 12-15-2023

Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	WB
Directions Served	R
Maximum Queue (m)	14.0
Average Queue (m)	6.3
95th Queue (m)	12.8
Link Distance (m)	87.3
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	WB	EB	WB	EB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (m)	21.9	28.2	21.9	27.9	42.9	48.7	46.7	16.0	39.8	82.9	13.7	8.6
Average Queue (m)	12.1	16.0	6.7	8.4	26.4	24.3	25.1	3.3	15.0	39.6	4.0	3.1
95th Queue (m)	19.8	28.2	16.2	21.4	37.2	38.0	38.5	11.2	29.9	73.1	10.3	9.2
Link Distance (m)			382.4	382.4		43.2	43.2			211.2		
Upstream Blk Time (%)					0	0	0					
Queuing Penalty (veh)					0	1	1					
Storage Bay Dist (m)					30.0	30.0				50.0		50.0
Storage Blk Time (%)					0	11	1			0		5
Queuing Penalty (veh)					0	21	3			0		8

Intersection: 12: Dixie Road & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	65.1	25.7
Average Queue (m)	28.8	4.5
95th Queue (m)	53.9	16.5
Link Distance (m)		286.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		50.0
Storage Blk Time (%)		1
Queuing Penalty (veh)		1

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

Movement	EB	WB	NB	SB
Directions Served	R			
Maximum Queue (m)	8.3			
Average Queue (m)	2.3			
95th Queue (m)	8.2			
Link Distance (m)	166.2			
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

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

Movement	EB	WB	NB	SB	LR
Directions Served	T	T	L	T	T
Maximum Queue (m)	15.8	22.1	15.2	66.4	55.6
Average Queue (m)	7.6	12.0	2.2	38.3	17.9
95th Queue (m)	16.1	21.4	9.2	55.1	41.6
Link Distance (m)	439.5	439.5		174.8	189.2
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)			95.0		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	30.4	43.9	54.3	26.0
Average Queue (m)	17.6	21.5	17.0	10.7
95th Queue (m)	26.8	34.6	31.5	19.4
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: 539

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)	557.8	546.2	569.7	2.6	0.2	2.5	0.8	0.1	0.7	0.1	0.0	0.1
Total Del/Veh (s)	923.2	96.8	80.2	31.1	50.2	7.2	78.6	49.2	4.0	89.0	39.6	5.5
Stop Del/Veh (s)	913.7	63.2	50.3	28.3	42.0	4.0	74.3	44.7	1.8	84.2	34.9	1.2

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	317.6
Total Del/Veh (s)	158.2
Stop Del/Veh (s)	142.3

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)	0.1	0.1	0.1	0.1	0.7	0.0	0.2	0.0	0.0	0.0	0.1
Total Del/Veh (s)	73.2	7.3	46.0	23.8	12.9	8.9	9.8	12.7	5.4	4.0	8.5
Stop Del/Veh (s)	71.1	6.9	41.2	20.4	7.8	4.0	5.6	6.7	1.5	0.4	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	0.1
Total Del/Veh (s)	7.1	8.3	4.2	5.4	10.0	5.6	5.8	5.1
Stop Del/Veh (s)	6.4	3.2	0.7	1.5	2.7	0.1	0.0	0.6

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)	4.7	4.7	3.4	4.1
Stop Del/Veh (s)	0.0	0.0	0.2	0.1

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	4.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	40.8	12.8	42.0	10.4	17.2	6.3	3.2	14.8	7.2	8.0	9.2
Stop Del/Veh (s)	36.9	9.3	37.6	6.8	10.9	2.0	0.4	6.1	1.3	1.0	4.1

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

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.3	4.0	2.3	2.8	3.2
Stop Del/Veh (s)	3.6	0.1	0.1	0.3	0.3

12: Dixie Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBL	SBT	SBR
Denied Del/Veh (s)	2.6	0.2	3.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.7	3.2
Total Del/Veh (s)	22.6	19.5	7.7	38.5	24.2	5.0	23.3	6.6	4.3	15.2	13.2	3.9	3.9
Stop Del/Veh (s)	18.2	15.3	4.6	35.5	22.0	2.7	20.0	4.6	2.2	11.3	9.0	1.7	1.7

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	14.6
Stop Del/Veh (s)	11.1

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	0.1	0.1	0.0
Total Del/Veh (s)	2.0	2.0	1.7	4.7	2.0
Stop Del/Veh (s)	0.3	0.2	0.3	2.2	0.3

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	0.0	1614.9	1545.1	0.1	0.1	576.8
Total Del/Veh (s)	5.3	2.3	3430.0	3550.3	22.7	17.3	321.8
Stop Del/Veh (s)	2.7	0.8	3428.2	3549.1	18.9	10.6	319.3

15: Bramalea Road & Old School Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.6	0.5	0.6	0.4	0.4	0.1	0.2	0.4	0.1	0.2	0.2	0.3	0.4
Total Del/Veh (s)	12.0	10.3	10.3	8.6	8.2	7.8	8.3	7.2	7.1	8.6	8.6	8.5	9.2
Stop Del/Veh (s)	5.8	4.6	4.5	4.0	3.7	3.7	4.0	3.1	2.3	3.9	3.9	3.7	4.1

Total Network Performance

Denied Del/Veh (s)	284.4
Total Del/Veh (s)	147.5
Stop Del/Veh (s)	127.7

Queuing and Blocking Report
 Future Total 2033 AM Peak Hour
 12-15-2023

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	L	T	T	T	R	R	L	L
Maximum Queue (m)	213.7	217.5	1006.1	1006.1	997.3	28.0	170.8	140.7	91.6	74.1	43.8	36.4
Average Queue (m)	212.6	217.2	977.2	977.2	870.1	12.7	106.6	91.2	59.3	8.8	14.7	21.0
95th Queue (m)	215.4	217.9	1212.2	1243.4	1259.0	24.2	140.3	123.2	93.8	41.8	33.1	34.9
Link Distance (m)			966.9	966.9	966.9		282.2	282.2				
Upstream Blk Time (%)			79	61	7							
Queuing Penalty (veh)			0	0	0							
Storage Bay Dist (m)	210.0	210.0					180.0				150.0	160.0
Storage Blk Time (%)	9	76										
Queuing Penalty (veh)	63	510			97							

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	SB	SB	SB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	T	R	R	R
Maximum Queue (m)	52.9	85.0	72.5	82.7	66.0	57.9	50.1	50.1	50.1	50.1
Average Queue (m)	29.8	33.0	4.4	37.7	26.5	26.4	15.5	15.5	15.5	15.5
95th Queue (m)	49.7	60.3	28.7	75.4	47.2	45.5	40.6	40.6	40.6	40.6
Link Distance (m)	847.3	847.3			469.3	469.3				
Upstream Blk Time (%)										
Queuing Penalty (veh)			65.0	210.0			180.0			
Storage Bay Dist (m)			2	0						
Storage Blk Time (%)			1	0						
Queuing Penalty (veh)			1	0						

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

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	L	TR	L	TR	LT	LT	R	R
Maximum Queue (m)	7.5	22.0	40.2	14.5	14.7	68.8	84.6	5.5	5.5	5.5
Average Queue (m)	0.4	9.0	12.8	1.6	4.1	15.8	21.4	0.2	0.2	0.2
95th Queue (m)	2.9	19.0	30.5	7.7	11.5	47.0	60.4	1.9	1.9	1.9
Link Distance (m)	233.4	233.4	108.4	108.4		469.3	360.1			
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)					95.0			50.0		
Storage Blk Time (%)							2			
Queuing Penalty (veh)							0			

Queuing and Blocking Report
 Future Total 2033 AM Peak Hour
 12-15-2023

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

Movement	EB	NB	SB	SB	SB	SB	SB	SB	SB	SB
Directions Served	R	LTR	LTR							
Maximum Queue (m)	23.2	73.2	28.1							
Average Queue (m)	4.8	20.0	3.2							
95th Queue (m)	17.2	60.0	15.3							
Link Distance (m)	105.4	360.1	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	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (m)	22.2	32.3	23.6	51.2	35.8	70.2	20.0	21.8	78.3	15.2
Average Queue (m)	5.2	9.6	12.7	12.4	9.0	20.2	2.3	5.6	22.8	1.1
95th Queue (m)	15.9	24.6	24.9	35.9	24.0	49.6	12.0	15.8	55.1	6.9
Link Distance (m)	171.5	171.5		134.3		375.1			819.7	
Upstream Blk Time (%)										
Queuing Penalty (veh)	15.0		15.0		60.0		60.0	60.0		60.0
Storage Bay Dist (m)	3	3	25	1	1	0	0	1		1
Storage Blk Time (%)	1	0	5	1	1	1	1	0		0
Queuing Penalty (veh)	1	0	5	1	1	1	1	0		0

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

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	T	R
Maximum Queue (m)	22.2	32.3	23.6	51.2	35.8	70.2	20.0	21.8	78.3	15.2
Average Queue (m)	5.2	9.6	12.7	12.4	9.0	20.2	2.3	5.6	22.8	1.1
95th Queue (m)	15.9	24.6	24.9	35.9	24.0	49.6	12.0	15.8	55.1	6.9
Link Distance (m)	171.5	171.5		134.3		375.1			819.7	
Upstream Blk Time (%)										
Queuing Penalty (veh)	15.0		15.0		60.0		60.0	60.0		60.0
Storage Bay Dist (m)	3	3	25	1	1	0	0	1		1
Storage Blk Time (%)	1	0	5	1	1	1	1	0		0
Queuing Penalty (veh)	1	0	5	1	1	1	1	0		0

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)	5.3	4.5	5.8	2.0	0.2	1.9	1.7	0.2	1.6	0.1	0.0	0.0
Total Del/Veh (s)	654.7	48.2	15.5	49.5	103.3	9.4	233.1	48.7	3.2	147.3	54.3	24.3
Stop Del/Veh (s)	634.7	23.2	0.7	38.6	80.7	1.5	226.1	41.4	0.0	139.4	43.6	9.9

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	2.2
Total Del/Veh (s)	122.2
Stop Del/Veh (s)	103.3

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

Movement	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	27.1	9.8	38.8	4.6	41.7	15.3	12.5	21.2	11.1
Stop Del/Veh (s)	24.9	9.4	35.0	4.6	34.4	4.6	3.5	12.7	2.3

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

Movement	EBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1	0.0	0.2	0.1
Total Del/Veh (s)	33.6	9.5	22.2	9.6	4.6	5.1	7.0
Stop Del/Veh (s)	31.8	9.4	9.6	1.4	0.0	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)	4.2	1.8	4.7	4.5
Stop Del/Veh (s)	0.0	0.1	0.2	0.1

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)	3.8	0.2	4.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	38.9	14.9	46.5	10.3	13.8	5.2	1.5	5.7	9.2	4.7	10.8
Stop Del/Veh (s)	36.0	14.1	43.4	8.6	11.4	1.0	0.6	3.8	1.2	0.5	5.1

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

Movement	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.3	0.2
Total Del/Veh (s)	4.1	4.4	2.1	3.8	4.0
Stop Del/Veh (s)	4.0	0.1	0.1	0.3	0.3

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	0.1	3.5	4.1	0.0	0.0	0.0	0.0	0.2	3.4	0.5	3.6
Total Del/Veh (s)	30.3	17.3	5.9	42.2	19.1	7.7	18.7	15.7	3.1	33.1	13.5	3.8
Stop Del/Veh (s)	27.4	12.1	4.0	40.6	16.1	6.9	15.8	7.5	2.1	30.0	6.3	2.2

12: Dixie Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	18.8
Stop Del/Veh (s)	14.0

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	0.1	0.1	0.0
Total Del/Veh (s)	1.3	0.9	4.0	2.3	3.1
Stop Del/Veh (s)	0.4	0.3	1.1	2.3	0.9

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	0.1	0.2
Total Del/Veh (s)	13.2	33.4	20.1	9.3	9.8	16.3
Stop Del/Veh (s)	7.7	29.8	12.9	7.6	8.3	10.6

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	0.4	0.4	0.5	0.4	0.6	0.4	0.3	0.2	0.1	0.2	0.1
Total Del/Veh (s)	8.9	13.2	6.9	10.7	13.4	7.4	10.6	14.3	8.0	5.4	10.6	3.5
Stop Del/Veh (s)	5.0	5.6	4.0	6.8	6.4	5.3	6.0	6.4	3.7	4.2	2.8	

15: Bramalea Road & Old School Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	12.4
Stop Del/Veh (s)	5.9

Total Network Performance

Denied Del/Veh (s)	19
Total Del/Veh (s)	103.5
Stop Del/Veh (s)	77.9

Intersection: 1: Dixie Road & Mayfield Road

Movement	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB
Directions Served	L	L	T	T	R	R	L	L	T	T	R	R	L	L	T	T
Maximum Queue (m)	213.7	217.4	1002.8	1002.0	997.3	27.7	187.4	233.6	238.8	198.9	157.4	104.7	210.3	215.1	679.9	640.7
Average Queue (m)	210.3	215.1	679.9	640.7	442.9	1.0	50.6	183.8	168.8	141.7	6.9	57.6	223.5	227.3	1198.3	1215.7
95th Queue (m)	223.5	227.3	1198.3	1215.7	1072.6	9.5	168.8	252.5	228.9	195.4	56.0	101.6	Link Distance (m)	986.9	986.9	986.9
Link Distance (m)	986.9	986.9	986.9	986.9	986.9	1	1	1	1	1	1	1	Upstream Blk Time (%)	19	8	1
Upstream Blk Time (%)	19	8	1	1	1	1	1	1	1	1	1	1	Queuing Penalty Veh	0	0	0
Queuing Penalty Veh	0	0	0	0	0	0	0	0	0	0	0	0	Storage Bay Dist (m)	210.0	210.0	0
Storage Bay Dist (m)	210.0	210.0	0	0	0	0	0	0	0	0	0	0	Storage Blk Time (%)	9	62	5
Storage Blk Time (%)	9	62	5	5	5	5	5	5	5	5	5	5	Queuing Penalty Veh	42	311	24
Queuing Penalty Veh	42	311	24	24	24	24	24	24	24	24	24	24	150.0	160.0	180.0	180.0

Intersection: 1: Dixie Road & Mayfield Road

Movement	NB	NB	SB	SB	NB	NB	SB	SB	NB	NB	SB	SB	NB	NB	SB	SB
Directions Served	L	T	T	T	R	R	L	L	T	T	R	R	L	L	T	T
Maximum Queue (m)	109.0	32.9	32.5	27.4	126.7	55.7	59.8	122.7	63.8	22.1	18.9	1.4	74.1	26.7	26.2	81.3
Average Queue (m)	63.8	22.1	18.9	1.4	74.1	26.7	26.2	81.3	102.2	33.6	31.8	10.5	121.0	44.8	48.8	119.9
95th Queue (m)	102.2	33.6	31.8	10.5	121.0	44.8	48.8	119.9	Link Distance (m)	847.3	847.3	847.3	469.3	469.3	469.3	469.3
Link Distance (m)	847.3	847.3	847.3	847.3	847.3	847.3	847.3	847.3	Upstream Blk Time (%)	160.0	210.0	65.0	210.0	180.0	180.0	180.0
Upstream Blk Time (%)	160.0	210.0	65.0	210.0	180.0	180.0	180.0	180.0	Queuing Penalty Veh	160.0	210.0	65.0	210.0	180.0	180.0	180.0
Queuing Penalty Veh	160.0	210.0	65.0	210.0	180.0	180.0	180.0	180.0	Storage Bay Dist (m)	160.0	210.0	65.0	210.0	180.0	180.0	180.0
Storage Bay Dist (m)	160.0	210.0	65.0	210.0	180.0	180.0	180.0	180.0	Storage Blk Time (%)	160.0	210.0	65.0	210.0	180.0	180.0	180.0
Storage Blk Time (%)	160.0	210.0	65.0	210.0	180.0	180.0	180.0	180.0	Queuing Penalty Veh	160.0	210.0	65.0	210.0	180.0	180.0	180.0
Queuing Penalty Veh	160.0	210.0	65.0	210.0	180.0	180.0	180.0	180.0								

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

Movement	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB	EB	EB	WB	WB
Directions Served	L	R	L	L	TR	L	TR	TR	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	14.1	26.9	38.2	8.6	21.1	502.4	102.5	102.5	2.2	10.2	21.3	1.4	4.5	95.3	41.7	41.7
Average Queue (m)	8.5	18.6	39.8	6.6	15.7	388.8	82.8	82.8	Link Distance (m)	233.4	233.4	108.4	469.3	360.1	360.1	360.1
95th Queue (m)	8.5	18.6	39.8	6.6	15.7	388.8	82.8	82.8	Upstream Blk Time (%)	233.4	233.4	108.4	469.3	360.1	360.1	360.1
Link Distance (m)	233.4	233.4	108.4	108.4	469.3	360.1	360.1	360.1	Queuing Penalty Veh	8	8	8	8	8	8	8
Upstream Blk Time (%)	8	8	8	8	8	8	8	8	Storage Bay Dist (m)	95.0	95.0	95.0	95.0	95.0	95.0	95.0
Storage Bay Dist (m)	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	Storage Blk Time (%)	4	4	4	4	4	4	4
Storage Blk Time (%)	4	4	4	4	4	4	4	4	Queuing Penalty Veh	0	0	0	0	0	0	0
Queuing Penalty Veh	0	0	0	0	0	0	0	0								

Queuing and Blocking Report
 Future Total 2033 PM Peak Hour
 12-15-2023

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

Movement	EB	WB	NB	SB
Directions Served	L	R	LTR	TR
Maximum Queue (m)	14.5	8.6	79.9	27.9
Average Queue (m)	2.0	1.2	21.8	3.5
95th Queue (m)	8.7	6.0	61.0	16.5
Link Distance (m)	105.4	78.5	300.1	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	EB	WB	NB	SB
Directions Served	L	R	L	T
Maximum Queue (m)	28.2	33.0	23.8	43.2
Average Queue (m)	10.1	14.9	7.0	4.5
95th Queue (m)	22.2	28.7	17.1	15.3
Link Distance (m)	382.4	382.4	7	19
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	30.0	0	0	30.0
Storage Blk Time (%)	0	0	0	33
Queuing Penalty (veh)	0	0	0	64

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

Movement	EB	WB	NB	SB
Directions Served	L	TR	L	TR
Maximum Queue (m)	22.3	52.0	22.4	54.2
Average Queue (m)	7.6	12.3	16.1	15.7
95th Queue (m)	18.7	30.2	26.1	40.4
Link Distance (m)	171.5	134.3	13.0	42.6
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	15.0	15.0	39	2
Storage Blk Time (%)	7	4	22	2
Queuing Penalty (veh)	4	1	22	2

Queuing and Blocking Report
 Future Total 2033 PM Peak Hour
 12-15-2023

Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	WB	SB
Directions Served	R	T
Maximum Queue (m)	7.7	259.7
Average Queue (m)	4.6	9.3
95th Queue (m)	10.3	88.8
Link Distance (m)	87.3	211.2
Upstream Blk Time (%)	0	0
Queuing Penalty (veh)	1	1
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Dixie Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	L	T	R	L
Maximum Queue (m)	28.2	33.0	23.8	43.2
Average Queue (m)	10.1	14.9	7.0	4.5
95th Queue (m)	22.2	28.7	17.1	15.3
Link Distance (m)	382.4	382.4	7	19
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	30.0	0	0	30.0
Storage Blk Time (%)	0	0	0	33
Queuing Penalty (veh)	0	0	0	64

Intersection: 12: Dixie Road & Old School Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	67.3	7.5
Average Queue (m)	25.0	2.7
95th Queue (m)	48.4	8.0
Link Distance (m)	286.8	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)	50.0	50.0
Storage Blk Time (%)	1	1
Queuing Penalty (veh)	1	1

Queuing and Blocking Report
 Future Total 2033 PM Peak Hour

12-15-2023

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

Movement	WB	NB				
Directions Served	T	R				
Maximum Queue (m)	56.3	8.3				
Average Queue (m)	6.6	1.6				
95th Queue (m)	31.5	6.9				
Link Distance (m)	439.5	166.2				
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

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

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	T	L	T	T	LR
Maximum Queue (m)	27.7	28.6	9.2	59.2	40.8	37.7
Average Queue (m)	13.7	16.9	3.1	34.3	15.7	13.9
95th Queue (m)	22.9	25.0	10.0	50.8	31.4	28.3
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 (%)						
Queuing Penalty (veh)						

Intersection: 15: Bramalea Road & Old School Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	56.0	59.6	35.5	21.5
Average Queue (m)	25.0	24.3	18.8	10.8
95th Queue (m)	42.2	42.0	29.8	18.2
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: 572

SimTraffic Performance Report
 Future Background 2033 (NES) AM Peak Hour

12-15-2023

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	0.3	0.3	2.9	0.1	2.5	1.1	0.1	1.1	0.1	0.0	0.0
Total Del/Veh (s)	441.4	44.9	23.3	33.6	49.3	3.4	97.1	51.2	6.0	59.3	50.7	3.8
Stop Del/Veh (s)	426.1	23.2	5.6	31.1	41.2	0.6	92.8	47.0	3.4	55.3	46.0	0.5

1: Dixie Road & Mayfield Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	85.9
Stop Del/Veh (s)	71.7

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)	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	65.8	6.4	57.9	9.1	11.1	7.6	7.3	8.5	3.8	3.5	7.7
Stop Del/Veh (s)	64.1	6.1	53.7	5.8	5.3	3.6	2.9	1.9	0.7	0.0	4.0

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)	9.9	5.9	3.1	3.5	15.2	5.1	5.8	4.3
Stop Del/Veh (s)	9.9	2.0	0.3	0.6	2.0	0.1	0.0	0.3

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

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.8	3.7	3.7
Stop Del/Veh (s)	0.0	0.1	0.0

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

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.0	0.1	0.0
Total Del/Veh (s)	10.2	12.4	11.4
Stop Del/Veh (s)	4.9	5.1	5.0

Queuing and Blocking Report
 Future Background 2033 (NES) AM Peak Hour
 12-15-2023

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

Movement	EB	NB	SB
Directions Served	R	LTR	LTR
Maximum Queue (m)	14.6	52.3	27.3
Average Queue (m)	1.1	9.2	2.1
95th Queue (m)	6.6	29.9	12.3
Link Distance (m)	105.4	380.1	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	EB	NB	SB
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	NB	SB
Directions Served	T	T
Maximum Queue (m)	79.1	88.5
Average Queue (m)	33.2	37.5
95th Queue (m)	58.0	67.9
Link Distance (m)	375.1	819.7
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)	1	1
Storage Blk Time (%)	0	0
Queuing Penalty (veh)	0	0

Queuing and Blocking Report
 Future Background 2033 (NES) AM Peak Hour
 12-15-2023

Intersection: 11: Dixie Road & 12861 Site Access 1

Movement	EB	NB	SB
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	T	R	T	R	L	T	R	L	T
Maximum Queue (m)	27.2	60.2	47.4	37.5	14.5	19.6	59.6	40.4	6.7	14.3	52.3
Average Queue (m)	9.0	30.8	24.0	9.2	2.3	1.3	11.0	15.7	2.5	2.6	25.3
95th Queue (m)	18.2	48.2	45.1	23.2	10.5	8.8	31.0	32.9	7.8	9.6	45.3
Link Distance (m)		382.4	382.4		43.2		211.2				266.8
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)	30.0	10	5	0	65.0	50.0	50.0	50.0	50.0	50.0	50.0
Storage Blk Time (%)	0	5	2	0	0	0	0	0	0	0	0
Queuing Penalty (veh)	0	5	2	0	1	1	0	0	0	0	0

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

Movement	EB	SB
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 (NES) AM Peak Hour

12-15-2023

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

Movement	EB	WB	NB	SB
Directions Served	T	T	T	T
Maximum Queue (m)	41.0	47.1	179.4	176.6
Average Queue (m)	12.6	15.9	177.0	171.2
95th Queue (m)	30.9	35.1	181.7	175.8
Link Distance (m)	439.5	439.5	174.8	174.8
Upstream Blk Time (%)		95	93	
Queuing Penalty (veh)		0	0	
Storage Bay Dist (m)				
Storage Blk Time (%)		0	100	
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)	35.2	28.4	27.2	29.0
Average Queue (m)	20.1	13.3	11.9	14.4
95th Queue (m)	31.8	21.3	21.9	24.0
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: 412

Appendix B:
12681 Dixie Road, Town of Caledon, Urban Transportation
Considerations – December 2023 Report



BA Group

12861 DIXIE ROAD TOWN OF CALEDON URBAN TRANSPORTATION CONSIDERATIONS

Prepared For: QuadReal Property Group

December 2023



**MOVEMENT
IN URBAN
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TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	THE SITE	1
1.2	THE PROPOSED DEVELOPMENT	2
2.0	TRANSPORTATION CONTEXT	5
2.1	EXISTING ROAD NETWORK.....	5
2.1.1	Dixie Road.....	5
2.1.2	Old School Road	5
2.1.3	Mayfield Road	5
2.1.4	Bramalea Road	6
2.1.5	Abbotside Way	6
2.2	EXISTING TRANSIT NETWORK.....	6
2.2.1	15 Bramalea.....	6
2.2.2	18 Dixie	6
2.3	EXISTING BICYCLE NETWORK.....	6
2.4	EXISTING PEDESTRIAN NETWORK.....	6
2.5	FUTURE INFRASTRUCTURE PROJECTS	12
2.5.1	Dixie Road Widening	12
2.5.2	Mayfield Road Widening	12
3.0	CAR PARKING CONSIDERATIONS.....	13
3.1	CAR PARKING STANDARDS	13
3.1.1	Town of Caledon Zoning By-law 2006-50.....	13
3.2	PROPOSED CAR PARKING PROVISION.....	13
3.3	ACCESSIBLE CAR PARKING.....	14
3.3.1	Accessible Car Parking Standards	14
3.3.2	Proposed Accessible Car Parking Provision	14
4.0	BICYCLE PARKING CONSIDERATIONS.....	15
5.0	LOADING CONSIDERATIONS.....	16
5.1	LOADING STANDARDS	16
5.1.1	Town of Caledon Zoning By-Law 2006-50	16
5.2	PROPOSED LOADING PROVISION	16
6.0	SITE PLAN CONSIDERATIONS	17
6.1	Site Access.....	17
6.2	Truck Access	17



7.0	TRAFFIC VOLUME FORECASTING	18
7.1	EXISTING TRAFFIC VOLUMES.....	18
7.2	EXISTING TRAFFIC CONDITIONS.....	18
7.3	FUTURE BACKGROUND TRAFFIC VOLUMES.....	19
7.3.1	Background Development Growth.....	19
7.3.2	Corridor Growth.....	19
7.3.3	Background Traffic Volumes.....	20
7.3.4	Removal of Existing Traffic.....	20
7.3.5	Future Background Traffic Volumes.....	20
7.4	SITE TRAFFIC VOLUMES.....	21
7.4.1	Vehicle Trip Generation Data.....	21
7.4.2	Site Light Vehicle Trip Generation.....	23
7.4.3	Site Heavy Vehicle Trip Generation.....	24
7.4.4	Heavy and Light Vehicle Volumes.....	25
7.4.5	Vehicle Trip Distribution.....	26
7.4.6	Site Traffic Volumes.....	28
7.4.7	Future Total Traffic Volumes.....	29
8.0	TRAFFIC OPERATIONS ANALYSIS	38
8.1	TRAFFIC OPERATIONS SCENARIOS.....	38
8.2	ANALYSIS METHODOLOGY.....	38
8.3	INPUT AND CALIBRATION PARAMETERS.....	39
8.4	STUDY AREA INTERSECTION OPERATIONS.....	42
8.4.1	Signalized Intersections.....	43
8.4.2	Unsignalized Intersections.....	51
8.5	QUEUING ANALYSIS.....	52
9.0	SIGNAL WARRANT	54
9.1	Signal Warrant Results.....	54
9.2	Signal Warrant Analysis Summary.....	55
10.0	LEFT TURNING LANE WARRANTS	56
11.0	TRANSPORTATION DEMAND MANAGEMENT (TDM)	57
11.1	TDM PLAN OBJECTIVES.....	57
11.2	SITE TRANSPORTATION CONTEXT AND USE CHARACTERISTICS.....	57
11.3	TDM PLAN STRATEGIES.....	58
11.3.1	Overview.....	58
11.3.2	Carpool Incentives.....	58
11.3.3	Transit Incentives.....	59



11.3.4 Walking Incentives59

12.0 SUMMARY AND CONCLUSIONS 60



LIST OF TABLES

Table 1	Town of Caledon Zoning By-Law 2006-50	13
Table 2	Town of Caledon Zoning By-Law 2006-50	16
Table 3	Site Access Summary	17
Table 4	Existing Traffic Count information	18
Table 5	Area Background Development	19
Table 6	Summary of Removal of Existing Traffic.....	20
Table 7	Industrial Facility Trip Generation	22
Table 8	Light Vehicle Trip Generation Summary	24
Table 9	Heavy Vehicle Trip Generation Summary	25
Table 10	Heavy and Light Vehicle Volumes	26
Table 11	TTS Site Traffic Distribution	27
Table 12	Existing Survey Site Traffic Distribution	27
Table 13	Dixie Road / Mayfield Road Capacity Analysis Results.....	44
Table 14	Dixie Road / Abbotside Way / 12173 Site Access Road Capacity Analysis Results.....	45
Table 15	Dixie Road / UPS Facility Access / 12173 Site Access Road Capacity Analysis Results...	46
Table 16	Dixie Road / 12489 Dixie Road Site Access 2 / 12892 Dixie Road South Signal Access...	47
Table 17	Old School Road / Site Access 3 Road Capacity Analysis Results.....	48
Table 18	Dixie Road / Old School Road Capacity Analysis Results.....	50
Table 19	Unsignalized Intersection Capacity Analysis Results	51
Table 20	95 th Percentile SimTraffic Queue Lengths	52
Table 21	Free Flow Signal Warrant Analysis – 2033 Future Total Traffic	55
Table 22	Recommended Site TDM Measures.....	58

LIST OF FIGURES

Figure 1:	Site Location	3
Figure 2:	Site Plan.....	4
Figure 3:	Existing Lane Configuration	8
Figure 4:	Area Road Network.....	9
Figure 5:	Area Transit Context	10



Figure 6:	Active Transportation Context.....	11
Figure 7:	Existing Traffic Volumes	30
Figure 8:	Future Background 2028 Traffic Volumes	31
Figure 9:	Future Background 2033 Traffic Volumes	32
Figure 10:	Site Light Vehicle Traffic Volumes	33
Figure 11:	Site Heavy Vehicle Traffic Volumes.....	34
Figure 12:	Total Site Traffic Volumes.....	35
Figure 13:	Future Total 2028 Traffic Volumes.....	36
Figure 14:	Future Total 2033 Traffic Volumes.....	37
Figure 15:	Future (2028 and 2033) Lane Configuration and Traffic Control.....	41

TABLE OF APPENDICES

APPENDIX A:	Reduced Architectural Drawings (Not to Scale) and Signage Plans
APPENDIX B:	Turning Movement Counts
APPENDIX C:	Signal Timing Plans
APPENDIX D:	Signal Warrant
APPENDIX E:	Lane Warrants
APPENDIX F:	Functional Design Plans
APPENDIX G:	Synchro and Simtraffic Worksheets



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 F**:

- 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**.



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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 Brampton.

A posted speed limit of 70 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 is assumed to operate 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. The route operates 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 and Bramalea Road / Mayfield Road. The active transportation network context in the vicinity of the Site is shown in **Figure 6**.

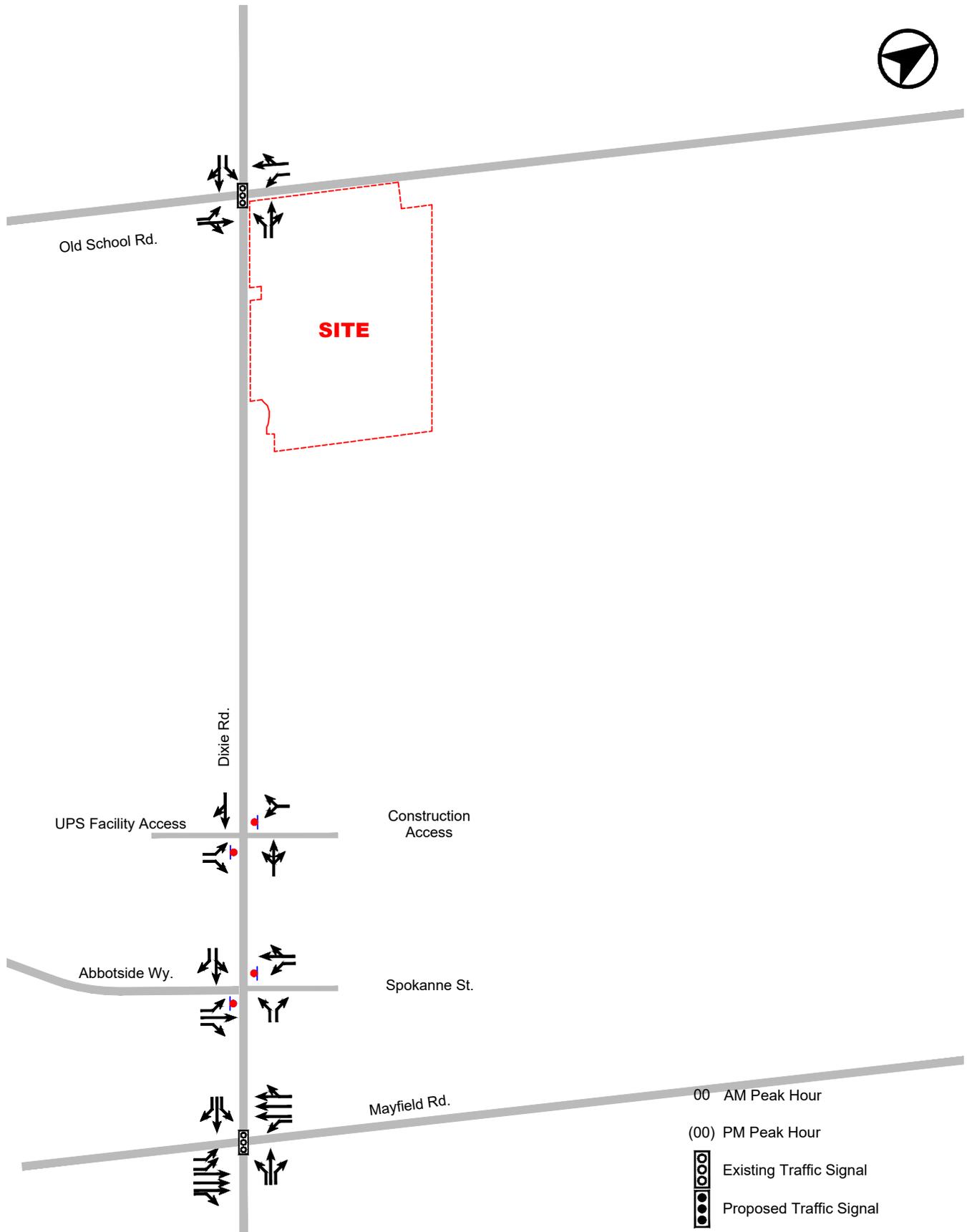


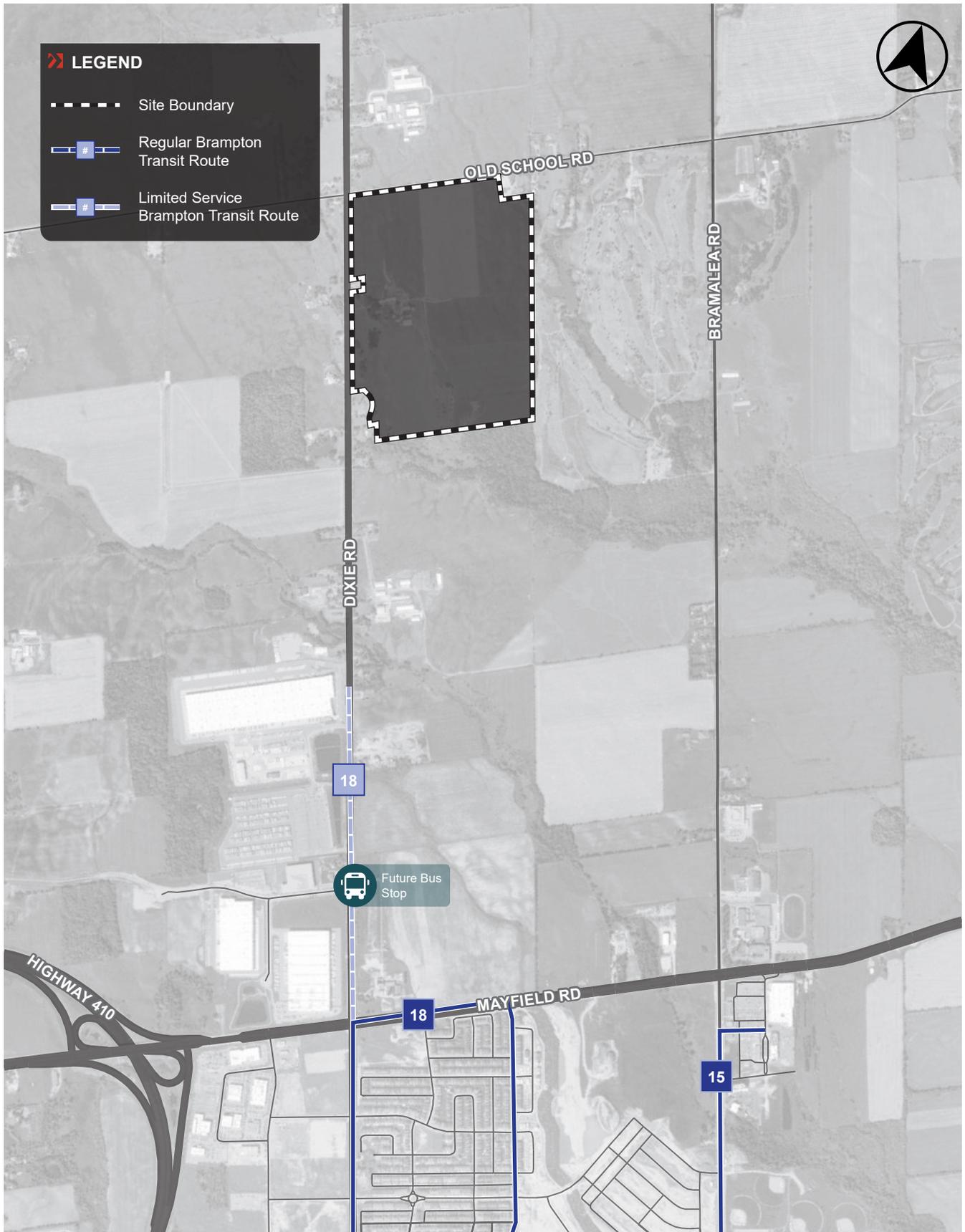
FIGURE 3 EXISING LANE CONFIGURATION AND TRAFFIC CONTROL



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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.

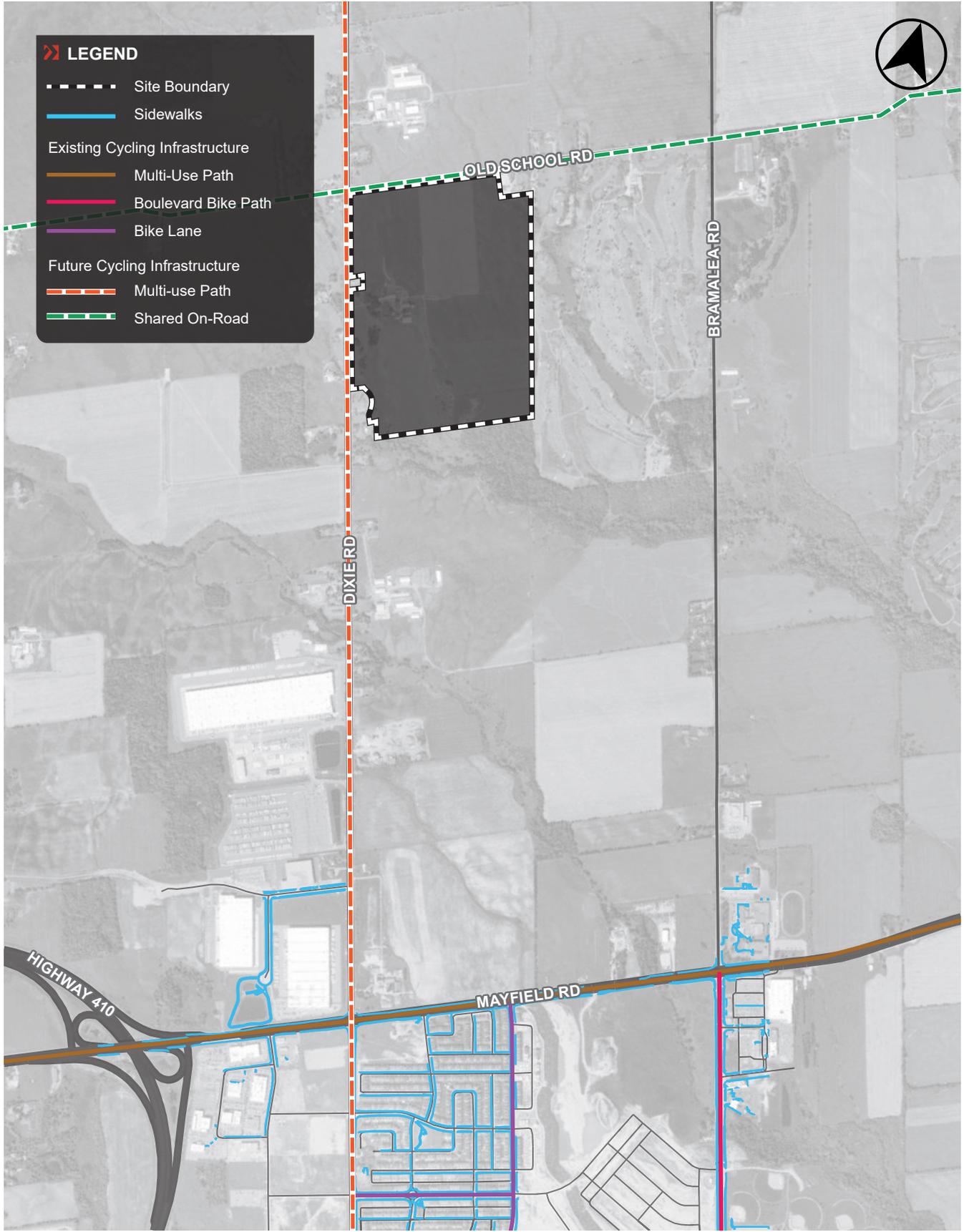
FIGURE 4 EXISTING STREET NETWORK



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FIGURE 5 EXISTING AND FUTURE TRANSIT NETWORK



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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 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 is 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. 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	1 space per 230 square metres of gross floor area	673
Warehouse (Building 2)	87,960 m ²		598
Total	188,718 m ²		1,271

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.

It is also noted that whilst not a requirement, the proposed car parking supply also includes 24 electric vehicle (EV) spaces.

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.

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 396 potential loading docks and two drive-in doors are proposed at one end of each building. 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.

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 with a median), 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 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 bay areas. Similarly, heavy vehicles may access the loading bays 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 B**.

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**.

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, background proposed developments include the order of 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.

TABLE 5 AREA BACKGROUND DEVELOPMENT

	Development Description	Traffic Study
12892 Dixie Road (Tribal Lands)	83,038 m ² industrial use	Tribal Lands Group
12490 Dixie Road (Tribal Lands)	136,576 m ² industrial use	Tribal Lands Group
12173 Dixie Road (Tribal Lands)	190,824 m ² industrial use	BA Group, April 2023
12892 Dixie Road (Amazon Distribution Centre)	173,797 m ² industrial use	LEA, February 2021
Total	584,235 m² industrial use	

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 that is not 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.^a

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 Error! Reference source not found.

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 8** and **Figure 9** 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 Rates ¹	--	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 m ² 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 m ² 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 m ² 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 m ² 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 m ² 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 m ² 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 m ² 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 m ² 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%

Location / Use	Time Period / Parameter	AM Peak Hour			PM Peak Hour			
		In	Out	2-Way	In	Out	2-Way	
Continued on Next Page								
8450 Boston Church Road (Ryder) , Milton [123,826 m ² 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 m ² 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 m ² 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 m ²]	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 CF 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 CF 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 10**, **Figure 11**, and **Figure 12**, 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 13** and **Figure 14** for the 2028 and 2033 horizons, respectively.

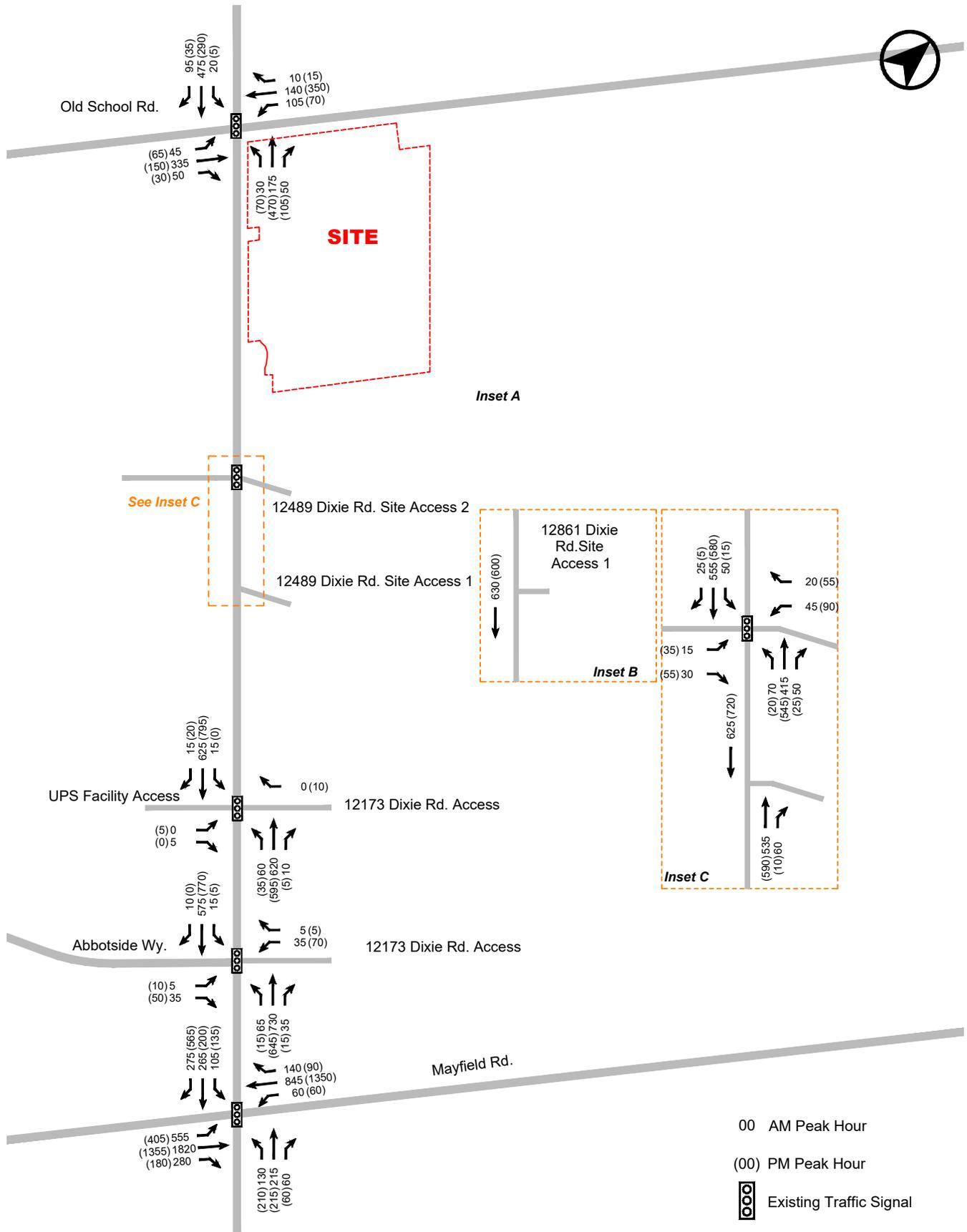


FIGURE 8 FUTURE BACKGROUND 2028 TOTAL TRAFFIC VOLUMES

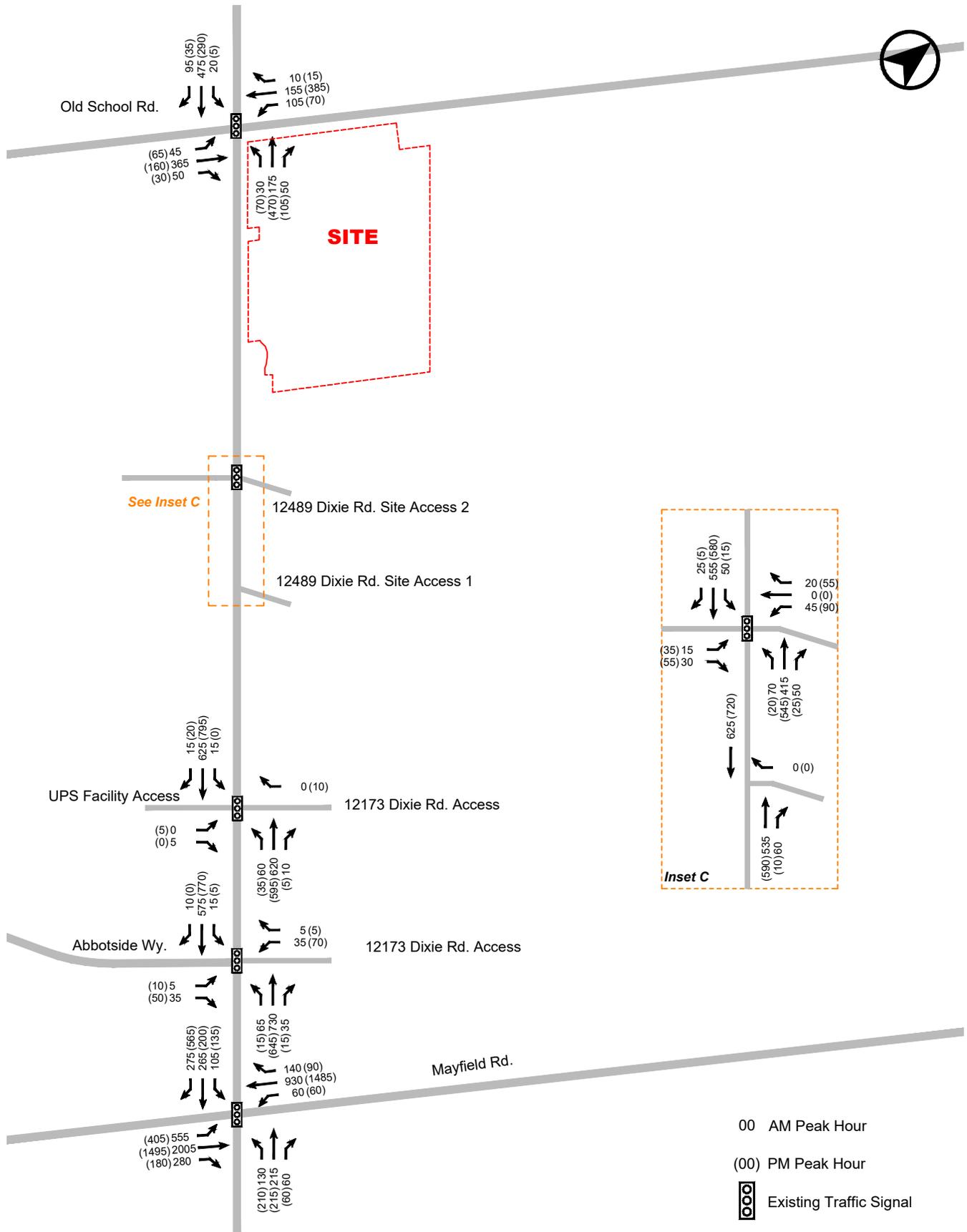


FIGURE 9 FUTURE BACKGROUND 2033 TOTAL TRAFFIC VOLUMES

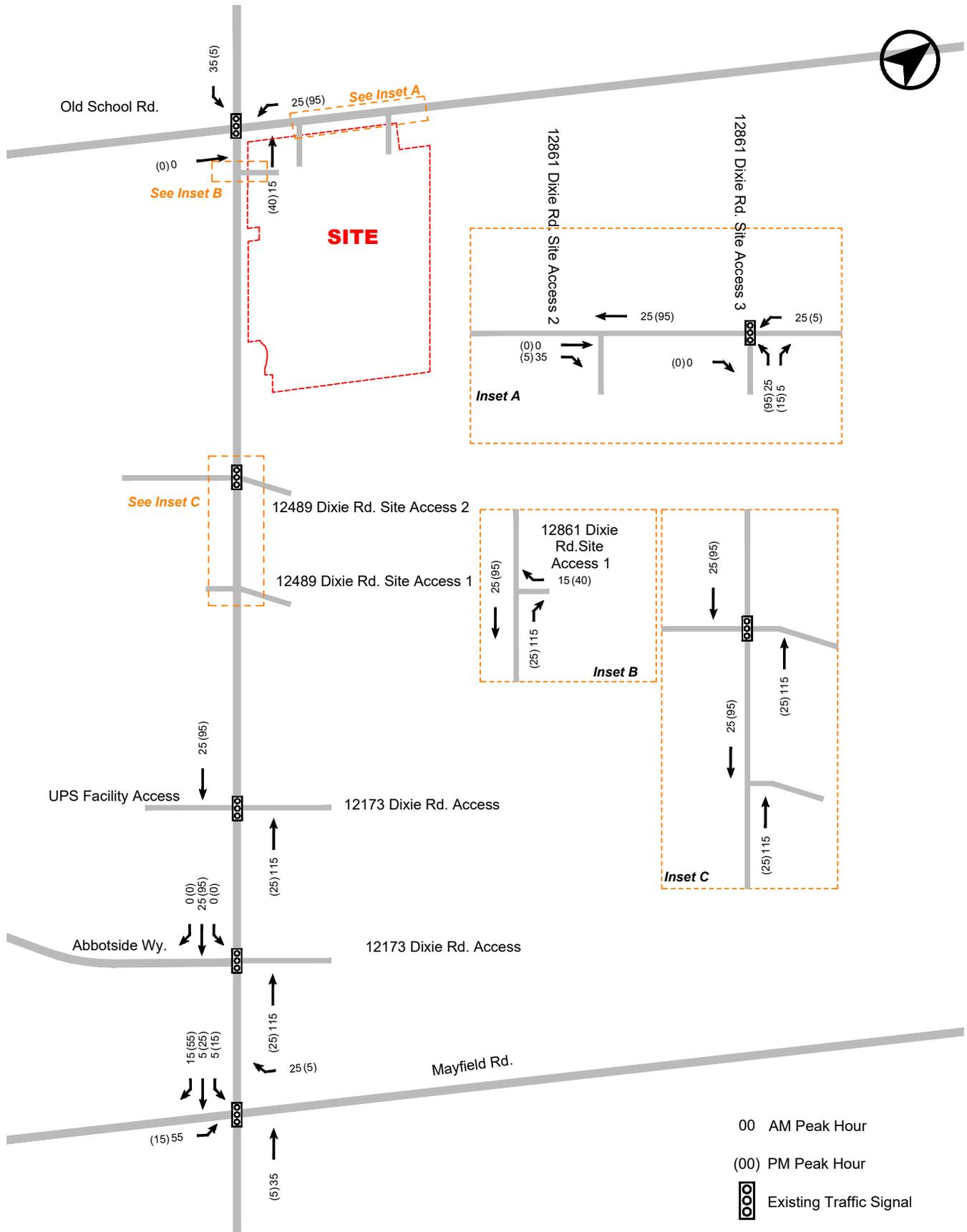


FIGURE 10 TOTAL LIGHT VEHICLE TRAFFIC VOLUMES

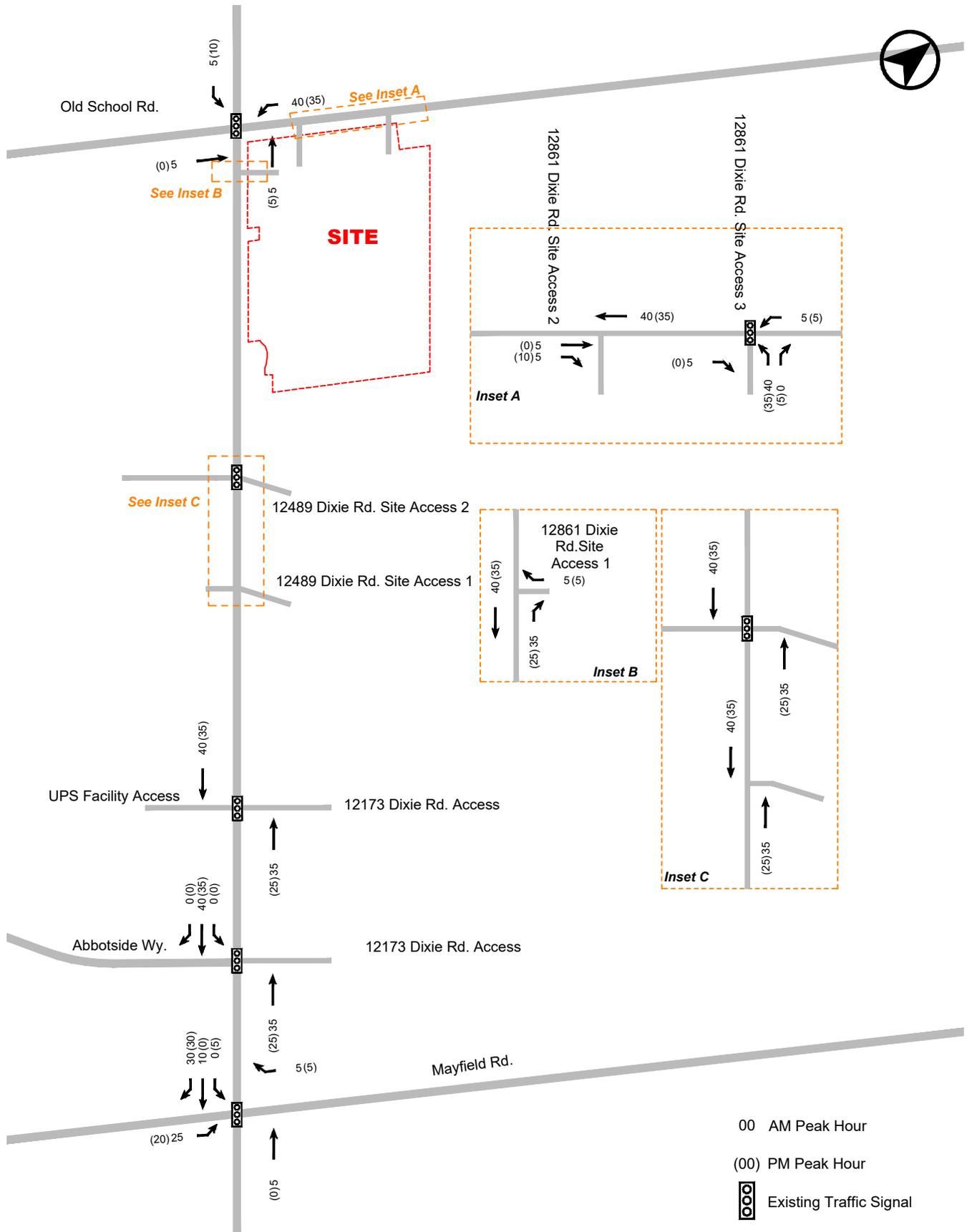


FIGURE 11 TOTAL HEAVY VEHICLE TRAFFIC VOLUMES

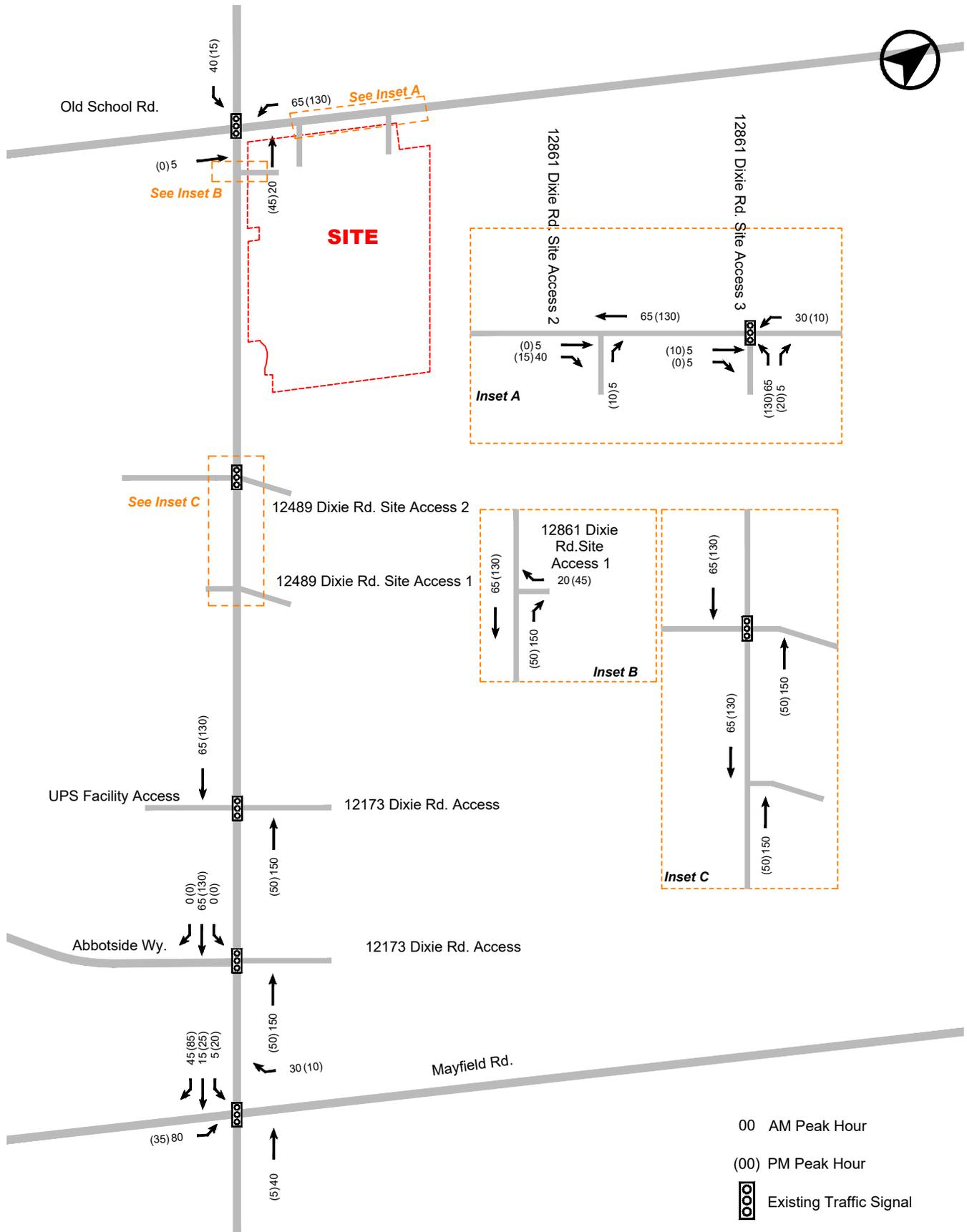


FIGURE 12 TOTAL SITE TRAFFIC VOLUMES

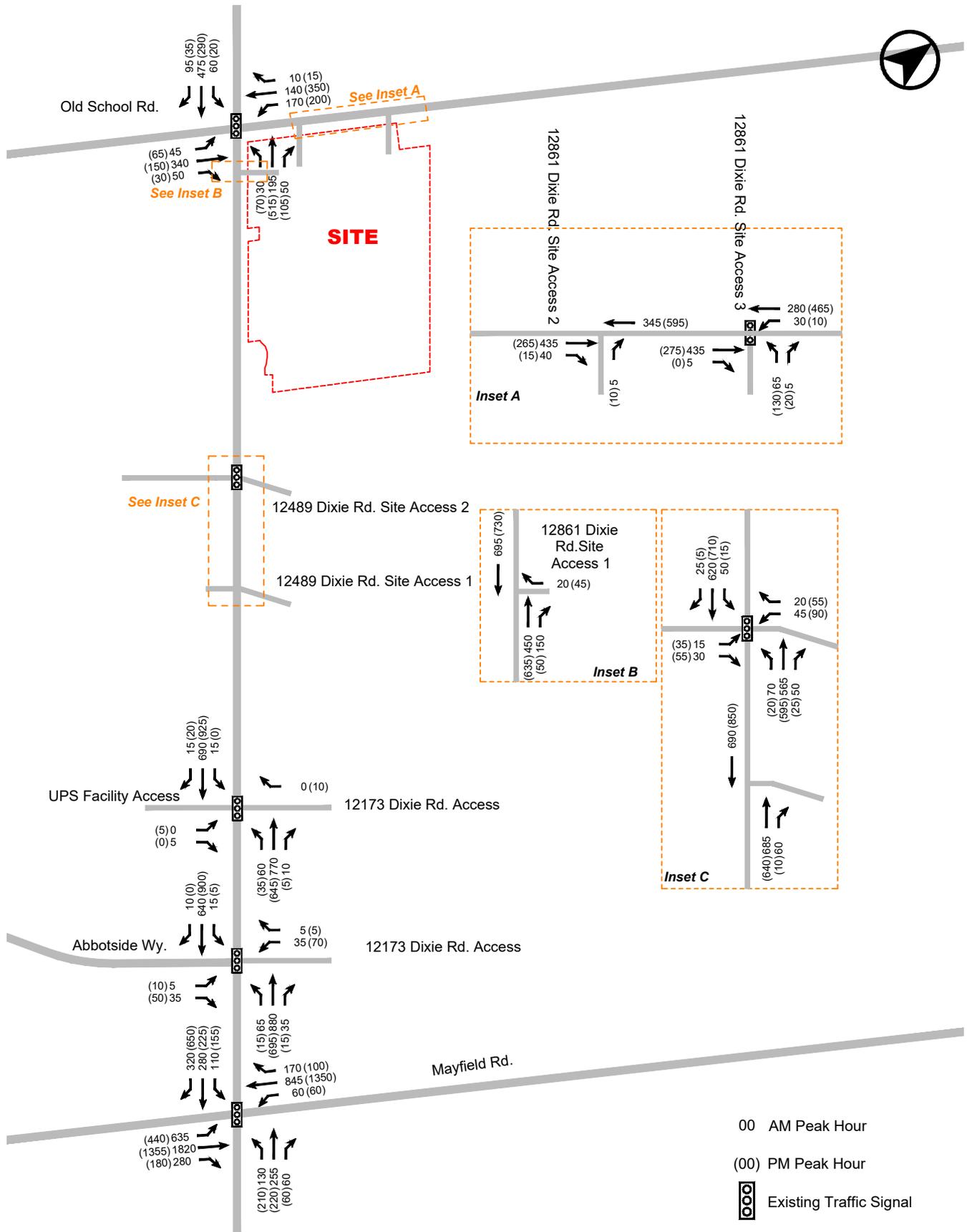


FIGURE 13 FUTURE TOTAL 2028 TOTAL TRAFFIC VOLUMES

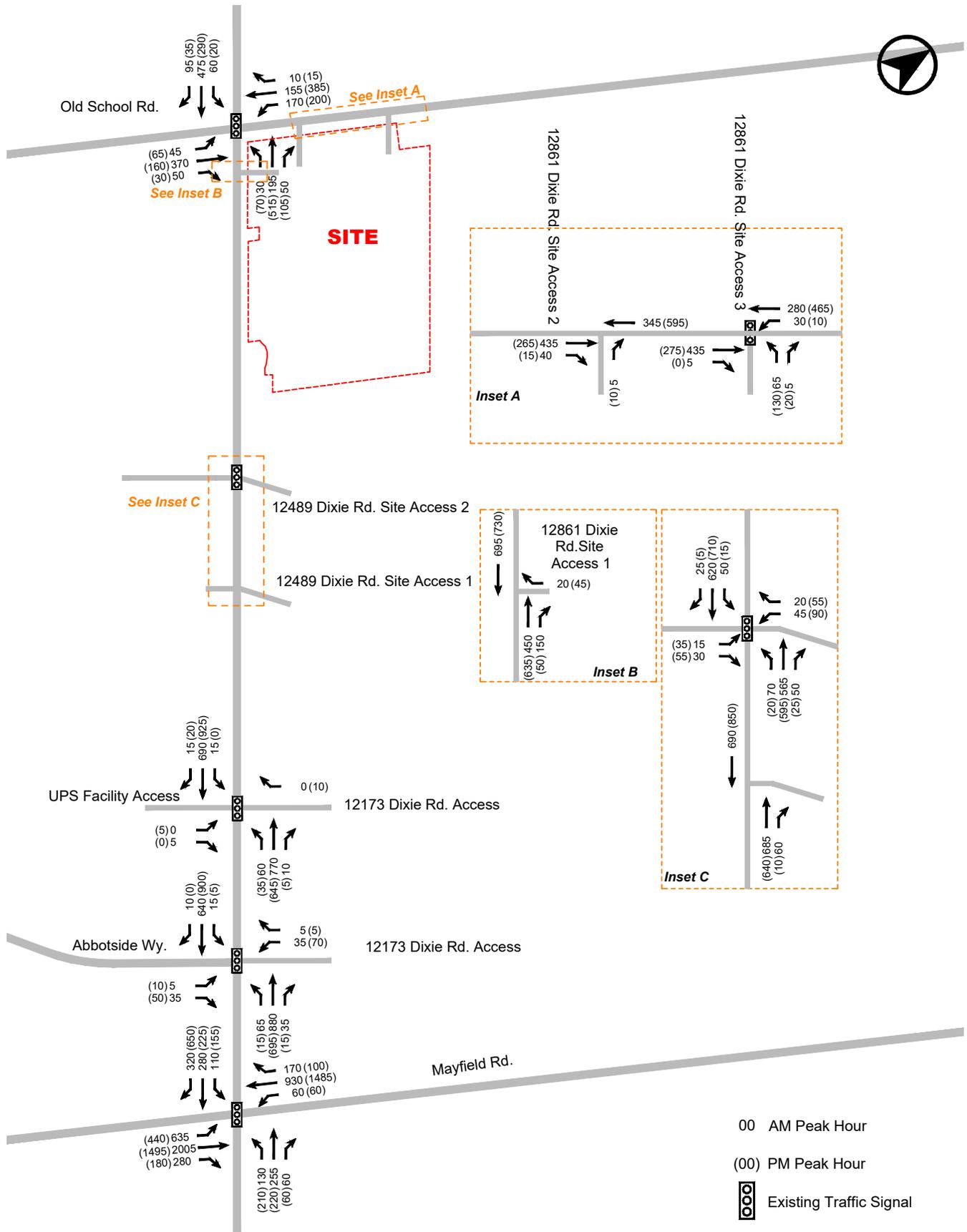


FIGURE 14 FUTURE TOTAL 2033 TOTAL TRAFFIC VOLUMES

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 15**.

Based on the Region of Peel's "Regional Guidelines for Using Synchro, Version 7.73 Rev 8" dated December 2010 and the City of Brampton's "Traffic Impact and Parking Study Terms of Reference" dated April 2019, 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 Brampton Roads.

Traffic Signal Timings

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

Under future background and future total conditions, traffic signal timings may 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 15: FUTURE (2028 AND 2033) 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 G**. 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 0.70 and 0.66, 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 0.69 and 0.85, in the weekday morning and afternoon peak hours, respectively. Under HCM 2000 methodology, the SBR movement is operating at critical capacity with an individual v/c ratio of 1.02.

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 0.68 and 0.96, in the weekday morning and afternoon peak hours, respectively. Under HCM 2000 methodology, the SBR movement is operating at critical capacity with an individual v/c ratio of 1.04.

Under future background (2033) conditions and a cycle length of 135 seconds, the intersection will operate with overall v/c ratios of 0.71 and 0.90, in the weekday morning and afternoon peak hours, respectively.

Under future total (2033) conditions and a cycle length of 135 seconds, the intersection sees major improvements when compared to the 120-second cycle length scenario. As the Proposed Development is fully developed, the intersection will operate with overall v/c ratios of 0.69 and 1.01 in the weekday morning and afternoon peak hours, respectively. Under HCM 2000 methodology, the SBR movement is operating at critical capacity with an individual v/c ratio of 1.04. While the SBR movement operates at capacity under all future PM peak hour scenarios, when analyzed with Simtraffic the movement operates with minimal delays, and with maximum queues that do not exceed the proposed storage length at the intersection. This could be attributed to the relatively high heavy vehicle percentage at the intersection, as area around Dixie Road north of Mayfield Road and South of Old School Road is proposed to function as an industrial corridor. Notwithstanding, These results are an improvement over the forecasted 2033 (with improvements) scenario capacity results outlined within the Dixie Road Environmental assessment, which forecast an overall v/c ratio of 1.39, with multiple individual movements above 1.0.

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	0.61 (0.60)	A (B)	0.80 (0.54)	D (D)	0.71 (0.49)	D (C)	0.80 (0.52)	D (D)	0.71 (0.48)	D (C)
EBT	0.54 (0.43)	B (B)	0.62 (0.47)	B (B)	0.63 (0.46)	B (B)	0.67 (0.50)	B (B)	0.69 (0.50)	B (B)
EBR	0.18 (0.12)	B (B)	0.18 (0.12)	B (A)	0.18 (0.12)	B (A)	0.18 (0.12)	B (A)	0.18 (0.12)	B (A)
WBL	0.31 (0.19)	B (B)	0.40 (0.28)	C (C)	0.42 (0.29)	C (C)	0.42 (0.29)	C (C)	0.45 (0.32)	C (C)
WBTR	0.33 (0.55)	B (C)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
WBT	-- (--)	-- (--)	0.46 (0.70)	C (D)	0.59 (0.83)	D (D)	0.48 (0.76)	C (D)	0.67 (0.94)	D (E)
WBR	-- (--)	-- (--)	0.10 (0.07)	C (C)	0.12 (0.10)	C (C)	0.10 (0.07)	C (C)	0.12 (0.08)	C (C)
NBL	0.96 (0.78)	F (E)	0.56 (0.78)	E (E)	0.53 (0.87)	E (F)	0.59 (0.86)	E (F)	0.59 (0.95)	E (F)
NBT	0.36 (0.47)	D (D)	0.54 (0.53)	E (E)	0.62 (0.55)	E (E)	0.54 (0.56)	E (E)	0.62 (0.55)	E (E)
NBR	0.04 (0.05)	D (D)	0.05 (0.05)	D (D)	0.05 (0.05)	D (D)	0.05 (0.05)	D (D)	0.05 (0.05)	D (D)
SBL	0.35 (0.30)	D (D)	0.53 (0.69)	D (E)	0.52 (0.78)	D (E)	0.52 (0.69)	D (E)	0.53 (0.83)	D (E)
SBT	0.73 (0.26)	D (D)	0.66 (0.59)	E (E)	0.67 (0.62)	E (E)	0.65 (0.59)	E (E)	0.63 (0.62)	E (E)
SBR	0.18 (0.62)	D (D)	0.18 (1.02)	D (E)	0.25 (1.04)	D (E)	0.19 (1.02)	D (E)	0.29 (1.04)	D (F)
Overall	0.70 (0.66)	C (C)	0.69 (0.85)	C (D)	0.68 (0.96)	C (D)	0.71 (0.90)	C (D)	0.69 (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 0.55 and 0.65, 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 0.78, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.55 and 0.66, 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 0.80, 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	-- (--)	-- (--)	0.10 (0.10)	D (C)						
EBR	-- (--)	-- (--)	0.03 (0.04)	D (C)						
WBL	-- (--)	-- (--)	0.56 (0.61)	E (D)						
WBTR	-- (--)	-- (--)	0.00 (0.00)	D (C)						
NBL	-- (--)	-- (--)	0.13 (0.07)	A (A)	0.14 (0.10)	A (A)	0.13 (0.07)	A (A)	0.14 (0.10)	A (A)
NBT	-- (--)	-- (--)	0.57 (0.61)	A (C)	0.73 (0.70)	B (C)	0.57 (0.62)	A (C)	0.75 (0.71)	B (C)
SBT	-- (--)	-- (--)	0.46 (0.70)	A (B)	0.56 (0.87)	A (B)	0.46 (0.72)	A (B)	0.57 (0.89)	A (C)
SBR	-- (--)	-- (--)	0.01 (--)	A (--)	0.01 (--)	A (--)	0.01 (--)	A (--)	0.01 (--)	A (--)
Overall	-- (--)	-- (--)	0.55 (0.65)	A (B)	0.69 (0.78)	B (C)	0.55 (0.66)	A (B)	0.71 (0.80)	B (C)

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, and therefore included within all future traffic scenarios.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.47 and 0.58, 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 0.61 and 0.72, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.47 and 0.58, 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 0.63 and 0.74, 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	-- (-)	-- (-)	-- (0.11)	-- (C)	-- (0.11)	-- (C)	-- (0.11)	-- (C)	-- (0.11)	-- (C)
EBR	-- (-)	-- (-)	0.01 (-)	D (-)	0.01 (-)	D (-)	0.01 (-)	D (-)	0.01 (-)	D (-)
WBR	-- (-)	-- (-)	-- (0.01)	-- (C)	-- (0.01)	-- (C)	-- (0.01)	-- (C)	-- (0.01)	-- (C)
NBTL	-- (-)	-- (-)	0.47 (0.53)	A (A)	0.62 (0.61)	A (A)	0.47 (0.53)	A (A)	0.64 (0.62)	A (A)
SBTR	-- (-)	-- (-)	0.42 (0.60)	A (A)	0.51 (0.74)	A (A)	0.42 (0.60)	A (A)	0.53 (0.77)	A (A)
Overall	-- (-)	-- (-)	0.47 (0.58)	A (A)	0.61 (0.72)	A (A)	0.47 (0.58)	A (A)	0.63 (0.74)	A (A)

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, and therefore included within all future traffic scenarios.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.43 and 0.43, 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 0.53 and 0.55, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.40 and 0.43, 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 0.54 and 0.57, 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	-- (--)	-- (--)	0.14 (0.24)	C (D)	0.15 (0.25)	C (D)	0.04 (0.23)	B (D)	0.15 (0.24)	C (D)
EBTR	-- (--)	-- (--)	0.02 (0.03)	C (D)	0.03 (0.04)	C (D)	0.02 (0.03)	B (D)	0.03 (0.04)	C (D)
WBL	-- (--)	-- (--)	0.42 (0.63)	C (D)	0.53 (0.68)	D (D)	0.13 (0.64)	C (D)	0.54 (0.70)	D (E)
WBTR	-- (--)	-- (--)	0.01 (0.03)	C (D)	0.02 (0.04)	C (D)	0.01 (0.03)	B (D)	0.02 (0.04)	C (D)
NBL	-- (--)	-- (--)	0.11 (0.03)	A (A)	0.17 (0.06)	A (A)	0.16 (0.03)	A (A)	0.17 (0.06)	A (A)
NBT	-- (--)	-- (--)	0.31 (0.41)	A (A)	0.47 (0.47)	A (A)	0.38 (0.39)	A (A)	0.49 (0.48)	A (A)
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	-- (--)	-- (--)	0.07 (0.02)	A (A)	0.09 (0.04)	A (A)	0.09 (0.02)	A (A)	0.10 (0.04)	A (A)
SBT	-- (--)	-- (--)	0.43 (0.41)	A (A)	0.53 (0.53)	A (A)	0.52 (0.40)	B (A)	0.54 (0.55)	A (A)
SBR	-- (--)	-- (--)	0.02 (0.00)	A (A)						
Overall	-- (--)	-- (--)	0.43 (0.43)	A (B)	0.53 (0.55)	A (B)	0.40 (0.43)	B (B)	0.54 (0.57)	A (B)

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, and therefore included within all future traffic scenarios.

Under existing conditions, the intersection operates with overall v/c ratios of 0.53 and 0.59, in the weekday morning and afternoon peak hours, respectively.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.56 and 0.67, 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 0.56 and 0.69, in the weekday morning and afternoon peak hours, respectively.

Under future background (2033) conditions, the intersection will operate with overall v/c ratios of 0.60 and 0.73, 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 0.62 and 0.76, 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	-- (--)	-- (--)	0.59 (0.35)	B (B)	0.59 (0.34)	C (B)	0.60 (0.34)	C (B)	0.61 (0.36)	C (B)
EBR	-- (--)	-- (--)	-- (--)	-- (--)	0.01 (--)	B (--)	-- (--)	-- (--)	0.00 (--)	B (--)
WBTL	-- (--)	-- (--)	0.39 (0.59)	C (C)	0.51 (0.61)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)
WBL	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	0.18 (0.04)	C (C)
WBT	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	0.39 (0.60)	C (C)	0.39 (0.60)	C (C)
NBLR			-- (--)	-- (--)	0.10 (0.18)	A (A)	-- (--)	-- (--)	0.06 (0.14)	A (A)
Overall	-- (--)	-- (--)	0.13 (0.15)	C (C)	0.21 (0.29)	C (B)	0.14 (0.16)	C (C)	0.19 (0.26)	C (B)

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 0.51 and 0.47, in the weekday morning and afternoon peak hours, respectively.

Under future background (2028) conditions, the intersection will operate with overall v/c ratios of 0.54 and 0.54, 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 0.64 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 0.45 and 0.45, 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 0.61 and 0.67, 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 (0.15)	C (B)	0.14 (0.33)	C (C)	0.12 (0.32)	B (B)	0.21 (0.27)	C (C)	0.13 (0.22)	B (B)
EBTR	0.72 (0.31)	C (B)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
EBT	-- (--)	-- (--)	0.69 (0.30)	C (B)	0.60 (0.30)	C (B)	0.57 (0.19)	C (B)	0.36 (0.15)	B (B)
EBR	-- (--)	-- (--)	0.04 (0.03)	B (B)	0.04 (0.03)	B (B)	0.04 (0.03)	C (B)	0.04 (0.03)	B (B)
WBL	0.16 (0.16)	C (B)	0.80 (0.57)	E (D)	0.86 (0.71)	E (D)	0.43 (0.64)	D (D)	0.80 (0.84)	D (D)
WBTR	0.30 (0.69)	C (C)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
WBT	-- (--)	-- (--)	0.30 (0.69)	C (D)	0.26 (0.67)	C (D)	0.25 (0.44)	D (D)	0.16 (0.35)	C (C)
WBR	-- (--)	-- (--)	0.01 (0.01)	B (B)	0.01 (0.01)	B (B)	0.01 (0.01)	C (B)	0.01 (0.01)	B (B)
NBL	0.02 (0.04)	A (A)	0.11 (0.18)	A (A)	0.13 (0.19)	A (A)	0.08 (0.18)	A (A)	0.12 (0.20)	A (B)
NBTR	0.17 (0.36)	A (A)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
NBT	-- (--)	-- (--)	0.18 (0.47)	A (B)	0.23 (0.53)	A (B)	0.14 (0.45)	A (A)	0.22 (0.57)	A (B)
NBR	-- (--)	-- (--)	0.03 (0.06)	A (A)	0.04 (0.07)	A (A)	0.02 (0.06)	A (A)	0.04 (0.07)	A (A)
SBL	0.03 (0.01)	A (A)	0.09 (0.05)	A (A)	0.11 (0.08)	A (A)	0.03 (0.05)	A (A)	0.13 (0.18)	A (B)
SBTR	0.41 (0.31)	B (A)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
SBT	-- (--)	-- (--)	0.44 (0.31)	B (A)	0.52 (0.33)	B (A)	0.37 (0.29)	A (A)	0.51 (0.35)	B (B)
SBR	-- (--)	-- (--)	0.06 (0.02)	A (A)						
Overall	0.51 (0.47)	B (B)	0.56 (0.55)	B (C)	0.64 (0.59)	B (C)	0.41 (0.51)	B (C)	0.61 (0.67)	B (B)

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 D 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)
Dixie Road / 12489 Site Access				
EBL	A (E)	0.0 (42.2)	A (E)	0.0 (42.2)
EBR	B (B)	10.7 (12.2)	B (B)	10.7 (12.2)
WBL	F (F)	63.1 (80.7)	F (F)	63.1 (80.7)
WBTR	B (B)	11.4 (10.9)	B (B)	11.4 (10.9)
NBL	A (B)	9.3 (10.1)	A (B)	9.3 (10.1)
SBL	A (A)	9.9 (9.3)	A (A)	9.9 (9.3)
Dixie Road / 12861 Dixie Road Site Access 1				
WBR	B (B)	11.6 (13.6)	B (B)	11.1 (13.2)
Old School Road / 12861 Dixie Road Site Access 2				
NBR	A (A)	9.6 (9.1)	A (A)	8.6 (8.9)

Notes:

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

8.5 QUEUING ANALYSIS

To determine the queuing impacts of the proposed development on the study area intersections, a queuing 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.

Due to the prevalence of medians along the majority of the corridors adjacent to the Site, queuing issues for through and left-turning traffic are expected to be minimal. Similarly, no queuing issues are expected at any of the intersections due to right-turning traffic, after the redevelopment of the Site. **Table 20** summarizes the 95th percentile reported queuing lengths for key movements in both the weekday morning and weekday afternoon peak hours. Full Synchro and SimTraffic results are shown in **Appendix G**.

TABLE 20 95TH PERCENTILE SIMTRAFFIC QUEUE LENGTHS

Movement	95 th Percentile Queue Lengths (metres)				
	Existing	2028 Future Background	2028 Future Total	2033 Future Background	2033 Future Total
Dixie Road / Mayfield Road					
EBL	162.4 (75.7)	97 (162.4)	162.5 (162.5)	217.5 (162.4)	217.5 (217.4)
EBT	169.8 (83)	135.3 (241.8)	1005.2 (1005.2)	1006.1 (241.8)	1006.1 (1002.8)
EBR	49.5 (23.2)	122.3 (28.5)	53.8 (25)	0 (26.3)	0 (9.5)
WBL	27.7 (14.9)	27.8 (26.3)	29.9 (20.3)	11.1 (84.1)	28 (168.8)
WBT	92 (106.8)	112.2 (84.1)	114.5 (196.4)	131 (175.8)	170.8 (252.5)
WBR	72.5 (72.5)	72.5 (72.5)	60.1 (72.5)	88.8 (70.3)	74.1 (56)
NBL	63.2 (69.9)	41.1 (175.8)	70.7 (48.8)	34.1 (108.5)	43.8 (102.2)
NBT	41.2 (48.6)	29.1 (70.3)	51.7 (43.1)	42.8 (38.6)	85 (32.9)
NBR	27.5 (19.1)	7.6 (108.5)	22.4 (26.1)	11.3 (17.3)	72.5 (10.5)
SBL	33.9 (30.9)	52.3 (38.6)	64.3 (107.4)	73 (64.8)	82.7 (121)
SBT	79.8 (32.7)	41.2 (17.3)	52.3 (350.6)	43.9 (38.4)	66 (48.8)
SBR	38.3 (43.9)	60.1 (64.8)	70.3 (177.5)	14.2 (127.5)	50.1 (119.9)
Dixie Road / 12489 Dixie Road Site Access 2 / 12892 Dixie Road South Signal Access					
EBL	-- (--)	7.9 (162.4)	12.2 (19.2)	8.1 (13.9)	22.2 (18.7)
EBT	-- (--)	0 (241.8)	0 (0)	0 (0)	0 (0)
WBL	-- (--)	14.2 (26.3)	22.3 (23.2)	16.6 (22.4)	23.6 (22.4)
WBT	-- (--)	0 (84.1)	0 (0)	0 (0)	0 (0)

Movement	95 th Percentile Queue Lengths (metres)				
	Existing	2028 Future Background	2028 Future Total	2033 Future Background	2033 Future Total
NBL	-- (--)	9.1 (175.8)	24 (14.7)	25.6 (9)	35.8 (13)
NBT	-- (--)	21.8 (70.3)	35.4 (51.9)	45.5 (51.7)	70.2 (42.6)
NBR	-- (--)	7.4 (108.5)	11.7 (6.5)	7.8 (5.6)	20 (10)
SBL	-- (--)	7.6 (38.6)	19.7 (15.6)	17.1 (8)	21.8 (10.5)
SBT	-- (--)	22.3 (17.3)	42.5 (72)	66.3 (49.2)	78.3 (59.8)
SBR	-- (--)	0 (64.8)	2.9 (0)	8.6 (0)	15.2 (2.4)
EBLR	-- (--)	7.6 (38.4)	26.1 (56.7)	12 (30.7)	51.2 (40.4)
Dixie Road / Old School Road					
EBL	16.2 (75.7)	28 (28.8)	18.3 (28.3)	19.6 (13.9)	21.4 (28.2)
EBT	0 (83)	41.7 (38.4)	71.1 (30.8)	40.6 (0)	45.3 (33)
EBR	0 (23.2)	20.8 (33.1)	18.2 (18.5)	29.1 (0)	21.3 (23.8)
WBL	20.5 (14.9)	0 (19.9)	30.5 (43.2)	0 (22.4)	43.1 (43.2)
WBT	0 (106.8)	16.8 (35.7)	19.7 (58.6)	19.3 (0)	48.2 (76.2)
WBTR	29.1 (72.5)	15.5 (43.2)	5.3 (28.2)	0 (0)	14.3 (14.1)
NBL	14.6 (69.9)	26.6 (52.7)	23.4 (34.9)	27.1 (9)	25.9 (40.7)
NBT	0 (48.6)	37.3 (11.8)	39.2 (66)	29.1 (51.7)	44.7 (67.7)
NBR	0 (19.1)	0 (25.1)	10 (18.6)	11.2 (5.6)	13.9 (17.8)
SBL	9.3 (30.9)	8.4 (82.2)	17.8 (19.5)	13.7 (8)	28.1 (38.7)
SBT	0 (32.7)	61.6 (14)	82.5 (49.5)	50.9 (49.2)	91 (67.3)
SBR	0 (43.9)	7.3 (5.1)	16.6 (7.4)	14.4 (0)	14.6 (7.5)
Old School Road / Site Access 3					
EBL	-- (--)	0 (0)	0 (0)	0 (0)	0 (0)
EBT	-- (--)	21.3 (24.8)	35.5 (25.2)	27.5 (24.5)	46.8 (28.6)
EBR	-- (--)	19.4 (0)	6.6 (0)	0 (0)	8.6 (0)
WBT	-- (--)	16.8 (0)	177.8 (52.1)	179.4 (55.1)	177.8 (59.2)
NBL	-- (--)	0 (43.1)	0 (0)	0 (0)	0 (0)
NBLR	-- (--)	(0)	34.8 (58.6)	()	24.9 (37.7)

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 D**.

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 Dixie Road / Site Access 2 / 12892 Dixie Road Access 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 operation of multiple conditions within the network.

As the area network is proposed to be an industrial corridor, the area 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 accidents and facilitating the smooth movement of traffic. Implementing a signal at these intersections 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 the 2028 and 2033 scenarios (after overall development has been fully constructed), the Old School Road / Site Access 3 intersection a peak hour volume of up to 30 vehicles per hour completing a left turn from the east on Old School Road into the Site up to 5 inbound vehicles completing a right turn into the Site from the West on Old School Road during the morning and afternoon peak hours, respectively.

Based on the foregoing, a left lane warrant analysis was undertaken to confirm a left turn lane for the base scenario as per 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 is not warranted or required under both future total horizons. Notwithstanding, it is recommended that a left turn lane be introduced into the future road network to improve the delays for all horizon years, and to provide heavy vehicles with more optimal access to the surrounding network through a main signalized intersection, given that the intersection is to operate as the main access for the proposed development.

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

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.

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 provided 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 / incentivize 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 / incentivize tenant upon occupancy
	Encourage tenants to run carpool promotional campaigns	TBD	Owner to encourage / incentivize tenant upon occupancy
	Include designated signed carpool spots within the Site parking facilities.	TBD	Owner to encourage / incentivize 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 carpool, 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 / incentivized 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 / incentivized 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 / incentivized 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.
- **Signalization of high-activity intersections:** Signalization of several site access intersections within proximity of transit stops to increase pedestrian safety and connectivity to transit stops.
- **Signalization of high activity intersections:** signalization of one Site access intersections along Old School Road to increase 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 1,972 car parking spaces exceeds the requirements of the Town of Caledon Zoning By-Law 2006-50.
7. A total of 29 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

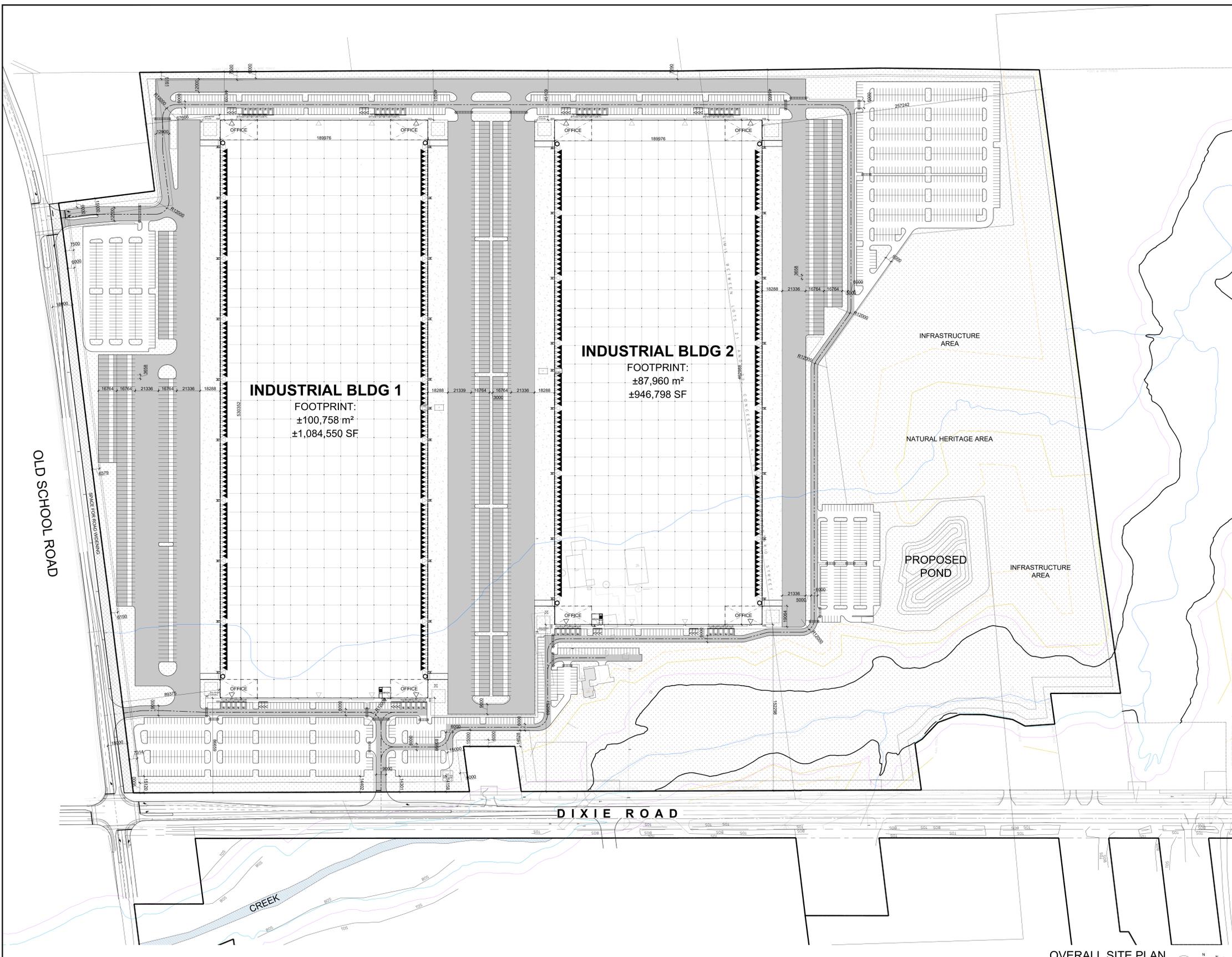
12. Under existing conditions, all area signalized intersections currently operate acceptably during the weekday morning and afternoon peak hours.
13. With the addition of background traffic, under the future horizon years of 2028 and 2033, the area signalized intersections continue to operate acceptably 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, except the Dixie Road / Mayfield Road intersection. The Dixie Road / Mayfield Road intersection is projected to approach capacity in all future horizon year scenarios. Under HCM 2000 methodology, the SBR movement is operating at critical capacity with an individual v/c ratio of 1.04. While the SBR movement operates at capacity under all future PM peak hour scenarios, when analyzed with Simtraffic the movement operates with minimal delays, and with maximum queues that do not exceed the proposed storage length at the intersection.
15. The analysis results are an improvement over the forecasted 2033 (with improvements) scenario capacity results outlined within the Dixie 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. No predicted queueing issues are expected at the area site intersections as a result of the Site redevelopment, due to the overall net decrease of site trips, after the redevelopment of the Site.
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 due to better regulate 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;

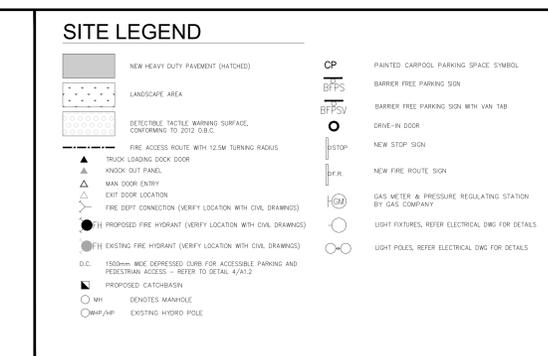
- Maintain on-site pedestrian facilities year-round; and
- Enhance public realm through provision of pedestrian scale landscaping.

**APPENDIX A:
Reduced Architectural Drawings (Not to Scale) and Signage
Plans**



SITE STATISTICS		MP
Existing Zoning Category		MP
Proposed Zoning Category		Group F2 (G & C - A-3 (2.1.1))
Building Classification		4,295,303 SF 455,160.62m ²
NET DEVELOPABLE AREA		4,295,303 SF 455,160.62m ²
GROSS SITE AREA		6,271,978 SF 582,688.42m ²
Zone Permitted Use (Town of Caledon Zoning By-law 2008-56)		Industrial
Proposed Use		Industrial
Section 8.3 - Zoning Standards - MP Zone		
BUILDING AREA:		
BUILDING 1	1,084,548 SF	100,757.96 m ²
Warehouse Area	1,058,548 SF	98,257.59 m ²
Office Area	25,901 SF	2,400.37 m ²
BUILDING 2	848,797 SF	87,861.28 m ²
Warehouse Area	820,229 SF	85,492.12 m ²
Office Area	28,568 SF	2,469.29 m ²
TOTAL BUILDING AREA	2,031,346 SF	188,718.37 m ²
NET FLOOR AREA:		
BUILDING 1	1,083,400 SF	100,651.28 m ²
Floor Area	1,084,548 SF	100,757.96 m ²
Building Area under services, M&E rooms etc.	1,148 SF	106.68 m ²
BUILDING 2	845,731 SF	87,861.28 m ²
Floor Area	848,797 SF	87,960.42 m ²
Building Area under services, M&E rooms etc.	1,068 SF	99.26 m ²
TOTAL NET AREA	2,029,131 SF	188,512.83 m ²
Requirements		
Proposed	Required	
Min. Lot Area	562,686.42m ²	925,00m ²
Net Floor Area	188,512.83m ²	-
Gross Floor Area	188,718.37m ²	-
Building Area	52.39%	50.00%
Min. Lot Frontage (m)	30.00	30.00
Min. Front Yard Building Setback (m)	9.00	9.00
Min. Ext. Side Yard Building Setback (m)	7.50	7.50
Min. Int. Side Yard Building Setback (m)	6.00	6.00
Min. Int. Side Yard Building Setback (m) - Abutting Residential	15.00	15.00
Min. Rear Yard Building Setback (m)	7.50	7.50
Lot Coverage	32.39%	50.00%
Maximum Building Height (m) - Building 1	16.01	18.00
Maximum Building Height (m) - Building 2	15.01	18.00
Min. Landscape Area (% of Lot Area)	30.50%	10.00%
Min. Landscape Area (SM)	178,267.16m ²	58,268.64m ²
Min. Front Landscape Buffer (m)	6.00	6.00
Min. Ext. Side Landscape Buffer (m)	6.00	6.00
Min. Int. Side Landscape Buffer (m)	6.00	6.00
Min. Rear Landscape Buffer (m)	6.00	6.00
Min. Landscape Buffer (m) - Abutting EPA > 6m width	-	-
Parking Calculations		
BUILDING 1	Proposed	Required
@ 139 x 1717m ² of Net Floor Area over 10,000 m ²	910	872
BUILDING 2	Proposed	Required
@ 139 x 1717m ² of Net Floor Area over 10,000 m ²	1082	587
Total no. of Parking Spaces (including Accessible Parking Spaces)	1992	1259
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
22 Type - A	14 Type - A	
22 Type - B	15 Type - B	
EV Parking Spaces	24	
Parking Stall Dimensions		
TYPE A - 3.4m x 5.4m	ACCESSIBLE TYPE A - 3.4m x 5.4m	
TYPE B - 2.75m x 5.4m	TYPE B - 2.75m x 5.4m	
or 1.5m access aisle on either side	or 1.5m access aisle on either side	
Proposed Trailer Parking		
BUILDING 1	Proposed	Required
300		
BUILDING 2	Proposed	Required
241		
Total no. of Trailer Parking Spaces	541	
Loading Space Calculations		
BUILDING 1	Proposed	Required
211		13
BUILDING 2	Proposed	Required
183		12
@ 3 x 1 per 9300 m ² in excess of 1441 m ² of Net Floor Area		
Total no. of Loading Spaces	394	25
Total no. of Loading Spaces	394	25
Min. Loading Space Dimensions	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.
 - 1500mm WIDE CURB TYPICAL
 - MIN. 1500mm WIDE SIDEWALK TYPICAL U.N.D.
 - TRAILER PARKING STALL - 12'-0" X 55'-0"
 - ACCESSIBLE CURB RAMP AS PER DETAIL
 - FIRE DEPARTMENT CONNECTION / SIAMESS
 - PROPOSED LOCATION OF TRANSFORMER G/W CONCRETE PAD
 - 1.8m HIGH BLACK VINYL CHAIN LINK FENCING OR APPROVED EQUIV. 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.
 - EXTENDING 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 STOP SIGN LOCATION
 - 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 QUADRAIL 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 AREA SLOPING UP TO MEET PROPOSED CURB LEVEL



OVERALL SITE PLAN
SCALE: 1:1200



WARE MALCOLM
ARCHITECTURE - CIVIL ENGINEERING - INTERIORS
6220 Highway 7, Suite 300
Vaughan, ON L4V 1P5
P: 905.760.1221

QUADREAL PROPERTY GROUP
TOWN OF CALEDON DIXIE ROAD
12861 DIXIE ROAD
CALEDON, ONTARIO CANADA

OVERALL SITE PLAN
REVISIONS

DATE	ISSUED FOR REVIEW AND COORDINATION
1 - 2023-12-01	ISSUED FOR REVIEW AND COORDINATION

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

SHEET
A100

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APPENDIX B: 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)

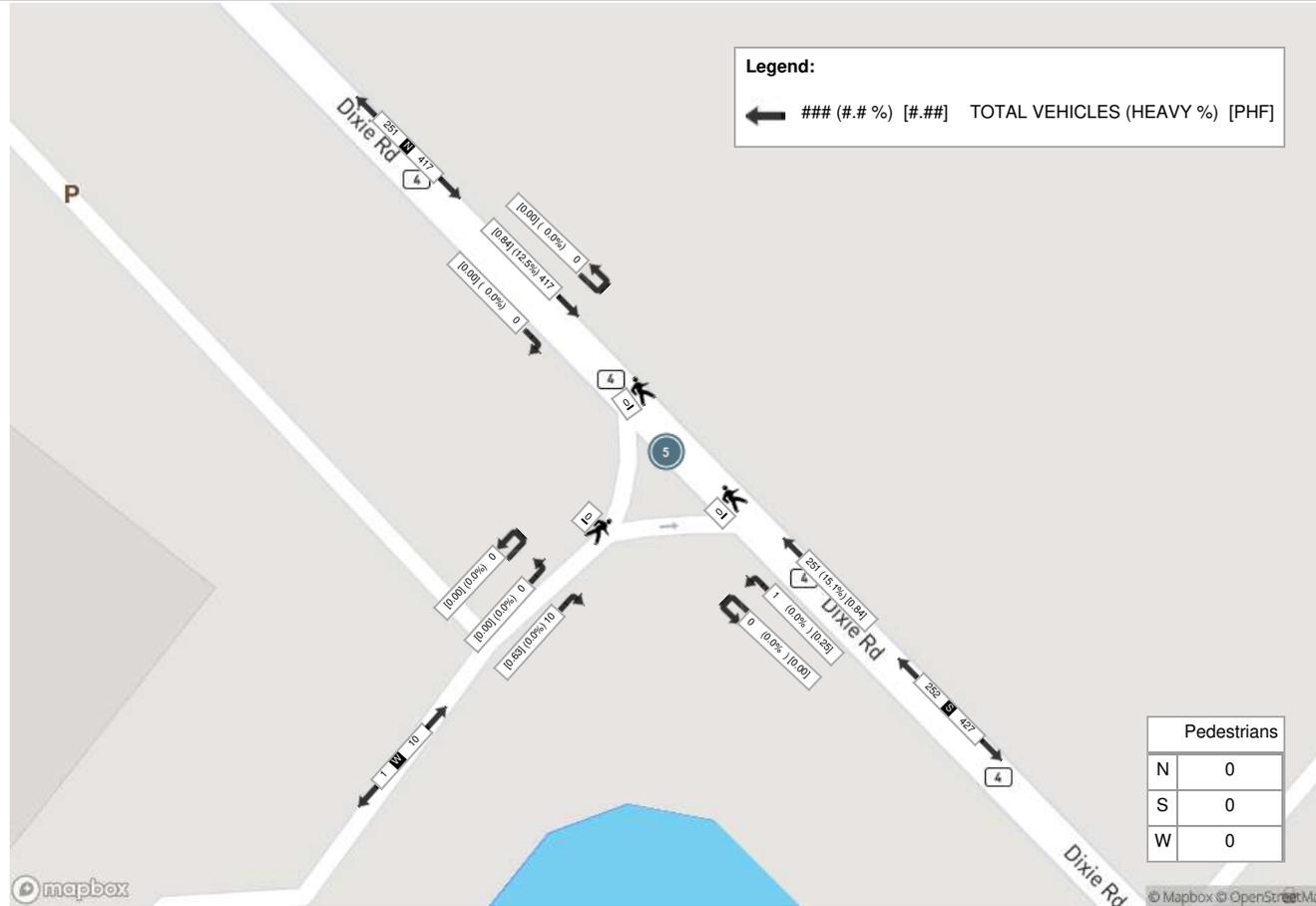
Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach 12424 DIXIE RD (UPS SOUTH ACCESS)					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
07:00:00	0	107	0	0	107	65	0	0	0	65	4	0	0	0	4	176
07:15:00	0	90	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%	-	-



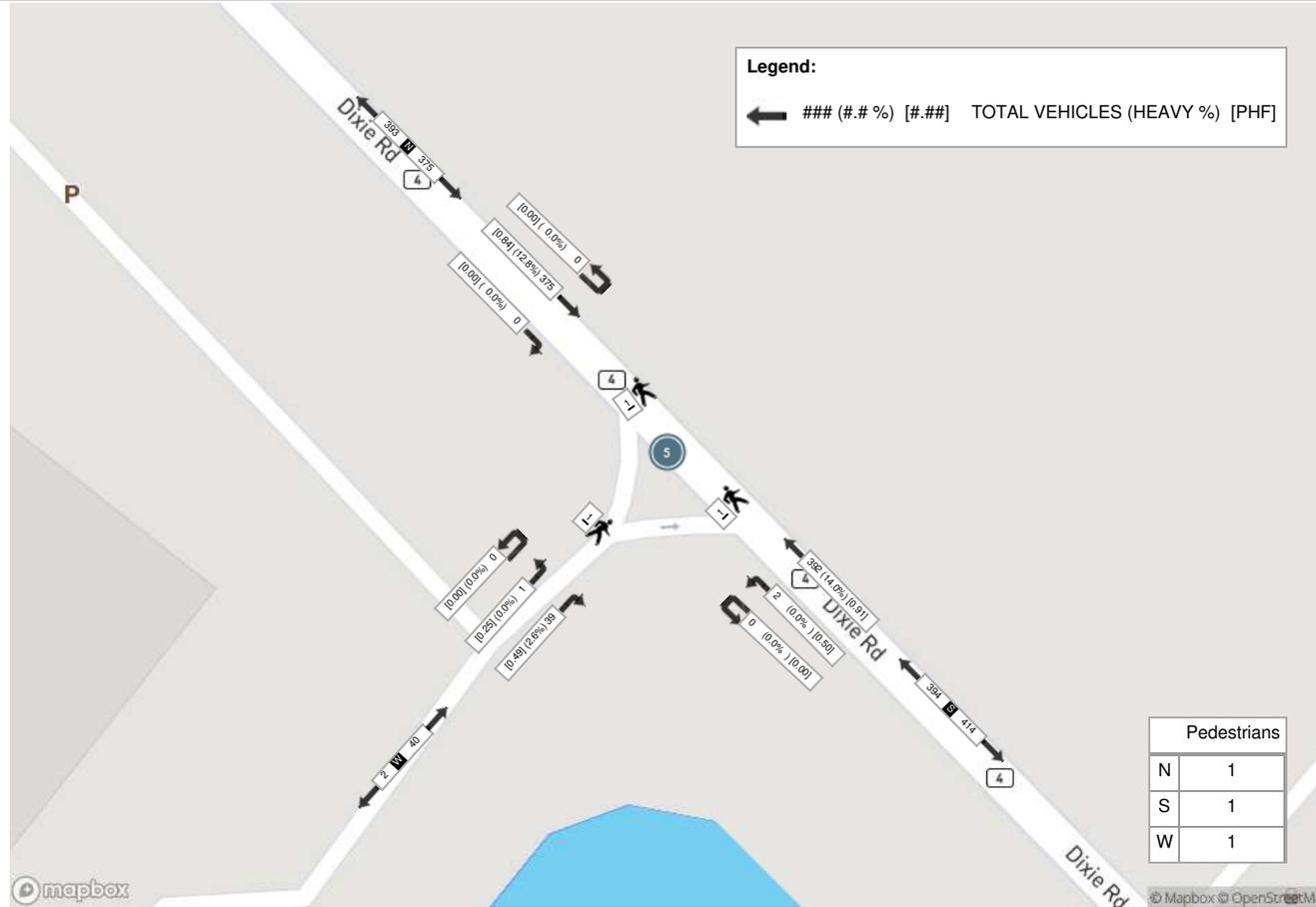
Peak Hour: 05:00 PM - 06:00 PM Weather: Few Clouds (7.51 °C)

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)

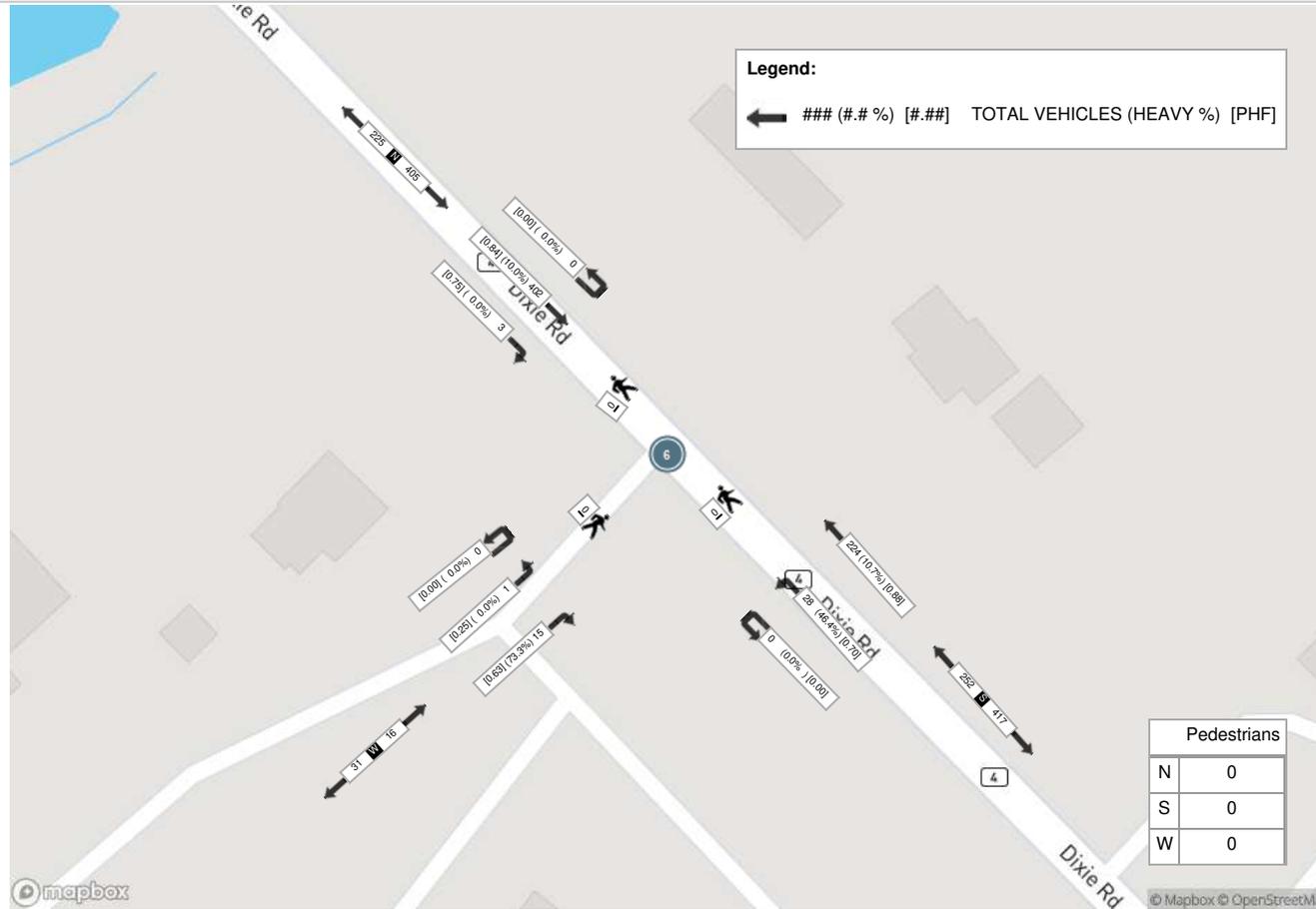
Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS MAIN INTERSECTION (12424 DIXIE RD)					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
07:00:00	1	101	0	0	102	57	6	0	0	63	6	1	0	0	7	172
07:15:00	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%	-	-



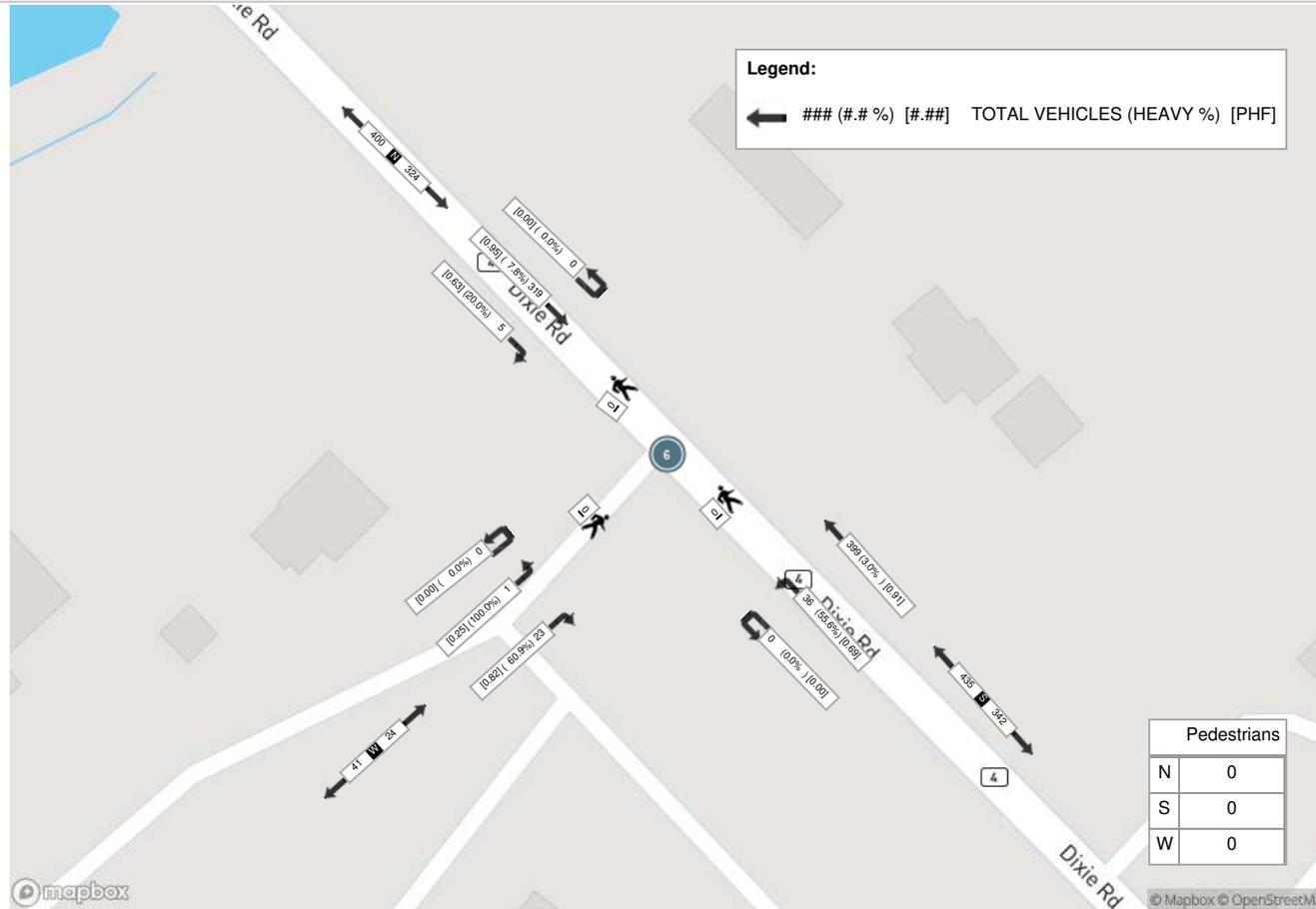
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS MAIN INERSECTION (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)

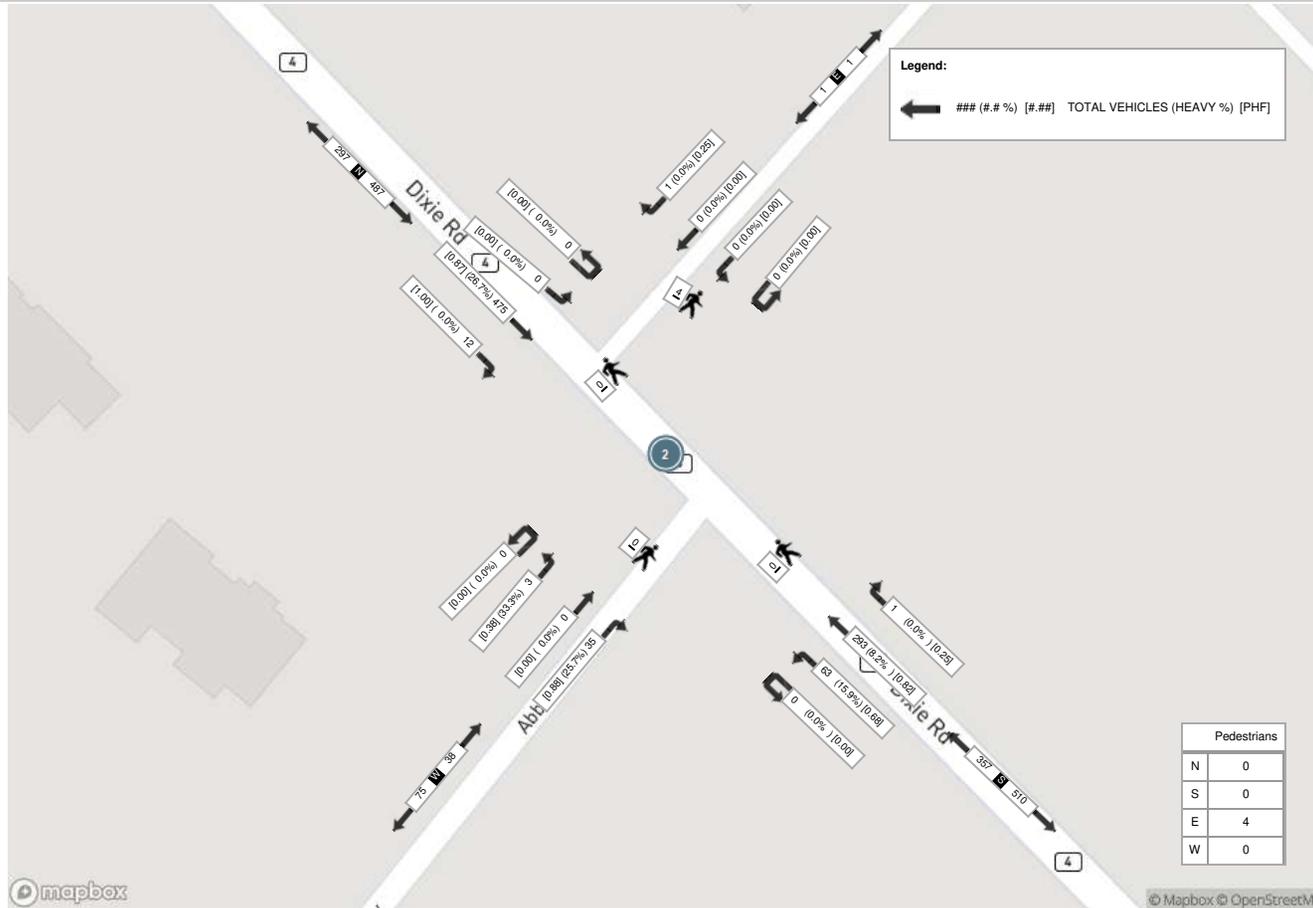
Start Time	N Approach DIXIE RD						E Approach SPOKANE ST						S Approach						W Approach						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	3	113	0	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%	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	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	0	24	10	0	34	9	0	1	0	10	-	-	-	
Heavy %	0%	26.7%	0%	0%	26.1%	0%	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	1	269	53	0	323	26	0	2	0	28	-	-	-	
Lights %	100%	73.3%	0%	0%	73.9%	100%	0%	0%	0%	100%	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	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%	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	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%	0.7%	0%	0%	0.6%	0%	0%	0%	0%	0%	-	-	-	
Articulated Trucks	0	12	0	0	12	0	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%	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)





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)

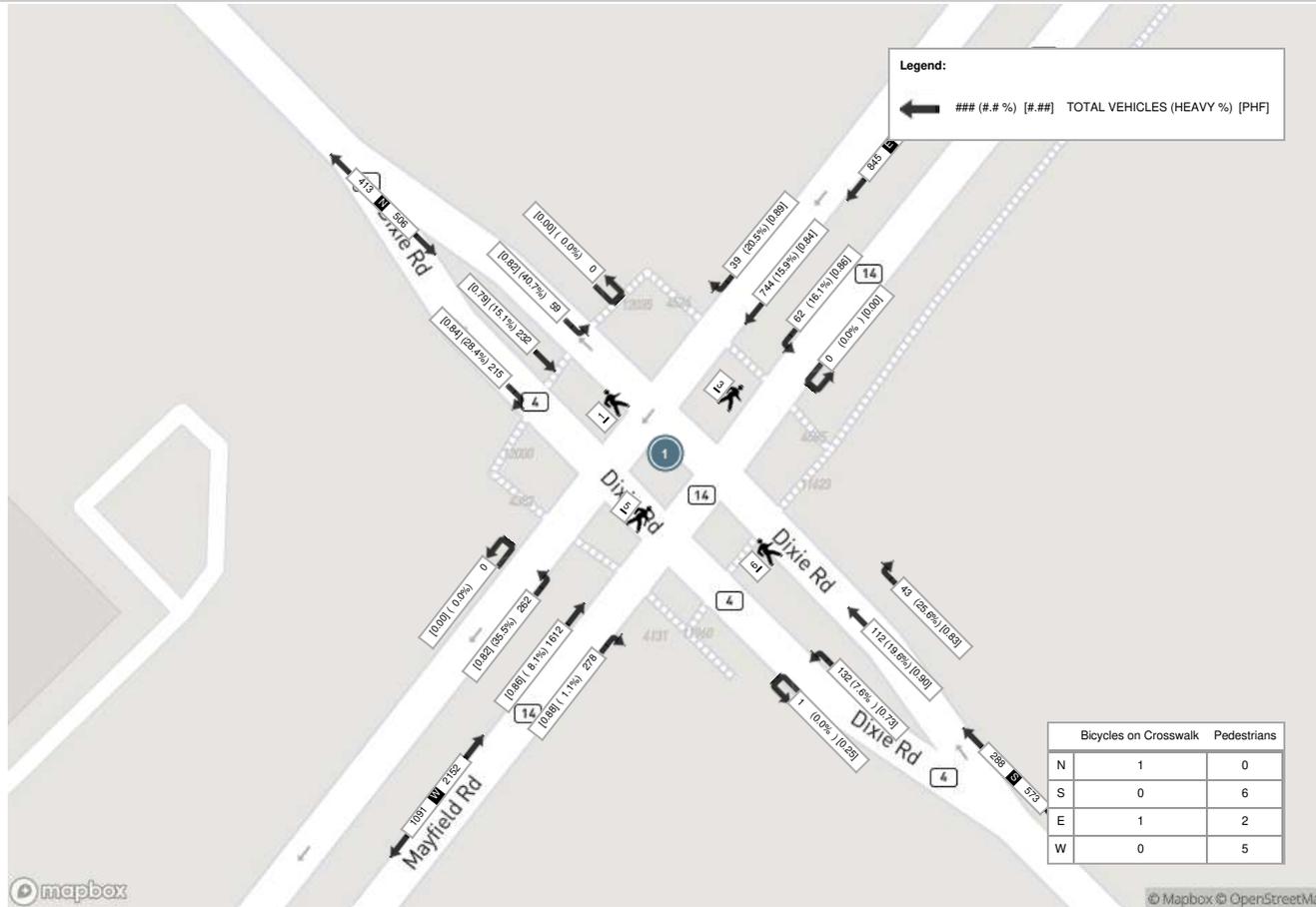
Start Time	N Approach DIXIE RD						E Approach MAYFIELD RD						S Approach DIXIE RD						W Approach MAYFIELD RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
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%	13.3%	1%	19.6%	1.6%	0%	22.3%	22.3%	1.1%	3%	3.5%	0%	7.6%	7.6%	42.5%	6.9%	0%	56.8%	56.8%	-	
PHF	0.84	0.79	0.82	0	0.88	0.88	0.89	0.84	0.86	0	0.86	0.86	0.83	0.9	0.73	0.25	0.84	0.84	0.88	0.86	0.82	0	0.88	0.88	-
Heavy	61	35	24	0	120	120	8	118	10	0	136	136	11	22	10	0	43	43	3	130	93	0	226	226	-
Heavy %	28.4%	15.1%	40.7%	0%	23.7%	23.7%	20.5%	15.9%	16.1%	0%	16.1%	16.1%	25.6%	19.6%	7.6%	0%	14.9%	14.9%	1.1%	8.1%	35.5%	0%	10.5%	10.5%	-
Lights	154	197	35	0	386	386	31	626	52	0	709	709	32	90	122	1	245	245	275	1482	169	0	1926	1926	-
Lights %	71.6%	84.9%	59.3%	0%	76.3%	76.3%	79.5%	84.1%	83.9%	0%	83.9%	83.9%	74.4%	80.4%	92.4%	100%	85.1%	85.1%	98.9%	91.9%	64.5%	0%	89.5%	89.5%	-
Single-Unit Trucks	45	28	12	0	85	85	6	31	5	0	42	42	1	20	2	0	23	23	2	47	84	0	133	133	-
Single-Unit Trucks %	20.9%	12.1%	20.3%	0%	16.8%	16.8%	15.4%	4.2%	8.1%	0%	5%	5%	2.3%	17.9%	1.5%	0%	8%	8%	0.7%	2.9%	32.1%	0%	6.2%	6.2%	-
Buses	0	5	10	0	15	15	1	20	3	0	24	24	9	2	8	0	19	19	1	28	0	0	29	29	-
Buses %	0%	2.2%	16.9%	0%	3%	3%	2.6%	2.7%	4.8%	0%	2.8%	2.8%	20.9%	1.8%	6.1%	0%	6.6%	6.6%	0.4%	1.7%	0%	0%	1.3%	1.3%	-
Articulated Trucks	16	2	2	0	20	20	1	67	2	0	70	70	1	0	0	0	1	1	0	55	9	0	64	64	-
Articulated Trucks %	7.4%	0.9%	3.4%	0%	4%	4%	2.6%	9%	3.2%	0%	8.3%	8.3%	2.3%	0%	0%	0%	0.3%	0.3%	0%	3.4%	3.4%	0%	3%	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%	-	-	-



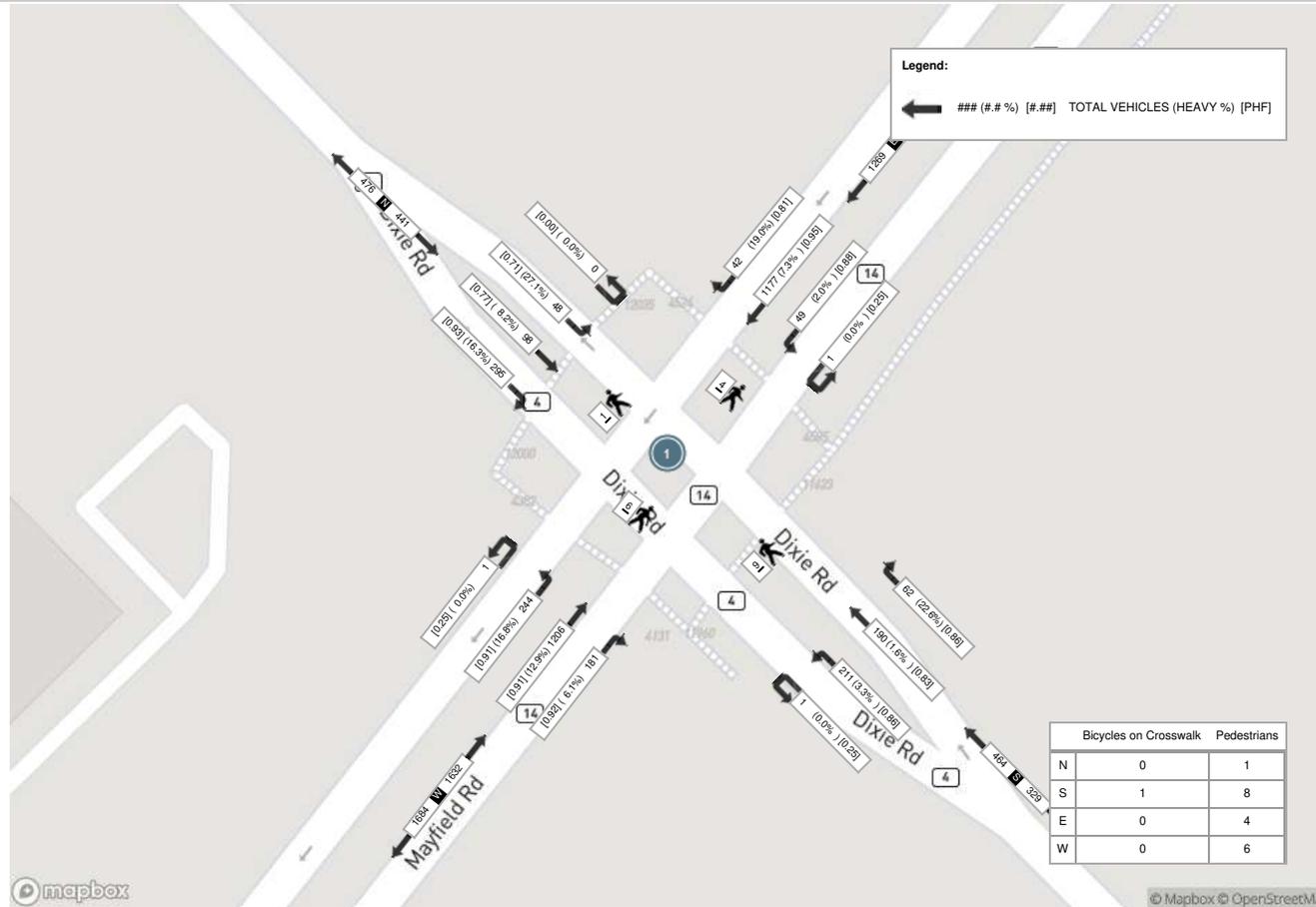
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

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%	11.6%	1.1%	30.9%	1.3%	0%	33.3%	33.3%	1.6%	5%	5.5%	0%	12.2%	12.2%	4.8%	31.7%	6.4%	0%	42.9%	42.9%	-
PHF	0.93	0.77	0.71	0	0.93	0.93	0.81	0.95	0.88	0.25	0.96	0.96	0.86	0.83	0.86	0.25	0.96	0.96	0.92	0.91	0.91	0.25	0.91	0.91	0.91
Heavy	48	8	13	0	69	69	8	86	1	0	95	95	14	3	7	0	24	24	11	155	41	0	207	207	-
Heavy %	16.3%	8.2%	27.1%	0%	15.6%	15.6%	19%	7.3%	2%	0%	7.5%	7.5%	22.6%	1.6%	3.3%	0%	5.2%	5.2%	6.1%	12.9%	16.8%	0%	12.7%	12.7%	-
Lights	247	90	35	0	372	372	34	1091	48	1	1174	1174	48	187	204	1	440	440	170	1051	203	1	1425	1425	-
Lights %	83.7%	91.8%	72.9%	0%	84.4%	84.4%	81%	92.7%	98%	100%	92.5%	92.5%	77.4%	98.4%	96.7%	100%	94.8%	94.8%	93.9%	87.1%	83.2%	100%	87.3%	87.3%	-
Single-Unit Trucks	35	5	13	0	53	53	2	41	0	0	43	43	3	2	0	0	5	5	1	61	26	0	88	88	-
Single-Unit Trucks %	11.9%	5.1%	27.1%	0%	12%	12%	4.8%	3.5%	0%	0%	3.4%	3.4%	4.8%	1.1%	0%	0%	1.1%	1.1%	0.6%	5.1%	10.7%	0%	5.4%	5.4%	-
Buses	2	1	0	0	3	3	1	7	1	0	9	9	8	1	6	0	15	15	10	31	0	0	41	41	-
Buses %	0.7%	1%	0%	0%	0.7%	0.7%	2.4%	0.6%	2%	0%	0.7%	0.7%	12.9%	0.5%	2.8%	0%	3.2%	3.2%	5.5%	2.6%	0%	0%	2.5%	2.5%	-
Articulated Trucks	11	2	0	0	13	13	5	38	0	0	43	43	3	0	1	0	4	4	0	63	15	0	78	78	-
Articulated Trucks %	3.7%	2%	0%	0%	2.9%	2.9%	11.9%	3.2%	0%	0%	3.4%	3.4%	4.8%	0%	0.5%	0%	0.9%	0.9%	0%	5.2%	6.1%	0%	4.8%	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%	85.6%	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)

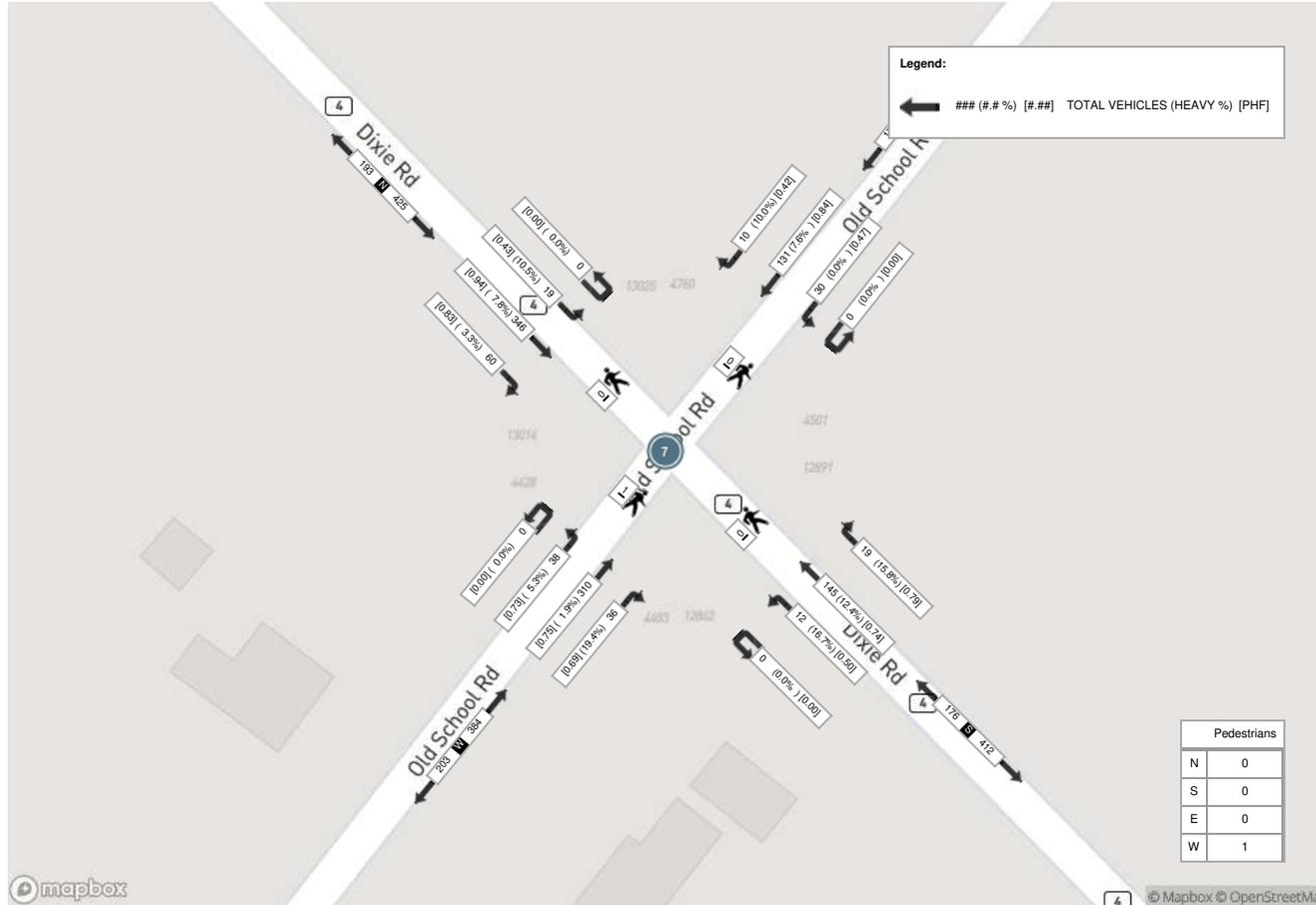
Start Time	N Approach DIXIE RD						E Approach OLD SCHOOL RD						S Approach DIXIE RD						W Approach OLD SCHOOL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach 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		-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-



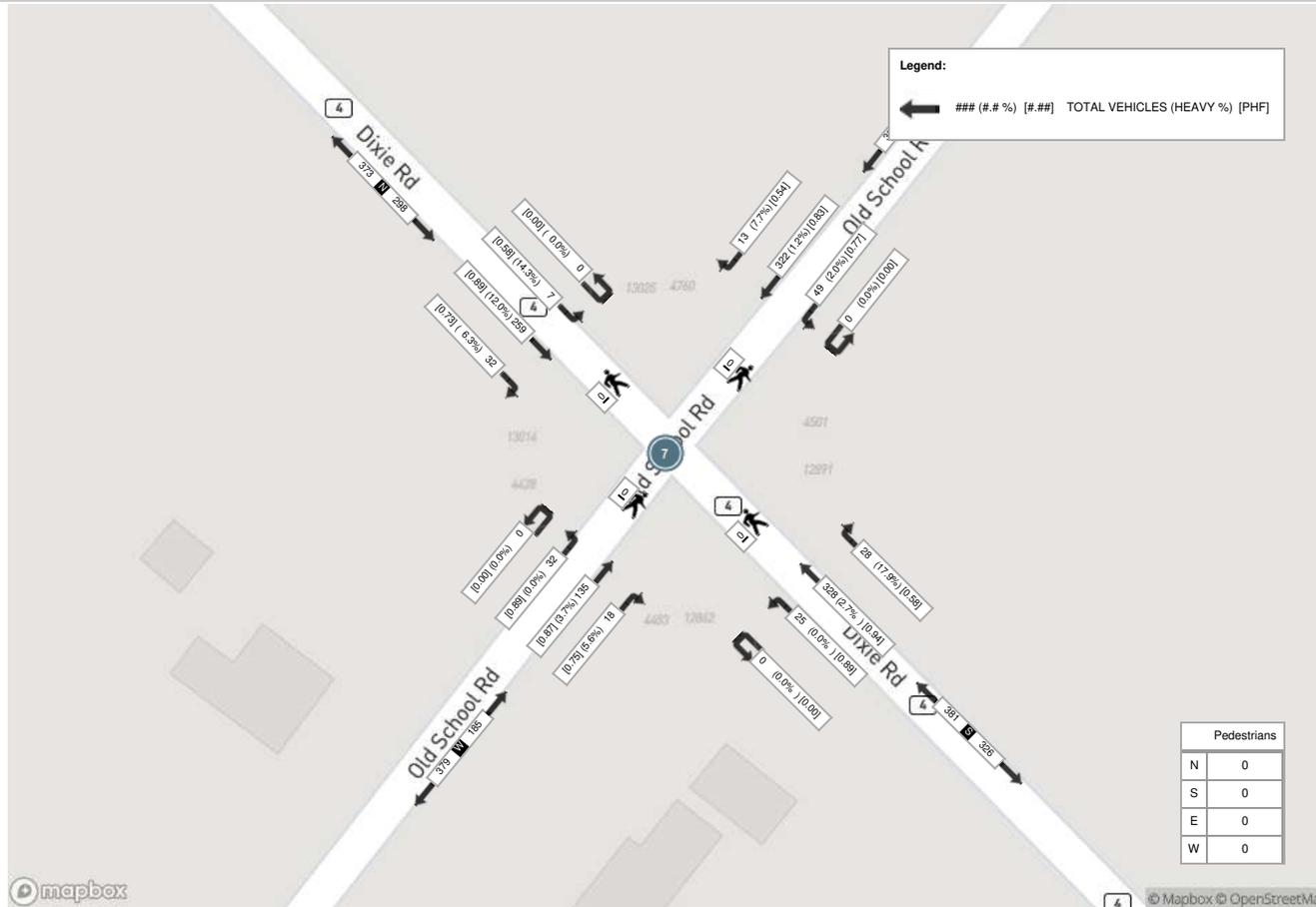
Peak Hour: 04:15 PM - 05:15 PM Weather: Few Clouds (7.51 °C)

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	-	-	-	-	-
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)

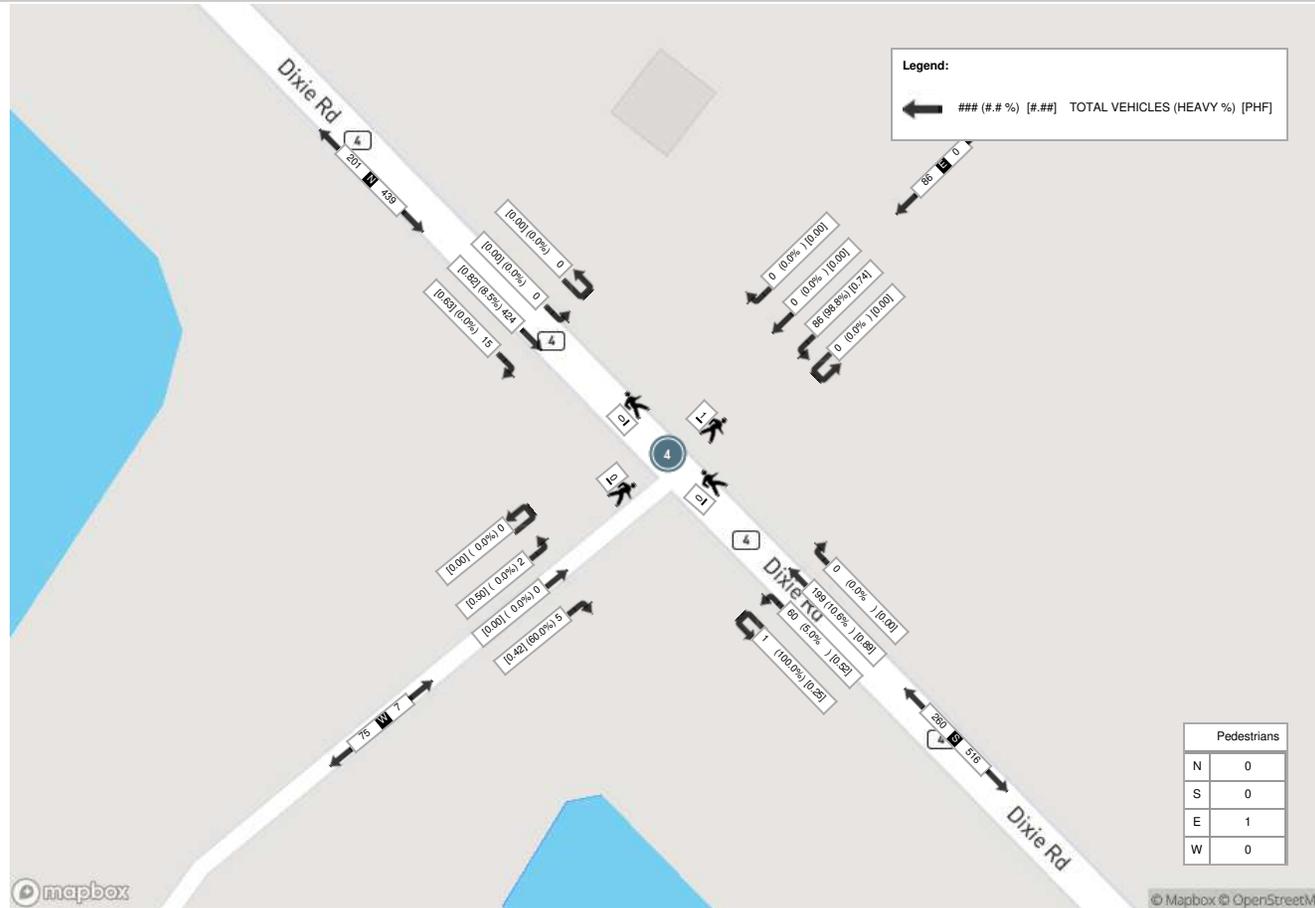
Start Time	N Approach DIXIE RD						E Approach CONSTRUCTION ACCESS						S Approach DIXIE RD						W Approach PARKING LOT NORTH ACCESS						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	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%	55.4%	0%	0%	10.9%	0%	10.9%	10.9%	0%	25.1%	7.6%	0.1%	32.8%	32.8%	0.6%	0%	0.3%	0%	0.9%	0.9%	-
PHF	0.63	0.82	0	0	0.84	0.84	0	0	0.74	0	0.74	0.74	0	0.89	0.52	0.25	0.82	0.82	0.42	0	0.5	0	0.58	0.58	-
Heavy	0	36	0	0	36	36	0	0	85	0	85	85	0	21	3	1	25	25	3	0	0	0	3	3	-
Heavy %	0%	8.5%	0%	0%	8.2%	8.2%	0%	0%	98.8%	0%	98.8%	98.8%	0%	10.6%	5%	100%	9.6%	9.6%	60%	0%	0%	0%	42.9%	42.9%	-
Lights	15	388	0	0	403	403	0	0	1	0	1	1	0	178	57	0	235	235	2	0	2	0	4	4	-
Lights %	100%	91.5%	0%	0%	91.8%	91.8%	0%	0%	1.2%	0%	1.2%	1.2%	0%	89.4%	95%	0%	90.4%	90.4%	40%	0%	100%	0%	57.1%	57.1%	-
Single-Unit Trucks	0	15	0	0	15	15	0	0	85	0	85	85	0	11	3	1	15	15	3	0	0	0	3	3	-
Single-Unit Trucks %	0%	3.5%	0%	0%	3.4%	3.4%	0%	0%	98.8%	0%	98.8%	98.8%	0%	5.5%	5%	100%	5.8%	5.8%	60%	0%	0%	0%	42.9%	42.9%	-
Buses	0	4	0	0	4	4	0	0	0	0	0	0	0	3	0	0	3	3	0	0	0	0	0	0	-
Buses %	0%	0.9%	0%	0%	0.9%	0.9%	0%	0%	0%	0%	0%	0%	0%	1.5%	0%	0%	1.2%	1.2%	0%	0%	0%	0%	0%	0%	-
Articulated Trucks	0	17	0	0	17	17	0	0	0	0	0	0	0	7	0	0	7	7	0	0	0	0	0	0	-
Articulated Trucks %	0%	4%	0%	0%	3.9%	3.9%	0%	0%	0%	0%	0%	0%	0%	3.5%	0%	0%	2.7%	2.7%	0%	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	0	54	1	0	55	0	0	0	0	0	0	0	-	
Heavy %	0%	12.3%	0%	0%	11.8%	0%	0%	0%	0%	0%	0%	0%	14%	3%	0%	13.1%	0%	0%	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)





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)

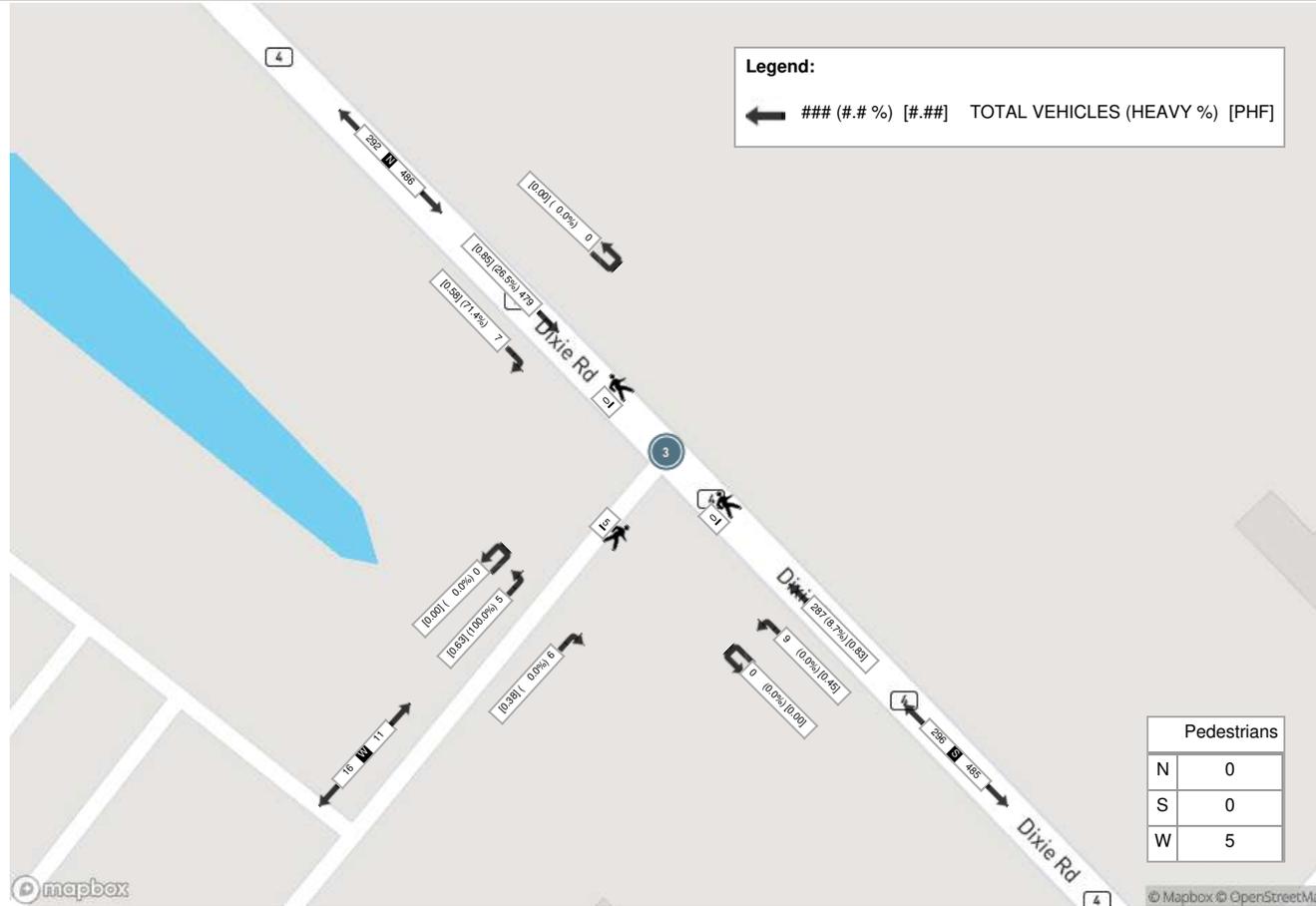
Start Time	N Approach DIXIE RD					S Approach DIXIE RD					W Approach UPS PARKING LOT SOUTH ACCESS					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:00:00	2	116	0	0	118	54	0	0	0	54	0	1	0	0	1	173
08:15:00	3	141	0	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%	-	-



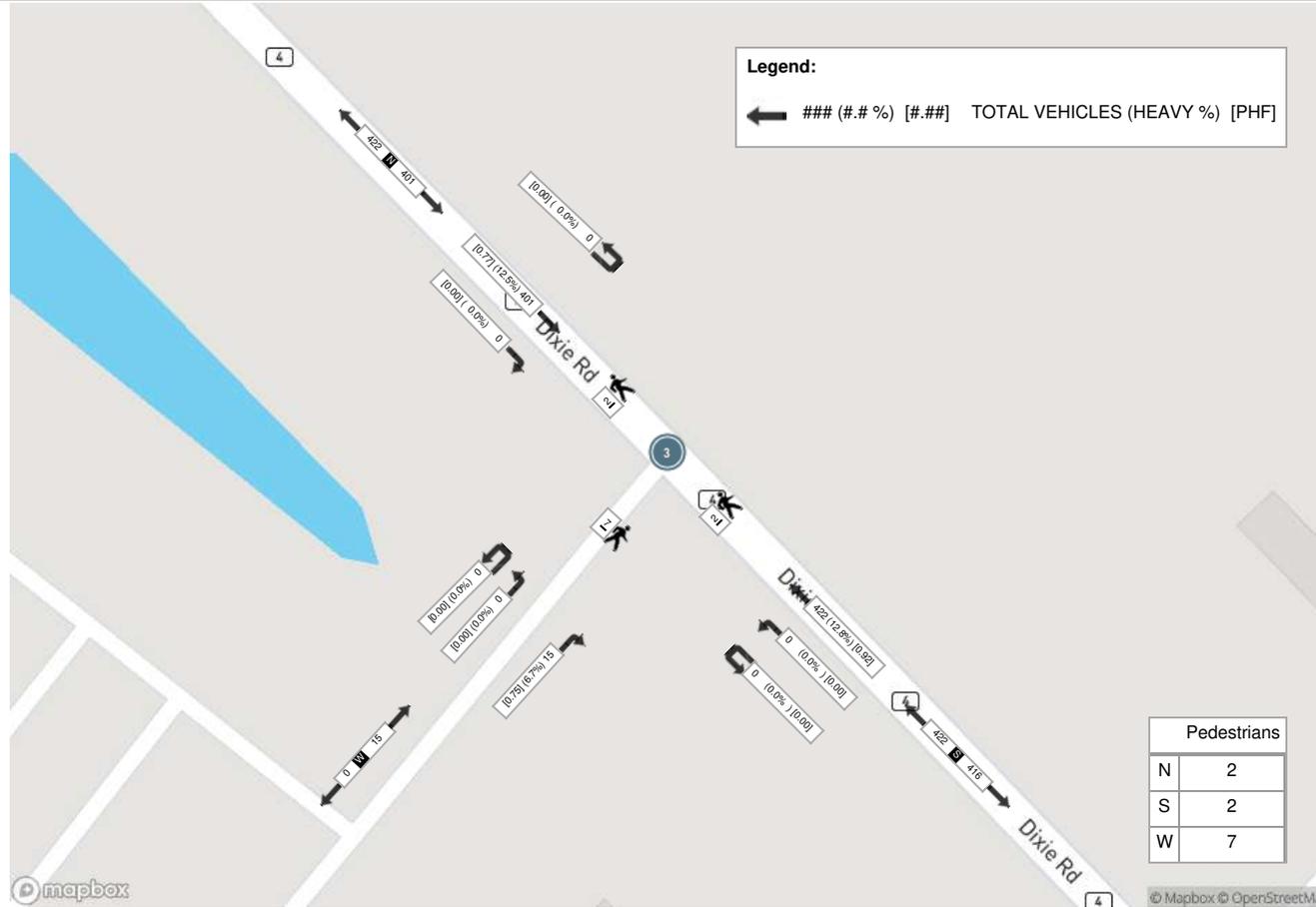
Peak Hour: 05:00 PM - 06:00 PM Weather: Few Clouds (7.51 °C)

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

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

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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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%	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 %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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

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%	6.1%	3.8%	30.9%	0.3%	0.3%	35.3%	35.3%	8.6%	3.1%	2.3%	0.1%	14.1%	14.1%	3%	32.5%	8.9%	0%	44.4%	44.4%	-
PHF	0.5	0.8	0.63	0	0.8	0.8	0.77	0.93	0.42	0.42	0.91	0.91	0.93	0.6	0.83	0.25	0.92	0.92	0.81	0.95	0.86	0	0.95	0.95	-
Heavy	0	0	1	0	1	1	5	150	0	0	155	155	7	2	1	0	10	10	2	127	11	0	140	140	-
Heavy %	0%	0%	2.1%	0%	1%	1%	7.7%	28.3%	0%	0%	25.6%	25.6%	4.7%	3.8%	2.5%	0%	4.1%	4.1%	3.8%	22.8%	7.2%	0%	18.4%	18.4%	-
Lights	12	45	47	0	104	104	60	380	5	5	450	450	141	51	39	1	232	232	50	430	141	0	621	621	-
Lights %	100%	100%	97.9%	0%	99%	99%	92.3%	71.7%	100%	100%	74.4%	74.4%	95.3%	96.2%	97.5%	100%	95.9%	95.9%	96.2%	77.2%	92.8%	0%	81.6%	81.6%	-
Single-Unit Trucks	0	0	0	0	0	0	4	60	0	0	64	64	5	1	0	0	6	6	1	39	7	0	47	47	-
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	6.2%	11.3%	0%	0%	10.6%	10.6%	3.4%	1.9%	0%	0%	2.5%	2.5%	1.9%	7%	4.6%	0%	6.2%	6.2%	-
Buses	0	0	1	0	1	1	0	16	0	0	16	16	0	0	1	0	1	1	0	4	3	0	7	7	-
Buses %	0%	0%	2.1%	0%	1%	1%	0%	3%	0%	0%	2.6%	2.6%	0%	0%	2.5%	0%	0.4%	0.4%	0%	0.7%	2%	0%	0.9%	0.9%	-
Articulated Trucks	0	0	0	0	0	0	1	74	0	0	75	75	2	1	0	0	3	3	1	84	1	0	86	86	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	1.5%	14%	0%	0%	12.4%	12.4%	1.4%	1.9%	0%	0%	1.2%	1.2%	1.9%	15.1%	0.7%	0%	11.3%	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%	-	-

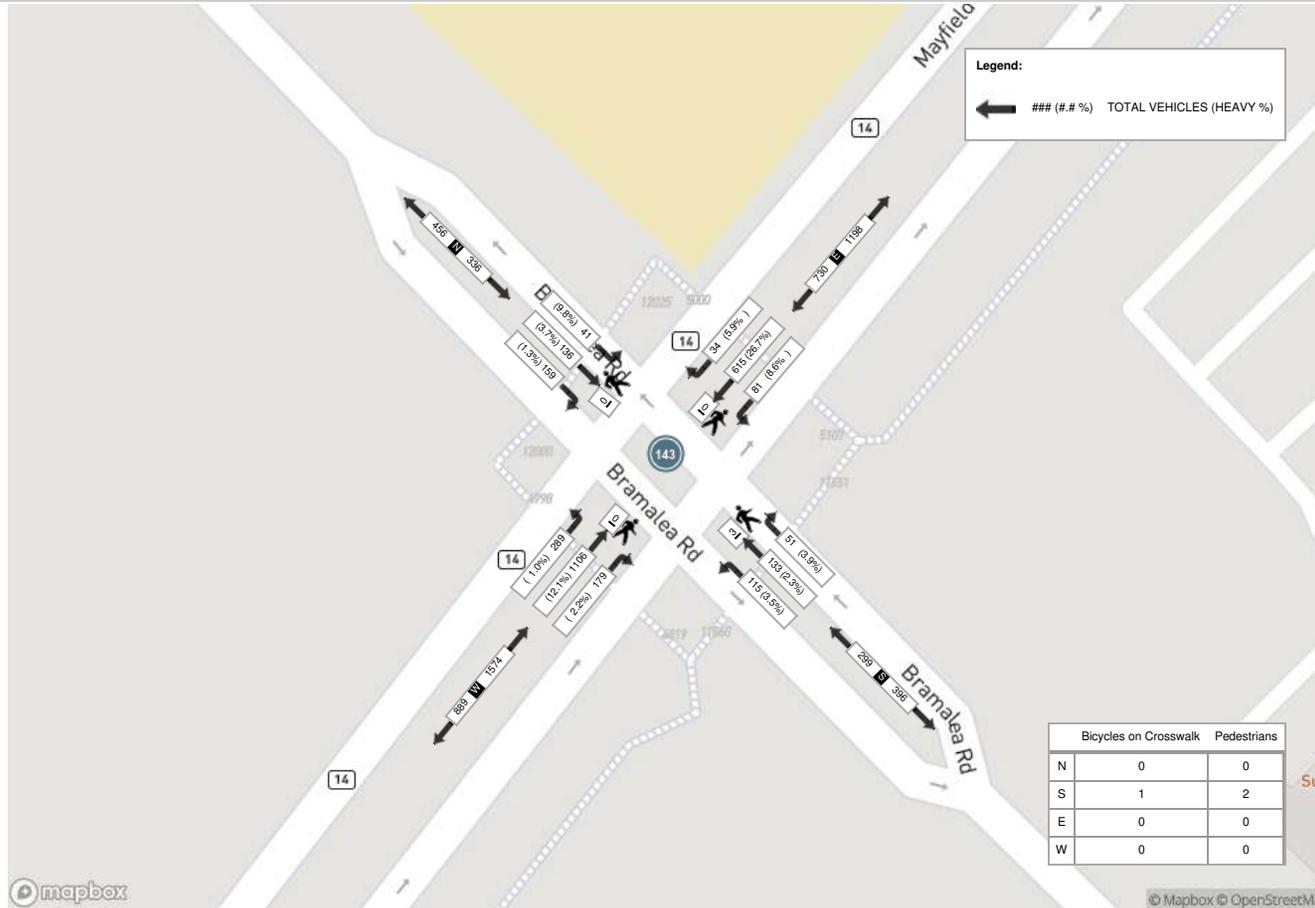


Turning Movement Count
 Location Name: MAYFIELD RD & BRAMALEA ROAD
 Date: Wed, Jun 01, 2022 Deployment Lead: Tasos Issaakidis

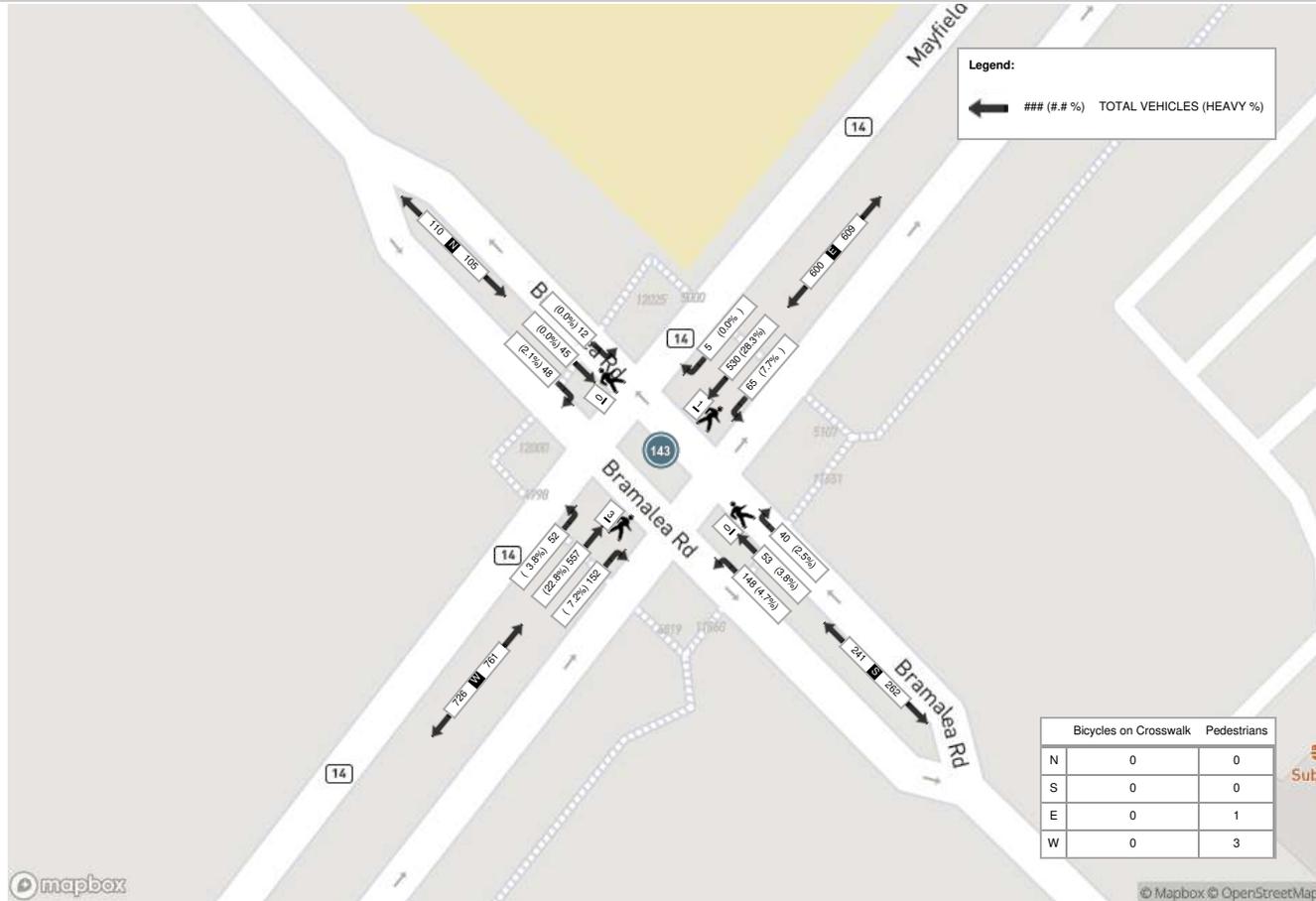
Peak Hour: 04:45 PM - 05:45 PM Weather: Broken Clouds (24.05 °C)

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%	-	-	-	-	-	

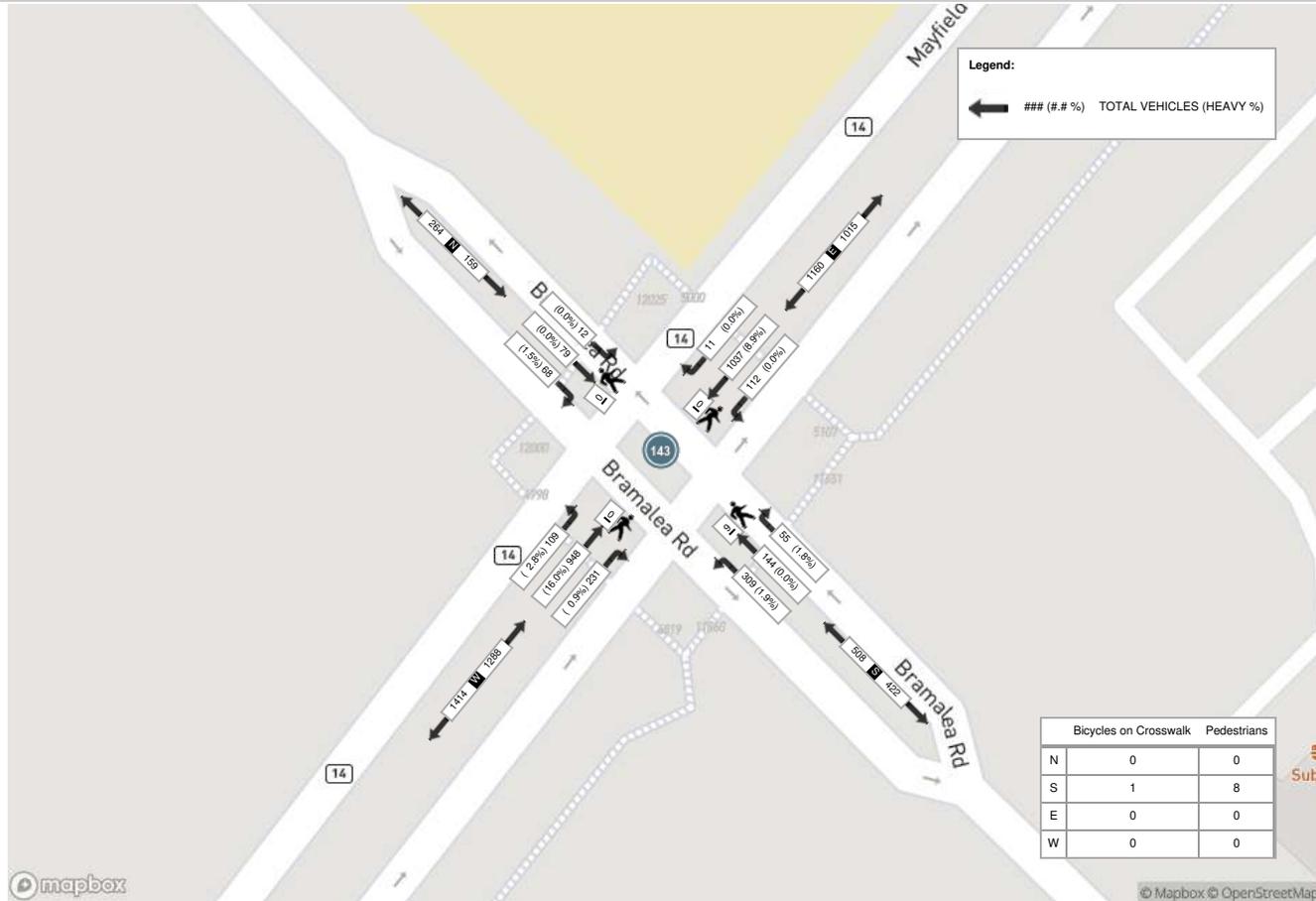
Peak Hour: 07:30 AM - 08:30 AM Weather: Broken Clouds (23.15 °C)



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)

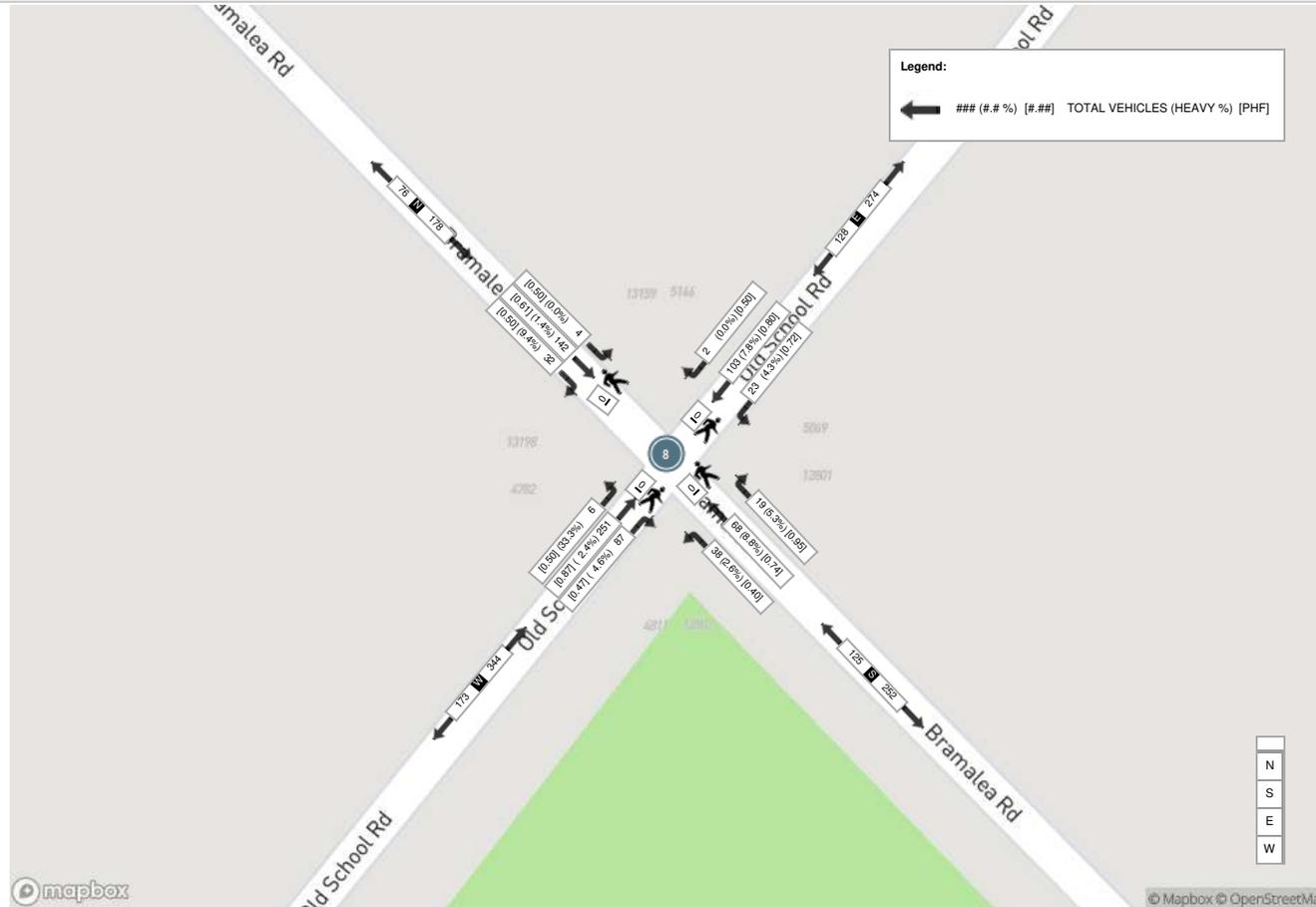
Start Time	N Approach BRAMALEA RD						E Approach OLD SCHOOL RD						S Approach BRAMALEA RD						W Approach OLD SCHOOL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	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%	-	-	-	-	%	-	-	-	-	%	-	-	-	-	-	%	-	-	-	-	-	%	-	-	-



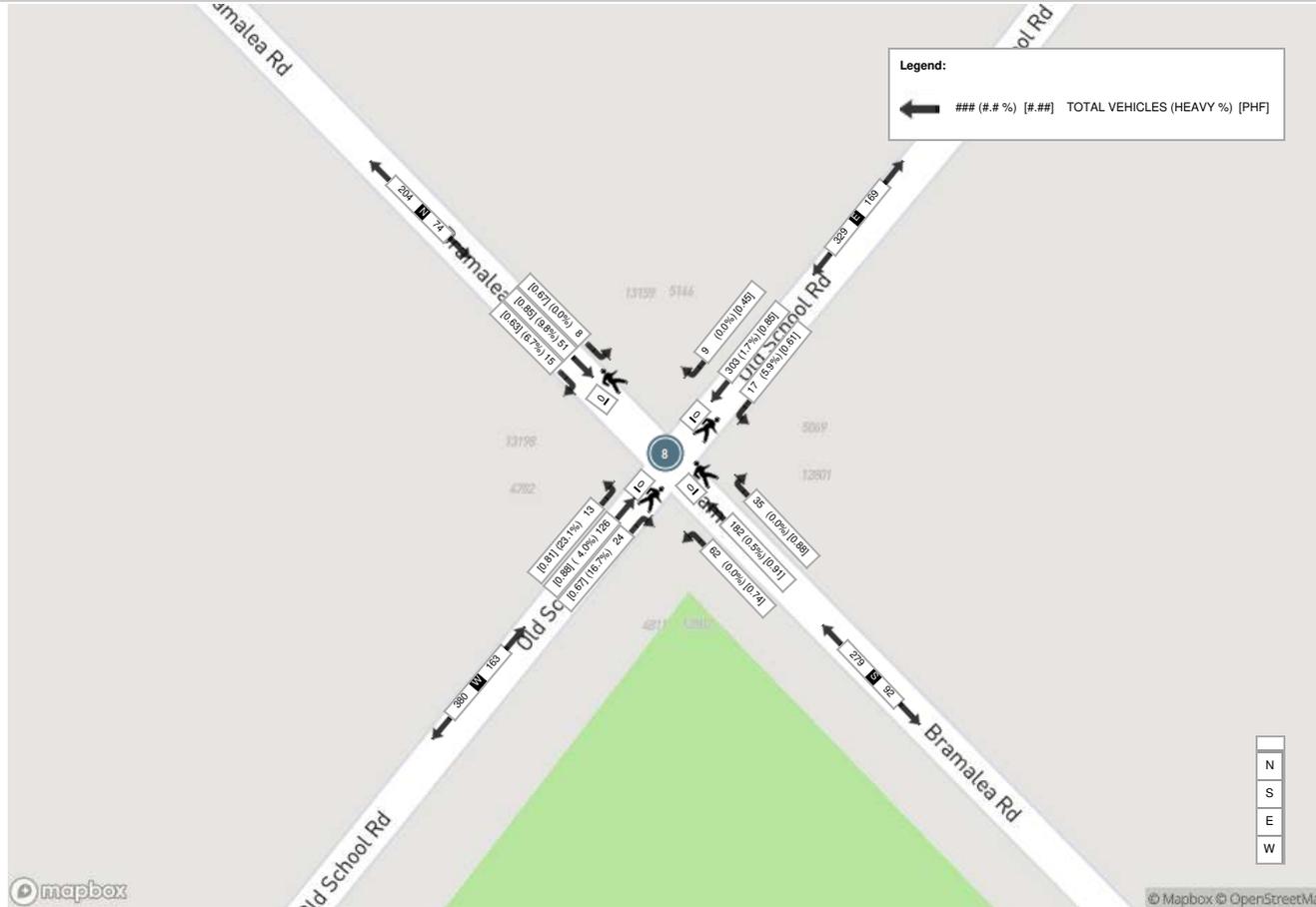
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (7.51 °C)

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 C: Signal Timing Plans

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
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	TIME (M-F)	PEAK	CYCLE LENGTH (s)	OFFSET (s)
No	07:00 - 09:00	AM	120	44
Semi-Actuated Mode	FREE	OFF	0	0
Yes	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		TIME (M-F)	PEAK	CYCLE LENGTH (s)	OFFSET (s)
No		06:00 - 09:00	AM	135	0
Semi-Actuated Mode		09:00 - 14:30	OFF	115	0
Yes		14:30 - 19:00	PM	135	16

APPENDIX D: Signal Warrant

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		
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Signal Justification 1:					Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

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		
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
2A	480	720	900	900	1,480	1,705	155	1,040	875	1,470	1,735	1,775		
	COMPLIANCE %				100	100	17	100	97	100	100	100	714	89
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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Signal Justification 2:					Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

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 <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>		

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
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 %	

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		
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
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	200	25
	COMPLIANCE %				25	25	25	25	25	25	25	25		
Free Flow					Both 1A and 1B 100% Fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Signal Justification 1:					Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

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		
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
2A	480	720	900	900	870	870	870	870	870	870	870	870	773	97
	COMPLIANCE %				97	97	97	97	97	97	97	97		
2B	50	75	75	75	85	85	85	85	85	85	85	85	800	100
	COMPLIANCE %				100	100	100	100	100	100	100	100		
Free Flow					Both 2A and 2B 100% Fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Signal Justification 2:					Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

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 <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>		

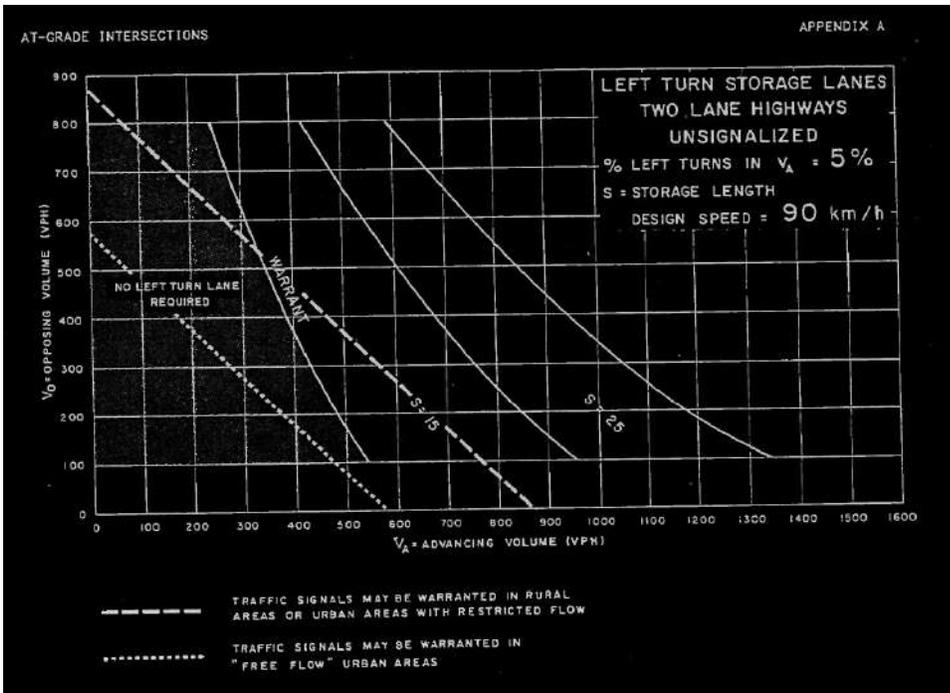
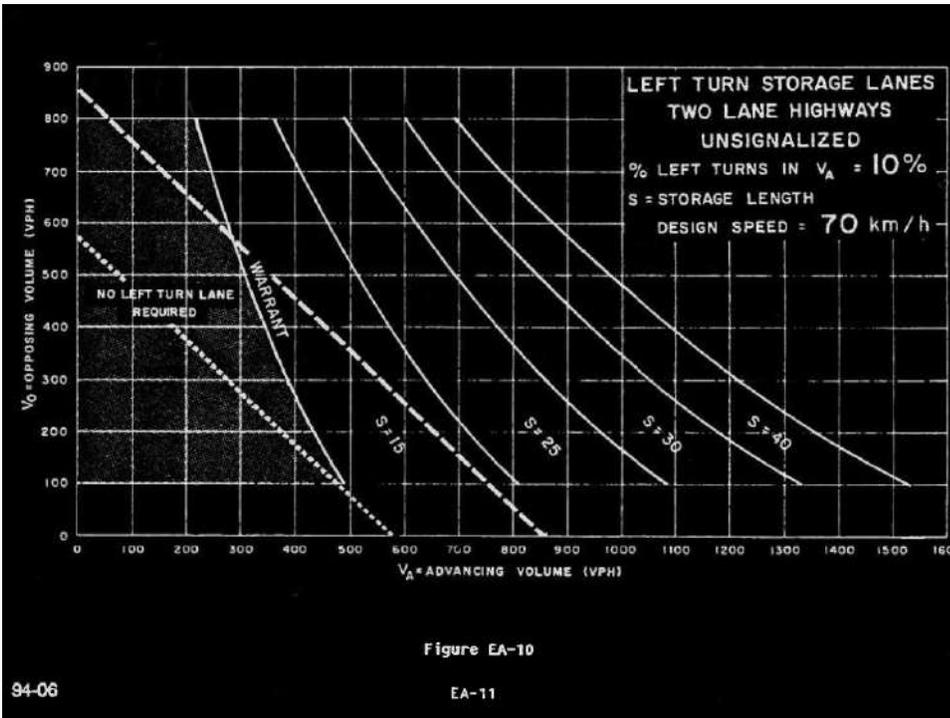
Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
Justification 4	7:00	870	30	247	12 %	12 %
	8:00	870	30	247	12 %	
	9:00	870	30	247	12 %	
	10:00	870	30	247	12 %	

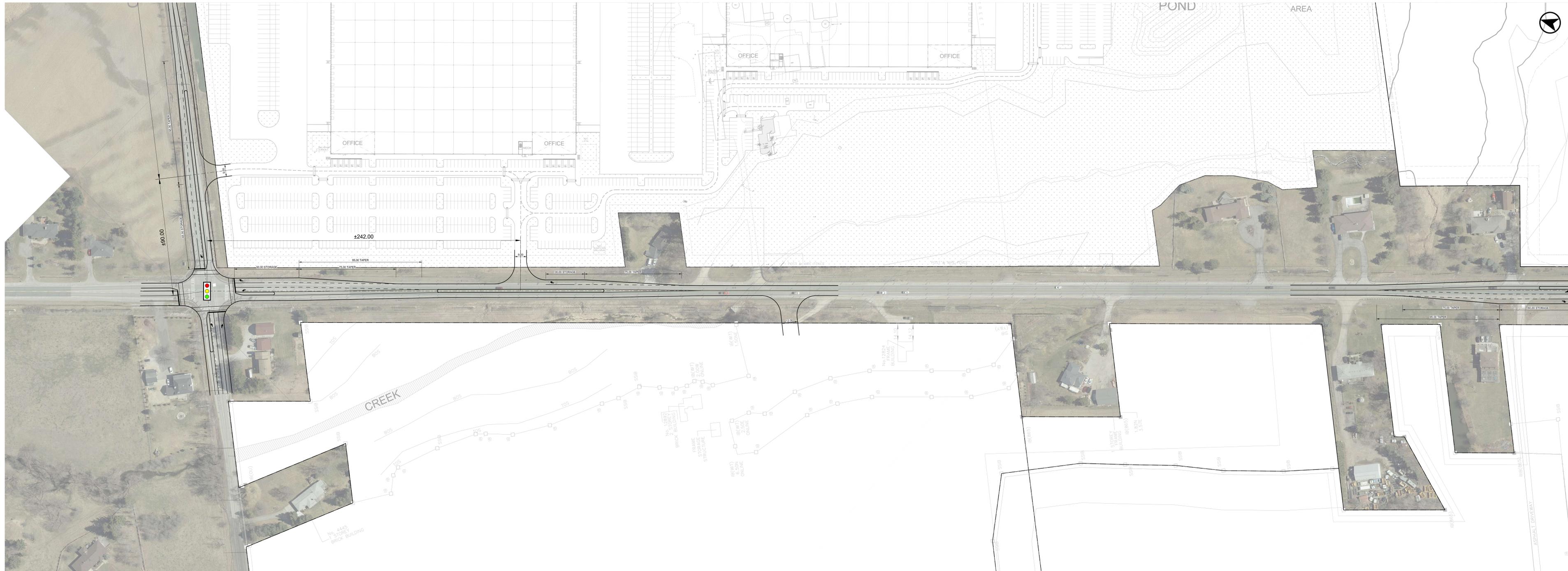
**APPENDIX E:
Lane Warrants**

Volumes

	VA	VL	VO	%	Design Speed	
					60	70
					Future Total 2026	
Int 10 AM	695	50	685	5%	90 NA	0
int 10 PM	730	15	640	0%	90	0
Int 13 AM	295	30	410	10%	70 NA	0
Int 13 PM	440	0	265	0%	70	0
					Future Total 2031	
Int 13 AM	310	30	440	10%	70 NA	0
Int 13 PM	230	0	115	0%	70	0



APPENDIX F
Functional Design Plans



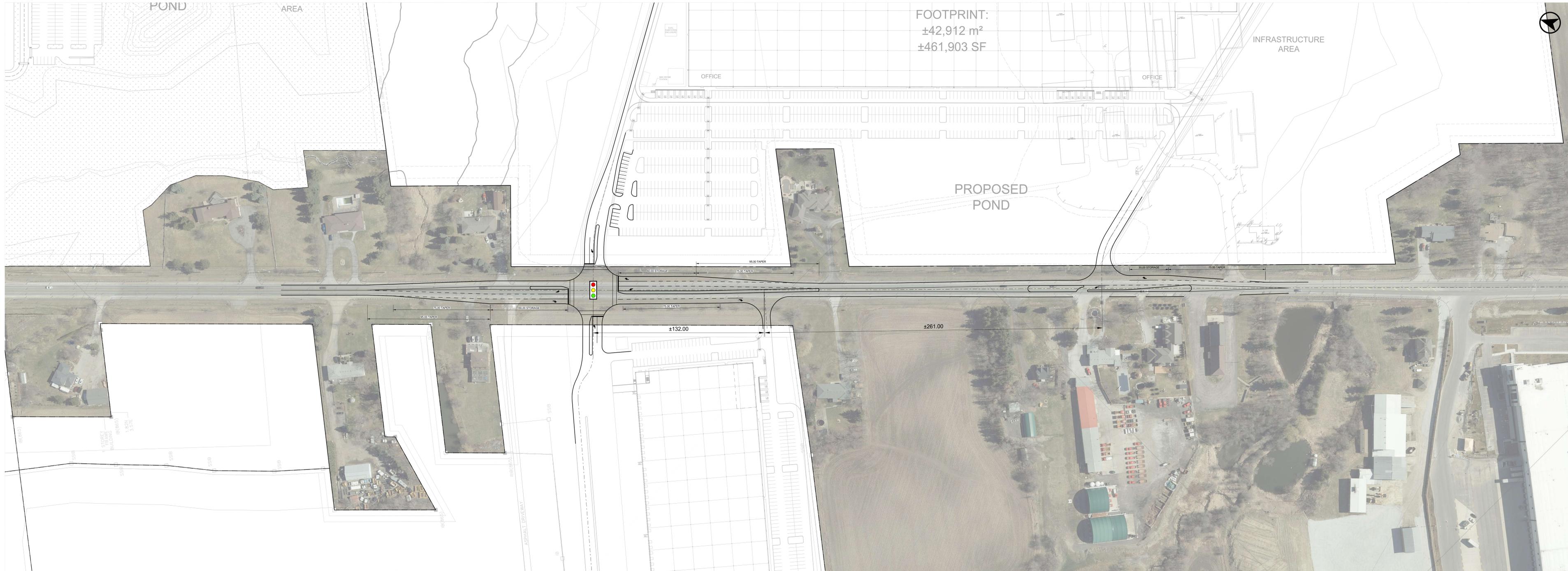
02	12-12-23	MSB	ISSUED FOR SUBMISSION
01	11-28-22	MSB	ISSUED FOR TEAM REVIEW
00	11-24-22	MSB	ISSUED FOR TEAM REVIEW



12489, 12861 & 12892 DIXIE ROAD

FUNCTIONAL ROAD PLAN
DIXIE ROAD - INTERIM CONDITION

Date: NOVEMBER 24, 2023
 Project No.: 7843-21
 Scale: 1:750



FOOTPRINT:
 ±42,912 m²
 ±461,903 SF



02	12-12-23	MSB	ISSUED FOR SUBMISSION
01	11-28-22	MSB	ISSUED FOR TEAM REVIEW
00	11-24-22	MSB	ISSUED FOR TEAM REVIEW



12489, 12861 & 12892 DIXIE ROAD

FUNCTIONAL ROAD PLAN
 DIXIE ROAD - INTERIM CONDITION

Date: NOVEMBER 24, 2023
 Project No.: 7843-21
 Scale: 1:750

FD02

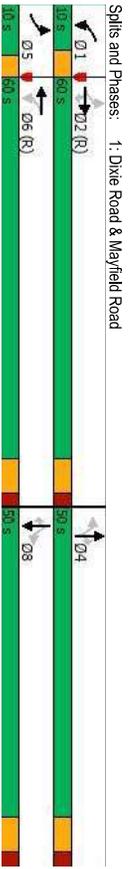
APPENDIX G: Synchro and Simtraffic Worksheets

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)	260	1610	280	60	785	130	110	45	60	230	215
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	2	1	6	4	4	4	8	8	8
Detector Phases	2	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 Spilt (%)	10.0	60.0	60.0	10.0	60.0	50.0	50.0	50.0	50.0	50.0	50.0
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	Lead	Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimizer?	Yes	Yes	Yes	Yes	Yes	Yes	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	0.53	0.26	0.28	0.33	0.96	0.36	0.15	0.35	0.73	0.53
Control Delay	12.4	15.3	2.3	10.5	17.6	113.3	44.0	4.8	45.7	58.8	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
Queue Length 50th (m)	12.4	15.3	2.3	10.5	17.6	113.3	44.0	4.8	45.7	58.8	9.9
Queue Length 95th (m)	18.8	79.2	0.0	3.7	38.8	32.3	24.1	0.0	13.1	54.5	0.0
Internal Link Dist (m)	40.0	120.2	13.7	10.2	57.7	#5816	37.9	5.2	24.5	75.1	20.0
Turn Bay Length (m)	155.0	980.1	115.0	150.0	140.0	844.0	65.0	100.0	481.5	170.0	170.0
Base Capacity (vph)	439	3018	1061	216	2391	261	579	494	329	600	578
Saturation 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	0.53	0.26	0.28	0.33	0.50	0.19	0.09	0.18	0.38	0.37

Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 105
 Offset: 9.5 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



Trial Lands Dixie
 Synchro 11 Report
 EX.svn

HCM Signalized Intersection Capacity Analysis
 1: Dixie Road & Mayfield Road

Existing AM Peak Hour

Movement	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
Ideal Flow (vph/pl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	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
Frt	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	1.00	1.00	0.85	1.00	0.99	1.00	0.85	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00
Satd: Flow (prot)	1322	4856	1537	1539	4516	1653	1614	1257	1270	1671	1227
Flt Permitted	0.31	1.00	1.00	0.13	1.00	0.41	1.00	0.69	1.00	1.00	1.00
Satd: Flow (perm)	428	4856	1537	215	4516	726	1614	1257	917	1671	1227
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
Adj. Flow (vph)	260	1610	280	60	745	130	110	45	60	230	215
RTOR Reduction (vph)	0	0	108	0	4	0	0	37	0	0	175
Lane Group Flow (vph)	260	1610	172	60	781	0	130	110	8	60	230
Confl. Peds. (#/hr)	35%	8%	1%	16%	15%	7%	19%	25%	40%	15%	28%
Heavy Vehicles (%)	5	5	5	5	5	5	5	5	5	5	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	2	1	6	4	4	4	8	8	8
Actuated Green, G (s)	83.6	73.9	73.9	69.7	63.5	22.6	22.6	22.6	22.6	22.6	22.6
Effective Green, g (s)	83.6	73.9	73.9	69.7	63.5	22.6	22.6	22.6	22.6	22.6	22.6
Actuated Q/C Ratio	0.70	0.62	0.62	0.58	0.53	0.19	0.19	0.19	0.19	0.19	0.19
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 Gap Cap (vph)	425	2990	946	193	2389	136	303	236	172	314	231
v/s Ratio Prot	60.09	0.33	0.02	0.17	0.07	0.07	0.07	0.07	0.07	0.14	0.14
v/s Ratio Perm	60.34	0.11	0.16	0.16	0.18	0.01	0.01	0.01	0.01	0.07	0.03
Uniform Delay, d1	0.61	0.54	0.18	0.31	0.33	0.96	0.36	0.04	0.35	0.73	0.18
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	2.6	0.7	0.4	0.9	0.4	63.1	0.7	0.1	1.2	8.5	0.4
Delay (s)	9.9	13.9	10.4	12.0	16.4	111.3	43.2	39.9	43.5	54.4	41.2
Level of Service	A	B	B	B	B	F	D	D	D	D	D
Approach Delay (s)	13.0				16.1				73.7		47.5
Approach LOS	B				B				D		D

Intersection Summary
 HCM 2000 Control Delay: 22.9
 HCM 2000 Level of Service: C
 HCM 2000 Volume to Capacity ratio: 0.70
 Actuated Cycle Length (s): 120.0
 Intersection Capacity Utilization: 79.1%
 ICU Level of Service: D
 Analysis Period (min): 15
 Critical Lane Group: e

Trial Lands Dixie
 Synchro 11 Report
 EX.svn

HCM Unsignalized Intersection Capacity Analysis

Existing AM Peak Hour

5: Dixie Road & Abbotside Wy., Spokane St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	5	0	35	0	0	0	65	295	0	0	475	10
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	Stop	Stop	Stop	Free						
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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)	5	0	35	0	0	0	65	295	0	0	475	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right Turn Flare (Veh)												
Median storage (veh)												
Median Type												
Upstream signal (m)												
PX, platoon unblocked												
VC, conflicting volume	900	900	475	935	910	295	485			295		
WC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCU, unblocked vol	900	900	475	935	910	295	485			295		
IC, single (s)	7.4	6.5	6.5	7.1	6.5	6.2	4.2			4.1		
IC, 2 stage (s)												
IF (s)	3.8	4.0	3.5	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	98	100	94	100	100	100	94			100		
CM capacity (veh/h)	218	260	545	219	257	744	1014			1266		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	40	0	65	295	475	10						
Volume Left	5	0	65	0	0	0						
Volume Right	35	0	0	0	0	10						
ESH	459	1700	1014	1700	1700	1700						
Volume to Capacity	0.09	0.00	0.06	0.17	0.28	0.01						
Queue Length 95th (m)	2.3	0.0	1.6	0.0	0.0	0.0						
Control Delay (s)	13.6	0.0	8.8	0.0	0.0	0.0						
Lane LOS	B	A	A	A	A	A						
Approach Delay (s)	13.6	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											

Tribal Lands Dixie

Synchro 11 Report
EX.syn

HCM Unsignalized Intersection Capacity Analysis

Existing AM Peak Hour

7: Dixie Road & UPS Facility Access/Construction Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	5	0	5	0	0	0	60	200	0	0	425	15
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	Stop	Stop	Stop	Free						
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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)	0	0	5	0	0	0	60	200	0	0	425	15
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right Turn Flare (Veh)												
Median storage (veh)												
Median Type												
Upstream signal (m)												
PX, platoon unblocked												
VC, conflicting volume	752	752	432	758	760	200	440			200		
WC1, stage 1 conf vol												
VC2, stage 2 conf vol												
VCU, unblocked vol	752	752	432	758	760	200	440			200		
IC, single (s)	7.1	6.5	6.8	7.1	6.5	6.2	4.1			4.1		
IC, 2 stage (s)												
IF (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	95			100		
CM capacity (veh/h)	315	321	517	307	317	841	1104			1372		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1							
Volume Total	0	5	0	260	440							
Volume Left	0	0	0	60	0							
Volume Right	0	5	0	0	15							
ESH	1700	517	1700	1104	1700							
Volume to Capacity	0.00	0.01	0.00	0.05	0.26							
Queue Length 95th (m)	0.0	0.2	0.0	1.4	0.0							
Control Delay (s)	0.0	12.0	0.0	2.3	0.0							
Lane LOS	A	B	A	A	A							
Approach Delay (s)	12.0		0.0	2.3	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											

Tribal Lands Dixie

Synchro 11 Report
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Queues
12: Dixie Road

Existing AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	4	3	3	3	3	3	3	3
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)	40	345	30	140	10	165	20	405
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	6	6
Detector Phases	4	4	8	8	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Minimum 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 Optimizer?	None	None	None	None	C-Min	C-Min	C-Min	C-Min
Recall Mode	0.13	0.72	0.16	0.31	0.02	0.18	0.03	0.41
v/c Ratio	18.6	31.3	19.9	20.3	9.5	8.9	9.3	11.4
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	18.6	31.3	19.9	20.3	9.5	8.9	9.3	11.4
Total Delay	4.2	42.0	3.2	14.8	0.6	9.3	1.1	28.0
Queue Length 80th (m)	9.9	60.3	8.5	25.0	3.1	22.9	5.0	58.9
Queue Length 95th (m)	118.0	65.0	135.5	2407.1	65.0	261.5	65.0	982
Internal Link Dist (m)	409	622	243	598	448	933	629	982
Turn Bay Length (m)	0	0	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0	0	0
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	0.10	0.55	0.12	0.23	0.02	0.18	0.03	0.41

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2:NBLT and 6:SBLT, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 12: Dixie Road

Trial/Lands Dixie

Synchro 11 Report
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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	4	3	3	3	3	3	3	3	3	3	3	3
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	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	1.00
Flt	1.00	0.98	1.00	1.00	0.99	1.00	0.95	1.00	0.98	1.00	0.98	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1719	1820	1805	1753	1805	1753	1556	1660	1641	1746	1641	1746
Flt Permitted	0.67	1.00	0.38	1.00	0.38	1.00	0.49	1.00	0.65	1.00	0.65	1.00
Satd. Flow (perm)	1208	1820	718	1753	802	1660	1127	1746	1127	1746	1127	1746
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)	40	310	35	30	130	10	10	145	20	20	345	60
RTOR Reduction (vph)	0	7	0	4	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	40	338	0	30	136	0	10	159	0	20	397	0
Heavy Vehicles (%)	5%	1%	19%	0%	7%	10%	18%	12%	15%	10%	7%	3%
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	6	6	6	6	6	6
Permitted Phases	18.2	18.2	18.2	18.2	18.2	18.2	38.8	38.8	38.8	38.8	38.8	38.8
Actuated Green, G (s)	18.2	18.2	18.2	18.2	18.2	18.2	38.8	38.8	38.8	38.8	38.8	38.8
Effective Green, g (s)	0.26	0.26	0.26	0.26	0.26	0.26	0.55	0.55	0.55	0.55	0.55	0.55
Actuated g/C Ratio	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Clearance Time (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
Vehicle Extension (s)	314	473	186	455	967	624	967	624	967	624	967	624
Lane Gp Cap (vph)	60.19	473	0.08	455	967	624	967	624	967	624	967	624
v/s Ratio Prot	0.03	0.72	0.04	0.16	0.30	0.02	0.17	0.02	0.17	0.02	0.17	0.02
v/c Ratio	19.8	23.5	20.0	20.8	7.0	7.7	7.1	9.0	7.1	9.0	7.1	9.0
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.2	5.1	0.4	0.4	0.4	0.1	0.4	0.1	0.4	0.1	0.4	0.1
Incremental Delay, d2	20.0	28.6	20.4	21.1	7.1	8.1	7.2	10.3	7.2	10.3	7.2	10.3
Level of Service	C	C	C	C	C	A	A	B	A	A	B	B
Approach Delay (s)	27.7	27.7	21.0	21.0	8.0	8.0	10.1	10.1	8.0	10.1	10.1	10.1
Approach LOS	C	C	C	C	A	A	B	B	A	A	B	B

Intersection Summary

HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
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		

e Critical Lane Group

Trial/Lands Dixie

Synchro 11 Report
EX.syn

HCM Unsignalized Intersection Capacity Analysis

17: Bramalea Road & Old School Road

Existing AM Peak Hour

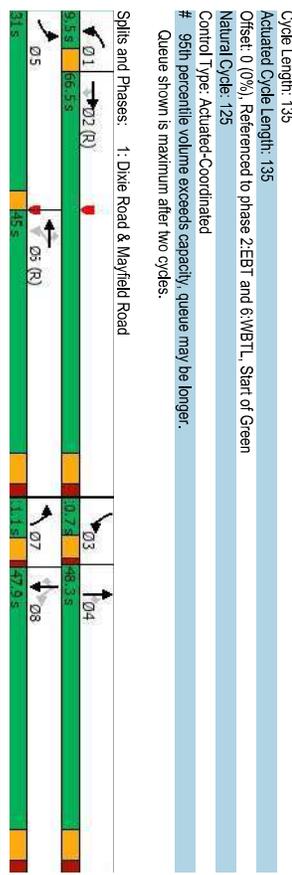
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	0	0	0	0								
Volume Left (vph)	0	0	0	0								
Volume Right (vph)	0	0	0	0								
Head (s)	0.00	0.00	0.00	0.00								
Departure Headway (s)	3.9	3.9	3.9	3.9								
Degree Utilization, x	0.00	0.00	0.00	0.00								
Capacity (veh/h)	917	917	917	917								
Control Delay (s)	6.9	6.9	6.9	6.9								
Approach Delay (s)	0.0	0.0	0.0	0.0								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	0.0											
Level of Service	A											
Intersection Capacity Utilization	0.0%											
Analysis Period (min)	15											

Queues

1: Dixie Road & Mayfield Road

Future Background (NEN) 2028 AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		RT	RT									
Traffic Volume (vph)	555	1820	280	60	845	140	130	215	60	105	265	275
Future Volume (vph)	555	1820	280	60	845	140	130	215	60	105	265	275
Lane Group Flow (vph)	555	1820	280	60	845	140	130	215	60	105	265	275
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	1	6	6	7	4	4	3	8	8
Permitted Phases	5	2	2	1	6	6	7	4	4	3	8	8
Detector Phases	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	9.5	44.9	44.9	9.5	44.9	44.9	9.5	47.9	47.9	9.5	47.9	47.9
Total Split (s)	31.0	66.5	66.5	9.5	45.0	45.0	11.1	48.3	48.3	10.7	47.9	47.9
Total Split (%)	23.0%	49.3%	49.3%	7.0%	33.3%	33.3%	8.2%	35.8%	35.8%	7.9%	35.5%	35.5%
Yellow Time (s)	3.0	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6
All-Red Time (s)	0.0	2.3	2.3	0.0	2.3	2.3	1.0	2.3	2.3	1.0	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	0.0
Lost Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	4.5	6.9	6.9	4.5	6.9	6.9
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	C-Min	C-Min	None	C-Min	None
v/c Ratio	0.80	0.62	0.27	0.36	0.46	0.21	0.55	0.53	0.23	0.49	0.66	0.65
Control Delay	57.3	19.5	2.3	19.4	31.8	5.4	69.5	60.2	2.0	50.5	64.5	13.2
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	57.3	19.5	2.3	19.4	31.8	5.4	69.5	60.2	2.0	50.5	64.5	13.2
Queue Length 50th (m)	75.4	120.9	0.0	5.2	65.0	0.0	18.1	30.7	0.0	23.8	38.0	26.5
Queue Length 95th (m)	93.9	145.7	13.0	10.1	82.9	14.7	43.5	42.0	0.0	41.3	51.2	28.5
Internal Link Dist (m)	980.1			272.1			844.0				481.5	
Turn Bay Length (m)	155.0	115.0	150.0		65.0	140.0		65.0	100.0		170.0	
Base Capacity (vph)	693	2939	1044	167	1830	656	235	1027	487	213	989	650
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	0.80	0.62	0.27	0.36	0.46	0.21	0.55	0.21	0.12	0.49	0.27	0.42
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT_L, Start of Green												
Natural Cycle: 125												
Control Type: Actuated-Coordinated												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												



HCM Signalized Intersection Capacity Analysis
 1: Dixie Road & Mayfield Road
 Future Background (NEN) 2028 AM Peak Hour

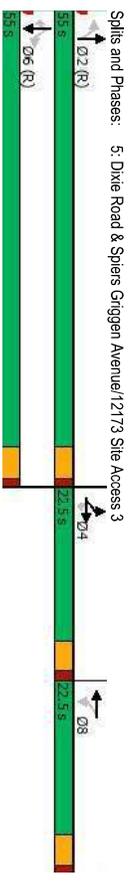
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	555	1820	280	60	845	140	130	215	60	105	265	275
Future Volume (vph)	555	1820	280	60	845	140	130	215	60	105	265	275
Ideal Flow (vph/pl)	1900	1900	1900	1900	1900	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	4.5	6.9	6.9	4.5	6.9	6.9
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.95	1.00	0.98
Frbp. 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
Frbp. 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
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.85	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	0.85
Satd. Flow (prot)	2815	4902	1554	1539	4961	1426	3236	3349	1319	1350	3259	1510
Flt Permitted	0.95	1.00	1.00	0.12	1.00	0.95	1.00	1.00	0.56	1.00	1.00	1.00
Satd. Flow (perm)	2815	4902	1554	186	4561	1426	3236	3349	1319	799	3259	1510
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)	555	1820	280	60	845	140	130	215	60	105	265	275
RTOR Reduction (vph)	0	0	114	0	0	84	0	0	53	0	0	241
Lane Group Flow (vph)	555	1820	186	60	845	56	130	215	7	105	265	34
Confl. Peds. (#/hr)	23%	7%	1%	16%	15%	12%	7%	9%	19%	32%	12%	4%
Heavy Vehicles (%)	23%	7%	1%	16%	15%	12%	7%	9%	19%	32%	12%	4%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	1	6	6	7	4	4	8	8	8
Permitted Green, G (s)	33.1	80.2	80.2	60.8	54.2	54.2	9.8	16.2	16.2	26.8	16.6	16.6
Effective Green, g (s)	33.1	80.2	80.2	60.8	54.2	54.2	9.8	16.2	16.2	26.8	16.6	16.6
Actuated Q/C Ratio	0.25	0.59	0.59	0.45	0.40	0.40	0.07	0.12	0.12	0.20	0.12	0.12
Clearance Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	4.5	6.9	6.9	4.5	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	3.0
Lane Gap Cap (vph)	690	2912	923	149	1831	572	234	401	158	200	400	185
v/s Ratio Prot	60.20	60.37	0.11	0.16	0.04	0.04	0.06	0.06	0.04	60.08	0.02	0.02
v/s Ratio Perm	0.80	0.62	0.18	0.40	0.46	0.10	0.56	0.54	0.05	0.53	0.66	0.18
Uniform Delay, d1	47.9	17.7	12.5	21.2	29.7	25.2	60.5	55.9	52.6	47.0	56.5	53.1
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	6.8	1.0	0.4	1.8	0.8	0.3	2.8	1.4	0.1	2.5	4.1	0.5
Level of Service	D	B	B	C	C	C	E	E	D	D	E	D
Approach Delay (s)	25.6	25.6	25.6	29.4	29.4	29.4	58.5	58.5	58.5	58.5	58.5	58.5
Approach LOS	C	C	C	C	C	C	E	E	D	D	E	E
Intersection Summary												
HCM 2000 Control Delay	33.4			HCM 2000 Level of Service			C					
HCM 2000 Volume to Capacity ratio	0.69			Sum of lost time (s)			21.8					
Actuated Cycle Length (s)	135.0			ICU Level of Service			D					
Intersection Capacity Utilization	74.6%			Analysis Period (min)			15					
Critical Lane Group												

Trial/Lands Dixie

Synchro 11 Report
 FT_2028.syn

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

Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Traffic Volume (vph)	5	35	35	0	65	730	15	575	10
Future Volume (vph)	5	35	35	0	65	730	15	575	10
Lane Group Flow (vph)	5	35	35	0	65	730	15	575	10
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	2	2	6	6	6
Permitted Phases	4	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase	4	4	8	8	2	2	6	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag									
Lead-Lag Optimizer?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/s Ratio	0.06	0.08	0.41	0.01	0.12	0.53	0.43	0.01	0.01
Control Delay	45.6	0.3	55.5	0.0	5.8	8.3	6.8	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	0.3	55.5	0.0	5.8	8.3	6.8	0.0	0.0
Queue Length 50th (m)	1.0	0.0	6.9	0.0	3.6	66.7	45.3	0.0	0.0
Queue Length 95th (m)	4.7	0.0	16.4	0.0	10.5	125.0	83.1	0.0	0.0
Internal Link Dist (m)					96.6	481.5	358.1		
Turn Bay Length (m)					95.0		50.0		
Base Capacity (vph)	241	562	163	617	529	1445	1377	1308	
Saturation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/s Ratio	0.02	0.06	0.21	0.01	0.12	0.53	0.43	0.01	0.01
Intersection Summary									
Cycle Length: 100									
Actuated Cycle Length: 100									
Offset: 0 (0%), Referenced to phase 2NBT, Start of Green									
Natural Cycle: 90									
Control Type: Actuated-Coordinated									
m Volume for 95th percentile queue is metered by upstream signal.									



Trial/Lands Dixie

Synchro 11 Report
 FT_2028.syn

HCM Signalized Intersection Capacity Analysis

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	5	0	35	35	0	5	65	730	35	15	575	10
Traffic Volume (vph)	5	0	35	35	0	5	65	730	35	15	575	10
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vph/pl)	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Lane Width	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1.00
Frbp. 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	0.85	1.00	0.85	1.00	0.99	1.00	0.99	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1342	1278	1137	1633	1552	1780	1552	1780	1733	1597	1597	1597
Flt Permitted	0.95	1.00	0.76	1.00	0.40	1.00	0.40	1.00	0.98	1.00	0.98	1.00
Satd. Flow (perm)	1342	1278	906	1633	652	1780	652	1780	1698	1597	1597	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)	5	0	35	35	0	5	65	730	35	15	575	10
RTOR Reduction (vph)	0	0	34	0	5	0	1	0	0	0	0	2
Lane Group Flow (vph)	5	0	1	35	0	0	65	764	0	0	590	8
Cont. Peds. (#/hr)	33%	0%	25%	57%	0%	0%	15%	6%	28%	0%	11%	0%
Heavy Vehicles (%)	33%	0%	25%	57%	0%	0%	15%	6%	28%	0%	11%	0%
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6
Permitted Green, G (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8
Effective Green, g (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8
Actuated Q/C Ratio	0.04	0.04	0.07	0.07	0.07	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	50	48	62	112	494	1349	1287	1210	1287	1210	1210	1210
v/s Ratio Prot	60.00	0.00	60.04	0.00	0.10	60.43	0.35	0.00	0.35	0.00	0.00	0.00
v/s Ratio Perm	0.10	0.03	0.56	0.00	0.13	0.57	0.46	0.01	0.46	0.01	0.01	0.01
Uniform Delay, d1	46.4	46.3	45.1	43.3	3.3	5.1	4.5	2.9	4.5	2.9	2.9	2.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	0.98	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.2	11.2	0.0	0.6	1.7	1.1	0.0	1.1	0.0	0.0	0.0
Delay (s)	47.3	46.6	56.3	43.4	3.8	6.9	5.5	3.0	5.5	3.0	3.0	3.0
Level of Service	D	D	E	D	A	A	A	A	A	A	A	A
Approach Delay (s)	46.7	46.7	54.7	46.7	46.7	54.7	46.7	46.7	54.7	46.7	46.7	46.7
Approach LOS	D	D	D	D	D	A	A	A	A	A	A	A
Intersection Summary												
HCM 2000 Control Delay	8.5		HCM 2000 Level of Service		A							
HCM 2000 Volume to Capacity ratio	0.55		Sum of lost time (s)		13.5							
Actuated Cycle Length (s)	100.0		ICU Level of Service		C							
Intersection Capacity Utilization	70.1%		Analysis Period (min)		15							
e Critical Lane Group												

Trial/Lands Dixie

Queues

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

Lane Group	EBR	NBL	NBT	SBL	SBT	Ø8
Lane Configurations	5	60	620	15	625	
Traffic Volume (vph)	5	60	620	15	625	
Future Volume (vph)	5	60	620	15	625	
Lane Group Flow (vph)	5	0	690	0	655	
Turn Type	Perm	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	8	
Permitted Phases	4	2	2	6	6	
Detector Phase	4	2	2	6	6	
Switch Phase	5.0	5.0	5.0	5.0	5.0	
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	
Minimum Split (s)	22.5	77.5	77.5	77.5	22.5	
Total Split (s)	22.5	77.5	77.5	77.5	22.5	
Total Split (%)	22.5%	77.5%	77.5%	77.5%	23%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimizer?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
v/s Ratio	0.01	0.44	0.44	0.39	0.39	
Control Delay	0.0	0.9	0.9	1.2	1.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	0.0	0.9	0.9	1.2	1.2	
Queue Length 50th (m)	0.0	0.0	0.0	0.0	0.0	
Queue Length 95th (m)	0.0	9.7	9.7	29.0	29.0	
Internal Link Dist (m)		358.1	696.2			
Turn Bay Length (m)						
Base Capacity (vph)	474	1579	1684			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/s Ratio	0.01	0.44	0.39			
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 0 (0%), Referenced to phase 2:NBLT and 6:SBTL, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						
Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1						
Ø2 (R)	Ø4	Ø8	Ø8	Ø8	Ø8	
77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	
Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)	
77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	

Trial/Lands Dixie

HCM Signalized Intersection Capacity Analysis
 7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background (NEN) 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	620	10	15	625	15
Future Volume (vph)	0	0	5	0	0	0	60	620	10	15	625	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	3.5	3.7	3.5
Total Lost time (s)			4.5				4.5			4.5		4.5
Lane Util. Factor			1.00				1.00			1.00		1.00
Flt Protected			0.85				1.00			1.00		1.00
Satd. Flow (prot)			998				1789			1762		1762
Flt Permitted			1.00				0.91			0.98		0.98
Satd. Flow (perm)			998				1626			1733		1733
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	620	10	15	625	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	690	0	0	695	0	0
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	7%	0%	9%	0%	0%
Turn Type	Prot	Perm	Perm	Perm	Perm	Perm	NA	NA	Perm	Perm	NA	Perm
Protected Phases	4			8			8	2		6		6
Actuated Green, G (s)			1.1				89.9			89.9		89.9
Effective Green, g (s)			1.1				89.9			89.9		89.9
Actuated Q/C Ratio			0.01				0.90			0.90		0.90
Clearance Time (s)			4.5				4.5			4.5		4.5
Vehicle Extension (s)			3.0				3.0			3.0		3.0
Lane Grp Cap (vph)			10				1461			1557		1557
v/s Ratio Prot												
v/s Ratio Perm			c0.00				c0.42			0.38		0.38
v/c Ratio			0.01				0.47			0.42		0.42
Uniform Delay, d1			48.9				0.9			0.8		0.8
Progression Factor			1.00				0.29			1.00		1.00
Incremental Delay, d2			0.2				0.9			0.8		0.8
Delay (s)			49.1				1.2			1.7		1.7
Level of Service			D				A			A		A
Approach Delay (s)			49.1				0.0			1.2		1.7
Approach LOS			D				A			A		A
Intersection Summary												
HCM 2000 Control Delay	1.6			HCM 2000 Level of Service			A					
HCM 2000 Volume to Capacity ratio	0.47			Sum of lost time (s)			9.0					
Actuated Cycle Length (s)	100.0			ICU Level of Service			C					
Intersection Capacity Utilization	67.6%			Analysis Period (min)			15					
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 8: Dixie Road & 12489 Site Access 1 Future Background (NEN) 2028 AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←	↔	→	↔	←	↔
Traffic Volume (veh/h)	0	0	535	60	0	625
Future Volume (veh/h)	0	0	535	60	0	625
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	535	60	0	625
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)	0.96			394		
PX, platoon unblocked	1160			595		
WC, conflicting volume	535			595		
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol	1146	535			595	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
FF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
CM capacity (veh/h)	214	549			991	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	535	60	625		
Volume Left	0	0	0	0		
Volume Right	0	0	60	0		
SSH	1700	1700	1700	991		
Volume to Capacity	0.00	0.31	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	A	A	A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A	A		A		
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	43.3%					
Analysis Period (min)	15					
	ICU Level of Service			A		

Queues

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	15	0	45	0	70	415	50	50	555	25
Traffic Volume (vph)	15	0	45	0	70	415	50	50	555	25
Future Volume (vph)	15	0	45	0	70	415	50	50	555	25
Lane Group Flow (vph)	15	30	45	20	70	415	50	50	555	25
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4	8	8	2	2	2	2	6	6
Detector Phases	4	4	8	8	2	2	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Minimum Split (s)	30.0	30.0	30.0	30.0	40.0	40.0	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%	57.1%	57.1%
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 Optimizer?	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Recall Mode	0.10	0.08	0.29	0.04	0.10	0.29	0.04	0.06	0.39	0.02
v/c Ratio	28.1	0.4	32.6	0.1	4.1	4.1	1.3	2.4	3.0	0.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	28.1	0.4	32.6	0.1	4.1	4.1	1.3	2.4	3.0	0.1
Total Delay	1.9	0.0	5.8	0.0	2.5	17.5	1.1	12.2	0.0	0.0
Queue Length 50th (m)	6.8	0.0	14.4	0.0	7.3	34.7	2.7	19.2	0.0	0.0
Queue Length 95th (m)	161.0	0.0	124.2	0.0	369.7	813.5	0.0	0.0	0.0	0.0
Internal Link Dist (m)	15.0	707	467	784	672	1455	1305	790	1415	1305
Turn Bay Length (m)	469	0	0	0	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Starvation 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	0.03	0.04	0.10	0.03	0.10	0.29	0.04	0.06	0.39	0.02

Intersection Summary

Cycle Length: 70

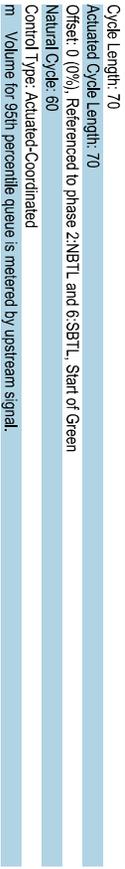
Actuated Cycle Length: 70

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

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



Tribal Lands Dixie

HCM Signalized Intersection Capacity Analysis

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	15	0	30	45	0	20	70	415	50	50	555	25
Traffic Volume (vph)	15	0	30	45	0	20	70	415	50	50	555	25
Future Volume (vph)	15	0	30	45	0	20	70	415	50	50	555	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	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	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	1.00
Flt	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1785	1633	1785	1633	1785	1633	1785	1597	1785	1746	1597	1785
Flt Permitted	0.74	1.00	0.74	1.00	0.74	1.00	0.44	1.00	0.52	1.00	1.00	1.00
Satd. Flow (perm)	1399	1633	1399	1633	1392	1633	829	1795	1597	1746	1597	1399
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	415	50	50	555	25
RTOR Reduction (vph)	0	28	0	0	18	0	0	0	13	0	0	0
Lane Group Flow (vph)	15	2	0	45	2	0	70	415	37	50	555	18
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	10%	0%
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	2	2	6	6	6	6
Permitted Phases	4	4	8	8	2	2	2	2	6	6	6	6
Actuated Green, G (s)	5.4	5.4	5.4	5.4	5.4	5.16	5.16	5.16	5.16	5.16	5.16	5.16
Effective Green, g (s)	5.4	5.4	5.4	5.4	5.4	5.16	5.16	5.16	5.16	5.16	5.16	5.16
Actuated Q/C Ratio	0.08	0.08	0.08	0.08	0.08	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Clearance Time (s)	6.5	6.5	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	3.0
Lane Grp Cap (vph)	107	125	107	125	107	611	1323	1177	719	1287	1177	1300
v/s Ratio Prot	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.23	0.23	0.23	0.23
v/s Ratio Perm	0.01	0.02	0.01	0.02	0.01	0.11	0.31	0.03	0.07	0.43	0.02	0.01
v/c Ratio	0.14	0.02	0.42	0.01	0.11	0.31	0.03	0.07	0.43	0.02	0.01	0.02
Uniform Delay, d1	30.1	29.9	30.8	29.8	30.8	2.6	3.1	2.5	2.5	3.5	2.4	2.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.54	0.20	0.20
Incremental Delay, d2	0.6	0.1	2.7	0.0	0.4	0.6	0.0	0.2	1.0	0.0	0.0	0.0
Delay (s)	30.7	29.9	33.5	29.9	33.5	3.0	3.8	2.5	1.7	2.9	0.5	0.5
Level of Service	C	C	C	C	C	A	A	A	A	A	A	A
Approach Delay (s)	30.2	C	32.4	C	32.4	A	A	A	A	A	A	A
Approach LOS	C	C	C	C	C	A	A	A	A	A	A	A

Intersection Summary

HCM 2000 Control Delay: 5.5

HCM 2000 Volume to Capacity ratio: 0.43

Actuated Cycle Length (s): 70.0

Intersection Capacity Utilization: 58.8%

Analysis Period (min): 15

c Critical Lane Group

HCM 2000 Level of Service: A

Sum of last time (s): 13.0

ICU Level of Service: B

Tribal Lands Dixie

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Background (NEN) 2028 AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	0	0	450	0	0	630
Traffic Volume (Veh/h)	0	0	450	0	0	630
Future Volume (Veh/h)	0	0	450	0	0	630
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	450	0	0	630
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median storage (veh)			None			None
Upstream signal (m)						240
pk, platoon unblocked						
vc, conflicting volume	1080	450			450	
vc1, stage 1 conf vol						
vc2, stage 2 conf vol						
vcu, unblocked vol	1006	450			450	
tc, single (s)	6.4	6.2			4.1	
tc, 2 stage (s)						
ff (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cm capacity (veh/h)	229	613			1121	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	450	0	630		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
ESH	1700	1700	1700	1700		
Volume to Capacity	0.10	0.26	0.03	0.37		
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	A	A	A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A	A		A		
Intersection Summary						
Average Delay	0.0			0.0		
Intersection Capacity Utilization	36.5%			ICU Level of Service A		
Analysis Period (min)	15					

Tribal Lands Dixie

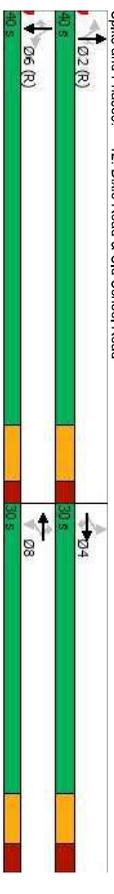
Synchro 11 Report
FT_2028.syn

Queues

12: Dixie Road & Old School Road

Future Background (NEN) 2028 AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	45	335	50	105	140	10	30	175	50	20	475	95
Traffic Volume (vph)	45	335	50	105	140	10	30	175	50	20	475	95
Future Volume (vph)	45	335	50	105	140	10	30	175	50	20	475	95
Lane Group Flow (vph)	Perm	NA	Perm	Perm	NA	Perm	Perm	Perm	NA	Perm	NA	Perm
Turn Type												
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6
Permitted Phases	4	4	4	8	8	8	2	2	2	6	6	6
Detector Phases												
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	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Traffic Volume (vph)	30.0	30.0	30.0	30.0	30.0	30.0	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	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	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	6.5	6.5
Lead/Lag												
Lead-Lag Optimizer?												
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.15	0.70	0.15	0.58	0.31	0.02	0.11	0.18	0.06	0.03	0.47	0.10
Control Delay	19.4	31.4	6.0	51.7	31.8	3.8	7.5	6.9	0.9	8.9	12.1	2.8
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	19.4	31.4	6.0	51.7	31.8	3.8	7.5	6.9	0.9	8.9	12.1	2.8
Queue Length 50th (m)	4.8	42.0	0.0	16.4	21.8	0.0	1.6	9.3	0.0	1.1	35.2	0.0
Queue Length 95th (m)	11.0	59.8	6.1	18.8	3.4	0.0	2.7	9.3	0.7	4.8	71.1	6.9
Internal Link Dist (m)		371.4		41.8			216.1				281.5	
Turn Bay Length (m)	30.0		30.0	30.0		65.0	50.0		50.0		50.0	50.0
Base Capacity (vph)	406	640	440	243	604	525	275	993	866	665	1021	924
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	0.11	0.52	0.11	0.43	0.23	0.02	0.11	0.18	0.06	0.03	0.47	0.10
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												



Tribal Lands Dixie

Synchro 11 Report
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HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background (NEN) 2028 AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	3	5	10	14	10	30	17	5	20	47	9
Traffic Volume (vph)	45	335	50	105	140	10	30	175	50	20	475	95
Future Volume (vph)	45	335	50	105	140	10	30	175	50	20	475	95
Ideal Flow (vph/pl)	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	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	1.00
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00
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)	1716	1902	1201	1785	1795	1452	1062	1762	1493	1733	1812	1566
Flt Permitted	0.67	1.00	1.00	0.38	1.00	1.00	0.44	1.00	1.00	0.65	1.00	1.00
Satd. Flow (perm)	1206	1902	1201	723	1795	1452	487	1762	1493	1160	1812	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)	45	335	50	105	140	10	30	175	50	20	475	95
RTOR Reduction (vph)	0	0	37	0	0	7	0	0	22	0	0	42
Lane Group Flow (vph)	45	335	13	105	140	3	140	28	20	475	53	53
Heavy Vehicles (%)	4%	1%	33%	0%	7%	10%	68%	9%	7%	3%	6%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	2	2	6	6	6	6	6
Permitted Green, G (s)	17.6	17.6	17.6	17.6	17.6	39.4	39.4	39.4	39.4	39.4	39.4	39.4
Effective Green, g (s)	17.6	17.6	17.6	17.6	17.6	39.4	39.4	39.4	39.4	39.4	39.4	39.4
Actuated Q/C Ratio	0.25	0.25	0.25	0.25	0.25	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Clearance Time (s)	6.5	6.5	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	3.0
Lane Gap Cap (vph)	303	478	301	181	451	365	274	991	840	664	1019	881
v/s Ratio Prot	0.18	0.18	0.15	0.08	0.08	0.06	0.10	0.10	0.02	0.02	0.02	0.03
v/s Ratio Perm	0.15	0.70	0.04	0.58	0.31	0.01	0.11	0.18	0.03	0.03	0.03	0.47
v/c Ratio	0.15	0.70	0.04	0.58	0.31	0.01	0.11	0.18	0.03	0.03	0.03	0.47
Uniform Delay, d1	20.4	23.8	19.8	23.0	21.3	19.6	7.1	7.4	6.8	6.8	9.1	6.9
Progression Factor	1.00	1.00	1.00	1.76	1.51	1.00	0.70	0.73	0.28	1.00	1.00	1.00
Incremental Delay, d2	0.2	4.6	0.1	4.6	0.4	0.0	0.8	0.4	0.1	0.1	1.5	0.1
Delay (s)	20.6	28.4	19.9	45.0	32.4	19.7	5.7	5.8	2.0	6.9	10.6	7.1
Level of Service	C	C	B	D	C	B	A	A	A	A	B	A
Approach Delay (s)	26.6			37.1			5.1			9.9		
Approach LOS	C			D			A			A		
Intersection Summary												
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service										
HCM 2000 Volume to Capacity ratio	0.54	B										
Actuated Cycle Length (s)	70.0	Sum of lost time (s)										
Intersection Capacity Utilization	64.7%	ICU Level of Service										
Analysis Period (min)	15	C										

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background (NEN) 2028 AM Peak Hour

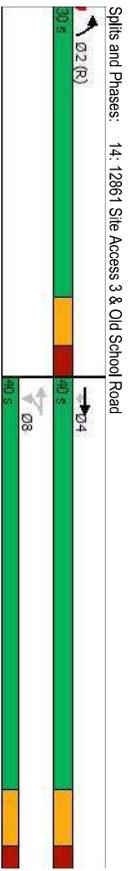
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4	0	0	2	0	0
Traffic Volume (veh/h)	400	0	0	265	0	0
Future Volume (veh/h)	400	0	0	265	0	0
Sign Control	Free	0%	Free	Stop	0%	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	400	0	0	265	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream signal (m)	66					
pX, platoon unblocked						
WC, conflicting volume			400		532	200
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol			400		532	200
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					3.5	3.3
FF (s)			2.2		100	100
p0 queue free %			100		482	814
CM capacity (veh/h)			1170			
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	267	133	132	132	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
SSH	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		A	
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	14.4%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

Lane Group	EBT	WBT	02
Lane Configurations	↔↔	↔↔	
Traffic Volume (vph)	400	265	
Future Volume (vph)	400	265	
Lane Group Flow (vph)	400	265	
Turn Type	NA	NA	2
Protected Phases	4	8	2
Permitted Phases	4	8	
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5
Total Split (s)	40.0	40.0	30.0
Total Split (%)	57.1%	57.1%	43%
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 Optimizer?			
Recall Mode	None	None	C-Min
v/c Ratio	0.58	0.39	
Control Delay	21.1	26.0	
Queue Delay	0.0	0.0	
Total Delay	21.1	26.0	
Queue Length 50th (m)	31.7	17.0	
Queue Length 95th (m)	22.7	25.5	
Internal Link Dist (m)	433.3	157.0	
Turn Bay Length (m)			
Base Capacity (vph)	1746	1746	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.23	0.15	

Intersection Summary
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔↔	↔↔
Traffic Volume (vph)	400	0	0	265	0	0
Future Volume (vph)	400	0	0	265	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		
Flt	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)	400	0	0	265	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	400	0	0	265	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	NA	Perm		NA	Prot	
Protected Phases	4		8		2	
Permitted Phases						
Actuated Green, G (s)	13.1			13.1		
Effective Green, g (s)	13.1			13.1		
Actuated g/C Ratio	0.19			0.19		
Clearance Time (s)	6.5			6.5		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	683			683		
v/s Ratio Prot	0.11			0.07		
v/s Ratio Perm						
v/c Ratio	0.59			0.39		
Uniform Delay, d1	26.0			24.9		
Progression Factor	0.70			1.00		
Incremental Delay, d2	1.2			0.4		
Delay (s)	19.3			25.3		
Level of Service	B			C		
Approach Delay (s)	19.3			25.3		
Approach LOS	B			C		A

Intersection Summary
 HCM 2000 Control Delay: 21.7
 HCM 2000 Volume to Capacity ratio: 0.13
 HCM 2000 Level of Service: C
 Actuated Cycle Length (s): 70.0
 Sum of lost time (s): 13.0
 Intersection Capacity Utilization: 16.5%
 ICU Level of Service: A
 Analysis Period (min): 15
 Critical Lane Group: c

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Background (NEN) 2028 AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	300	85	25	195	0	40	75	20	5	155	30
Future Volume (vph)	10	300	85	25	195	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	300	85	25	195	0	40	75	20	5	155	30
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	395	220	135	190								
Volume Left (vph)	10	25	40	5								
Volume Right (vph)	85	0	20	30								
Head (s)	-0.08	0.09	0.07	-0.06								
Departure Headway (s)	5.2	5.6	6.0	5.8								
Degree Utilization, x	0.57	0.34	0.23	0.30								
Capacity (veh/h)	661	594	521	557								
Control Delay (s)	14.8	11.5	10.8	11.3								
Approach Delay (s)	14.8	11.5	10.8	11.3								
Approach LOS	B	B	B	B								
Intersection Summary												
Delay	12.7											
Level of Service	B											
Intersection Capacity Utilization	50.5%											
ICU Level of Service	A											
Analysis Period (min)	15											

Trial Lands Dixie

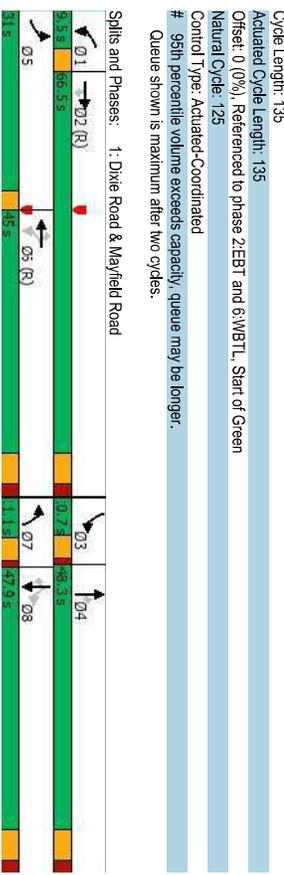
Synchro 11 Report
FT_2028.syn

Queues

1: Dixie Road & Mayfield Road

Future Background 2033 (NEN) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Permitted Phases			Permitted Phases			Permitted Phases			Permitted Phases	
Traffic Volume (vph)	555	2005	280	60	930	140	130	215	60	105	265	275
Future Volume (vph)	555	2005	280	60	930	140	130	215	60	105	265	275
Lane Group Flow (vph)	555	2005	280	60	930	140	130	215	60	105	265	275
Turn Type	Prot	NA	Perm	pmt+pt	NA	Perm	Prot	NA	Perm	pmt+pt	NA	Perm
Protected Phases	5	2	2	1	6	6	6	7	4	4	8	8
Permitted Phases	5	2	2	1	6	6	6	7	4	4	8	8
Detector Phase												
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	9.5	44.9	44.9	9.5	44.9	44.9	9.5	47.9	47.9	9.5	47.9	47.9
Total Split (s)	31.0	66.5	66.5	9.5	45.0	45.0	11.1	48.3	48.3	10.7	47.9	47.9
Total Split (%)	23.0%	49.3%	49.3%	7.0%	33.3%	33.3%	8.2%	35.8%	35.8%	7.9%	35.5%	35.5%
Yellow Time (s)	3.0	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6
All-Red Time (s)	0.0	2.3	2.3	0.0	2.3	2.3	1.0	2.3	2.3	1.0	2.3	2.3
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
Lost Time (s)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.80	0.66	0.26	0.37	0.48	0.21	0.58	0.54	0.23	0.49	0.65	0.67
Control Delay	56.4	19.2	2.1	22.2	30.5	5.1	72.1	60.6	2.0	51.2	64.3	14.3
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	56.4	19.2	2.1	22.2	30.5	5.1	72.1	60.6	2.0	51.2	64.3	14.3
Queue Length 50th (m)	75.1	138.5	0.0	4.8	71.2	0.0	18.2	30.3	0.0	23.9	38.0	0.0
Queue Length 95th (m)	92.8	167.6	12.8	13.2	91.7	14.6	43.9	42.3	0.0	41.1	51.2	27.3
Internal Link Dist (m)	980.1			272.1			844.0				481.5	
Turn Bay Length (m)	210.0	184.0	180.0		192.1	681	223	1027	487	216	1035	624
Base Capacity (vph)	705	3021	1065	162	1921	681	223	1027	487	216	1035	624
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	0.79	0.66	0.26	0.37	0.48	0.21	0.58	0.21	0.12	0.49	0.26	0.44
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT_L, Start of Green												
Natural Cycle: 125												
Control Type: Actuated-Coordinated												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												



Trial Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Signalized Intersection Capacity Analysis
 1: Dixie Road & Mayfield Road
 Future Background 2033 (NEN) AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	555	2005	280	60	930	140	130	215	60	105	265	275
Future Volume (vph)	555	2005	280	60	930	140	130	215	60	105	265	275
Ideal Flow (vph/pl)	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)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frbp. 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
Frbp. 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
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.85	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	1.00
Satd. Flow (prot)	2815	4902	1554	1539	4561	1426	3236	3349	1319	1381	3411	1427
Flt Permitted	0.95	1.00	1.00	0.09	1.00	0.95	1.00	1.00	0.57	1.00	1.00	1.00
Satd. Flow (perm)	2815	4902	1554	143	4561	1426	3236	3349	1319	835	3411	1427
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)	555	2005	280	60	930	140	130	215	60	105	265	275
RTOR Reduction (vph)	0	0	109	0	0	81	0	0	53	0	0	242
Lane Group Flow (vph)	555	2005	171	60	930	59	130	215	7	105	265	33
Cont. Peds. (#/hr)	23%	7%	1%	16%	15%	12%	7%	9%	19%	29%	7%	10%
Heavy Vehicles (%)	23%	7%	1%	16%	15%	12%	7%	9%	19%	29%	7%	10%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	2	2	1	6	6	7	4	3	8	8	8
Permitted Green (s)	32.5	82.5	82.5	63.1	56.8	56.8	8.3	16.0	16.0	24.5	16.1	16.1
Effective Green (s)	33.5	82.5	82.5	63.1	56.8	56.8	9.3	16.0	16.0	25.5	16.1	16.1
Actuated G/C Ratio	0.25	0.61	0.61	0.48	0.42	0.42	0.07	0.12	0.12	0.20	0.12	0.12
Clearance Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	4.5	6.9	6.9	4.5	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	3.0
Lane Gap Cap (vph)	698	2995	949	144	1918	599	222	396	156	201	406	170
v/s Ratio Prot	60.20	60.41	0.11	0.18	0.20	0.20	60.04	0.06	0.04	60.08	0.02	0.02
v/s Ratio Perm	0.80	0.67	0.18	0.42	0.48	0.10	0.59	0.54	0.05	0.52	0.65	0.19
Uniform Delay, d1	47.5	17.3	11.5	18.9	28.5	23.6	61.0	56.1	52.7	47.2	56.8	53.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.2	1.2	0.4	1.9	0.9	0.3	3.9	1.5	0.1	2.4	3.7	0.6
Delay (s)	53.8	18.5	11.9	20.9	29.3	24.0	64.9	57.6	52.9	49.6	60.5	54.1
Level of Service	D	B	B	C	C	C	E	E	D	D	E	D
Approach Delay (s)	24.7			28.2			59.2			56.0		
Approach LOS	C			C			E			E		
Intersection Summary												
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service										
HCM 2000 Volume to Capacity ratio	0.71	C										
Actuated Cycle Length (s)	135.0	Sum of lost time (s)										
Intersection Capacity Utilization	77.8%	ICU Level of Service										
Analysis Period (min)	15	D										
e Critical Lane Group												

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

Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Traffic Volume (vph)	5	35	35	0	65	730	15	575	10
Future Volume (vph)	5	35	35	0	65	730	15	575	10
Lane Group Flow (vph)	5	35	35	5	65	765	0	680	10
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4		8	8	2	2	6	6	6
Permitted Phases	4	4	8	8	2	2	6	6	6
Detector Phase									
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)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead-Lag Optimizer?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/s Ratio	0.06	0.08	0.41	0.01	0.12	0.53	0.43	0.01	0.01
Control Delay	45.6	0.3	55.5	0.0	5.8	8.3	6.7	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	0.3	55.5	0.0	5.8	8.3	6.7	0.0	0.0
Queue Length 50th (m)	1.0	0.0	6.9	0.0	3.6	66.7	45.3	0.0	0.0
Queue Length 95th (m)	4.7	0.0	16.4	0.0	10.5	125.0	83.1	0.0	0.0
Internal Link Dist (m)				96.6		481.5	358.1		
Turn Bay Length (m)				95.0			50.0		
Base Capacity (vph)	241	562	163	617	529	1445	1377	1308	
Saturation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/s Ratio	0.02	0.06	0.21	0.01	0.12	0.53	0.43	0.01	0.01
Intersection Summary									
Cycle Length: 100									
Actuated Cycle Length: 100									
Offset: 0 (0%), Referenced to phase 2NBT, Start of Green									
Natural Cycle: 90									
Control Type: Actuated-Coordinated									
m Volume for 95th percentile queue is metered by upstream signal.									
Spills and Phases: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3									

HCM Signalized Intersection Capacity Analysis

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Traffic Volume (vph)	5	0	35	35	0	5	65	730	35	15	575	10	
Future Volume (vph)	5	0	35	35	0	5	65	730	35	15	575	10	
Ideal Flow (vph/pl)	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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	1.00	
Fpb. 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	
Ft	1.00	1.00	0.85	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.99	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1342	1278	1137	1633	1552	1780	1597	1733	1597	1733	1597	1597	
Flt Permitted	0.95	1.00	0.76	1.00	0.40	1.00	0.40	1.00	0.98	1.00	0.98	1.00	
Satd. Flow (perm)	1342	1278	906	1633	652	1780	1698	1597	1698	1597	1597	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)	5	0	35	35	0	5	65	730	35	15	575	10	
RTOR Reduction (vph)	0	0	34	0	5	0	0	1	0	0	0	2	
Lane Group Flow (vph)	5	0	1	35	0	0	65	764	0	0	590	8	
Cont. Peds. (#/hr)	33%	0%	25%	57%	0%	0%	15%	6%	28%	0%	11%	0%	
Heavy Vehicles (%)	33%	0%	25%	57%	0%	0%	15%	6%	28%	0%	11%	0%	
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6	
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6	
Permitted Green, G (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8	
Effective Green, g (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8	
Actuated G/C Ratio	0.04	0.04	0.07	0.07	0.07	0.76	0.76	0.76	0.76	0.76	0.76	0.76	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	50	48	62	112	494	1349	1287	1210	1287	1210	1210	1210	
v/s Ratio Prot	60.00	0.00	60.04	0.00	0.10	60.43	0.35	0.00	0.35	0.00	0.00	0.00	
v/s Ratio Perm	0.10	0.03	0.56	0.00	0.13	0.57	0.46	0.01	0.46	0.01	0.01	0.01	
Uniform Delay, d1	46.4	46.3	45.1	43.3	3.3	5.1	4.5	2.9	4.5	2.9	2.9	2.9	
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	0.9	0.2	11.2	0.0	0.6	1.7	1.1	0.0	1.1	0.0	0.0	0.0	
Delay (s)	47.3	46.6	56.3	43.4	3.8	6.9	5.5	3.0	5.5	3.0	3.0	3.0	
Level of Service	D	D	E	D	A	A	A	A	A	A	A	A	
Approach Delay (s)	46.7	46.7	54.7	46.7	46.7	54.7	46.7	46.7	46.7	46.7	46.7	46.7	
Approach LOS	D	D	D	D	D	D	D	D	D	D	D	D	
Intersection Summary													
HCM 2000 Control Delay	8.5						HCM 2000 Level of Service						A
HCM 2000 Volume to Capacity ratio	0.55						Sum of lost time (s)						13.5
Actuated Cycle Length (s)	100.0						ICU Level of Service						C
Intersection Capacity Utilization	70.1%						Analysis Period (min)						15
e Critical Lane Group													

Trial Lands Dixie

Queues

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

Lane Group	EBR	NBL	NBT	SBL	SBT	Ø8
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	5	60	620	15	625	625
Future Volume (vph)	5	60	620	15	625	625
Lane Group Flow (vph)	5	0	690	0	655	655
Turn Type	Perm	Perm	NA	Perm	NA	NA
Protected Phases	4	2	2	6	6	8
Permitted Phases	4	2	2	6	6	6
Detector Phase	4	2	2	6	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	22.5	77.5	77.5	77.5	77.5	22.5
Total Split (s)	22.5%	77.5%	77.5%	77.5%	77.5%	23%
Total Split (%)	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimizer?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
v/s Ratio	0.01	0.44	0.44	0.40	0.40	0.40
Control Delay	0.0	0.9	0.9	1.3	1.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	0.9	0.9	1.3	1.3	1.3
Queue Length 50th (m)	0.0	0.0	0.0	0.0	0.0	0.0
Queue Length 95th (m)	0.0	9.7	9.7	29.8	29.8	29.8
Internal Link Dist (m)		358.1	358.1	696.2	696.2	696.2
Turn Bay Length (m)						
Base Capacity (vph)	474	1579	1647	1647	1647	1647
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/s Ratio	0.01	0.44	0.44	0.40	0.40	0.40
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 0 (0%), Referenced to phase 2NBT, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						
Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1						
Ø2 (R)	Ø4 (R)	Ø4 (R)	Ø4 (R)	Ø4 (R)	Ø4 (R)	Ø4 (R)
77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s
Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)	Ø6 (R)
77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s

Trial Lands Dixie

HCM Signalized Intersection Capacity Analysis
 7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background 2033 (NEN) 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	620	10	15	625	15
Future Volume (vph)	0	0	5	0	0	0	60	620	10	15	625	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)			4.5				4.5			4.5		4.5
Lane Util. Factor			1.00				1.00			1.00		1.00
Flt Protected			0.85				1.00			1.00		1.00
Satd. Flow (prot)			998				1789			1723		1723
Flt Permitted			1.00				0.91			0.98		0.98
Satd. Flow (perm)			998				1626			1695		1695
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	620	10	15	625	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	690	0	0	665	0	0
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	7%	0%	9%	0%	0%
Turn Type	Prot	Perm	Perm	Perm	Perm	Perm	NA	NA	Perm	Perm	NA	Perm
Protected Phases	4			8			8	2		6		6
Actuated Green, G (s)			1.1				89.9			89.9		89.9
Effective Green, g (s)			1.1				89.9			89.9		89.9
Actuated Q/C Ratio			0.01				0.90			0.90		0.90
Clearance Time (s)			4.5				4.5			4.5		4.5
Vehicle Extension (s)			3.0				3.0			3.0		3.0
Lane Grp Cap (vph)			10				1461			1523		1523
v/s Ratio Prot												
v/s Ratio Perm			c0.00				c0.42			0.39		0.39
v/c Ratio			0.01				0.47			0.43		0.43
Uniform Delay, d1			48.9				0.9			0.8		0.8
Progression Factor			1.00				0.29			1.00		1.00
Incremental Delay, d2			0.2				0.9			0.9		0.9
Delay (s)			49.1				1.2			1.7		1.7
Level of Service			D				A			A		A
Approach Delay (s)			49.1				0.0			1.2		1.7
Approach LOS			D				A			A		A
Intersection Summary												
HCM 2000 Control Delay			1.6			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.47			Sum of lost time (s)			9.0			
Actuated Cycle Length (s)			100.0			ICU Level of Service			C			
Intersection Capacity Utilization			67.6%			Analysis Period (min)			15			
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 8: Dixie Road & 12489 Site Access 1 Future Background 2033 (NEN) AM Peak Hour

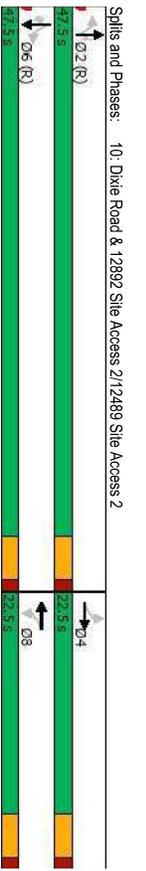
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←	↔	→	↔	←	↔
Traffic Volume (veh/h)	0	0	535	60	0	625
Future Volume (veh/h)	0	0	535	60	0	625
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	535	60	0	625
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Upstream signal (m)			0.86			394
pX, platoon unblocked			1160			595
WC, conflicting volume						
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol	1104	535				595
IC, single (s)	6.4	6.2				4.1
IC, 2 stage (s)						
FF (s)	3.5	3.3				2.2
p0 queue free %	100	100				100
CM capacity (veh/h)	202	549				991
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	535	60	625		
Volume Left	0	0	0	0		
Volume Right	0	0	60	0		
SSH	1700	1700	1700	991		
Volume to Capacity	0.00	0.31	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	A	A	A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A	A		A		
Intersection Summary						
Average Delay			0.0			A
Intersection Capacity Utilization			43.3%			
Analysis Period (min)			15			

Queues

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBR	SBR
Lane Configurations	15	0	45	0	70	415	50	50	555	25
Traffic Volume (vph)	15	0	45	0	70	415	50	50	555	25
Future Volume (vph)	15	0	45	0	70	415	50	50	555	25
Lane Group Flow (vph)	15	30	45	20	70	415	50	50	555	25
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	8	8	8	2	2	6	6	6	6
Permitted Phases	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	22.5	22.5	22.5	22.5	47.5	47.5	47.5	47.5	47.5	47.5
Total Split (s)	32.1%	32.1%	32.1%	32.1%	67.9%	67.9%	67.9%	67.9%	67.9%	67.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead-Lag Optimizer?	0.04	0.04	0.13	0.03	0.16	0.38	0.05	0.09	0.52	0.03
v/c Ratio	20.1	0.1	21.4	0.1	7.0	8.0	2.0	6.0	11.6	2.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	20.1	0.1	21.4	0.1	7.0	8.0	2.0	6.0	11.6	2.5
Total Delay	1.5	0.0	4.8	0.0	3.7	25.2	0.0	3.8	55.4	0.3
Queue Length 50th (m)	5.9	0.0	12.5	0.0	9.1	41.1	3.4	m2.9	85.4	m0.3
Internal Link Dist (m)	161.0		124.2		369.7			813.5		
Turn Bay Length (m)	15.0		15.0		60.0		60.0	60.0		60.0
Base Capacity (vph)	359	671	336	759	433	1102	1000	549	1072	990
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
Reductn v/c Ratio	0.04	0.04	0.13	0.03	0.16	0.38	0.05	0.09	0.52	0.03

Intersection Summary
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2(NBTL) and 6(SPTL) Start of Green
 Natural Cycle: 50
 Control Type: Prelimed
 m Volume for 95th percentile queue is metered by upstream signal.



Tribal Lands Dixie

HCM Signalized Intersection Capacity Analysis

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	SBR
Lane Configurations	15	0	30	45	0	20	70	415	50	50	555	25
Traffic Volume (vph)	15	0	30	45	0	20	70	415	50	50	555	25
Future Volume (vph)	15	0	30	45	0	20	70	415	50	50	555	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	3.5	3.5	3.5	3.7	3.5
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	1.00
Flt	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1785	1633	1685	1633	1685	1633	1785	1597	1785	1746	1597	1597
Flt Permitted	0.74	1.00	0.74	1.00	0.38	1.00	0.38	1.00	0.48	1.00	1.00	1.00
Satd. Flow (perm)	1399	1633	1308	1633	1633	1308	1633	1597	1597	894	1746	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	415	50	50	555	25
RTOR Reduction (vph)	0	22	0	0	15	0	0	19	0	0	0	10
Lane Group Flow (vph)	15	8	0	45	5	0	70	415	31	50	555	15
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	10%	0%
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4	8	8	8	2	2	2	6	6	6	6
Permitted Phases	18.0	18.0	18.0	18.0	18.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Effective Green, g (s)	0.26	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Actuated Q/C Ratio	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Clearance Time (s)	359	419	336	419	434	1102	981	549	1072	981		
Lane Gp Cap (vph)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
v/s Ratio Prot	0.01	0.02	0.03	0.10	0.10	0.38	0.02	0.06	0.06	0.02		
v/c Ratio	0.04	0.02	0.13	0.13	0.01	0.16	0.38	0.03	0.09	0.52	0.02	0.02
Uniform Delay, d1	19.5	19.4	20.0	19.4	5.8	6.8	5.3	5.5	7.6	5.3		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.24	1.04		
Incremental Delay, d2	0.2	0.1	0.8	0.1	0.1	0.8	1.0	0.1	0.3	1.7		
Delay (s)	19.7	19.5	20.8	19.4	6.6	7.8	5.4	5.8	11.1	5.5		
Level of Service	B	B	C	B	B	A	A	A	A	B		
Approach Delay (s)	19.6		20.4		7.4		7.4		10.5			
Approach LOS	B		C		A		B		B			

Intersection Summary
 HCM 2000 Control Delay: 10.0 HCM 2000 Level of Service: B
 HCM 2000 Volume to Capacity ratio: 0.40
 Actuated Cycle Length (s): 70.0 Sum of lost time (s): 9.0
 Intersection Capacity Utilization: 53.8% ICU Level of Service: A
 Analysis Period (min): 15
 e Critical Lane Group

Tribal Lands Dixie

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Background 2033 (NEN) AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	0	0	450	0	0	630
Traffic Volume (Veh/h)	0	0	450	0	0	630
Future Volume (Veh/h)	0	0	450	0	0	630
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	450	0	0	630
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median storage (veh)			None			None
Upstream signal (m)						240
pk, platoon unblocked						
vc, conflicting volume	1080	450			450	
vc1, stage 1 conf vol						
vc2, stage 2 conf vol						
vcu, unblocked vol	1021	450			450	
ic, single (s)	6.4	6.2			4.1	
ic, 2 stage (s)						
ff (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cm capacity (veh/h)	232	613			1121	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	450	0	630		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
ESH	1700	1700	1700	1700		
Volume to Capacity	0.00	0.26	0.00	0.37		
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	36.5%					
ICU Level of Service	A					
Analysis Period (min)	15					

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

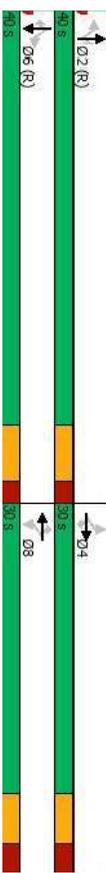
Queues

12: Dixie Road & Old School Road

Future Background 2033 (NEN) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	45	45	50	105	155	10	30	175	50	20	475	95
Traffic Volume (vph)	45	365	50	105	155	10	30	175	50	20	475	95
Future Volume (vph)	45	365	50	105	155	10	30	175	50	20	475	95
Lane Group Flow (vph)	45	365	50	105	155	10	30	175	50	20	475	95
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	Perm	Perm	NA	Perm	NA
Protected Phases		4		4		8		8		2		2
Permitted Phases	4	4	4	4	8	8	8	8	2	2	2	6
Detector Phases												
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	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Traffic Volume (vph)	30.0	30.0	30.0	30.0	30.0	30.0	40.0	40.0	40.0	40.0	40.0	40.0
Total Spill (s)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%	57.1%	57.1%
Total Spill (%)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	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	6.5	6.5
Lead/Lag												
Lead-Lag Optimizer?												
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.20	0.53	0.18	0.56	0.24	0.03	0.09	0.16	0.05	0.03	0.42	0.09
Control Delay	24.2	27.7	7.7	56.1	40.6	10.0	7.4	7.0	2.0	6.7	9.0	2.1
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	24.2	27.7	7.7	56.1	40.6	10.0	7.4	7.0	2.0	6.7	9.0	2.1
Queue Length 50th (m)	5.4	24.4	0.0	16.4	12.6	0.0	1.5	9.3	0.3	0.9	28.0	0.0
Queue Length 95th (m)	12.4	32.7	6.9	27.3	16.8	0.0	m=4.5	16.6	2.6	4.0	99.8	5.8
Internal Link Dist (m)		371.4			41.8			216.1				
Turn Bay Length (m)	30.0		30.0	30.0		65.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	396	1213	439	330	1145	523	319	1097	951	735	1129	1011
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	0.11	0.30	0.11	0.32	0.14	0.02	0.09	0.16	0.05	0.03	0.42	0.09
Intersection Summary												
Cycle Length: 70												
Actuated Cycle Length: 70												
Offset: 0 (0%), Referenced to phase 2(NBT) and 6(SBT), Start of Green												
Natural Cycle: 50												
Control Type: Actuated-Coordinated												
m: Volume for 95th percentile queue is metered by upstream signal.												

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



Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background 2033 (NEN) AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4	4	4	4
Traffic Volume (vph)	45	365	50	105	155	10	30	175	50	20	475	95
Future Volume (vph)	45	365	50	105	155	10	30	175	50	20	475	95
Ideal Flow (vph/pl)	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	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)	1716	3614	1201	1785	3411	1452	1062	1762	1493	1733	1812	1566
Flt Permitted	0.65	1.00	1.00	0.52	1.00	1.00	0.46	1.00	1.00	0.65	1.00	1.00
Satd. Flow (perm)	1181	3614	1201	984	3411	1452	512	1762	1493	1160	1812	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)	45	365	50	105	155	10	30	175	50	20	475	95
RTOR Reduction (vph)	0	0	40	0	0	8	0	0	19	0	0	36
Lane Group Flow (vph)	45	365	10	105	155	2	30	175	31	20	475	59
Heavy Vehicles (%)	4%	1%	33%	0%	7%	10%	68%	9%	7%	3%	6%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6
Actuated Green, G (s)	13.4	13.4	13.4	13.4	13.4	43.6	43.6	43.6	43.6	43.6	43.6	43.6
Effective Green, g (s)	13.4	13.4	13.4	13.4	13.4	43.6	43.6	43.6	43.6	43.6	43.6	43.6
Actuated Q/C Ratio	0.19	0.19	0.19	0.19	0.19	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Clearance Time (s)	6.5	6.5	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	3.0
Lane Grp Cap (vph)	226	691	229	188	652	277	318	1097	929	734	1128	975
v/s Ratio Prot	0.10	0.10	0.01	0.11	0.05	0.00	0.06	0.10	0.02	0.02	0.02	0.04
v/s Ratio Perm	0.20	0.53	0.04	0.56	0.24	0.01	0.09	0.16	0.03	0.03	0.03	0.06
v/c Ratio	0.20	0.53	0.04	0.56	0.24	0.01	0.09	0.16	0.03	0.03	0.03	0.06
Uniform Delay, d1	23.8	25.5	23.1	25.6	24.0	22.9	5.3	5.5	5.1	5.1	6.7	5.2
Progression Factor	1.00	1.00	1.00	1.80	1.74	1.00	0.96	1.03	0.88	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.7	0.1	3.5	0.2	0.0	0.6	0.3	0.1	1.2	0.1	0.1
Delay (s)	24.2	26.2	23.1	49.6	41.9	22.9	5.6	6.0	4.5	5.1	7.9	5.3
Level of Service	C	C	C	D	D	C	A	A	A	A	A	A
Approach Delay (s)		25.7			44.2			5.7			7.4	
Approach LOS		C			D			A			A	
Intersection Summary												
HCM 2000 Control Delay	18.8			HCM 2000 Level of Service			B					
HCM 2000 Volume to Capacity ratio	0.45											
Actuated Cycle Length (s)	70.0			Sum of lost time (s)			13.0					
Intersection Capacity Utilization	57.2%			ICU Level of Service			B					
Analysis Period (min)	15											
c Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background 2033 (NEN) AM Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4	4	4	4	4	4
Traffic Volume (veh/h)	430	0	0	280	0	0
Future Volume (veh/h)	430	0	0	280	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	430	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, platform unblocked			0.91		0.91	0.91
WC, conflicting volume			430		570	215
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol			186		339	0
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)			2.2		3.5	3.3
FF (s)			100		100	100
p0 queue free %			1279		581	996
CM capacity (veh/h)						
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	287	143	140	140	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
SSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.17	0.08	0.08	0.08	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			A		
Intersection Capacity Utilization	15.2%			A		
Analysis Period (min)	15					

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

Lane Group	EBT	WBT	02
Lane Configurations	↔↔	↔↔	
Traffic Volume (vph)	430	280	
Future Volume (vph)	430	280	
Lane Group Flow (vph)	430	280	
Turn Type	NA	NA	2
Protected Phases	4		2
Permitted Phases		8	
Detector Phases	4	8	
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5
Total Split (s)	40.0	40.0	30.0
Total Split (%)	57.1%	57.1%	43%
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 Optimizer?			
Recall Mode	None	None	C-Min
v/c Ratio	0.60	0.39	
Control Delay	24.3	25.5	
Queue Delay	0.0	0.0	
Total Delay	24.3	25.5	
Queue Length 50th (m)	34.7	17.8	
Queue Length 95th (m)	46.0	26.3	
Internal Link Dist (m)	433.3	157.0	
Turn Bay Length (m)			
Base Capacity (vph)	1746	1746	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.25	0.16	
Intersection Summary			
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Splits and Phases: 14: 12861 Site Access 3 & Old School Road			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔	↔↔	↔	↔
Traffic Volume (vph)	430	0	0	280	0	0
Future Volume (vph)	430	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		
Flt	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)	430	0	0	280	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	430	0	0	280	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	NA	Perm	custom	NA	Prot	2
Protected Phases	4		8	8		
Permitted Phases		4	8	8		
Actuated Green, G (s)	13.8			13.8		
Effective Green, g (s)	13.8			13.8		
Actuated g/C Ratio	0.20			0.20		
Clearance Time (s)	6.5			6.5		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	719			719		
v/s Ratio Prot	0.12			0.08		
v/s Ratio Perm				0.39		
v/c Ratio	0.60			0.39		
Uniform Delay, d1	25.6			24.4		
Progression Factor	0.82			1.00		
Incremental Delay, d2	1.3			0.4		
Delay (s)	22.3			24.8		
Level of Service	C			C		
Approach Delay (s)	22.3			24.8		0.0
Approach LOS	C			C		A
Intersection Summary						
HCM 2000 Control Delay	23.3					C
HCM 2000 Volume to Capacity ratio	0.14					
Actuated Cycle Length (s)	70.0					13.0
Intersection Capacity Utilization	17.3%					A
Analysis Period (min)	15					
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Background 2033 (NEN) AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop		Stop		Stop		Stop		Stop
Traffic Volume (vph)	10	330	85	25	210	0	40	85	20	5	170	30
Future Volume (vph)	10	330	85	25	210	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	330	85	25	210	0	40	85	20	5	170	30
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	425	235	145	205								
Volume Left (vph)	10	25	40	5								
Volume Right (vph)	85	0	20	30								
Head (s)	-0.07	0.09	0.07	-0.06								
Departure Headway (s)	5.3	5.8	6.3	6.0								
Degree Utilization, x	0.63	0.38	0.25	0.34								
Capacity (veh/h)	642	560	495	534								
Control Delay (s)	17.0	12.3	11.4	12.1								
Approach Delay (s)	17.0	12.3	11.4	12.1								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay	14.1											
Level of Service	B											
Intersection Capacity Utilization	53.5%											
ICU Level of Service	A											
Analysis Period (min)	15											

Queues

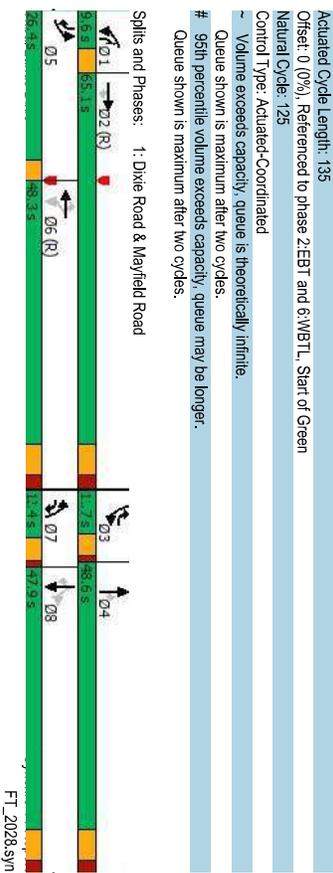
1: Dixie Road & Mayfield Road

Future Background (NEN) 2028 PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Prohibit										
Traffic Volume (vph)	405	1355	180	60	1350	90	210	215	60	135	200	565
Future Volume (vph)	405	1355	180	60	1350	90	210	215	60	135	200	565
Lane Group Flow (vph)	405	1355	180	60	1350	90	210	215	60	135	200	565
Turn Type	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases				2	6	6	6	6	4	8	8	8
Detector Phases	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)	26.4	65.1	12.4	9.6	48.3	11.7	12.4	48.6	9.6	11.7	47.9	26.4
Total Split (%)	19.6%	48.2%	9.2%	7.1%	35.8%	8.7%	9.2%	36.0%	7.1%	8.7%	35.5%	19.6%
Yellow Time (s)	3.0	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.0
All-Red Time (s)	0.0	2.3	1.0	0.0	2.3	1.0	1.0	2.3	0.0	1.0	2.3	0.0
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	0.0
Total Lost Time (s)	3.0	6.9	4.5	3.5	6.9	4.5	4.5	6.9	3.5	4.5	6.9	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
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						
v/c Ratio	0.54	0.46	0.16	0.25	0.70	0.12	0.78	0.53	0.19	0.63	0.59	0.95
Control Delay	43.9	14.3	1.1	14.9	37.5	5.6	80.7	61.7	3.8	63.1	66.8	51.9
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	43.9	14.3	1.1	14.9	37.5	5.6	80.7	61.7	3.8	63.1	66.8	51.9
Queue Length 50th (m)	50.3	67.5	0.0	4.1	110.2	0.8	-33.5	30.7	0.0	38.4	30.2	87.7
Queue Length 95th (m)	59.3	87.2	6.8	9.8	153.6	12.1	#60.5	43.6	4.6	60.4	43.6	104.8
Internal Link Dist (m)	980.1											
Turn Bay Length (m)	155.0											
Base Capacity (vph)	751	2924	1116	237	1930	725	289	1116	318	214	1066	594
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	0.54	0.46	0.16	0.25	0.70	0.12	0.78	0.19	0.63	0.59	0.95	0.95
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT_L, Start of Green												
Natural Cycle: 125												
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.												

Trial Lands Dixie

Synchro 11 Report
FT_2033.syn



FT_2028.syn

HCM Signalized Intersection Capacity Analysis
 1: Dixie Road & Mayfield Road
 Future Background (NEN) 2028 PM Peak Hour

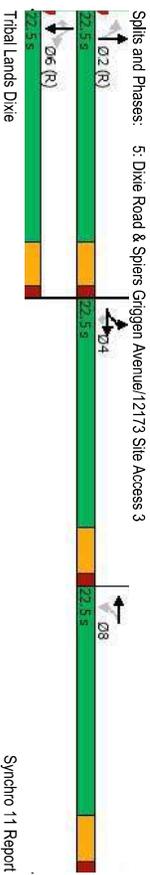
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	405	1355	180	60	1350	90	210	215	60	135	200	565
Future Volume (vph)	405	1355	180	60	1350	90	210	215	60	135	200	565
Ideal Flow (vph/trl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.0
Total Lost time (s)	3.0	6.9	4.5	3.5	6.9	4.5	4.5	6.9	3.5	4.5	6.9	3.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frbp. ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
Frbp. 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
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95
Satd. Flow (prot)	2770	4683	1477	1767	4902	1342	3362	3614	1293	1535	3510	1395
Flt Permitted	0.95	1.00	1.00	0.19	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95
Satd. Flow (perm)	2770	4683	1477	352	4902	1342	3362	3614	1293	988	3510	1395
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)	405	1355	180	60	1350	90	210	215	60	135	200	565
RTOR Reduction (vph)	0	0	54	0	0	45	0	0	51	0	0	43
Lane Group Flow (vph)	405	1355	126	60	1350	45	210	215	9	135	200	522
Confl. Peds. (#/hr)	25%	12%	6%	1%	7%	19%	3%	1%	22%	16%	4%	14%
Heavy Vehicles (%)	25%	12%	6%	1%	7%	19%	3%	1%	22%	16%	4%	14%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	5	2	2	1	6	3	7	4	4	3	8	5
Permitted Phases	2	2	2	6	6	6	6	4	8	8	8	8
Actuated Green, G (s)	36.6	83.6	94.4	58.9	53.2	62.0	10.8	15.1	20.8	21.9	13.1	49.7
Effective Green, g (s)	36.6	83.6	94.4	58.9	53.2	62.0	10.8	15.1	20.8	21.9	13.1	49.7
Actuated G/C Ratio	0.27	0.62	0.70	0.44	0.39	0.46	0.08	0.11	0.15	0.16	0.10	0.37
Clearance Time (s)	3.0	6.9	4.5	3.5	6.9	4.5	4.5	6.9	3.5	4.5	6.9	3.0
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 Gap Cap (vph)	750	2899	1032	213	1931	616	268	404	199	196	340	513
v/s Ratio Prot	0.15	0.29	0.01	0.01	0.28	0.00	0.06	0.06	0.04	0.06	0.06	0.28
v/s Ratio Perm	0.54	0.47	0.12	0.28	0.70	0.07	0.78	0.53	0.05	0.69	0.59	1.02
Uniform Delay, d1	42.0	13.8	6.7	22.2	34.2	20.4	61.0	56.6	48.7	52.0	58.4	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	0.85
Incremental Delay, d2	0.8	0.5	0.1	0.7	2.1	0.1	13.9	1.3	0.1	8.2	2.2	40.9
Delay (s)	42.8	14.3	6.7	22.9	36.3	20.5	74.8	58.0	48.7	64.8	63.3	77.1
Level of Service	D	B	A	C	D	C	E	E	D	E	E	E
Approach Delay (s)	19.6			34.9			64.1			72.2		
Approach LOS	B			C			E			E		
Intersection Summary	HCM 2000 Control Delay			HCM 2000 Level of Service			D			D		
HCM 2000 Volume to Capacity ratio	0.85			Sum of lost time (s)			21.8			D		
Actuated Cycle Length (s)	135.0			ICU Level of Service			80.4%			D		
Intersection Capacity Utilization	80.4%			Analysis Period (min)			15			e Critical Lane Group		

Tribal Lands Dixie

Synchro 11 Report
 FT_2028.syn

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

Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	10	50	70	0	15	645	5	770	
Traffic Volume (vph)	10	50	70	0	15	645	5	770	
Future Volume (vph)	10	50	70	0	15	645	5	770	
Lane Group Flow (vph)	10	50	70	5	15	660	0	775	
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA	
Protected Phases	4	4	8	8	2	2	6	6	
Permitted Phases	4	4	8	8	2	2	6	6	
Detector Phase	4	4	8	8	2	2	6	6	
Switch Phase	4	4	8	8	2	2	6	6	
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead-Lag Optimizer?	None	None	None	None	C-Max	C-Max	C-Max	C-Max	
Recall Mode	0.06	0.10	0.44	0.01	0.06	0.54	0.62	0.62	
v/s Ratio	28.7	0.4	34.1	0.0	8.1	25.5	14.7	14.7	
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Queue Delay	28.7	0.4	34.1	0.0	8.1	25.5	14.7	14.7	
Total Delay	1.3	0.0	8.6	0.0	1.5	186.6	71.6	71.6	
Queue Length 50th (m)	5.3	0.0	18.8	0.0	m3.3	221.4	#/62.7	62.7	
Queue Length 95th (m)	5.3	0.0	18.8	0.0	m3.3	221.4	#/62.7	62.7	
Internal Link Dist (m)	96.6			96.6			358.1		
Turn Bay Length (m)	96.0			96.0			358.1		
Base Capacity (vph)	476	673	296	832	247	1216	1243	1243	
Saturation 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/s Ratio	0.02	0.07	0.24	0.01	0.06	0.54	0.62	0.62	
Intersection Summary	Cycle Length: 67.5			Actuated Cycle Length: 67.5			Offset: 0 (0%), Referenced to phase 2NBLT, Start of Green		
Natural Cycle: 90	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.									



Tribal Lands Dixie

Synchro 11 Report
 FT_2028.syn

HCM Signalized Intersection Capacity Analysis

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	10	0	50	70	0	5	15	64.5	15	5	770	0	
Traffic Volume (vph)	10	0	50	70	0	5	15	64.5	15	5	770	0	
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Ideal Flow (vph/ln)	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	
Lane Width	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
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	1.00	
Frbp. 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	
Ft	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (prot)	1785	1426	1394	1633	1291	1688	1291	1688	1731	1731	1731	1731	
Flt Permitted	0.95	1.00	0.76	1.00	0.25	1.00	0.25	1.00	1.00	1.00	1.00	1.00	
Satd. Flow (perm)	1785	1426	1111	1633	343	1688	343	1688	1727	1727	1727	1727	
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)	10	0	50	70	0	5	15	64.5	15	5	770	0	
RTOR Reduction (vph)	0	0	47	0	4	0	0	1	0	0	0	0	
Lane Group Flow (vph)	10	0	3	70	1	0	15	659	0	0	775	0	
Cont. Ped. (#/hr)	0%	0%	12%	28%	0%	0%	38%	13%	33%	0%	11%	0%	
Heavy Vehicles (%)	0%	0%	12%	28%	0%	0%	38%	13%	33%	0%	11%	0%	
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6	
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6	
Actuated Green, G (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2	
Effective Green, g (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2	
Actuated G/C Ratio	0.06	0.06	0.10	0.10	0.10	0.64	0.64	0.64	0.64	0.64	0.64	0.64	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	100	80	115	169	219	1080	0.39	0.39	0.39	0.39	0.39	0.39	
v/s Ratio Prot	60.01	0.00	60.06	0.00	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	
v/s Ratio Perm	0.10	0.04	0.61	0.00	0.07	0.61	0.61	0.61	0.61	0.61	0.61	0.61	
Uniform Delay, d1	30.2	28.9	27.1	4.6	7.2	7.9	7.9	7.9	7.9	7.9	7.9	7.9	
Progression Factor	1.00	1.00	1.00	1.00	0.94	2.61	2.61	2.61	2.61	2.61	2.61	2.61	
Incremental Delay, d2	0.4	0.2	8.8	0.0	0.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	
Delay (s)	30.7	30.3	37.8	27.1	4.9	21.2	21.2	21.2	21.2	21.2	21.2	21.2	
Level of Service	C	C	D	C	A	C	C	C	C	C	C	C	
Approach Delay (s)	30.4	30.4	37.0	20.8	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	
Approach LOS	C	C	D	B	B	B	B	B	B	B	B	B	
Intersection Summary													
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service					B						
HCM 2000 Volume to Capacity ratio	0.65												
Actuated Cycle Length (s)	67.5	Sum of lost time (s)					13.5						
Intersection Capacity Utilization	65.3%	ICU Level of Service					C						
Analysis Period (min)	15												
e Critical Lane Group													

Tribal Lands Dixie

Queues

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

Lane Group	EBL	WBR	NBL	NBT	SBT
Lane Configurations	5	10	35	595	795
Traffic Volume (vph)	5	10	35	595	795
Future Volume (vph)	5	10	35	595	795
Lane Group Flow (vph)	5	10	0	635	815
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases	2	2	2	6	6
Permitted Phases	4	8	2	2	6
Detector Phase	4	8	2	2	6
Switch Phase	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Recall-Lag Optimizer?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/s Ratio	0.02	0.03	0.44	0.50	0.50
Control Delay	17.2	0.2	2.8	3.1	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.2	2.8	3.1	3.1
Queue Length 50th (m)	0.4	0.0	0.0	0.0	0.0
Queue Length 95th (m)	2.5	0.0	44.7	62.1	62.1
Internal Link Dist (m)			358.1	696.2	
Turn Bay Length (m)					
Base Capacity (vph)	714	728	1445	1640	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/s Ratio	0.01	0.01	0.44	0.50	
Intersection Summary					
Cycle Length: 45					
Actuated Cycle Length: 45					
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBT, Start of Green					
Natural Cycle: 60					
Control Type: Actuated-Coordinated					
Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1					

Tribal Lands Dixie

HCM Signalized Intersection Capacity Analysis
 7: Dixie Road & UPS Facility Access/12173 West Access 1 Future Background (NEN) 2028 PM Peak Hour

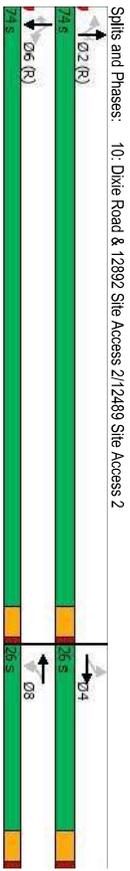
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	0	0	0	0	10	35	595	5	0	795	20
Future Volume (vph)	5	0	0	0	0	10	35	595	5	0	795	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	4.5					4.5					4.5	
Lane Util. Factor	1.00					1.00					1.00	
Frbp. ped/bikes	1.00					1.00					1.00	
Ft	1.00					0.85					1.00	
Fl Protected	0.95					1.00					1.00	
Satd. Flow (prot)	1785					1597					1759	
Fl Permitted	0.95					1.00					0.94	
Satd. Flow (perm)	1785					1597					1759	
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	595	5	0	795	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	1	0
Lane Group Flow (vph)	5	0	0	0	0	0	0	635	0	0	814	0
Confl. Peds. (#/hr)	0%	0%	0%	0%	0%	0%	2%	17%	100%	0%	9%	0%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	17%	100%	0%	9%	0%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	NA	NA	NA	NA	NA
Protected Phases												6
Permitted Phases	4		4	8		8	2					2
Actuated Green, G (s)	1.2		1.2	1.2		1.2	34.8				34.8	34.8
Effective Green, g (s)	1.2		1.2	1.2		1.2	34.8				34.8	34.8
Actuated G/C Ratio	0.03		0.03	0.03		0.03	0.77				0.77	0.77
Clearance Time (s)	4.5		4.5	4.5		4.5	3.0				4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0		3.0	1199				3.0	3.0
Lane Gap Cap (vph)	47		47	42		42	1360				1360	60.46
v/s Ratio Prot												
v/s Ratio Perm	60.00		60.00	0.00		0.00	0.41				0.60	0.60
v/c Ratio	0.11		0.11	0.01		0.01	0.53				2.2	2.2
Uniform Delay, d1	21.4		21.4	21.3		21.3	2.0				1.00	1.00
Progression Factor	1.00		1.00	1.00		1.00	1.7				2.0	2.0
Incremental Delay, d2	1.0		1.0	0.1		0.1	1.7				4.1	4.1
Delay (s)	22.4		22.4	21.4		21.4	3.6				4.1	4.1
Level of Service	C		C	C		C	A				A	A
Approach Delay (s)	22.4		22.4	21.4		21.4	3.6				4.1	4.1
Approach LOS	C		C	C		C	A				A	A
Intersection Summary												
HCM 2000 Control Delay	4.1		4.1	HCM 2000 Level of Service			A				A	A
HCM 2000 Volume to Capacity ratio	0.58		0.58	Sum of lost time (s)			9.0				C	C
Actuated Cycle Length (s)	45.0		45.0	ICU Level of Service			15				15	15
Intersection Capacity Utilization	70.7%		70.7%	Analysis Period (min)			15				15	15
e Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 8: Dixie Road & 12489 Site Access 1 Future Background (NEN) 2028 PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (veh/h)	0	0	590	10	0	720
Future Volume (veh/h)	0	0	590	10	0	720
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	590	10	0	720
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median Type			None			None
Median storage (veh)						
Upstream signal (m)	0.95					394
pX, platoon unblocked	1310		590			600
vC, conflicting volume						
wC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCn, unblocked vol	1299		590			600
IC, single (s)	6.4		6.2			4.1
IC, 2 stage (s)						
IF (s)	3.5		3.3			2.2
p0 queue free %	100		100			100
CM capacity (veh/h)	170		511			987
Direction, Lane #						
Volume Total	0	590	10	720		
Volume Left	0	0	0	0		
Volume Right	0	0	10	0		
SSH	1700	1700	1700	987		
Volume to Capacity	0.00	0.35	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	A	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0		
Approach LOS	A	A	A	A		
Intersection Summary						
Average Delay	0.0		0.0			A
Intersection Capacity Utilization	47.9%		47.9%			A
Analysis Period (min)	15		15			15

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	90	0	20	545	25	15	580	5
Traffic Volume (vph)	35	0	90	0	20	545	25	15	580	5
Future Volume (vph)	35	55	90	55	20	545	25	15	580	5
Lane Group Flow (vph)	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Turn Type	4	8	8	8	2	2	2	2	6	6
Protected Phases	4	4	8	8	2	2	2	2	6	6
Detector Phases	4	4	8	8	2	2	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	26.0	26.0	26.0	26.0	74.0	74.0	74.0	74.0	74.0	74.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%
Total Spill (%)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
LeadLag										
Lead-Lag Optimizer?	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Recall Mode	0.22	0.11	0.56	0.10	0.03	0.40	0.02	0.02	0.40	0.00
v/c Ratio	41.3	0.4	53.7	0.4	3.1	4.5	1.3	3.1	4.4	0.6
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	41.3	0.4	53.7	0.4	3.1	4.5	1.3	3.1	4.4	0.6
Total Delay	6.6	0.0	17.6	0.0	0.7	26.8	0.0	0.5	28.6	0.0
Queue Length 50th (m)	15.3	0.0	32.3	0.0	2.8	53.9	1.9	2.3	56.5	0.4
Queue Length 95th (m)	161.0	15.0	124.2	60.0	369.7	60.0	60.0	813.5	60.0	60.0
Internal Link Dist (m)	291	642	291	661	647	1373	1317	676	1462	1315
Turn Bay Length (m)	0	0	0	0	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Starvation 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	0.12	0.09	0.31	0.08	0.03	0.40	0.02	0.02	0.40	0.00

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	55	90	0	55	20	545	25	15	580	5
Traffic Volume (vph)	35	0	55	90	0	55	20	545	25	15	580	5
Future Volume (vph)	35	55	90	55	20	55	20	545	25	15	580	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Flt	1.00	0.85	1.00	0.85	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	0.95	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)	1785	1633	1785	1633	1785	1633	1671	1597	1785	1779	1597	1597
Flt Permitted	0.72	1.00	0.72	1.00	0.72	1.00	0.42	1.00	0.44	1.00	1.00	0.44
Satd. Flow (perm)	1335	1633	1335	1633	1335	1633	789	1671	1597	822	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	545	25	15	580	5
RTOR Reduction (vph)	0	49	0	0	49	0	0	0	0	0	0	0
Lane Group Flow (vph)	35	6	6	90	6	6	20	545	20	15	580	4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	8%	0%
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4	8	8	8	8	2	2	6	6	6	6
Permitted Phases	4	4	8	8	8	8	2	2	6	6	6	6
Actuated Green, G (s)	10.6	10.6	10.6	10.6	10.6	10.6	80.4	80.4	80.4	80.4	80.4	80.4
Effective Green, g (s)	10.6	10.6	10.6	10.6	10.6	10.6	80.4	80.4	80.4	80.4	80.4	80.4
Actuated Q/C Ratio	0.11	0.11	0.11	0.11	0.11	0.11	0.80	0.80	0.80	0.80	0.80	0.80
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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)	143	173	173	143	173	143	633	1343	1283	660	1430	1283
v/s Ratio Prot	0.00	0.00	0.00	0.00	0.00	0.00	60.33	60.33	60.33	60.33	60.33	60.33
v/s Ratio Perm	0.03	0.03	0.03	0.03	0.03	0.03	0.41	0.41	0.41	0.41	0.41	0.41
v/c Ratio	0.24	0.03	0.63	0.03	0.03	0.03	0.02	0.02	0.02	0.41	0.00	0.00
Uniform Delay, d1	41.0	40.1	42.8	40.1	2.0	2.9	1.9	2.0	2.0	2.9	1.9	1.9
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	0.9	0.1	8.4	0.1	0.1	0.9	0.1	0.1	0.1	0.9	0.0	0.0
Delay (s)	41.9	40.2	51.2	40.2	2.1	3.8	2.0	2.0	3.7	1.9	1.9	1.9
Level of Service	D	D	D	D	D	A	A	A	A	A	A	A
Approach Delay (s)	40.9	40.9	47.0	40.9	40.9	40.9	3.6	3.6	3.6	3.6	3.6	3.6
Approach LOS	D	D	D	D	D	A	A	A	A	A	A	A

Intersection Summary
 HCM 2000 Control Delay: 10.4
 HCM 2000 Volume to Capacity ratio: 0.43
 Actuated Cycle Length (s): 100.0
 Intersection Capacity Utilization: 49.7%
 Analysis Period (min): 15
 Critical Lane Group: c

HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background (NEN) 2028 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	→	→	←	←	←	←	→	→	→	→	→
Traffic Volume (vph)	65	150	30	70	350	15	70	470	105	5	290	35
Future Volume (vph)	65	150	30	70	350	15	70	470	105	5	290	35
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	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	0.85	1.00	1.00	0.85	1.00	1.00	1.00	0.85	1.00	0.85
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	1.00	0.85	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)	1785	1865	1166	1785	1902	1493	1159	1902	1507	1733	1746	1521
Flt Permitted	0.39	1.00	1.00	0.66	1.00	1.00	0.58	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	732	1865	1166	1243	1902	1493	710	1902	1507	793	1746	1521
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)	65	150	30	70	350	15	70	470	105	5	290	35
RTOR Reduction (vph)	0	0	22	0	0	11	0	0	49	0	0	16
Lane Group Flow (vph)	65	150	8	70	350	4	70	470	56	5	290	19
Heavy Vehicles (%)	0%	3%	37%	0%	1%	7%	54%	1%	6%	3%	10%	5%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	2	2	6	6	6	6	6
Actuated Green, G (s)	17.2	17.2	17.2	17.2	17.2	34.8	34.8	34.8	34.8	34.8	34.8	34.8
Effective Green, g (s)	17.2	17.2	17.2	17.2	17.2	34.8	34.8	34.8	34.8	34.8	34.8	34.8
Actuated Q/C Ratio	0.26	0.26	0.26	0.26	0.26	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Clearance Time (s)	6.5	6.5	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	3.0
Lane Grp Cap (vph)	193	493	308	328	503	395	380	1018	806	424	934	814
v/s Ratio Prot	0.09	0.08	0.01	0.06	0.18	0.00	0.10	0.46	0.07	0.01	0.17	0.17
v/s Ratio Perm	0.34	0.30	0.03	0.21	0.70	0.01	0.18	0.46	0.07	0.01	0.31	0.02
v/c Ratio	19.3	19.1	17.7	18.6	21.5	17.6	7.8	9.3	7.3	7.1	8.4	7.1
Uniform Delay, d1	1.00	1.00	1.00	1.18	1.73	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	1.0	0.4	0.0	0.3	4.1	0.0	1.1	1.5	0.2	0.1	0.9	0.1
Incremental Delay, d2	20.3	19.5	17.7	22.3	41.3	17.6	8.8	10.8	7.5	7.1	9.3	7.2
Delay (s)	C	B	B	C	D	B	A	B	A	A	A	A
Level of Service	C	B	B	C	D	B	A	B	A	A	A	A
Approach Delay (s)	19.5	37.4	10.1	37.4	10.1	37.4	10.1	37.4	10.1	37.4	10.1	37.4
Approach LOS	B	D	B	D	B	A	B	A	A	A	A	A
Intersection Summary												
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service										
HCM 2000 Volume to Capacity ratio	0.34	B										
Actuated Cycle Length (s)	65.0	Sum of lost time (s)										
Intersection Capacity Utilization	73.2%	ICU Level of Service										
Analysis Period (min)	15	D										

Tribal Lands Dixie

Synchro 11 Report
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HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background (NEN) 2028 PM Peak Hour

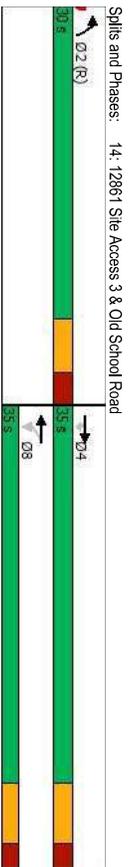
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	255	0	0	430	0	0
Future Volume (veh/h)	255	0	0	430	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	255	0	0	430	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream storage (veh)						
Upstream signal (m)	66					
pX, platform unblocked						
WC, conflicting volume			255		470	128
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol	255			470	128	
IC, single (s)	4.1			6.8	6.9	
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	100			100	100	
CM capacity (veh/h)	1322			527	905	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	170	85	215	215	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
SSH	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	A	A	A	A	
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0	
Approach LOS	A	A	A	A	A	
Intersection Summary						
Average Delay	0.0	0.0				
Intersection Capacity Utilization	15.2%	15.2%				
Analysis Period (min)	15	15				
		ICU Level of Service				
		A				

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

Lane Group	EBT	WBT	02
Lane Configurations	↔↔	↔↔	
Traffic Volume (vph)	255	430	
Future Volume (vph)	255	430	
Lane Group Flow (vph)	255	430	
Turn Type	NA	NA	
Protected Phases	4	8	2
Permitted Phases			
Detector Phases	4	8	
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	24.5
Total Split (s)	35.0	35.0	30.0
Total Split (%)	53.8%	53.3%	46%
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 Optimizer?			
Recall Mode	None	None	C-Min
v/c Ratio	0.35	0.59	
Control Delay	14.5	26.5	
Queue Delay	0.0	0.0	
Total Delay	14.5	26.5	
Queue Length 50th (m)	6.2	28.2	
Queue Length 95th (m)	16.0	36.7	
Internal Link Dist (m)	433.3	157.0	
Turn Bay Length (m)			
Base Capacity (vph)	1600	1600	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.16	0.27	

Intersection Summary
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔↔	↔↔
Traffic Volume (vph)	255	0	0	430	0	0
Future Volume (vph)	255	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		
Flt	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)	255	0	0	430	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	255	0	0	430	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type	NA	Perm		NA	Prot	
Protected Phases	4		8	8	2	
Permitted Phases						
Actuated Green, G (s)	13.1			13.1		
Effective Green, g (s)	13.1			13.1		
Actuated g/C Ratio	0.20			0.20		
Clearance Time (s)	6.5			6.5		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	735			735		
v/s Ratio Prot	0.07			0.12		
v/s Ratio Perm						
v/c Ratio	0.35			0.59		
Uniform Delay, d1	22.3			23.5		
Progression Factor	0.61			1.00		
Incremental Delay, d2	0.3			1.2		
Delay (s)	13.8			24.7		
Level of Service	B			C		
Approach Delay (s)	13.8			24.7		
Approach LOS	B			C		

Intersection Summary
 HCM 2000 Control Delay: 20.6
 HCM 2000 Volume to Capacity ratio: 0.15
 Actuated Cycle Length (s): 65.0
 Intersection Capacity Utilization: 17.3%
 Analysis Period (min): 15
 Critical Lane Group: c

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Background (NEN) 2028 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop		Stop		Stop		Stop		Stop
Traffic Volume (vph)	15	215	25	15	355	10	60	200	35	10	55	15
Future Volume (vph)	15	215	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	215	25	15	355	10	60	200	35	10	55	15
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	255	380	295	80								
Volume Left (vph)	15	15	60	10								
Volume Right (vph)	25	10	35	15								
Head (s)	0.02	0.01	-0.03	0.02								
Departure Headway (s)	5.7	5.5	5.8	6.4								
Degree Utilization, x	0.41	0.58	0.48	0.14								
Capacity (veh/h)	578	619	568	466								
Control Delay (s)	12.6	15.9	14.0	10.4								
Approach Delay (s)	12.6	15.9	14.0	10.4								
Approach LOS	B	C	B	B								
Intersection Summary												
Delay	14.1											
Level of Service	B											
Intersection Capacity Utilization	53.1%											
ICU Level of Service	A											
Analysis Period (min)	15											

Queues

1: Dixie Road & Mayfield Road

Future Background 2033 (NEN) PM Peak Hour

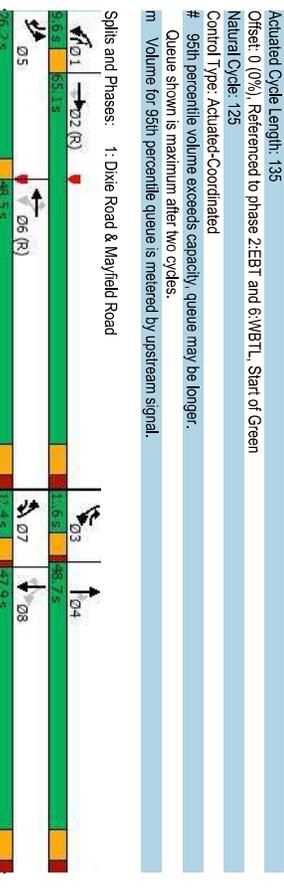
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		RT	RT		RT	RT		RT	RT	RT	RT	RT
Traffic Volume (vph)	405	1495	180	60	1485	90	210	215	60	135	200	565
Future Volume (vph)	405	1495	180	60	1485	90	210	215	60	135	200	565
Lane Group Flow (vph)	405	1495	180	60	1485	90	210	215	60	135	200	565
Turn Type	Prot	NA	pmt+ov	Prot	NA	pmt+ov	Prot	NA	pmt+ov	Prot	NA	pmt+ov
Protected Phases	1	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases	5	2	7	1	6	3	7	4	1	3	8	5
Detector Phases	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	47.9	9.5	47.9	9.5	47.9	9.5
Total Split (s)	26.2	65.1	12.4	9.6	48.5	11.6	12.4	48.7	9.6	11.6	47.9	26.2
Total Split (%)	19.4%	48.2%	9.2%	7.1%	35.9%	8.6%	9.2%	36.1%	7.1%	8.6%	35.5%	19.4%
Yellow Time (s)	3.0	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.0
All-Red Time (s)	0.0	2.3	1.0	0.0	2.3	1.0	1.0	2.3	0.0	1.0	2.3	0.0
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)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
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	0.52	0.50	0.16	0.26	0.76	0.13	0.87	0.57	0.19	0.64	0.59	0.96
Control Delay	41.7	14.1	1.1	15.0	39.3	4.9	93.4	63.2	3.9	63.6	66.7	52.9
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	41.7	14.1	1.1	15.0	39.3	4.9	93.4	63.2	3.9	63.6	66.7	52.9
Queue Length 50th (m)	49.4	77.8	0.0	4.0	127.8	0.0	30.8	30.7	0.0	38.6	30.2	88.6
Queue Length 95th (m)	59.1	99.5	6.7	9.5	#186.8	11.0	#58.8	43.5	4.6	m#0.1	43.6	105.2
Internal Link Dist (m)		980.1		272.1			844.0				481.5	
Turn Bay Length (m)	210.0		184.0	180.0		150.0	160.0		65.0	210.0		180.0
Base Capacity (vph)	779	2998	1116	232	1948	711	242	1119	309	212	1066	590
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	0.52	0.50	0.16	0.26	0.76	0.13	0.87	0.57	0.19	0.64	0.59	0.96
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green												
Natural Cycle: 125												
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.												

Trial Lands Dixie

Synchro 11 Report
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Trial Lands Dixie

Synchro 11 Report
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HCM Signalized Intersection Capacity Analysis

Future Background 2033 (NEN) PM Peak Hour

1: Dixie Road & Mayfield Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	405	1495	180	60	1485	90	210	215	60	135	200	565
Future Volume (vph)	405	1495	180	60	1485	90	210	215	60	135	200	565
Ideal Flow (vph/pl)	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)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	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	0.99	1.00	1.00	1.00
Flt	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85
Satd. Flow (prot)	2684	4683	1476	1767	4902	1320	3362	3614	1293	1484	3510	1348
Flt Permitted	0.95	1.00	1.00	0.16	1.00	0.95	1.00	1.00	0.82	1.00	1.00	1.00
Satd. Flow (perm)	2684	4683	1476	303	4902	1320	3362	3614	1293	964	3510	1348
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)	405	1495	180	60	1485	90	210	215	60	135	200	565
RTOR Reduction (vph)	0	0	54	0	0	49	0	0	51	0	0	42
Lane Group Flow (vph)	405	1495	126	60	1485	41	210	215	9	135	200	523
Confl. Peds. (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Heavy Vehicles (%)	29%	12%	6%	1%	7%	21%	3%	1%	22%	4%	18%	5%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	5	2	2	6	1	6	3	7	4	3	8	5
Permitted Green, G (s)	38.2	88.7	94.5	59.2	63.6	61.2	8.8	14.3	19.9	20.7	13.1	51.3
Effective Green, g (s)	39.2	85.7	94.5	61.2	63.6	61.2	9.8	14.3	19.9	22.7	13.1	51.3
Actuated G/C Ratio	0.29	0.63	0.70	0.45	0.40	0.45	0.07	0.11	0.15	0.10	0.38	0.38
Clearance Time (s)	3.0	6.9	4.5	3.5	6.9	4.5	4.5	6.9	3.5	4.5	6.9	3.0
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 Gap Cap (vph)	779	2972	1033	208	1946	598	244	382	190	195	340	512
v/s Ratio Prot	0.15	0.32	0.01	0.01	0.30	0.00	0.06	0.06	0.04	0.06	0.06	0.28
v/s Ratio Perm	0.52	0.50	0.12	0.29	0.76	0.07	0.86	0.56	0.05	0.69	0.59	1.02
Uniform Delay, d1	4.00	13.2	6.6	20.9	35.2	20.8	61.9	57.4	49.4	51.5	58.4	41.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.05	0.88
Incremental Delay, d2	0.6	0.6	0.1	0.8	2.9	0.0	25.2	1.9	0.1	8.5	2.2	41.6
Level of Service	D	B	A	C	D	C	F	E	D	E	E	E
Approach Delay (s)	18.4			36.6			70.1			72.5		
Approach LOS	B			D			E			E		
Intersection Summary												
HCM 2000 Control Delay		38.7		HCM 2000 Level of Service			D					
HCM 2000 Volume to Capacity ratio		0.90										
Actuated Cycle Length (s)		135.0		Sum of lost time (s)			21.8					
Intersection Capacity Utilization		82.6%		ICU Level of Service			E					
Analysis Period (min)		15										
e Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

Queues

Future Background 2033 (NEN) PM Peak Hour

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

Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Traffic Volume (vph)	10	50	70	0	15	645	5	770
Future Volume (vph)	10	50	70	0	15	645	5	770
Lane Group Flow (vph)	10	50	70	5	15	660	0	775
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8	8	2		6	
Detector Phases	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)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead-Lag Optimizer?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/s Ratio	0.06	0.10	0.44	0.01	0.06	0.55	0.64	0.64
Control Delay	28.7	0.4	34.1	0.0	8.3	25.4	15.3	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	0.4	34.1	0.0	8.3	25.4	15.3	15.3
Queue Length 50th (m)	1.3	0.0	8.6	0.0	1.5	186.8	73.3	73.3
Queue Length 95th (m)	5.3	0.0	18.8	0.0	m3.3	225.1	#/65.8	#/65.8
Internal Link Dist (m)					96.6		358.1	
Turn Bay Length (m)					95.0			
Base Capacity (vph)	476	673	296	832	247	1206	1210	1210
Saturation 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/s Ratio	0.02	0.07	0.24	0.01	0.06	0.55	0.64	0.64
Intersection Summary								
Cycle Length: 67.5								
Actuated Cycle Length: 67.5								
Offset: 0 (0%), Referenced to phase 2NBT, Start of Green								
Natural Cycle: 90								
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: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3								
Tribal Lands Dixie								

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Signalized Intersection Capacity Analysis

5: Dixie Road & Spliers Griggsen Avenue/12173 Site Access 3 Future Background 2033 (NEN) PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	10	0	50	70	0	5	15	64.5	15	5	77.0	0
Traffic Volume (vph)	10	0	50	70	0	5	15	64.5	15	5	77.0	0
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Lane Width	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1.00
Frbp. 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
Ft	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1785	1426	1394	1633	1291	1673	1291	1673	1686	1686	1686	1686
Flt Permitted	0.95	1.00	0.76	1.00	0.25	1.00	0.25	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1785	1426	1111	1633	343	1673	343	1673	1681	1681	1681	1681
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)	10	0	50	70	0	5	15	64.5	15	5	77.0	0
RTOR Reduction (vph)	0	0	47	0	4	0	0	1	0	0	0	0
Lane Group Flow (vph)	10	0	3	70	1	0	15	659	0	0	775	0
Cont. Peds. (#/hr)	0%	0%	12%	28%	0%	0%	38%	14%	33%	0%	14%	0%
Heavy Vehicles (%)	0%	0%	12%	28%	0%	0%	38%	14%	33%	0%	14%	0%
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6
Actuated Green, G (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Effective Green, g (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Actuated G/C Ratio	0.06	0.06	0.10	0.10	0.10	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	100	80	115	169	219	1070	0.39	0.39	0.39	0.46	0.46	0.46
v/s Ratio Prot	60.01	0.00	60.06	0.00	0.07	0.62	0.72	0.72	0.72	0.72	0.72	0.72
v/s Ratio Perm	0.10	0.04	0.61	0.00	0.07	0.62	0.72	0.72	0.72	0.72	0.72	0.72
Uniform Delay, d1	30.2	30.1	28.9	27.1	8.1	4.6	7.2	7.2	7.2	7.2	7.2	7.2
Progression Factor	1.00	1.00	1.00	1.00	0.98	2.59	4.2	4.2	4.2	4.2	4.2	4.2
Incremental Delay, d2	0.4	0.2	8.8	0.0	0.6	2.5	4.2	4.2	4.2	4.2	4.2	4.2
Delay (s)	30.7	30.3	37.8	27.1	5.0	21.2	12.3	12.3	12.3	12.3	12.3	12.3
Level of Service	C	C	C	D	C	A	C	C	C	C	C	C
Approach Delay (s)	30.4	30.4	37.0	37.0	20.8	12.3	12.3	12.3	12.3	12.3	12.3	12.3
Approach LOS	C	C	D	D	C	B	B	B	B	B	B	B
Intersection Summary												
HCM 2000 Control Delay	17.8			HCM 2000 Level of Service	B							
HCM 2000 Volume to Capacity ratio	0.66			Sum of lost time (s)	13.5							
Actuated Cycle Length (s)	67.5			ICU Level of Service	C							
Intersection Capacity Utilization	65.3%											
Analysis Period (min)	15											
e Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

Queues

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

Lane Group	EBL	WBR	NBL	NBT	SBT
Lane Configurations	10	10	35	595	795
Traffic Volume (vph)	5	10	35	595	795
Future Volume (vph)	5	10	35	595	795
Lane Group Flow (vph)	5	10	0	635	815
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases	2	2	2	6	6
Detector Phases	4	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Lead-Lag Optimizer?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/s Ratio	0.02	0.03	0.45	0.52	0.52
Control Delay	17.2	0.2	2.9	3.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.2	2.9	3.8	3.8
Queue Length 50th (m)	0.4	0.0	0.0	0.0	0.0
Queue Length 95th (m)	2.5	0.0	45.7	#68.1	#68.1
Internal Link Dist (m)			358.1	696.2	696.2
Turn Bay Length (m)					
Base Capacity (vph)	714	728	1423	1563	1563
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/s Ratio	0.01	0.01	0.45	0.52	0.52
Intersection Summary					
Cycle Length: 45					
Actuated Cycle Length: 45					
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBT, Start of Green					
Natural Cycle: 60					
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					

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 Background 2033 (NEN) PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	0	0	0	0	10	35	595	5	0	795	20
Future Volume (vph)	5	0	0	0	0	10	35	595	5	0	795	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)	4.5					4.5		4.5			4.5	
Lane Util. Factor	1.00					1.00		1.00			1.00	
Frbp. ped/bikes	1.00					1.00		1.00			1.00	
Ft	1.00					0.85		1.00			1.00	
Flt Protected	0.95					1.00		1.00			1.00	
Satd. Flow (prot)	1785					1597		1612			1675	
Fl Permitted	0.95					1.00		0.94			1.00	
Satd. Flow (perm)	1785					1597		1526			1675	
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	595	5	0	795	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	1	0
Lane Group Flow (vph)	5	0	0	0	0	0	635	0	0	0	814	0
Cont. Peds. (#/hr)	0%	0%	0%	0%	0%	0%	2%	19%	100%	0%	12%	0%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	10%	19%	100%	0%	12%	0%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	NA	NA	NA	NA	NA
Protected Phases												6
Permitted Phases	4		4	8		8	2					2
Actuated Green, G (s)	1.2		1.2	1.2		1.2	34.8				34.8	
Effective Green, g (s)	1.2		1.2	1.2		1.2	34.8				34.8	
Actuated G/C Ratio	0.03		0.03	0.03		0.03	0.77				0.77	
Cheerance Time (s)	4.5		4.5	4.5		4.5	4.5				4.5	
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0				3.0	
Lane Gap Cap (vph)	47		47	42		42	1180				1295	
v/s Ratio Prot											60.49	
v/s Ratio Perm	60.00		60.00	0.00		0.00	0.42				0.63	
v/c Ratio	0.11		0.11	0.01		0.01	0.54				2.3	
Uniform Delay, d1	21.4		21.4	21.3		21.3	2.0				2.3	
Progression Factor	1.00		1.00	1.00		1.00	1.00				1.00	
Incremental Delay, d2	1.0		1.0	0.1		0.1	1.8				2.3	
Delay (s)	22.4		22.4	21.4		21.4	3.7				4.6	
Level of Service	C		C	C		C	A				A	
Approach Delay (s)	22.4		22.4	21.4		21.4	3.7				4.6	
Approach LOS	C		C	C		C	A				A	
Intersection Summary												
HCM 2000 Control Delay	4.4		4.4	HCM 2000 Level of Service		A					A	
HCM 2000 Volume to Capacity ratio	0.61		0.61	Sum of lost time (s)		9.0					C	
Actuated Cycle Length (s)	45.0		45.0	ICU Level of Service		C						
Intersection Capacity Utilization	70.7%		70.7%	Analysis Period (min)		15						
Analysis Period (min)	15		15									
e Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 8: Dixie Road & 12489 Site Access 1 Future Background 2033 (NEN) PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (veh/h)	0	0	590	10	0	720
Future Volume (Veh/h)	0	0	590	10	0	720
Sign Control	Stop	0%	Free	0%	Free	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	590	10	0	720
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median Type			None			None
Median storage (veh)						
Upstream signal (m)	0.94					394
pX, platoon unblocked	1310		590			600
vC, conflicting volume						
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
vCn, unblocked vol	1298		590			600
IC, single (s)	6.4		6.2			4.1
IC, 2 stage (s)						
IF (s)	3.5		3.3			2.2
p0 queue free %	100		100			100
CM capacity (veh/h)	170		511			987
Direction, Lane #						
Volume Total	0	590	10	720		
Volume Left	0	0	0	0		
Volume Right	0	0	10	0		
SSH	1700	1700	1700	987		
Volume to Capacity	0.00	0.35	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			A		
Intersection Summary						
Average Delay	0.0		0.0			A
Intersection Capacity Utilization	47.9%		47.9%			A
Analysis Period (min)	15		15			

Queues

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	90	0	20	545	25	15	580	5
Traffic Volume (vph)	35	0	90	0	20	545	25	15	580	5
Future Volume (vph)	35	55	90	55	20	545	25	15	580	5
Lane Group Flow (vph)	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Turn Type	4	4	8	8	2	2	2	2	6	6
Protected Phases	4	4	8	8	2	2	2	2	6	6
Detector Phases	4	4	8	8	2	2	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	26.0	26.0	26.0	26.0	74.0	74.0	74.0	74.0	74.0	74.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
LeadLag										
Lead-Lag Optimizer?	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Recall Mode	0.21	0.11	0.57	0.10	0.03	0.38	0.02	0.02	0.39	0.00
v/c Ratio	4.06	0.4	54.7	0.4	3.3	4.4	1.4	3.3	4.5	0.6
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	4.06	0.4	54.7	0.4	3.3	4.4	1.4	3.3	4.5	0.6
Total Delay	6.5	0.0	17.6	0.0	0.7	26.8	0.0	0.5	29.0	0.0
Queue Length 50th (m)	15.2	0.0	32.3	0.0	2.9	53.8	2.0	2.4	57.3	0.4
Queue Length 95th (m)	161.0	0.0	124.2	0.0	369.7	813.5	0.0	60.0	813.5	60.0
Internal Link Dist (m)	15.0	642	274	661	642	1442	1311	672	1497	1309
Turn Bay Length (m)	291	0	0	0	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
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	0.12	0.09	0.33	0.08	0.03	0.38	0.02	0.02	0.39	0.00

Intersection Summary

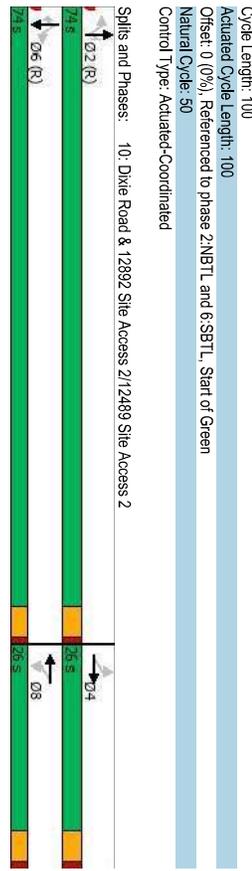
Cycle Length: 100

Actuated Cycle Length: 100

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

Natural Cycle: 50

Control Type: Actuated-Coordinated



Tribal Lands Dixie

HCM Signalized Intersection Capacity Analysis

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	55	90	0	55	20	545	25	15	580	5
Traffic Volume (vph)	35	0	55	90	0	55	20	545	25	15	580	5
Future Volume (vph)	35	55	90	55	20	55	20	545	25	15	580	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	3.7	3.5	3.5
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	1.00
Flt	1.00	0.85	1.00	0.85	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	0.95	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)	1785	1633	1685	1633	1685	1633	1785	1762	1597	1785	1830	1597
Flt Permitted	0.72	1.00	0.72	1.00	0.72	1.00	0.42	1.00	1.00	0.44	1.00	1.00
Satd. Flow (perm)	1335	1633	1279	1633	1633	1279	785	1762	1597	820	1830	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	545	25	15	580	5
RTOR Reduction (vph)	0	49	0	0	49	0	0	0	0	0	0	0
Lane Group Flow (vph)	35	6	0	90	6	0	20	545	20	15	580	4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	5%	0%
Turn Type	Perm	NA	0%	Perm	NA	0%	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4	8	8	8	8	2	2	2	6	6	6
Permitted Phases	4	4	8	8	8	8	2	2	2	6	6	6
Actuated Green, G (s)	11.0	11.0	11.0	11.0	11.0	11.0	8.0	8.0	8.0	8.0	8.0	8.0
Effective Green, g (s)	11.0	11.0	11.0	11.0	11.0	11.0	8.0	8.0	8.0	8.0	8.0	8.0
Actuated G/C Ratio	0.11	0.11	0.11	0.11	0.11	0.11	0.80	0.80	0.80	0.80	0.80	0.80
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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)	149	179	140	179	140	179	628	1409	1277	656	1464	1277
v/s Ratio Prot	0.03	0.03	0.03	0.03	0.03	0.03	0.31	0.31	0.01	0.02	0.32	0.00
v/s Ratio Perm	0.23	0.03	0.64	0.03	0.03	0.39	0.02	0.02	0.02	0.40	0.00	0.00
v/c Ratio	4.07	39.8	42.6	39.8	2.1	2.9	2.0	2.0	2.0	2.9	2.0	2.0
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.8	0.1	9.7	0.1	0.1	0.8	0.0	0.1	0.8	0.0	0.1	0.8
Incremental Delay, d2	41.5	39.8	52.3	39.8	2.1	3.7	2.0	2.1	3.7	2.0	3.7	2.0
Level of Service	D	D	D	D	D	A	A	A	A	A	A	A
Approach Delay (s)	40.5	40.5	47.6	40.5	40.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Approach LOS	D	D	D	D	D	A	A	A	A	A	A	A

Intersection Summary

HCM 2000 Control Delay: 10.4

HCM 2000 Volume to Capacity ratio: 0.43

Actuated Cycle Length (s): 100.0

Intersection Capacity Utilization: 49.7%

Analysis Period (min): 15

ICU Level of Service: A

Tribal Lands Dixie

HCM Unsignalized Intersection Capacity Analysis

11: Dixie Road & 12861 Site Access 1

Future Background 2033 (NEN) PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	0	0	635	0	0	600
Traffic Volume (Veh/h)	0	0	635	0	0	600
Future Volume (Veh/h)	0	0	635	0	0	600
Sign Control	Stop	0%	Free	0%	Free	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	635	0	0	600
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median Type			None			None
Median storage (veh)						
Upstream signal (m)			0.99			240
pK, platoon unblocked						
vC, conflicting volume			1235			635
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCn, unblocked vol			1232			635
IC, single (s)			6.4			6.2
IC, 2 stage (s)						
IC, 2 stage (s)			3.5			3.3
FF (s)			100			100
p0 queue free %			195			482
CM capacity (veh/h)						958
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	635	0	600		
Volume Left	0	0	0	0		
Volume Right	0	0	0	0		
ESH	1700	1700	1700	1700		
Volume to Capacity	0.00	0.37	0.00	0.35		
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	A	A	A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A			A		
Intersection Summary						
Average Delay	0.0			0.0		
Intersection Capacity Utilization	36.8%			ICU Level of Service		
Analysis Period (min)	15			A		

Trial Lands Dixie

Synchro 11 Report
FT_2033.syn

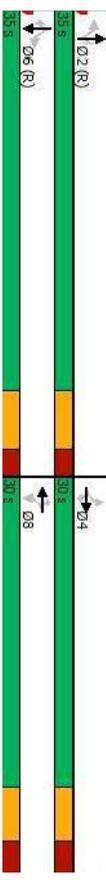
Queues

12: Dixie Road & Old School Road

Future Background 2033 (NEN) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	65	160	30	70	385	15	70	470	105	5	290	35
Traffic Volume (vph)	65	160	30	70	385	15	70	470	105	5	290	35
Future Volume (vph)	65	160	30	70	385	15	70	470	105	5	290	35
Lane Group Flow (vph)	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Turn Type												
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6
Permitted Phases	4	4	4	8	8	8	2	2	2	6	6	6
Detector Phases												
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	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	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	30.0	30.0	35.0	35.0	35.0	35.0	35.0	
Total Spilt (%)	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	53.8%	53.8%	53.8%	53.8%	53.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	
Leadlag												
Lead-Lag Optimizer?												
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
v/c Ratio	0.35	0.24	0.11	0.30	0.56	0.05	0.16	0.41	0.11	0.01	0.28	
Control Delay	27.4	22.3	3.3	47.8	49.7	13.1	7.7	8.6	2.0	6.2	7.4	
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	27.4	22.3	3.3	47.8	49.7	13.1	7.7	8.6	2.0	6.2	7.4	
Queue Length 50th (m)	7.2	9.1	0.0	10.1	29.2	0.2	3.3	26.7	0.0	0.2	14.9	
Queue Length 95th (m)	16.5	15.4	2.7	19.0	36.3	m1.7	10.3	53.2	5.7	1.6	31.4	
Internal Link Dist (m)				371.4	41.8			216.1			281.5	
Turn Bay Length (m)	30.0	1281	459	437	1306	577	432	1147	950	464	1054	
Base Capacity (vph)	351	1281	459	437	1306	577	432	1147	950	464	1054	
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	0.12	0.07	0.16	0.29	0.03	0.16	0.41	0.11	0.01	0.28	
Intersection Summary												
Cycle Length: 65												
Actuated Cycle Length: 65												
Offset: 0 (0%), Referenced to phase 2(NBTL) and 6(SRTL, Start of Green												
Natural Cycle: 50												
Control Type: Actuated-Coordinated												
m Volume for 95th percentile queue is metered by upstream signal.												

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



Trial Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Signalized Intersection Capacity Analysis

12: Dixie Road & Old School Road

Future Background 2033 (NEN) PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	65	160	30	70	385	15	70	470	105	5	290	35
Future Volume (vph)	65	160	30	70	385	15	70	470	105	5	290	35
Ideal Flow (vph/pl)	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1785	3544	1166	1767	3614	1493	1159	1883	1493	1566	1731	1521
Flt Permitted	0.52	1.00	1.00	0.65	1.00	1.00	0.58	1.00	1.00	0.46	1.00	1.00
Satd. Flow (perm)	971	3544	1166	1210	3614	1493	710	1883	1493	763	1731	1521
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)	65	160	30	70	385	15	70	470	105	5	290	35
RTOR Reduction (vph)	0	0	24	0	0	12	0	0	41	0	0	14
Lane Group Flow (vph)	65	160	6	70	385	3	70	470	64	5	290	21
Heavy Vehicles (%)	0%	3%	37%	1%	1%	7%	54%	2%	7%	14%	11%	5%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6
Actuated Green, G (s)	12.4	12.4	12.4	12.4	12.4	39.6	39.6	39.6	39.6	39.6	39.6	39.6
Effective Green, g (s)	12.4	12.4	12.4	12.4	12.4	39.6	39.6	39.6	39.6	39.6	39.6	39.6
Actuated Q/C Ratio	0.19	0.19	0.19	0.19	0.19	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Clearance Time (s)	6.5	6.5	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	3.0
Lane Grp Cap (vph)	185	676	222	230	689	284	432	1147	909	464	1054	926
v/s Ratio Prot	0.05	0.00	0.06	0.11	0.00	0.10	0.41	0.07	0.01	0.28	0.02	0.01
v/s Ratio Perm	0.35	0.24	0.03	0.30	0.56	0.01	0.16	0.41	0.07	0.01	0.28	0.02
v/c Ratio	22.8	22.3	21.4	22.6	23.8	21.3	5.5	6.6	5.2	5.0	6.0	5.0
Uniform Delay, d1	1.00	1.00	1.00	2.04	1.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	1.2	0.2	0.0	0.7	1.0	0.0	0.8	1.1	0.1	0.0	0.6	0.0
Incremental Delay, d2	24.0	22.5	21.4	46.9	48.5	21.3	6.3	7.7	5.3	5.0	6.6	5.1
Delay (s)	C	C	C	D	D	C	A	A	A	A	A	A
Level of Service	C	C	C	D	D	C	A	A	A	A	A	A
Approach Delay (s)	22.7			47.4			7.2			6.4		
Approach LOS	C			D			A			A		
Intersection Summary												
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service										C
HCM 2000 Volume to Capacity ratio	0.45											
Actuated Cycle Length (s)	65.0	Sum of lost time (s)										13.0
Intersection Capacity Utilization	65.4%	ICU Level of Service										C
Analysis Period (min)	15											
c Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Unsignalized Intersection Capacity Analysis

13: 12861 Site Access 2 & Old School Road

Future Background 2033 (NEN) PM Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	265	0	0	465	0	0
Future Volume (veh/h)	265	0	0	465	0	0
Sign Control	Free	0%	Free	Free	Stop	0%
Grade	0%	0%	0%	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	465	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median storage (veh)	None			None		
Upstream signal (m)	66					
PX, platoon unblocked			0.98		0.98	0.98
WC, conflicting volume			265		498	132
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol			196		435	60
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)			2.2		3.5	3.3
FF (s)			100		100	100
p0 queue free %			1355		541	974
CM capacity (veh/h)						
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	177	88	232	232	0	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	0	
SSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.10	0.05	0.14	0.14	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	A	A	A	A	
Approach Delay (s)	0.0		0.0		0.0	
Approach LOS			A		A	
Intersection Summary						
Average Delay	0.0	0.0				A
Intersection Capacity Utilization	16.2%	15				
Analysis Period (min)						

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Unsignalized Intersection Capacity Analysis

15: Bramalea Road & Old School Road

Future Background 2033 (NEN) PM Peak Hour

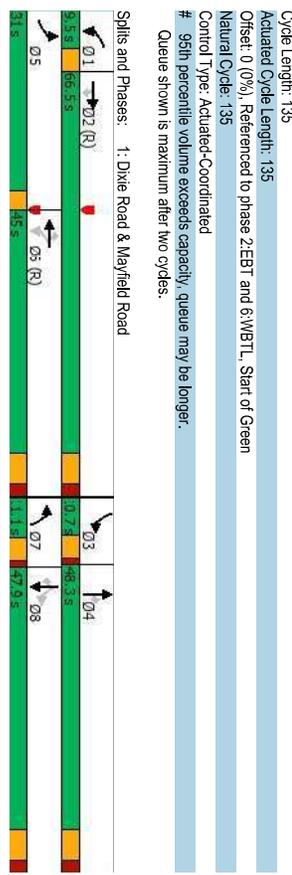
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop		Stop		Stop		Stop		Stop
Traffic Volume (vph)	15	225	25	15	390	10	60	220	35	10	60	15
Future Volume (vph)	15	225	25	15	390	10	60	220	35	10	60	15
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate (vph)	15	225	25	15	390	10	60	220	35	10	60	15
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	265	415	315	85								
Volume Left (vph)	15	15	60	10								
Volume Right (vph)	25	10	35	15								
Head (s)	0.03	0.01	-0.03	0.03								
Departure Headway (s)	6.0	5.7	6.1	6.7								
Degree Utilization, x	0.44	0.66	0.53	0.16								
Capacity (veh/h)	553	604	590	438								
Control Delay (s)	13.7	19.1	15.7	11.0								
Approach Delay (s)	13.7	19.1	15.7	11.0								
Approach LOS	B	C	C	B								
Intersection Summary												
Delay	16.1											
Level of Service	C											
Intersection Capacity Utilization	56.1%											
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		RT	RT									
Traffic Volume (vph)	635	1820	280	60	845	170	130	285	60	110	280	320
Future Volume (vph)	635	1820	280	60	845	170	130	285	60	110	280	320
Lane Group Flow (vph)	635	1820	280	60	845	170	130	285	60	110	280	320
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	1	6	6	7	4	4	3	8	8
Permitted Phases	5	2	2	1	6	6	7	4	4	3	8	8
Detector Phases	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	9.5	44.9	44.9	9.5	44.9	44.9	9.5	47.9	47.9	9.5	47.9	47.9
Total Split (s)	31.0	66.5	66.5	9.5	45.0	45.0	11.1	48.3	48.3	10.7	47.9	47.9
Total Split (%)	23.0%	49.3%	49.3%	7.0%	33.3%	33.3%	8.2%	35.8%	35.8%	7.9%	35.5%	35.5%
Yellow Time (s)	3.0	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6
All-Red Time (s)	0.0	2.3	2.3	0.0	2.3	2.3	1.0	2.3	2.3	1.0	2.3	2.3
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)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.71	0.63	0.27	0.37	0.59	0.31	0.53	0.62	0.22	0.49	0.67	0.71
Control Delay	44.8	20.3	2.4	24.2	41.8	6.6	68.3	61.6	1.8	48.2	63.4	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	20.3	2.4	24.2	41.8	6.6	68.3	61.6	1.8	48.2	63.4	14.5
Queue Length 50th (m)	82.4	124.6	0.0	5.3	73.2	0.0	18.1	36.6	0.0	24.3	39.7	0.0
Queue Length 95th (m)	102.0	150.1	13.4	12.4	91.9	17.8	83.9	48.6	0.0	41.7	53.5	30.4
Internal Link Dist (m)	980.1			272.1			844.0				481.5	
Turn Bay Length (m)	155.0	115.0	150.0		65.0	140.0		65.0	100.0		170.0	
Base Capacity (vph)	890	2900	1033	162	1432	553	245	981	487	224	931	613
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	0.63	0.27	0.37	0.59	0.31	0.53	0.26	0.12	0.49	0.30	0.52
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT_L, 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.												



HCM Signalized Intersection Capacity Analysis

Future Total 2028 AM Peak Hour

Queues

Future Total 2028 AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	635	1820	280	60	845	170	130	255	60	110	280	320
Future Volume (vph)	635	1820	280	60	845	170	130	255	60	110	280	320
Ideal Flow (vph/pl)	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)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	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	0.98	1.00	1.00	1.00	0.98
Frpb, 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
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00
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)	2643	4902	1554	1539	4641	1413	3236	3202	1319	1360	3067	1287
Flt Permitted	0.95	1.00	1.00	0.12	1.00	0.95	1.00	1.00	0.49	1.00	1.00	1.00
Satd. Flow (perm)	2643	4902	1554	186	4641	1413	3236	3202	1319	697	3067	1287
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)	635	1820	280	60	845	170	130	255	60	110	280	320
RTOR Reduction (vph)	0	0	116	0	117	0	0	52	0	0	277	0
Lane Group Flow (vph)	635	1820	184	60	845	53	130	255	8	110	280	43
Confl. Peds. (#/hr)	31%	7%	1%	16%	13%	13%	7%	14%	19%	31%	19%	22%
Heavy Vehicles (%)	31%	7%	1%	16%	13%	13%	7%	14%	19%	31%	19%	22%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	6	6	6	7	4	4	8	8	8
Permitted Green, G (s)	44.5	79.2	79.2	48.2	41.7	41.7	9.2	17.4	17.4	28.4	18.3	18.3
Effective Green, g (s)	45.5	79.2	79.2	50.2	41.7	41.7	10.2	17.4	17.4	30.4	18.3	18.3
Actuated /OC Ratio	0.34	0.59	0.59	0.37	0.31	0.31	0.08	0.13	0.13	0.23	0.14	0.14
Clearance Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	4.5	6.9	6.9	4.5	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	3.0
Lane Gap Cap (vph)	890	2875	911	144	1433	436	244	412	170	211	415	174
v/s Ratio Prot	60.24	60.37	0.11	0.13	0.04	0.04	0.04	0.08	0.01	60.04	60.09	0.03
v/s Ratio Perm	0.71	0.63	0.18	0.42	0.59	0.12	0.53	0.62	0.05	0.52	0.67	0.25
Uniform Delay, d1	39.1	18.3	12.9	27.7	39.4	33.5	60.1	55.7	51.5	44.1	55.5	52.2
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	2.7	1.1	0.4	1.9	1.8	0.6	2.2	2.8	0.1	2.3	4.3	0.8
Level of Service	D	B	B	C	D	C	E	D	D	D	E	D
Approach Delay (s)	24.0			39.4			58.7			54.7		
Approach LOS	C			D			E			D		
Intersection Summary												
HCM 2000 Control Delay	34.8			HCM 2000 Level of Service	C							
HCM 2000 Volume to Capacity ratio	0.88											
Actuated Cycle Length (s)	135.0			Sum of lost time (s)	19.8							
Intersection Capacity Utilization	74.8%			ICU Level of Service	D							
Analysis Period (min)	15											
e Critical Lane Group												

Trial Lands Dixie

Synchro 11 Report
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Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Traffic Volume (vph)	5	35	35	0	65	880	15	640	10
Future Volume (vph)	5	35	35	0	65	880	15	640	10
Lane Group Flow (vph)	5	35	35	5	65	915	0	655	10
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4		8	8	2		6	6	6
Permitted Phases	4	4	8	8	2	2	6	6	6
Detector Phase									
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)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	22.5%	22.5%	22.5%	22.5%	55.0%	55.0%	55.0%	55.0%	55.0%
Total Spill (%)	22.5%	22.5%	22.5%	22.5%	55.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead-Lag Optimizer?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/s Ratio	0.06	0.08	0.41	0.01	0.13	0.68	0.53	0.01	0.01
Control Delay	45.6	0.4	55.5	0.0	6.0	12.4	8.0	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	0.4	55.5	0.0	6.0	12.4	8.0	0.0	0.0
Queue Length 50th (m)	1.0	0.0	6.9	0.0	3.7	102.4	57.4	0.0	0.0
Queue Length 95th (m)	4.7	0.0	16.4	0.0	10.7	#215.0	91.0	m0.0	m0.0
Internal Link Dist (m)					96.6		358.1		
Turn Bay Length (m)					95.0		50.0		
Base Capacity (vph)	241	539	183	584	483	1340	1242	1308	1308
Saturation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/s Ratio	0.02	0.06	0.21	0.01	0.13	0.68	0.53	0.01	0.01
Intersection Summary									
Cycle Length: 100									
Actuated Cycle Length: 100									
Offset: 0 (0%), Referenced to phase 2NBT and 6SBTL Start of Green									
Natural Cycle: 110									
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:	5- Dixie Road & Spiers Griggen Avenue/12173 Site Access 3								
Diagram									
Trial Lands Dixie									

Trial Lands Dixie

Synchro 11 Report
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HCM Signalized Intersection Capacity Analysis
 5: Dixie Road & Spiers Griggsen 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)	5	0	35	35	0	5	65	880	35	15	640	10	
Future Volume (vph)	5	0	35	35	0	5	65	880	35	15	640	10	
Ideal Flow (vph/ft)	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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	1.00	
Frpb. 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	
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	
Satd. Flow (prot)	1342	1278	1137	1633	1567	1597	1567	1597	1567	1597	1567	1597	
Flt Permitted	0.95	1.00	0.76	1.00	0.36	1.00	0.36	1.00	0.98	1.00	0.98	1.00	
Satd. Flow (perm)	1342	1278	906	1633	1633	1633	596	1652	1531	1597	1531	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)	5	0	35	35	0	5	65	880	35	15	640	10	
RTOR Reduction (vph)	0	0	34	0	5	0	0	1	0	0	0	2	
Lane Group Flow (vph)	5	0	1	35	0	0	65	914	0	0	655	8	
Cont. Peds. (#/hr)	33%	0%	25%	57%	0%	0%	15%	15%	28%	0%	23%	0%	
Heavy Vehicles (%)	33%	0%	25%	57%	0%	0%	15%	15%	28%	0%	23%	0%	
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6	
Protected Phases	4	4	8	8	8	8	2	2	2	6	6	6	
Permitted Green, G (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8	
Effective Green, g (s)	3.8	3.8	6.9	6.9	6.9	75.8	75.8	75.8	75.8	75.8	75.8	75.8	
Actuated G/C Ratio	0.04	0.04	0.07	0.07	0.07	0.76	0.76	0.76	0.76	0.76	0.76	0.76	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	50	48	62	112	112	451	1252	1252	1160	1210	1210	1210	
v/s Ratio Prot	60.00	0.00	60.04	0.00	0.00	0.11	0.73	0.73	0.43	0.00	0.00	0.00	
v/s Ratio Perm	0.10	0.03	0.56	0.00	0.14	0.73	0.73	0.73	0.56	0.01	0.01	0.01	
Uniform Delay, d1	46.4	46.3	45.1	43.3	3.3	6.6	5.1	2.9	2.9	2.9	2.9	2.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.2	11.2	0.0	0.7	3.8	1.8	0.0	1.8	0.0	0.0	0.0	
Delay (s)	47.3	46.6	56.3	43.4	4.0	10.3	6.6	3.0	6.6	3.0	3.0	3.0	
Level of Service	D	D	E	D	D	A	B	B	A	A	A	A	
Approach Delay (s)	46.7	46.7	54.7	46.7	46.7	54.7	46.7	46.7	46.7	46.7	46.7	46.7	
Approach LOS	D	D	D	D	D	A	A	A	A	A	A	A	
Intersection Summary													
HCM 2000 Control Delay	10.5						HCM 2000 Level of Service						B
HCM 2000 Volume to Capacity ratio	0.89												
Actuated Cycle Length (s)	100.0						Sum of lost time (s)						13.5
Intersection Capacity Utilization	70.1%						ICU Level of Service						C
Analysis Period (min)	15												
e Critical Lane Group													

Trial/Lands Dixie

Synchro 11 Report
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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	770	15	690	
Future Volume (vph)	5	60	770	15	690	
Lane Group Flow (vph)	5	0	840	0	720	
Turn Type	Perm	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	8	
Permitted Phases	4	2	2	6	6	
Detector Phase	4	2	2	6	6	
Switch Phase	5.0	5.0	5.0	5.0	5.0	
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	
Minimum Split (s)	22.5	77.5	77.5	77.5	22.5	
Total Split (s)	22.5%	77.5%	77.5%	77.5%	23%	
Total Split (%)	22.5%	77.5%	77.5%	77.5%	23%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimizer?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
v/s Ratio	0.01	0.57	0.57	0.47	0.47	
Control Delay	0.0	2.3	0.0	1.7	0.0	
Queue Delay	0.0	0.0	2.3	1.7	0.0	
Total Delay	0.0	2.3	0.0	1.7	0.0	
Queue Length 50th (m)	0.0	0.0	22.0	38.3	0.0	
Queue Length 95th (m)	0.0	0.0	358.1	696.2	0.0	
Internal Link Dist (m)						
Turn Bay Length (m)						
Base Capacity (vph)	442	1466	1531	1531	1531	
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/s Ratio	0.01	0.57	0.57	0.47	0.47	
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 0 (0%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green						
Natural Cycle: 75						
Control Type: Actuated-Coordinated						
Splits and Phases: 7: Dixie Road & UPS Facility Access/12173 West Access 1						
Ø2 (R)	Ø4 (R)	Ø6 (R)	Ø8 (R)	Ø8 (R)	Ø8 (R)	Ø8 (R)
77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s
Ø6 (R)	Ø4 (R)	Ø6 (R)	Ø8 (R)	Ø8 (R)	Ø8 (R)	Ø8 (R)
77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s	77.5 s

Trial/Lands Dixie

Synchro 11 Report
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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	770	10	15	690	15
Future Volume (vph)	0	0	5	0	0	0	60	770	10	15	690	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	3.5	3.5	3.5
Total Lost time (s)			4.5					4.5			4.5	
Lane Util. Factor			1.00				1.00	1.00			1.00	
Flt Protected			0.85				1.00	1.00			1.00	
Satd. Flow (prot)			998				1648	1606			1606	
Flt Permitted			1.00				0.91	0.98			0.98	
Satd. Flow (perm)			998				1510	1576			1576	
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	770	10	15	690	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	840	0	0	720	0	0
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	17%	0%	20%	0%	0%
Turn Type	Prot	Perm	Perm	Perm	Perm	Perm	NA	NA	Perm	NA	NA	Perm
Protected Phases	4			8			8	2		6		6
Actuated Green, G (s)			1.1				89.9	89.9		89.9		89.9
Effective Green, g (s)			1.1				89.9	89.9		89.9		89.9
Actuated Q/C Ratio			0.01				0.90	0.90		0.90		0.90
Clearance Time (s)			4.5				4.5	4.5		4.5		4.5
Vehicle Extension (s)			3.0				3.0	3.0		3.0		3.0
Lane Grp Cap (vph)			10				1357	1357		1416		1416
v/s Ratio Prot												
v/s Ratio Perm			c0.00				c0.56	c0.56		0.46		0.46
v/c Ratio			0.01				0.62	0.62		0.51		0.51
Uniform Delay, d1			48.9				1.1	1.1		0.9		0.9
Progression Factor			1.00				1.28	1.28		1.00		1.00
Incremental Delay, d2			0.2				1.6	1.6		1.3		1.3
Delay (s)			49.1				3.0	3.0		2.2		2.2
Level of Service			D				A	A		A		A
Approach Delay (s)			49.1				0.0	3.0		2.2		2.2
Approach LOS			D				A	A		A		A
Intersection Summary												
HCM 2000 Control Delay	2.8		HCM 2000 Level of Service		A							
HCM 2000 Volume to Capacity ratio	0.61		Sum of lost time (s)		9.0							
Actuated Cycle Length (s)	100.0		ICU Level of Service		D							
Intersection Capacity Utilization	76.2%		Analysis Period (min)		15							
c Critical Lane Group												

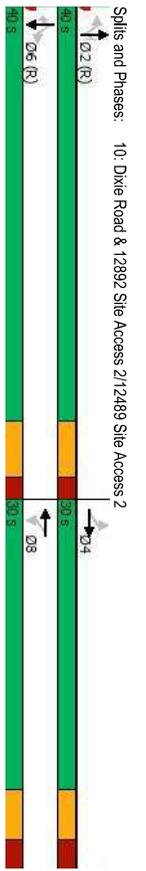
HCM Unsignalized Intersection Capacity Analysis
 8: Dixie Road & 12489 Site Access 1

Future Total 2028 AM Peak Hour

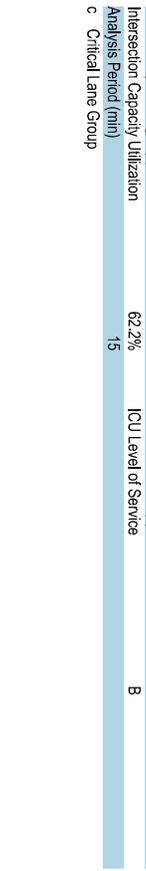
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑	↑	↔	↔
Traffic Volume (veh/h)	0	0	685	60	0	690
Future Volume (veh/h)	0	0	685	60	0	690
Sign Control	Stop	Stop	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	685	60	0	690
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median storage (veh)			None			None
Upstream signal (m)						394
PX, platoon unblocked			0.89			
VC, conflicting volume			1375	685		745
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCu, unblocked vol			1359	685		745
IC, single (s)			6.4	6.2		4.1
IC, 2 stage (s)						
FF (s)			3.5	3.3		2.2
p0 queue free %			100	100		100
CM capacity (veh/h)			147	452		872
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	685	60	690		
Volume Left	0	0	0	0		
Volume Right	0	0	60	0		
SSH	1700	1700	1700	872		
Volume to Capacity	0.00	0.40	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	A	A	A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A	A		A		
Intersection Summary						
Average Delay	0.0		A			
Intersection Capacity Utilization	46.7%		ICU Level of Service		A	
Analysis Period (min)	15		Analysis Period (min)		15	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	15	0	45	0	70	565	50	50	620	25
Traffic Volume (vph)	15	0	45	0	70	565	50	50	620	25
Future Volume (vph)	15	0	45	0	70	565	50	50	620	25
Lane Group Flow (vph)	15	30	45	20	70	565	50	50	620	25
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4	8	8	2	2	2	2	6	6
Permitted Phases	4	4	8	8	2	2	2	2	6	6
Detector Phases	4	4	8	8	2	2	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Minimum Split (s)	30.0	30.0	30.0	30.0	40.0	40.0	40.0	40.0	40.0	40.0
Total Spill (%)	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%	57.1%	57.1%
Total Spill (s)	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead-Lag										
Lead-Lag Optimizer?	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Recall Mode	0.11	0.10	0.38	0.05	0.15	0.42	0.06	0.09	0.48	0.02
v/c Ratio	26.6	0.6	36.1	0.2	5.6	6.2	1.7	3.0	3.9	0.2
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	26.6	0.6	36.1	0.2	5.6	6.2	1.7	3.0	3.9	0.2
Total Delay	1.9	0.0	5.8	0.0	2.8	30.1	0.0	1.9	26.0	0.0
Queue Length 50th (m)	6.5	0.0	14.3	0.0	9.5	63.9	3.2	m2.9	37.6	m0.1
Queue Length 95th (m)	161.0		124.2		369.7			813.5		
Internal Link Dist (m)	15.0	15.0	15.0	15.0	60.0	60.0	60.0	60.0	60.0	60.0
Turn Bay Length (m)	352	498	300	593	462	1336	803	582	1291	1278
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Saturation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Shrinkback 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	0.04	0.06	0.15	0.03	0.15	0.42	0.06	0.09	0.48	0.02

Intersection Summary
 Cycle Length: 70
 Actuated Cycle Length: 70
 Natural Cycle: 60
 Offset: 0 (0%), Referenced to phase 2:NBLT and 6:SRTL Start of Green
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	15	0	30	45	0	20	70	565	50	50	620	25
Traffic Volume (vph)	15	0	30	45	0	20	70	565	50	50	620	25
Future Volume (vph)	15	0	30	45	0	20	70	565	50	50	620	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.5	3.5	3.7	3.5	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	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	1.00
Flt	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)	1342	1089	1152	1306	1342	1089	1394	1685	998	1623	1628	1597
Flt Permitted	0.74	1.00	0.74	1.00	0.74	1.00	0.40	1.00	0.43	1.00	1.00	0.43
Satd. Flow (perm)	1052	1089	894	894	1306	582	1685	998	734	1628	1597	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	565	50	50	620	25
RTOR Reduction (vph)	0	27	0	0	18	0	0	0	14	0	0	7
Lane Group Flow (vph)	15	3	0	45	2	0	70	565	36	50	620	18
Heavy Vehicles (%)	33%	0%	50%	55%	0%	25%	14%	60%	10%	18%	0%	0%
Turn Type	Perm	NA	NA	Perm	NA	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	2	2	6	6	6	6
Permitted Phases	4	4	8	8	2	2	2	2	6	6	6	6
Actuated Green, G (s)	6.7	6.7	6.7	6.7	6.7	6.7	50.3	50.3	50.3	50.3	50.3	50.3
Effective Green, g (s)	6.7	6.7	6.7	6.7	6.7	6.7	50.3	50.3	50.3	50.3	50.3	50.3
Actuated Q/C Ratio	0.10	0.10	0.10	0.10	0.10	0.10	0.72	0.72	0.72	0.72	0.72	0.72
Clearance Time (s)	6.5	6.5	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	3.0
Lane Grp Cap (vph)	100	104	85	125	418	1210	527	1169	1147			
v/s Ratio Prot	0.00	0.00	0.00	0.00	0.12	0.34						
v/s Ratio Perm	0.01	0.03	0.05	0.05	0.02	0.17	0.47	0.05	0.09	0.53	0.02	0.01
v/c Ratio	0.15	0.03	0.53	0.02	0.17	0.47	0.05	0.09	0.53	0.02	0.02	0.02
Uniform Delay, d1	29.0	28.7	30.1	28.7	3.2	4.2	2.9	3.0	4.5	2.8	2.8	2.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.60	0.50	0.27	0.27
Incremental Delay, d2	0.7	0.1	5.8	0.0	0.9	1.3	0.1	0.3	1.5	0.0	0.0	0.0
Delay (s)	29.7	28.8	36.0	28.7	4.0	5.5	3.0	2.1	3.7	0.8	0.8	0.8
Level of Service	C	C	D	C	A	A	A	A	A	A	A	A
Approach Delay (s)	29.1		33.8		5.1		3.5		3.5		3.5	
Approach LOS	C		C		A		A		A		A	
Intersection Summary												
HCM 2000 Control Delay	6.3		HCM 2000 Level of Service	A								
HCM 2000 Volume to Capacity ratio	0.53											
Actuated Cycle Length (s)	70.0		Sum of lost time (s)	13.0								
Intersection Capacity Utilization	62.2%		ICU Level of Service	B								
Analysis Period (min)	15											
c Critical Lane Group												



HCM Unsignalized Intersection Capacity Analysis

Future Total 2028 AM Peak Hour

Queues

Future Total 2028 AM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	0	20	450	150	0	695
Traffic Volume (Veh/h)	0	20	450	150	0	695
Future Volume (Veh/h)	0	20	450	150	0	695
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	20	450	150	0	695
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						
VC, conflicting volume		1145		450		600
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol		1070		450		600
IC, single (s)		6.4		6.5		4.1
IC, 2 stage (s)						
F (s)		3.5		3.5		2.2
p0 queue free %		100		96		100
CM capacity (veh/h)		204		564		987
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	20	450	150	695		
Volume Left	0	0	0	0		
Volume Right	20	0	150	0		
ESH	564	1700	1700	1700		
Volume to Capacity	0.04	0.26	0.09	0.41		
Queue Length 95th (m)	0.9	0.0	0.0	0.0		
Control Delay (s)	11.6	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	11.6	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.2			A		
Intersection Capacity Utilization	39.9%			15		
Analysis Period (min)	15			A		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	45	340	50	170	140	10	30	195	50	60	475
Traffic Volume (vph)	45	340	50	170	140	10	30	195	50	60	475
Future Volume (vph)	45	340	50	170	140	10	30	195	50	60	475
Lane Group Flow (vph)	Perm	NA	Perm	Perm	Perm	NA	Perm	Perm	NA	Perm	NA
Turn Type											
Protected Phases	4	4	4	8	8	8	2	2	2	2	6
Permitted Phases	4	4	4	8	8	8	2	2	2	2	6
Detector Phases											
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)	24.5	24.5	24.5	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	30.0	30.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag											
Lead-Lag Optimizer?											
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.12	0.60	0.12	0.86	0.26	0.02	0.13	0.23	0.07	0.11	0.52
Control Delay	16.5	24.6	5.3	71.5	19.5	0.3	7.9	7.7	0.7	11.5	15.3
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	16.5	24.6	5.3	71.5	19.5	0.3	7.9	7.7	0.7	11.5	15.3
Queue Length 50th (m)	4.2	37.4	0.0	26.0	20.6	0.0	1.6	10.2	0.1	4.3	43.7
Queue Length 95th (m)	10.8	60.2	6.0	#43.2	9.7	0.1	m1.9	8.6	m0.4	10.9	73.0
Internal Link Dist (m)		371.4		41.8			216.1				261.5
Turn Bay Length (m)	30.0		30.0	30.0	65.0	50.0		50.0		50.0	50.0
Base Capacity (vph)	421	657	454	228	632	541	242	884	749	564	942
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	0.11	0.52	0.11	0.75	0.22	0.02	0.12	0.22	0.07	0.11	0.50
Intersection Summary											
Cycle Length: 70											
Actuated Cycle Length: 70											
Offset: 0 (0%), Referenced to phase 2(NBTL) and 6(SRTL), Start of Green											
Natural Cycle: 50											
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.											



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	4	4	4	4	4	4	4	4	4	4	4	4	
Traffic Volume (vph)	45	340	50	170	140	10	30	195	50	60	475	95	
Future Volume (vph)	45	340	50	170	140	10	30	195	50	60	475	95	
Ideal Flow (vph/pl)	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	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	1.00	
Flt	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)	1716	1883	1201	1451	1812	1452	1062	1685	1377	1608	1795	1566	
Flt Permitted	0.67	1.00	1.00	0.43	1.00	1.00	0.41	1.00	1.00	0.64	1.00	1.00	
Satd. Flow (perm)	1206	1883	1201	655	1812	1452	461	1685	1377	1075	1795	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)	45	340	50	170	140	10	30	195	50	60	475	95	
RTOR Reduction (vph)	0	0	35	0	0	7	0	0	24	0	0	46	
Lane Group Flow (vph)	45	340	15	170	140	3	30	195	26	60	475	49	
Heavy Vehicles (%)	4%	2%	33%	23%	6%	10%	68%	14%	16%	11%	7%	2%	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Protected Phases	4	4	8	8	8	2	2	2	2	6	6	6	
Actuated Green, G (s)	21.2	21.2	21.2	21.2	21.2	35.8	35.8	35.8	35.8	35.8	35.8	35.8	
Effective Green, g (s)	21.2	21.2	21.2	21.2	21.2	35.8	35.8	35.8	35.8	35.8	35.8	35.8	
Actuated Q/C Ratio	0.30	0.30	0.30	0.30	0.30	0.51	0.51	0.51	0.51	0.51	0.51	0.51	
Clearance Time (s)	6.5	6.5	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	3.0	
Lane Gap Cap (vph)	365	570	363	198	548	439	235	861	704	549	918	800	
v/s Ratio Prot	0.18			0.08			0.12			0.06		0.03	
v/s Ratio Perm	0.04	0.01	0.01	0.26	0.00	0.07	0.23	0.04	0.11	0.52	0.06	0.03	
v/c Ratio	0.12	0.60	0.04	0.86	0.26	0.01	0.13	0.23	0.04	0.11	0.52	0.06	
Uniform Delay, d1	17.7	20.8	17.2	23.0	18.4	17.0	8.9	9.4	8.5	8.8	11.4	8.6	
Progression Factor	1.00	1.00	1.00	1.56	1.08	1.00	0.59	0.64	0.15	1.00	1.00	1.00	
Incremental Delay, d2	0.2	1.7	0.0	28.7	0.2	0.0	1.1	0.6	0.1	0.4	2.1	0.1	
Delay (s)	17.8	22.4	17.3	64.5	20.1	17.1	6.3	6.6	1.4	9.3	13.4	8.8	
Level of Service	B	C	B	E	C	B	A	A	A	A	B	A	
Approach Delay (s)		21.4			43.6			5.6		12.3			
Approach LOS		C			D			A		B			
Intersection Summary													
HCM 2000 Control Delay	19.6					HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio	0.64												
Actuated Cycle Length (s)	70.0					Sum of lost time (s)			13.0				
Intersection Capacity Utilization	78.1%					ICU Level of Service			D				
Analysis Period (min)	15												

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

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	4	4	4	4	4	4	
Traffic Volume (veh/h)	405	40	0	330	0	5	
Future Volume (veh/h)	405	40	0	330	0	5	
Sign Control	Free	Free	Free	Stop	0%	0%	
Grade	0%	0%	0%	0%	0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	405	40	0	330	0	5	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median storage (veh)	None			None			
Upstream signal (m)	66						
pX, platoon unblocked							
WC, conflicting volume			445		590	222	
WC1, stage 1 conf vol							
WC2, stage 2 conf vol							
VCU, unblocked vol		445		590	222		
IC, single (s)		4.1		6.8	6.9		
IC, 2 stage (s)			2.2		3.3		
FF (s)			100		99		
p0 queue free %			1126		443	787	
CM capacity (veh/h)							
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1		
Volume Total	270	175	165	165	5		
Volume Left	0	0	0	0	0		
Volume Right	0	40	0	0	5		
SSH	1700	1700	1700	1700	787		
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	22.5%						
Analysis Period (min)	15						
	ICU Level of Service			A			

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

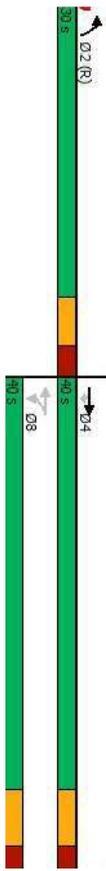
Queues
14: 12861 Site Access 3 & Old School Road

Future Total 2028 AM Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	405	5	30	265	65
Future Volume (vph)	405	5	30	265	65
Lane Group Flow (vph)	405	5	0	295	70
Turn Type	NA	Perm	custom	NA	Prot
Protected Phases	4				2
Permitted Phases	4	4	8	8	2
Detector Phases					
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5
Total Split (s)	40.0	40.0	40.0	40.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	57.1%	42.9%
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
Lead/Lag					
Lead-Lag Optimizer?					
Recall Mode	None	None	None	C-Min	
v/c Ratio	0.59	0.03		0.51	0.10
Control Delay	22.0	7.6		28.1	6.2
Queue Delay	0.0	0.0		0.0	0.0
Total Delay	22.0	7.6		28.1	6.2
Queue Length 50th (m)	29.7	0.4		19.3	3.1
Queue Length 95th (m)	32.6	m0.3		28.8	9.0
Internal Link Dist (m)	433.3			157.0	183.7
Turn Bay Length (m)		50.0			
Base Capacity (vph)	1729	394		1459	710
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	0.23	0.01		0.20	0.10

Intersection Summary
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 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



Tribal Lands Dixe

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)	405	5	30	265	65	5
Future Volume (vph)	405	5	30	265	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	
Lane Util. Factor	0.95	1.00		0.95	1.00	
Flt	1.00	0.85		1.00	0.99	
Flt Protected	1.00	1.00		0.99	0.96	
Satd. Flow (prot)	3614	799		3574	1135	
Flt Permitted	1.00	1.00		0.85	0.96	
Satd. Flow (perm)	3614	799		3050	1135	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	405	5	30	265	65	5
RTOR Reduction (vph)	0	4	0	0	2	0
Lane Group Flow (vph)	405	1	0	295	68	0
Heavy Vehicles (%)	1%	100%	16%	0%	61%	0%
Turn Type	NA	Perm	custom	NA	Prot	
Protected Phases	4				2	
Permitted Phases						
Actuated Green, G (s)	13.3	13.3		13.3	43.7	
Effective Green, g (s)	13.3	13.3		13.3	43.7	
Actuated G/C Ratio	0.19	0.19		0.19	0.52	
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)	686	151		579	708	
v/s Ratio Prot	0.11				0.06	
v/s Ratio Perm		0.00		0.10		
v/c Ratio	0.59	0.01		0.51	0.10	
Uniform Delay, d1	25.9	23.0		25.4	5.3	
Progression Factor	0.73	0.53		1.00	1.00	
Incremental Delay, d2	1.3	0.0		0.7	0.3	
Delay (s)	20.2	12.2		26.1	5.5	
Level of Service	C	B		C	A	
Approach Delay (s)	20.1			26.1	5.5	
Approach LOS	C			C	A	

Intersection Summary
 HCM 2000 Control Delay: 21.1
 HCM 2000 Volume to Capacity ratio: 0.21
 Actuated Cycle Length (s): 70.0
 Intersection Capacity Utilization: 39.8%
 Analysis Period (min): 15
 ICU Level of Service: A
 c Critical Lane Group

Tribal Lands Dixe

HCM Unsignalized Intersection Capacity Analysis
15: Bramalea Road & Old School Road

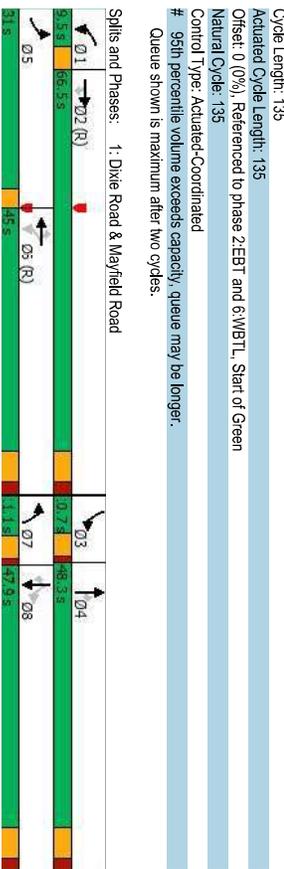
Future Total 2028 AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop	Stop		Stop	Stop		Stop	Stop	
Traffic Volume (vph)	20	300	85	25	195	0	40	75	20	5	155	60
Future Volume (vph)	20	300	85	25	195	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	300	85	25	195	0	40	75	20	5	155	60
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	405	220	135	220								
Volume Left (vph)	20	25	40	5								
Volume Right (vph)	85	0	20	60								
Head (s)	-0.06	0.08	0.06	-0.09								
Departure Headway (s)	5.3	5.7	6.2	5.8								
Degree Utilization, x	0.60	0.35	0.23	0.36								
Capacity (veh/h)	645	574	506	555								
Control Delay (s)	15.9	11.8	11.0	12.0								
Approach Delay (s)	15.9	11.8	11.0	12.0								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay	13.4											
Level of Service	B											
Intersection Capacity Utilization	54.4%											
ICU Level of Service	A											
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	RT	RT	RT	T	T	T	RT	RT	RT	RT	RT	RT
Traffic Volume (vph)	635	2005	280	60	930	170	130	285	60	105	265	340
Future Volume (vph)	635	2005	280	60	930	170	130	285	60	105	265	340
Lane Group Flow (vph)	635	2005	280	60	930	170	130	285	60	105	265	340
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	1	6	6	7	4	4	3	8	8
Permitted Phases	5	2	2	6	6	6	7	4	4	3	8	8
Detector Phase												
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	9.5	44.9	44.9	9.5	44.9	44.9	9.5	47.9	47.9	9.5	47.9	47.9
Total Split (s)	31.0	66.5	66.5	9.5	45.0	45.0	11.1	48.3	48.3	10.7	47.9	47.9
Total Split (%)	23.0%	49.3%	49.3%	7.0%	33.3%	33.3%	8.2%	35.8%	35.8%	7.9%	35.5%	35.5%
Yellow Time (s)	3.0	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6	3.5	4.6	4.6
All-Red Time (s)	0.0	2.3	2.3	0.0	2.3	2.3	1.0	2.3	2.3	1.0	2.3	2.3
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)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.71	0.68	0.27	0.41	0.66	0.31	0.59	0.62	0.22	0.49	0.63	0.75
Control Delay	44.2	20.8	2.3	28.7	43.5	6.6	72.5	61.3	1.8	49.6	61.5	16.1
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	44.2	20.8	2.3	28.7	43.5	6.6	72.5	61.3	1.8	49.6	61.5	16.1
Queue Length 50th (m)	81.9	137.6	0.0	4.9	81.3	0.0	18.2	36.3	0.0	23.8	38.0	0.0
Queue Length 95th (m)	105.3	181.3	13.9	15.7	103.5	17.9	43.9	47.8	0.0	39.1	49.6	32.1
Internal Link Dist (m)	980.1			272.1			844.0				481.5	
Turn Bay Length (m)	210.0	184.0	180.0	1400	540	221	956	487	213	963	600	180.0
Base Capacity (vph)	894	2954	1047	149	1400	540	221	956	487	213	963	600
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	0.68	0.27	0.40	0.66	0.31	0.59	0.62	0.27	0.49	0.28	0.57
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT_L, 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.												



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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	635	2005	280	60	930	170	130	255	60	105	265	340
Future Volume (vph)	635	2005	280	60	930	170	130	255	60	105	265	340
Ideal Flow (vph/ft)	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)	2.0	6.9	6.9	2.5	6.9	6.9	3.5	6.9	6.9	3.5	6.9	6.9
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	1.00	1.00	0.95	1.00	0.98
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
Flt	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00
Satd. Flow (prot)	2665	4902	1554	1539	4961	1377	3236	3120	1319	1381	3174	1199
Flt Permitted	0.95	1.00	1.00	0.09	1.00	0.95	1.00	0.51	1.00	1.00	1.00	1.00
Satd. Flow (perm)	2565	4902	1554	153	4561	1377	3236	3120	1319	744	3174	1199
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)	635	2005	280	60	930	170	130	255	60	105	265	340
RTOR Reduction (vph)	0	113	0	0	118	0	0	52	0	0	295	0
Lane Group Flow (vph)	635	2005	167	60	930	52	130	265	8	105	265	45
Cont. Peds. (#/hr)	35%	7%	1%	16%	15%	16%	7%	17%	19%	29%	15%	31%
Heavy Vehicles (%)	35%	7%	1%	16%	15%	16%	7%	17%	19%	29%	15%	31%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2	2	6	1	6	7	4	3	8	8	8
Permitted Green, G (s)	46.1	80.6	80.6	47.8	41.4	41.4	8.2	17.9	17.9	26.3	18.0	18.0
Effective Green, g (s)	47.1	80.6	80.6	49.8	41.4	41.4	9.2	17.9	17.9	28.3	18.0	18.0
Actuated G/C Ratio	0.35	0.60	0.60	0.37	0.31	0.31	0.07	0.13	0.13	0.21	0.13	0.13
Clearance Time (s)	3.0	6.9	6.9	3.5	6.9	6.9	4.5	6.9	6.9	4.5	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	3.0
Lane Gap Cap (vph)	894	2926	927	132	1398	422	220	413	174	199	423	159
v/s Ratio Prot	60.25	60.41	0.11	0.14	0.20	0.04	60.04	0.08	0.04	0.04	60.08	0.04
v/s Ratio Perm	0.71	0.69	0.18	0.45	0.67	0.12	0.59	0.62	0.05	0.53	0.63	0.29
Uniform Delay, d1	38.0	18.5	12.3	28.0	40.8	33.7	61.1	55.3	51.1	45.7	55.3	52.7
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	2.7	1.3	0.4	2.5	2.5	0.6	4.2	2.7	0.1	2.5	2.9	1.0
Delay (s)	40.7	19.9	12.7	30.5	43.3	34.3	65.3	58.1	51.2	48.2	58.2	53.7
Level of Service	D	B	B	C	D	C	E	E	D	D	E	D
Approach Delay (s)	23.7			C			D			E		
Approach LOS	C			D			E			D		
Intersection Summary	HCM 2000 Control Delay			HCM 2000 Level of Service			C			C		
HCM 2000 Volume to Capacity ratio	0.89			135.0			Sum of lost time (s)			19.8		
Actuated Cycle Length (s)	78.1%			ICU Level of Service			D			D		
Intersection Capacity Utilization	15			Analysis Period (min)			15			15		
Analysis Period (min)	15			Critical Lane Group			e			e		

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	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR			
Traffic Volume (vph)	5	35	35	0	65	880	15	640	10			
Future Volume (vph)	5	35	35	0	65	880	15	640	10			
Lane Group Flow (vph)	5	35	35	5	65	915	0	655	10			
Turn Type	Spill	Perm	Perm	NA	Perm	NA	Perm	NA	Perm			
Protected Phases	4	4	8	8	2	2	6	6	6			
Detector Phases	4	4	8	8	2	2	6	6	6			
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5			
Minimum Split (s)	22.5	22.5	22.5	22.5	55.0	55.0	55.0	55.0	55.0			
Total Split (%)	22.5%	22.5%	22.5%	22.5%	55.0%	55.0%	55.0%	55.0%	55.0%			
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5			
Lead-Lag Optimizer?	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max			
Recall Mode	0.06	0.08	0.41	0.01	0.13	0.70	0.54	0.54	0.01			
v/s Ratio	45.6	0.4	55.5	0.0	6.0	13.1	8.2	8.2	0.0			
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Queue Delay	45.6	0.4	55.5	0.0	6.0	13.1	8.2	8.2	0.0			
Total Delay	1.0	0.0	6.9	0.0	3.7	105.6	58.2	58.2	0.0			
Queue Length 50th (m)	4.7	0.0	16.4	0.0	10.7	#242.0	91.0	91.0	m0.0			
Queue Length 95th (m)					96.6	481.5	358.1	358.1				
Internal Link Dist (m)					95.0				50.0			
Turn Bay Length (m)					241	539	163	584	483			
Base Capacity (vph)					0	0	0	0	0			
Saturation 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/s Ratio					0.02	0.06	0.21	0.01	0.13			
Intersection Summary	Cycle Length: 100			Actuated Cycle Length: 100			Orset: 0 (0%), Referenced to phase 2NBT and 6SBTL Start of Green			Natural Cycle: 110		
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:	5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3			06 (R)			04			08		
55 s	22.5 s			22.5 s			22.5 s			22.5 s		
55 s	22.5 s			22.5 s			22.5 s			22.5 s		
55 s	22.5 s			22.5 s			22.5 s			22.5 s		

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	770	10	15	690	15
Future Volume (vph)	0	0	5	0	0	0	60	770	10	15	690	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)			4.5					4.5			4.5	
Lane Util. Factor			1.00				1.00	1.00			1.00	
Flt Protected			0.85				1.00	1.00			1.00	
Satd. Flow (prot)			998				1598	1546			1546	
Flt Permitted			1.00				0.91	0.98			0.98	
Satd. Flow (perm)			998				1464	1517			1517	
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	770	10	15	690	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	840	0	0	720	0	
Heavy Vehicles (%)	0%	0%	60%	0%	0%	0%	5%	21%	0%	22%	0%	
Turn Type	Prot	Perm	Perm	Perm	Perm	Perm	NA	NA	Perm	NA	NA	
Protected Phases	4			8			2			6		
Actuated Green, G (s)			1.1				89.9			89.9		
Effective Green, g (s)			1.1				89.9			89.9		
Actuated Q/C Ratio			0.01				0.90			0.90		
Clearance Time (s)			4.5				4.5			4.5		
Vehicle Extension (s)			3.0				3.0			3.0		
Lane Grp Cap (vph)			10				1363			1363		
v/s Ratio Prot												
v/s Ratio Perm			c0.00				c0.57			0.47		
v/c Ratio			0.01				0.64			0.53		
Uniform Delay, d1			48.9				1.2			1.0		
Progression Factor			1.00				1.62			1.00		
Incremental Delay, d2			0.2				1.7			1.5		
Delay (s)			49.1				3.6			2.4		
Level of Service			D				A			A		
Approach Delay (s)			49.1				0.0			3.6		
Approach LOS			D				A			A		
Intersection Summary												
HCM 2000 Control Delay	3.2			HCM 2000 Level of Service			A					
HCM 2000 Volume to Capacity ratio	0.63			Sum of lost time (s)			9.0					
Actuated Cycle Length (s)	100.0			ICU Level of Service			D					
Intersection Capacity Utilization	76.2%			Analysis Period (min)			15					
c Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
 FT_2033.syn

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	685	60	0	690
Future Volume (veh/h)	0	0	685	60	0	690
Sign Control	Stop	Stop	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	685	60	0	690
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Upstream signal (m)						394
pX, platoon unblocked			0.89			
vC, conflicting volume			1375			745
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCn, unblocked vol			1359			745
IC, single (s)			6.4			4.1
IC, 2 stage (s)						
FF (s)			3.5			2.2
p0 queue free %			100			100
CM capacity (veh/h)			147			872
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	0	685	60	690		
Volume Left	0	0	0	0		
Volume Right	0	0	60	0		
SSH	1700	1700	1700	872		
Volume to Capacity	0.00	0.40	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	A	A	A		
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A	A		A		
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	46.7%					
ICU Level of Service	A					
Analysis Period (min)	15					

Tribal Lands Dixie

Synchro 11 Report
 FT_2033.syn

HCM Unsignalized Intersection Capacity Analysis

Future Total 2033 AM Peak Hour

11: Dixie Road & 12861 Site Access 1

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	0	20	450	150	0	695
Traffic Volume (Veh/h)	0	20	450	150	0	695
Future Volume (Veh/h)	0	20	450	150	0	695
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	20	450	150	0	695
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		0.83				
VC, conflicting volume		1145		450		600
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCU, unblocked vol		1073		450		600
IC, single (s)		6.4		6.2		4.1
IC, 2 stage (s)						
FF (s)		3.5		3.3		2.2
p0 queue free %		100		97		100
CM capacity (veh/h)		205		613		987
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	20	450	150	695		
Volume Left	0	0	0	0		
Volume Right	20	0	150	0		
ESH	613	1700	1700	1700		
Volume to Capacity	0.03	0.26	0.09	0.41		
Queue Length 95th (m)	0.8	0.0	0.0	0.0		
Control Delay (s)	11.1	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	11.1	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.2			A		
Intersection Capacity Utilization	39.9%			15		
Analysis Period (min)						

Trial Lands Dixie

Synchro 11 Report
FT_2033.syn

Queues

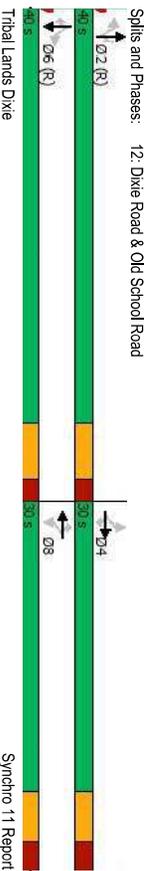
Future Total 2033 AM Peak Hour

12: Dixie Road & Old School Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	45	370	50	170	155	10	30	195	50	60	475
Traffic Volume (Vph)	45	370	50	170	155	10	30	195	50	60	475
Future Volume (Vph)	45	370	50	170	155	10	30	195	50	60	475
Lane Group Flow (Vph)	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Turn Type											
Protected Phases	4	4	4	8	8	8	2	2	2	2	6
Permitted Phases	4	4	4	8	8	8	2	2	2	2	6
Detector Phases											
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)	24.5	24.5	24.5	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	30.0	30.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%	57.1%	57.1%	57.1%	57.1%	57.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag											
Lead-Lag Optimizer?											
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio	0.13	0.36	0.13	0.81	0.16	0.02	0.12	0.22	0.07	0.13	0.51
Control Delay	16.9	19.6	5.4	61.1	18.9	0.4	7.6	7.4	0.7	11.6	14.7
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	16.9	19.6	5.4	61.1	18.9	0.4	7.6	7.4	0.7	11.6	14.7
Queue Length 50th (m)	4.3	20.1	0.0	25.8	11.9	0.0	1.6	10.4	0.1	4.2	42.3
Queue Length 95th (m)	10.9	29.2	6.0	#33.3	5.1	0.2	m1.9	8.6	m0.4	11.3	73.0
Internal Link Dist (m)		371.4		41.8			216.1			281.5	
Turn Bay Length (m)	30.0	1227	451	250	1181	538	248	889	758	470	955
Base Capacity (Vph)	409	1227	451	250	1181	538	248	889	758	470	955
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	0.11	0.30	0.11	0.68	0.13	0.02	0.12	0.22	0.07	0.13	0.50
Intersection Summary											
Cycle Length: 70											
Actuated Cycle Length: 70											
Offset: 0 (0%), Referenced to phase 2(NBTL) and 6(SRTL, Start of Green											
Natural Cycle: 55											
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.											

Trial Lands Dixie

Synchro 11 Report
FT_2033.syn



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	4	4	4	4	4	4	4	4	4	4	4	4
Traffic Volume (vph)	45	370	50	170	155	10	30	195	50	60	475	95
Future Volume (vph)	45	370	50	170	155	10	30	195	50	60	475	95
Ideal Flow (vph/pl)	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.96	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	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)	1716	3544	1201	1293	3411	1452	1062	1671	1377	1322	1795	1566
Flt Permitted	0.65	1.00	1.00	0.53	1.00	1.00	0.42	1.00	1.00	0.64	1.00	1.00
Satd. Flow (perm)	1181	3544	1201	724	3411	1452	467	1671	1377	884	1795	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)	45	370	50	170	155	10	30	195	50	60	475	95
RTOR Reduction (vph)	0	0	35	0	0	7	0	0	24	0	0	45
Lane Group Flow (vph)	45	370	15	170	155	3	30	195	26	60	475	50
Heavy Vehicles (%)	4%	3%	33%	38%	7%	10%	68%	15%	16%	35%	7%	2%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	8	2	2	2	6	6	6
Actuated Green, G (s)	20.5	20.5	20.5	20.5	20.5	20.5	36.5	36.5	36.5	36.5	36.5	36.5
Effective Green, g (s)	20.5	20.5	20.5	20.5	20.5	20.5	36.5	36.5	36.5	36.5	36.5	36.5
Actuated Q/C Ratio	0.29	0.29	0.29	0.29	0.29	0.29	0.52	0.52	0.52	0.52	0.52	0.52
Clearance Time (s)	6.5	6.5	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	3.0
Lane Gap Cap (vph)	345	1037	361	212	998	425	243	871	718	460	935	816
v/s Ratio Prot	0.10	0.01	0.01	0.05	0.00	0.06	0.12	0.02	0.07	0.07	0.06	0.03
v/s Ratio Perm	0.13	0.36	0.04	0.80	0.16	0.01	0.12	0.22	0.04	0.13	0.51	0.06
v/c Ratio	0.13	0.36	0.04	0.80	0.16	0.01	0.12	0.22	0.04	0.13	0.51	0.06
Uniform Delay, d1	18.2	19.5	17.7	22.9	18.3	17.5	8.6	9.1	8.2	8.6	10.9	8.3
Progression Factor	1.00	1.00	1.00	1.52	1.10	1.00	0.58	0.64	0.15	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.0	19.2	0.1	0.0	0.6	0.1	0.6	2.0	2.0	0.1
Delay (s)	18.4	19.8	17.8	53.8	20.3	17.5	5.9	6.3	1.3	9.2	12.9	8.4
Level of Service	B	B	B	D	C	B	A	A	A	A	B	A
Approach Delay (s)	19.4			37.2			5.4			11.9		
Approach LOS	B			D			A			B		
Intersection Summary												
HCM 2000 Control Delay	17.9											
HCM 2000 Volume to Capacity ratio	0.61											
Actuated Cycle Length (s)	70.0											
Intersection Capacity Utilization	70.5%											
Analysis Period (min)	15											
c Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

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	4	4	4	4	4	4
Traffic Volume (veh/h)	435	40	0	345	0	5
Future Volume (veh/h)	435	40	0	345	0	5
Sign Control	Free	Free	Free	Stop	0%	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	435	40	0	345	0	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream signal (m)	66					
Px, platform unblocked			0.92		0.92	0.92
wC, conflicting volume			475		628	238
wC1, stage 1 conf vol						
wC2, stage 2 conf vol						
vC1, unblocked vol			284		430	7
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)			2.2		3.5	3.3
FF (s)			100		100	99
p0 queue free %			1210		516	997
CM capacity (veh/h)						
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	290	185	172	172	5	
Volume Left	0	0	0	0	0	
Volume Right	0	40	0	0	5	
SSH	1700	1700	1700	1700	997	
Volume to Capacity	0.17	0.11	0.10	0.10	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.1	
Control Delay (s)	0.0	0.0	0.0	0.0	8.6	
Lane LOS	A	A	A	A	A	
Approach Delay (s)	0.0			8.6		
Approach LOS	A			A		
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	23.3%					
Analysis Period (min)	15					
A						

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

Queues
14: 12861 Site Access 3 & Old School Road

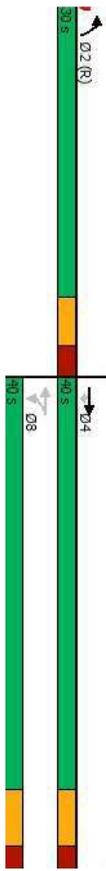
Future Total 2033 AM Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	435	5	30	280	65	5
Future Volume (vph)	435	5	30	280	65	5
Lane Group Flow (vph)	435	5	30	280	70	
Turn Type	NA	Perm	custom	NA	Prot	
Protected Phases	4				2	
Permitted Phases	4	4	8	8	2	
Detector Phases						
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5	
Total Split (s)	40.0	40.0	40.0	40.0	30.0	
Total Split (%)	57.1%	57.1%	57.1%	57.1%	42.9%	
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	

Recall Mode	None	None	None	C-Min
v/c Ratio	0.61	0.02	0.18	0.39
Control Delay	23.3	7.6	24.8	25.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.3	7.6	24.8	25.3
Queue Length 50th (m)	32.7	0.4	3.5	17.7
Queue Length 95th (m)	43.2	m0.5	9.9	26.2
Internal Link Dist (m)	433.3			157.0
Turn Bay Length (m)	50.0	95.0		183.7
Base Capacity (vph)	1729	766	394	1746
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	0.25	0.01	0.08	0.16

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
Natural Cycle: 50
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



Tribal Lands Dixe

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)	435	5	30	280	65	5
Future Volume (vph)	435	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	
Flt	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	1597	1785	3650	1778	
Flt Permitted	1.00	1.00	0.44	1.00	0.96	
Satd. Flow (perm)	3614	1597	825	3650	1778	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	
Adj. Flow (vph)	435	5	30	280	65	5
RTOR Reduction (vph)	0	4	0	0	2	0
Lane Group Flow (vph)	435	1	30	280	68	0
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%
Turn Type	NA	Perm	custom	NA	Prot	
Protected Phases	4				2	
Permitted Phases	4	4	8	8	2	
Actuated Green, G (s)	13.9	13.9	13.9	13.9	43.1	
Effective Green, g (s)	13.9	13.9	13.9	13.9	43.1	
Actuated G/C Ratio	0.20	0.20	0.20	0.20	0.52	
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)	717	317	163	724	1094	
v/s Ratio Prot	60.12				60.04	
v/s Ratio Perm	0.61	0.00	0.18	0.39	0.06	
Uniform Delay, d1	25.6	22.5	23.3	24.4	5.4	
Progression Factor	0.78	0.57	1.00	1.00	1.00	
Incremental Delay, d2	1.4	0.0	0.5	0.3	0.1	
Delay (s)	21.4	12.8	23.9	24.7	5.5	
Level of Service	C	B	C	C	A	
Approach Delay (s)	21.3			24.6	5.5	
Approach LOS	C			C	A	

Intersection Summary	Level of Service
HCM 2000 Control Delay	21.2
HCM 2000 Volume to Capacity ratio	0.19
Actuated Cycle Length (s)	70.0
Intersection Capacity Utilization	36.6%
Analysis Period (min)	15
c Critical Lane Group	

Tribal Lands Dixe

HCM Unsignalized Intersection Capacity Analysis

Future Total 2033 AM Peak Hour

15: Bramalea Road & Old School Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop			Stop		Stop		Stop	
Traffic Volume (vph)	20	330	85	25	210	0	40	85	20	5	170	60
Future Volume (vph)	20	330	85	25	210	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	330	85	25	210	0	40	85	20	5	170	60
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	435	235	145	235								
Volume Left (vph)	20	25	40	5								
Volume Right (vph)	85	0	20	60								
Head (s)	-0.02	0.09	0.07	-0.02								
Departure Headway (s)	5.6	6.0	6.5	6.2								
Degree Utilization, x	0.67	0.39	0.26	0.40								
Capacity (veh/h)	620	539	477	527								
Control Delay (s)	19.3	12.9	11.8	13.3								
Approach Delay (s)	19.3	12.9	11.8	13.3								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay	15.5											
Level of Service	C											
Intersection Capacity Utilization	57.5%											
ICU Level of Service	B											
Analysis Period (min)	15											

Queues

Future Total 2028 PM Peak Hour

1: Dixie Road & Mayfield Road

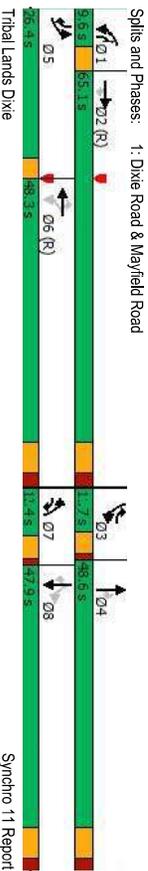
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		RT	RT		RT	RT		RT	RT		RT	RT
Traffic Volume (vph)	440	1355	180	60	1350	100	210	220	60	155	225	650
Future Volume (vph)	440	1355	180	60	1350	100	210	220	60	155	225	650
Lane Group Flow (vph)	440	1355	180	60	1350	100	210	220	60	155	225	650
Turn Type	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases				2	6	6	6	6	4	4	8	8
Detector Phases	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	47.9	9.5	47.9	9.5	47.9	9.5
Total Spilt (s)	26.4	65.1	12.4	9.6	48.3	11.7	12.4	48.6	9.6	11.7	47.9	26.4
Total Spilt (%)	19.6%	48.2%	9.2%	7.1%	35.8%	8.7%	9.2%	36.0%	7.1%	8.7%	35.5%	19.6%
Yellow Time (s)	3.0	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.0
All-Red Time (s)	0.0	2.3	1.0	0.0	2.3	1.0	1.0	2.3	0.0	1.0	2.3	0.0
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)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
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	0.49	0.45	0.16	0.26	0.83	0.17	0.87	0.55	0.19	0.72	0.62	0.98
Control Delay	36.1	13.9	1.2	17.0	47.5	7.6	94.0	61.9	3.8	66.5	65.8	54.2
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	36.1	13.9	1.2	17.0	47.5	7.6	94.0	61.9	3.8	66.5	65.8	54.2
Queue Length 50th (m)	47.2	68.9	0.0	5.5	132.4	2.6	30.8	31.2	0.0	44.7	34.2	97.4
Queue Length 95th (m)	66.2	89.2	7.0	9.2	152.8	14.5	45.8	43.8	4.5	55.6	44.6	186.2
Internal Link Dist (m)		980.1			272.1			844.0				481.5
Turn Bay Length (m)	155.0		115.0	150.0		65.0	140.0		65.0	100.0		170.0
Base Capacity (vph)	906	2989	1106	230	1631	600	241	1116	315	216	1055	661
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	0.49	0.45	0.16	0.26	0.83	0.17	0.87	0.55	0.19	0.72	0.62	0.98
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green												
Natural Cycle: 125												
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.												

Trial Lands Dixie

Synchro 11 Report
FT_2033.syn

Trial Lands Dixie

Synchro 11 Report
FT_2028.syn



HCM Signalized Intersection Capacity Analysis

Future Total 2028 PM Peak Hour

1: Dixie Road & Mayfield Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	440	1355	180	60	1350	100	210	220	60	155	225	650
Future Volume (vph)	440	1355	180	60	1350	100	210	220	60	155	225	650
Ideal Flow (vph/ft)	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)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	1.00	0.95	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	0.99	1.00	1.00	1.00
Frpb. 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
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.85	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	0.85
Satd. Flow (prot)	2584	4725	1476	1767	4948	1258	3362	3614	1293	1472	3476	1315
Flt Permitted	0.95	1.00	1.00	0.19	1.00	0.95	1.00	1.00	0.59	1.00	1.00	1.00
Satd. Flow (perm)	2584	4725	1476	352	4948	1258	3362	3614	1293	917	3476	1315
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)	440	1355	180	60	1350	100	210	220	60	155	225	650
RTOR Reduction (vph)	0	0	55	0	0	51	0	0	51	0	0	38
Lane Group Flow (vph)	440	1355	125	60	1350	49	210	220	9	155	225	612
Confl. Peds. (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Heavy Vehicles (%)	34%	11%	6%	1%	6%	27%	3%	1%	22%	21%	5%	21%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	5	2	7	1	6	3	7	4	4	8	5	8
Permitted Phases	2	2	6	6	6	6	6	6	6	6	6	6
Actuated Green, G (s)	46.3	84.7	93.4	50.3	44.6	52.5	8.7	14.9	20.6	22.0	14.1	60.4
Effective Green, g (s)	47.3	84.7	93.4	52.3	44.6	52.5	9.7	14.9	20.6	24.0	14.1	60.4
Actuated G/C Ratio	0.35	0.63	0.69	0.39	0.33	0.39	0.07	0.11	0.15	0.18	0.10	0.45
Clearance Time (s)	3.0	6.9	4.5	3.5	6.9	4.5	3.5	6.9	3.5	4.5	6.9	3.0
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 Gap Cap (vph)	905	2964	1021	206	1634	489	241	398	197	199	363	588
v/s Ratio Prot	0.17	0.29	0.01	0.01	0.27	0.01	0.06	0.06	0.00	0.05	0.06	0.36
v/s Ratio Perm	0.49	0.46	0.12	0.29	0.83	0.10	0.87	0.55	0.05	0.78	0.62	1.04
v/c Ratio	34.3	13.1	7.0	30.5	41.6	26.2	62.0	56.9	48.8	51.5	57.9	37.3
Uniform Delay, d1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.11	1.05	0.94
Progression Factor	0.4	0.5	0.1	0.8	4.9	0.1	27.2	1.7	0.1	12.7	2.2	42.5
Incremental Delay, d2	34.7	13.6	7.1	31.3	46.6	26.3	89.3	58.6	48.9	69.9	77.7	77.7
Level of Service	C	B	A	C	D	C	F	E	D	E	E	E
Approach Delay (s)	17.7			44.6			70.5			73.3		
Approach LOS	B			D			E			E		
Intersection Summary												
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service										D
HCM 2000 Volume to Capacity ratio	0.96											
Actuated Cycle Length (s)	135.0	Sum of lost time (s)										21.8
Intersection Capacity Utilization	85.3%	ICU Level of Service										E
Analysis Period (min)	15											
e Critical Lane Group												

Trial Lands Dixie

Synchro 11 Report
FT_2028.syn

Queues

Future Total 2028 PM Peak Hour

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

Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Traffic Volume (vph)	10	50	70	0	15	695	5	900
Future Volume (vph)	10	50	70	0	15	695	5	900
Lane Group Flow (vph)	10	50	70	5	15	710	0	905
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8	8	2		2	6
Permitted Phases	4	4	8	8	2	2	6	6
Detector Phase								
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead-Lag								
Lead-Lag Optimizer?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.06	0.10	0.44	0.01	0.09	0.62	0.77	21.0
Control Delay	28.7	0.4	34.1	0.0	9.4	27.3	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	0.4	34.1	0.0	9.4	27.3	21.0	21.0
Queue Length 50th (m)	1.3	0.0	8.6	0.0	1.4	193.3	104.3	104.3
Queue Length 95th (m)	5.3	0.0	18.8	0.0	m3.3	#26338	#209.5	#209.5
Internal Link Dist (m)				96.6		481.5	358.1	
Turn Bay Length (m)				95.0				
Base Capacity (vph)	476	689	296	828	172	1147	1170	1170
Saturation 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	0.02	0.07	0.24	0.01	0.09	0.62	0.77	0.77
Intersection Summary								
Cycle Length: 67.5								
Actuated Cycle Length: 67.5								
Offset: 0 (0%), Referenced to phase 2NBLT and 6SBTL Start of Green								
Natural Cycle: 110								
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: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3								
Trial Lands Dixie								

Trial Lands Dixie

Synchro 11 Report
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HCM Signalized Intersection Capacity Analysis
 5: Dixie Road & Spliers Griggs 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	10	0	50	70	0	5	15	695	15	5	900	0
Traffic Volume (vph)	10	0	50	70	0	5	15	695	15	5	900	0
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vph/trl)	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Lane Width	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1.00
Frbp. 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	0.85	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1785	1426	1394	1633	1293	1592	1293	1592	1629	1629	1629	1629
Flt Permitted	0.95	1.00	0.76	1.00	0.18	1.00	0.18	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1785	1426	1111	1633	240	1592	240	1592	1625	1625	1625	1625
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)	10	0	50	70	0	5	15	695	15	5	900	0
RTOR Reduction (vph)	0	0	47	0	4	0	0	1	0	0	0	0
Lane Group Flow (vph)	10	0	3	70	1	0	15	709	0	0	905	0
Cont. Peds. (#/hr)	0%	0%	12%	28%	0%	0%	38%	20%	33%	0%	18%	0%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6
Permitted Phases	4	4	4	8	8	8	2	2	2	6	6	6
Actuated Green, G (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Effective Green, g (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Actuated G/C Ratio	0.06	0.06	0.10	0.10	0.10	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	100	80	115	169	153	1018	1018	1018	1018	1040	1040	1040
v/s Ratio Prot	60.01	0.00	60.06	0.00	0.06	0.45	0.45	0.45	0.45	0.56	0.56	0.56
v/s Ratio Perm	0.10	0.04	0.61	0.00	0.10	0.70	0.70	0.70	0.70	0.87	0.87	0.87
Uniform Delay, d1	30.2	30.1	28.9	27.1	4.7	7.9	9.9	9.9	9.9	9.9	9.9	9.9
Progression Factor	1.00	1.00	1.00	1.00	0.99	2.54	2.54	2.54	2.54	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2	8.8	0.0	1.2	3.8	3.8	3.8	3.8	9.9	9.9	9.9
Delay (s)	30.7	30.3	37.8	27.1	5.8	23.8	23.8	23.8	23.8	19.8	19.8	19.8
Level of Service	C	C	C	D	C	A	C	C	C	B	B	B
Approach Delay (s)	30.4	30.4	37.0	37.0	37.0	23.4	23.4	23.4	23.4	19.8	19.8	19.8
Approach LOS	C	C	D	D	D	C	C	C	C	B	B	B
Intersection Summary												
HCM 2000 Control Delay	22.4			HCM 2000 Level of Service	C							
HCM 2000 Volume to Capacity ratio	0.78											
Actuated Cycle Length (s)	67.5			Sum of lost time (s)	13.5							
Intersection Capacity Utilization	69.4%			ICU Level of Service	C							
Analysis Period (min)	15											
e Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

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	10	10	35	645	925
Traffic Volume (vph)	5	10	35	645	925
Future Volume (vph)	5	10	35	645	925
Lane Group Flow (vph)	5	10	0	685	945
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases	2	2	2	6	6
Detector Phases	4	8	2	2	6
Switch Phase	4	8	2	2	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Lead-Lag Optimizer?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.02	0.03	0.50	0.61	0.61
Control Delay	17.2	0.2	3.8	6.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.2	3.8	6.1	6.1
Queue Length 50th (m)	0.4	0.0	0.0	0.0	0.0
Queue Length 95th (m)	2.5	0.0	58.1	#130.6	#130.6
Internal Link Dist (m)			358.1	696.2	696.2
Turn Bay Length (m)					
Base Capacity (vph)	714	713	1361	1543	1543
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	0.01	0.50	0.61	0.61
Intersection Summary					
Cycle Length: 45					
Actuated Cycle Length: 45					
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBT, Start of Green					
Natural Cycle: 75					
Control Type: Actuated-Coordinated					
# 95th percentile volume exceeds capacity, queue may be longer.					
Queue shown is maximum after two cycles.					



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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	0	0	0	0	10	35	645	5	0	925	20
Future Volume (vph)	5	0	0	0	0	10	35	645	5	0	925	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	3.5	3.7	3.5
Total Lost time (s)	4.5					4.5					4.5	
Lane Util. Factor	1.00					1.00					1.00	
Frbp. ped/bikes	1.00					1.00					1.00	
Ft	1.00					0.85					1.00	
Flt Protected	0.95					1.00					1.00	
Satd. Flow (prot)	1785					1597					1550	
Fl Permitted	0.95					1.00					0.94	
Satd. Flow (perm)	1785					1597					1460	
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	645	5	0	925	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	1	0
Lane Group Flow (vph)	5	0	0	0	0	0	0	685	0	0	944	0
Confl. Peds. (#/hr)	0%	0%	0%	0%	0%	0%	2%	24%	100%	0%	16%	0%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	NA	NA	NA	NA	NA
Protected Phases												6
Permitted Phases	4		4	8		8	2					2
Actuated Green, G (s)	1.2		1.2	1.2		1.2	34.8				34.8	
Effective Green, g (s)	1.2		1.2	1.2		1.2	34.8				34.8	
Actuated G/C Ratio	0.03		0.03	0.03		0.03	0.77				0.77	
Cheerance Time (s)	4.5		4.5	4.5		4.5	4.5				4.5	
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0				3.0	
Lane Gap Cap (vph)	47		47	42		42	1129				1279	
v/s Ratio Prot											60.57	
v/s Ratio Perm	60.00		60.00	0.00		0.00	0.47				0.74	
v/c Ratio	0.11		0.11	0.01		0.01	0.61				2.7	
Uniform Delay, d1	21.4		21.4	21.3		21.3	2.2				1.00	
Progression Factor	1.00		1.00	1.00		1.00	1.00				1.00	
Incremental Delay, d2	1.0		1.0	0.1		0.1	2.4				3.8	
Delay (s)	22.4		22.4	21.4		21.4	4.6				6.5	
Level of Service	C		C	C		C	A				A	
Approach Delay (s)	22.4		22.4	21.4		21.4	4.6				6.5	
Approach LOS	C		C	C		C	A				A	
Intersection Summary												
HCM 2000 Control Delay	5.9			HCM 2000 Level of Service			A					
HCM 2000 Volume to Capacity ratio	0.72			Sum of lost time (s)			9.0					
Actuated Cycle Length (s)	45.0			ICU Level of Service			D					
Intersection Capacity Utilization	73.3%			Analysis Period (min)			15					
e Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Future Total 2028 PM Peak Hour

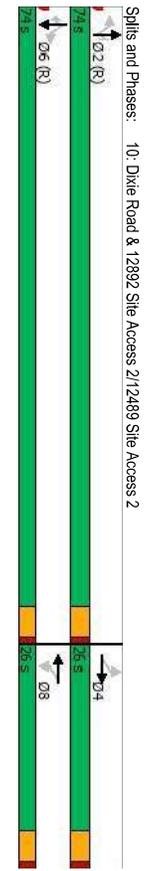
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (veh/h)	0	0	640	10	0	850
Future Volume (veh/h)	0	0	640	10	0	850
Sign Control	Stop	0	Free	0	Free	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	640	10	0	850
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median Type			None			None
Median storage (veh)						
Upstream signal (m)	0.85					394
pX, platoon unblocked	1490		640			650
vC, conflicting volume						
wC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCn, unblocked vol	1488		640			650
IC, single (s)	6.4		6.2			4.1
IC, 2 stage (s)						
IF (s)	3.5		3.3			2.2
p0 queue free %	100		100			100
CM capacity (veh/h)	118		479			946
Direction, Lane #						
Volume Total	0	640	10	850		
Volume Left	0	0	0	0		
Volume Right	0	0	10	0		
SSH	1700	1700	1700	946		
Volume to Capacity	0.00	0.38	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			A		
Intersection Summary						
Average Delay	0.0			A		
Intersection Capacity Utilization	54.7%			ICU Level of Service		
Analysis Period (min)	15					

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	90	0	20	595	25	15	710	5
Traffic Volume (vph)	35	0	90	0	20	595	25	15	710	5
Future Volume (vph)	35	55	90	55	20	595	25	15	710	5
Lane Group Flow (vph)	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Turn Type	4	4	8	8	2	2	2	2	6	6
Protected Phases	4	4	8	8	2	2	2	2	6	6
Permitted Phases	4	4	8	8	2	2	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	26.0	26.0	26.0	26.0	74.0	74.0	74.0	74.0	74.0	74.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%
Total Spill (%)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
LeadLag										
Lead-Lag Optimizer?	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Recall Mode	0.23	0.13	0.61	0.11	0.06	0.46	0.03	0.04	0.52	0.00
v/c Ratio	39.8	0.7	57.0	0.5	4.1	5.8	1.8	4.0	6.5	0.6
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	39.8	0.7	57.0	0.5	4.1	5.8	1.8	4.0	6.5	0.6
Total Delay	6.5	0.0	17.6	0.0	0.8	34.3	0.0	0.6	44.9	0.0
Queue Length 50th (m)	14.9	0.0	32.2	0.0	3.4	71.4	2.2	2.7	92.6	0.4
Queue Length 95th (m)	161.0	15.0	124.2	60.0	369.7	60.0	60.0	60.0	813.5	60.0
Internal Link Dist (m)	295	503	238	580	353	1304	721	372	1361	1293
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Starvation 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	0.14	0.11	0.38	0.09	0.06	0.46	0.03	0.04	0.52	0.00

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Natural Cycle: 60
 Offset: 0 (0%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green
 Control Type: Actuated-Coordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	55	90	0	55	20	595	25	15	710	5
Traffic Volume (vph)	35	0	55	90	0	55	20	595	25	15	710	5
Future Volume (vph)	35	55	90	55	20	595	25	15	710	5		
Ideal Flow (vphpl)	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	3.5	3.5	3.5		
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00		
Flt	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85		
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00		
Satd. Flow (prot)	1566	1286	1463	1384	1614	887	1075	1685	1597	1597		
Flt Permitted	0.72	1.00	0.72	1.00	0.35	1.00	1.00	0.41	1.00	1.00		
Satd. Flow (perm)	1189	1286	1111	1384	438	1614	887	1685	1597	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		
Adj. Flow (vph)	35	0	55	90	0	55	20	595	25	15		
RTOR Reduction (vph)	0	48	0	0	48	0	0	0	0	0		
Lane Group Flow (vph)	35	7	0	90	7	0	20	595	20	15		
Heavy Vehicles (%)	14%	0%	27%	22%	0%	18%	50%	19%	80%	66%		
Turn Type	Perm	NA										
Protected Phases	4	4	8	8	2	2	2	2	6	6		
Permitted Phases	4	4	8	8	2	2	2	2	6	6		
Actuated Green, G (s)	12.0	12.0	12.0	12.0	79.0	79.0	79.0	79.0	79.0	79.0		
Effective Green, g (s)	12.0	12.0	12.0	12.0	79.0	79.0	79.0	79.0	79.0	79.0		
Actuated G/C Ratio	0.12	0.12	0.12	0.12	0.79	0.79	0.79	0.79	0.79	0.79		
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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		
Lane Grp Cap (vph)	142	154	133	166	346	1275	700	364	1331	1261		
v/s Ratio Prot	0.01	0.01	0.00	0.00	0.37	0.02	0.02	0.03	0.04	0.00		
v/s Ratio Perm	0.03	0.04	0.68	0.04	0.06	0.47	0.03	0.04	0.53	0.00		
Uniform Delay, d1	39.9	38.9	42.1	38.9	2.3	3.5	2.3	2.3	3.8	2.2		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	0.9	0.1	1.2	0.1	0.3	1.2	0.1	0.2	1.5	0.0		
Delay (s)	40.8	39.0	55.0	39.0	2.6	4.7	2.3	2.5	5.3	2.2		
Level of Service	D	D	D	D	A	A	A	A	A	A		
Approach Delay (s)	39.7	39.7	48.9	39.7	4.6	4.6	4.6	4.6	5.3	4.6		
Approach LOS	D	D	D	D	A	A	A	A	A	A		

Intersection Summary
 HCM 2000 Control Delay: 10.9
 HCM 2000 Volume to Capacity ratio: 0.55
 Actuated Cycle Length (s): 100.0
 Intersection Capacity Utilization: 56.5%
 Analysis Period (min): 15
 ICU Level of Service: B
 Critical Lane Group: c

HCM Unsignalized Intersection Capacity Analysis

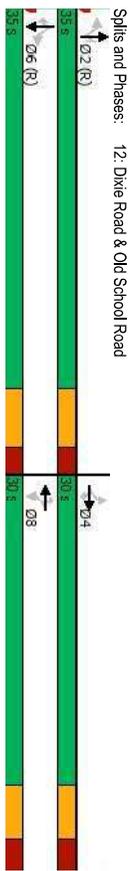
Future Total 2028 PM Peak Hour

Queues

Future Total 2028 PM Peak Hour

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	0	45	635	50	0	730
Traffic Volume (Veh/h)	0	45	635	50	0	730
Future Volume (Veh/h)	0	45	635	50	0	730
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	45	635	50	0	730
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		0.93		635		685
VC, conflicting volume		1365		635		685
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol		1365		635		685
IC, single (s)		6.4		6.3		4.1
IC, 2 stage (s)						
FF (s)		3.5		3.4		2.2
p0 queue free %		100		90		100
CM capacity (veh/h)		155		463		918
Direction, Lane #	WB 1	NB 1	NB 2	SB 1		
Volume Total	45	635	50	730		
Volume Left	0	0	0	0		
Volume Right	45	0	50	0		
ESH	463	1700	1700	1700		
Volume to Capacity	0.10	0.37	0.03	0.43		
Queue Length 95th (m)	2.6	0.0	0.0	0.0		
Control Delay (s)	13.6	0.0	0.0	0.0		
Lane LOS	B					
Approach Delay (s)	13.6	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.4			A		
Intersection Capacity Utilization	43.4%			ICU Level of Service		
Analysis Period (min)	15					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	65	150	30	200	350	15	70	515	105	20	290
Traffic Volume (vph)	65	150	30	200	350	15	70	515	105	20	290
Future Volume (vph)	65	150	30	200	350	15	70	515	105	20	290
Lane Group Flow (vph)	Perm	NA	Perm	Perm	NA	Perm	Perm	Perm	NA	Perm	NA
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	Perm	NA	Perm	NA
Protected Phases	4		4	8	8	8	2	2	2	6	6
Permitted Phases	4	4	4	8	8	8	2	2	2	6	6
Detector Phases											
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)	24.5	24.5	24.5	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	30.0	30.0	35.0	35.0	35.0	35.0	35.0
Total Spilt (%)	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	53.8%	53.8%	53.8%	53.8%	53.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag											
Lead-Lag Optimizer?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
v/c Ratio	0.32	0.30	0.08	0.71	0.67	0.03	0.19	0.53	0.13	0.08	0.33
Control Delay	21.4	18.8	2.3	50.7	42.8	6.8	11.8	14.0	3.1	11.0	11.5
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	21.4	18.8	2.3	50.7	42.8	6.8	11.8	14.0	3.1	11.0	11.5
Queue Length 50th (m)	6.5	15.0	0.0	27.6	48.1	0.1	4.3	39.4	0.0	1.2	19.4
Queue Length 95th (m)	14.6	24.9	2.3	43.1	64.4	m1.0	13.4	79.1	7.4	5.4	21.4
Internal Link Dist (m)		371.4		41.8			216.1				281.5
Turn Bay Length (m)	30.0		30.0	30.0	65.0	50.0	50.0	50.0	50.0	50.0	50.0
Base Capacity (vph)	270	674	459	374	694	577	374	973	821	254	888
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	0.24	0.22	0.07	0.53	0.50	0.03	0.19	0.53	0.13	0.08	0.33
Intersection Summary											
Cycle Length: 65											
Actuated Cycle Length: 65											
Offset: 0 (0%), Referenced to phase 2(NBT) and 6(SBT), Start of Green											
Natural Cycle: 55											
Control Type: Actuated-Coordinated											
m Volume for 95th percentile queue is metered by upstream signal.											



Tribal Lands Dixie

Synchro 11 Report
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Tribal Lands Dixie

Synchro 11 Report
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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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Traffic Volume (vph)	65	150	30	200	350	15	70	515	105	20	290	35	
Future Volume (vph)	65	150	30	200	350	15	70	515	105	20	290	35	
Ideal Flow (vph/pl)	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	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	1.00	
Flt	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)	1785	1865	1166	1487	1921	1493	1159	1847	1465	1167	1885	1521	
Flt Permitted	0.40	1.00	1.00	0.66	1.00	1.00	0.58	1.00	1.00	0.39	1.00	1.00	
Satd. Flow (perm)	748	1865	1166	1036	1921	1493	710	1847	1465	483	1685	1521	
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)	65	150	30	200	350	15	70	515	105	20	290	35	
RTOR Reduction (vph)	0	0	22	0	0	11	0	0	50	0	0	17	
Lane Group Flow (vph)	65	150	8	200	350	4	70	515	55	20	290	18	
Heavy Vehicles (%)	0%	3%	37%	20%	0%	7%	54%	4%	9%	53%	14%	5%	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Protected Phases	4	4	8	8	8	2	2	6	6	6	6	6	
Actuated Green, G (s)	17.7	17.7	17.7	17.7	17.7	34.3	34.3	34.3	34.3	34.3	34.3	34.3	
Effective Green, g (s)	17.7	17.7	17.7	17.7	17.7	34.3	34.3	34.3	34.3	34.3	34.3	34.3	
Actuated Q/C Ratio	0.27	0.27	0.27	0.27	0.27	0.53	0.53	0.53	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	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	3.0	
Lane Grp Cap (vph)	203	507	317	282	523	406	374	974	773	254	889	802	
v/s Ratio Prot	0.08	0.08	0.01	0.19	0.00	0.10	0.10	0.04	0.04	0.04	0.17	0.01	
v/s Ratio Perm	0.32	0.30	0.03	0.71	0.67	0.01	0.19	0.53	0.07	0.08	0.33	0.02	
v/c Ratio	18.9	18.7	17.3	21.3	21.0	17.3	8.0	10.1	7.5	7.6	8.8	7.3	
Uniform Delay, d1	1.00	1.00	1.00	1.80	1.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Progression Factor	0.9	0.3	0.0	7.8	3.2	0.0	1.1	2.1	0.2	0.6	1.0	0.1	
Incremental Delay, d2	19.8	19.0	17.4	46.2	41.0	17.3	9.1	12.1	7.7	8.2	9.7	7.4	
Delay (s)	B	B	B	D	D	B	A	B	A	A	A	A	
Level of Service	B	B	B	D	D	B	A	B	A	A	A	A	
Approach Delay (s)	19.0	42.2	11.1	9.4	9.4	11.1	9.4	9.4	9.4	9.4	9.4	9.4	
Approach LOS	B	D	B	D	D	B	A	B	A	A	A	A	
Intersection Summary													
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service					C						
HCM 2000 Volume to Capacity ratio	0.39												
Actuated Cycle Length (s)	65.0	Sum of lost time (s)					13.0						
Intersection Capacity Utilization	75.5%	ICU Level of Service					D						
Analysis Period (min)	15												
c Critical Lane Group													

Tribal Lands Dixie

Synchro 11 Report
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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	EBT	EBR	WBL	WBT	NBL	NBR	
Traffic Volume (veh/h)	255	15	0	560	0	10	
Future Volume (veh/h)	255	15	0	560	0	10	
Sign Control	Free	Free	Free	Free	Stop	Stop	
Grade	0%	0%	0%	0%	0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	255	15	0	560	0	10	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Upstream signal (m)	66						
pX, platoon unblocked							
WC, conflicting volume			270		542	135	
WC1, stage 1 conf vol							
WC2, stage 2 conf vol							
VCU, unblocked vol	270			542	135		
IC, single (s)	4.1			6.8	6.9		
IC, 2 stage (s)							
IF (s)	2.2			3.5	3.3		
p0 queue free %	100			100	99		
CM capacity (veh/h)	1305			475	895		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1		
Volume Total	170	100	280	280	10		
Volume Left	0	0	0	0	0		
Volume Right	0	15	0	0	10		
SSH	1700	1700	1700	1700	895		
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	A	A	A	A		
Approach Delay (s)	0.0	0.0	9.1	9.1	9.1		
Approach LOS	A	A	A	A	A		
Intersection Summary							
Average Delay	0.1	HCM 2000 Level of Service					A
Intersection Capacity Utilization	18.8%	ICU Level of Service					A
Analysis Period (min)	15						

Tribal Lands Dixie

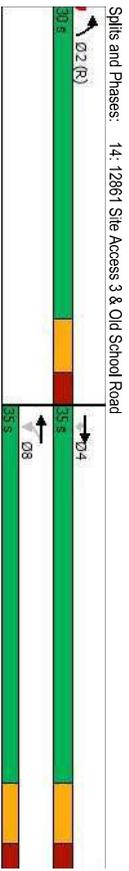
Synchro 11 Report
FT_2028.syn

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)	265	10	430	130
Future Volume (vph)	265	10	430	130
Lane Group Flow (vph)	265	0	440	150
Turn Type	NA	Perm	NA	Prot
Protected Phases	4	8	8	2
Detector Phases	4	8	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	24.5
Total Split (s)	35.0	35.0	35.0	30.0
Total Split (%)	53.8%	53.8%	53.8%	46.2%
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 Optimizer?				
Recall Mode	None	None	None	C-Min
v/c Ratio	0.34	0.61	0.61	0.18
Control Delay	18.0	26.6	26.6	7.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.0	26.6	26.6	7.1
Queue Length 50th (m)	16.1	26.6	7.1	7.1
Queue Length 95th (m)	26.7	37.1	17.4	17.4
Internal Link Dist (m)	433.3	157.0	183.7	
Turn Bay Length (m)				
Base Capacity (vph)	1584	1476	828	828
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	0.30	0.18	0.18

Intersection Summary
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated



Tribal Lands Dixie

Synchro 11 Report
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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)	265	0	10	430	130	20
Future Volume (vph)	265	0	10	430	130	20
Ideal Flow (vph/pl)	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	6.5
Lane Util. Factor	0.95	1.00	0.95	1.00	0.98	1.00
Flt	1.00	1.00	1.00	0.96	1.00	0.96
Flt Protected						
Satd. Flow (prot)	3614	3571	1405	3571	1405	1405
Flt Permitted	1.00	0.94	0.96	0.94	0.96	0.96
Satd. Flow (perm)	3614	3368	1405	3368	1405	1405
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	265	0	10	430	130	20
RTOR Reduction (vph)	0	0	0	0	5	0
Lane Group Flow (vph)	265	0	0	440	145	0
Heavy Vehicles (%)	1%	0%	50%	1%	26%	25%
Turn Type	NA	Perm	Perm	NA	Prot	Prot
Protected Phases	4	4	8	8	2	2
Permitted Phases						
Actuated Green, G (s)	13.9	13.9	13.9	38.1	38.1	38.1
Effective Green, g (s)	13.9	13.9	13.9	38.1	38.1	38.1
Actuated G/C Ratio	0.21	0.21	0.21	0.59	0.59	0.59
Clearance Time (s)	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
Lane Grp Cap (vph)	772	823	720	823	823	823
v/s Ratio Prot	0.07			0.10		
v/s Ratio Perm				0.13		
v/c Ratio	0.34	0.61	0.61	0.18	0.18	0.18
Uniform Delay, d1	21.7	23.1	23.1	6.2	6.2	6.2
Progression Factor	0.80	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	1.5	0.5	1.5	0.5	0.5
Delay (s)	17.5	24.6	24.6	6.7	6.7	6.7
Level of Service	B	C	C	A	A	A
Approach Delay (s)	17.5	24.6	6.7	6.7	6.7	6.7
Approach LOS	B	C	C	A	A	A

Intersection Summary
 HCM 2000 Control Delay: 19.3
 HCM 2000 Volume to Capacity ratio: 0.29
 Actuated Cycle Length (s): 65.0
 Intersection Capacity Utilization: 38.3%
 Analysis Period (min): 15
 ICU Level of Service: A
 c Critical Lane Group

Tribal Lands Dixie

Synchro 11 Report
FT_2028.syn

HCM Unsignalized Intersection Capacity Analysis

Future Total 2028 PM Peak Hour

15: Bramalea Road & Old School Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop		Stop			Stop		Stop		Stop	
Traffic Volume (vph)	45	215	25	15	355	10	60	200	35	10	55	25
Future Volume (vph)	45	215	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	215	25	15	355	10	60	200	35	10	55	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	285	380	295	90								
Volume Left (vph)	45	15	60	10								
Volume Right (vph)	25	10	35	25								
Head (s)	0.10	0.03	-0.03	0.05								
Departure Headway (s)	5.9	5.7	6.0	6.6								
Degree Utilization, x	0.47	0.60	0.49	0.17								
Capacity (veh/h)	563	602	590	448								
Control Delay (s)	14.1	17.0	14.7	10.9								
Approach Delay (s)	14.1	17.0	14.7	10.9								
Approach LOS	B	C	B	B								
Intersection Summary												
Delay	15.0											
Level of Service	C											
Intersection Capacity Utilization	61.4%											
ICU Level of Service	B											
Analysis Period (min)	15											

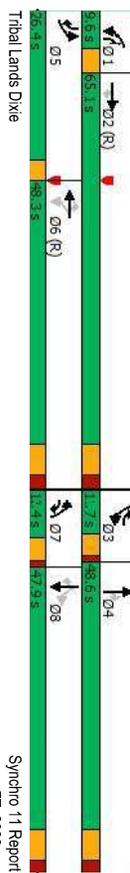
Queues

Future Total 2033 PM Peak Hour

1: Dixie Road & Mayfield Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		RT	RT		RT	RT		RT	RT		RT	RT
Traffic Volume (vph)	440	1495	180	60	1485	100	210	220	60	155	225	650
Future Volume (vph)	440	1495	180	60	1485	100	210	220	60	155	225	650
Lane Group Flow (vph)	440	1495	180	60	1485	100	210	220	60	155	225	650
Turn Type	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov	Prot	NA	pmt+ov	pmt+pt	NA	pmt+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases				2	6	6	6	6	4	8	8	8
Detector Phases	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	8.0	9.5	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	12.4	9.5	44.9	9.5	47.9	9.5	47.9	9.5	47.9	9.5
Total Split (s)	26.4	65.1	12.4	9.6	48.3	11.7	12.4	48.6	9.6	11.7	47.9	26.4
Total Spill (%)	19.6%	48.2%	9.2%	7.1%	35.8%	8.7%	9.2%	36.0%	7.1%	8.7%	35.5%	19.6%
Yellow Time (s)	3.0	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.5	3.5	4.6	3.0
All-Red Time (s)	0.0	2.3	1.0	0.0	2.3	1.0	1.0	2.3	0.0	1.0	2.3	0.0
Lost Time Adjust (s)	-1.0	0.0	0.0	-1.0	0.0	0.0	-1.0	0.0	-1.0	0.0	0.0	0.0
Total Lost Time (s)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
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	0.48	0.50	0.16	0.29	0.94	0.17	0.95	0.55	0.19	0.76	0.62	0.99
Control Delay	35.2	14.5	1.2	18.3	57.2	5.2	11.1	61.9	3.8	69.3	68.5	60.7
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	35.2	14.5	1.2	18.3	57.2	5.2	11.1	61.9	3.8	69.3	68.5	60.7
Queue Length 50th (m)	47.5	79.7	0.0	5.5	151.9	0.0	30.8	31.2	0.0	39.4	32.2	91.6
Queue Length 95th (m)	66.7	102.6	7.1	9.2	#187.6	11.6	#58.8	43.8	4.5	#50.8	#41.5	#254.2
Internal Link Dist (m)		980.1		272.1			844.0				481.5	
Turn Bay Length (m)	210.0	184.0	180.0		150.0	160.0		65.0	210.0		180.0	
Base Capacity (vph)	919	2987	1105	210	1579	381	221	1116	315	203	1045	638
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	0.48	0.50	0.16	0.29	0.94	0.17	0.95	0.55	0.19	0.76	0.62	0.99
Intersection Summary												
Cycle Length: 135												
Actuated Cycle Length: 135												
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, 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.												
m Volume for 95th percentile queue is metered by upstream signal.												

Splits and Phases: 1: Dixie Road & Mayfield Road



HCM Signalized Intersection Capacity Analysis

Future Total 2033 PM Peak Hour

1: Dixie Road & Mayfield Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Traffic Volume (vph)	440	1495	180	60	1485	100	210	220	60	155	225	650	
Future Volume (vph)	440	1495	180	60	1485	100	210	220	60	155	225	650	
Ideal Flow (vph/pl)	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)	2.0	6.9	4.5	2.5	6.9	4.5	3.5	6.9	3.5	3.5	6.9	3.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.95	1.00	1.00	0.95	1.00	
Frbp. ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	
Frbp. 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	
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	2628	4683	1476	1767	4902	1229	3362	3614	1293	1437	3444	1273	
Flt Permitted	0.95	1.00	1.00	0.16	1.00	0.95	1.00	0.95	1.00	0.59	1.00	1.00	
Satd. Flow (perm)	2628	4683	1476	303	4902	1229	3362	3614	889	3444	1273		
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)	440	1495	180	60	1485	100	210	220	60	155	225	650	
RTOR Reduction (vph)	0	0	56	0	0	62	0	0	51	0	0	37	
Lane Group Flow (vph)	440	1495	124	60	1485	38	210	220	9	155	225	613	
Confl. Peds. (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10	
Heavy Vehicles (%)	37%	12%	6%	1%	7%	30%	3%	1%	22%	24%	6%	25%	
Turn Type	Prot	NA	pm+ov	pm+pt	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	pm+ov	
Protected Phases	5	2	2	7	1	6	3	7	4	3	8	5	
Permitted Phases	2	6	6	6	6	6	6	6	6	6	6	6	
Actuated Green, G (s)	48.1	88.4	93.3	49.2	43.5	50.7	7.9	14.9	20.6	21.4	14.2	62.3	
Effective Green, g (s)	49.1	85.4	93.3	51.2	43.5	50.7	8.9	14.9	20.6	23.4	14.2	62.3	
Actuated Q/C Ratio	0.36	0.63	0.69	0.38	0.32	0.38	0.07	0.11	0.15	0.17	0.11	0.46	
Clearance Time (s)	3.0	6.9	4.5	3.5	6.9	4.5	4.5	6.9	3.5	4.5	6.9	3.0	
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 Gap Cap (vph)	919	2962	1020	187	1579	461	221	398	197	187	362	587	
v/s Ratio Prot	0.17	0.32	0.01	0.02	0.30	0.00	0.06	0.06	0.06	0.05	0.07	0.37	
v/s Ratio Perm	0.48	0.50	0.12	0.32	0.94	0.08	0.35	0.55	0.05	0.83	0.62	1.04	
Uniform Delay, d1	33.1	13.4	7.0	32.4	44.5	27.2	62.8	56.9	48.8	52.5	57.8	36.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.08	1.10	1.17	
Incremental Delay, d2	0.4	0.6	0.1	1.0	12.3	0.1	46.5	1.7	0.1	18.4	2.3	43.1	
Level of Service	C	B	A	C	E	C	F	E	D	E	E	F	
Approach Delay (s)	17.5	17.5	17.5	54.2	54.2	54.2	79.1	79.1	79.1	79.1	79.1	79.1	
Approach LOS	B	B	B	D	D	D	E	E	E	E	E	E	
Intersection Summary													
HCM 2000 Control Delay	46.8	HCM 2000 Level of Service					D						
HCM 2000 Volume to Capacity ratio	1.01												
Actuated Cycle Length (s)	135.0	87.9%	Sum of lost time (s)		21.8								
Intersection Capacity Utilization	87.9%	ICU Level of Service		E									
Analysis Period (min)	15												
e Critical Lane Group													

Tribal Lands Dixie

Synchro 11 Report
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Queues

Future Total 2033 PM Peak Hour

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

Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	EBL	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Traffic Volume (vph)	10	50	70	0	15	695	5	900
Future Volume (vph)	10	50	70	0	15	695	5	900
Lane Group Flow (vph)	10	50	70	5	15	710	0	905
Turn Type	Split	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	8	2	2	6	6
Detector Phases	4	4	8	8	2	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead-Lag Optimizer?	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Recall Mode	0.06	0.10	0.44	0.01	0.09	0.63	0.79	0.79
v/c Ratio	28.7	0.4	34.1	0.0	10.8	30.7	22.2	22.2
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	28.7	0.4	34.1	0.0	10.8	30.7	22.2	22.2
Total Delay	1.3	0.0	8.6	0.0	1.6	183.4	107.5	107.5
Queue Length 50th (m)	5.3	0.0	18.8	0.0	m5.9	#250.2	#212.4	#212.4
Queue Length 95th (m)					96.6	481.5	358.1	358.1
Internal Link Dist (m)					96.6			
Turn Bay Length (m)					96.6			
Base Capacity (vph)	476	689	296	828	172	1128	1140	1140
Saturation 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	0.02	0.07	0.24	0.01	0.09	0.63	0.79	0.79
Intersection Summary								
Cycle Length: 67.5								
Actuated Cycle Length: 67.5								
Offset: 0 (0%), Referenced to phase 2NBT, Start of Green								
Natural Cycle: 110								
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: 5: Dixie Road & Spiers Griggen Avenue/12173 Site Access 3								
Tribal Lands Dixie								

Tribal Lands Dixie

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HCM Signalized Intersection Capacity Analysis
 5: Dixie Road & Spiers Griggs 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	10	0	50	70	0	5	15	695	15	5	900	0
Traffic Volume (vph)	10	0	50	70	0	5	15	695	15	5	900	0
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5	3.5	3.7	3.5
Lane Width	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1.00
Frbp. 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	0.85	1.00	0.85	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1785	1426	1394	1633	1293	1567	1589	1589	1589	1589	1589	1589
Flt Permitted	0.95	1.00	0.76	1.00	0.18	1.00	0.18	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1785	1426	1111	1633	240	1567	1585	1585	1585	1585	1585	1585
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)	10	0	50	70	0	5	15	695	15	5	900	0
RTOR Reduction (vph)	0	0	47	0	4	0	0	1	0	0	0	0
Lane Group Flow (vph)	10	0	3	70	1	0	15	709	0	0	905	0
Cont. Peds. (#/hr)	0%	0%	12%	28%	0%	0%	38%	22%	33%	0%	21%	0%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	4	4	8	8	8	2	2	2	6	6	6
Protected Phases	4	4	4	8	8	8	2	2	2	6	6	6
Actuated Green, G (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Effective Green, g (s)	3.8	3.8	7.0	7.0	7.0	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Actuated G/C Ratio	0.06	0.06	0.10	0.10	0.10	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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 Gap Cap (vph)	100	80	115	169	153	1002	0.45	0.45	0.45	0.45	0.45	0.45
v/s Ratio Prot	60.01	0.00	60.06	0.00	0.06	0.89	0.89	0.89	0.89	0.89	0.89	0.89
v/s Ratio Perm	0.10	0.04	0.61	0.00	0.10	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Uniform Delay, d1	30.2	30.1	28.9	27.1	4.7	8.0	10.2	10.2	10.2	10.2	10.2	10.2
Progression Factor	1.00	1.00	1.00	1.00	1.15	2.88	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2	8.8	0.0	1.2	4.0	11.8	11.8	11.8	11.8	11.8	11.8
Delay (s)	30.7	30.3	37.8	27.1	6.6	27.0	22.0	22.0	22.0	22.0	22.0	22.0
Level of Service	C	C	C	D	C	A	C	C	C	C	C	C
Approach Delay (s)	30.4	30.4	30.4	37.0	37.0	26.6	26.6	26.6	26.6	26.6	26.6	26.6
Approach LOS	C	C	C	D	D	C	C	C	C	C	C	C
Intersection Summary												
HCM 2000 Control Delay	24.8			HCM 2000 Level of Service	C							
HCM 2000 Volume to Capacity ratio	0.80			Sum of lost time (s)	13.5							
Actuated Cycle Length (s)	67.5			ICU Level of Service	C							
Intersection Capacity Utilization	69.4%											
Analysis Period (min)	15											
e Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

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	10	10	35	645	925
Traffic Volume (vph)	5	10	35	645	925
Future Volume (vph)	5	10	35	645	925
Lane Group Flow (vph)	5	10	0	685	945
Turn Type	Perm	Perm	Perm	NA	NA
Protected Phases	2	2	2	6	6
Permitted Phases	4	8	2	2	6
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)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5
Total Spilt (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Lead-Lag Optimizer?					
Recall Mode	None	None	C-Max	C-Max	C-Max
v/s Ratio	0.02	0.03	0.51	0.54	0.54
Control Delay	17.2	0.2	4.2	6.9	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	0.2	4.2	6.9	6.9
Queue Length 50th (m)	0.4	0.0	0.0	0.0	0.0
Queue Length 95th (m)	2.5	0.0	#63.3	#134.7	358.1
Internal Link Dist (m)			358.1	696.2	
Turn Bay Length (m)					
Base Capacity (vph)	714	713	1331	1485	1485
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/s Ratio	0.01	0.01	0.51	0.64	0.64
Intersection Summary					
Cycle Length: 45					
Actuated Cycle Length: 45					
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBT, Start of Green					
Natural Cycle: 80					
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					

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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	0	0	0	0	10	35	645	5	0	925	20
Future Volume (vph)	5	0	0	0	0	10	35	645	5	0	925	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)	4.5					4.5					4.5	
Lane Util. Factor	1.00					1.00					1.00	
Frbp. ped/bikes	1.00					1.00					1.00	
Ft	1.00					0.85					1.00	
Flt Protected	0.95					1.00					1.00	
Satd. Flow (prot)	1785					1597					1516	
Fl Permitted	0.95					1.00					0.94	
Satd. Flow (perm)	1785					1597					1427	
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	645	5	0	925	20
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	0	0	1	0
Lane Group Flow (vph)	5	0	0	0	0	0	0	685	0	0	944	0
Confl. Peds. (#/hr)	0%	0%	0%	0%	0%	0%	2%	27%	100%	0%	18%	0%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	NA	NA	NA	NA	NA
Protected Phases												2
Actuated Green, G (s)	4			4			8				2	
Effective Green, g (s)	1.2			1.2			1.2				34.8	34.8
Actuated G/C Ratio	0.03			0.03			0.03				0.77	0.77
Clearance Time (s)	4.5			4.5			4.5				4.5	4.5
Vehicle Extension (s)	3.0			3.0			3.0				3.0	3.0
Lane Gap Cap (vph)	47			42			1103				1231	60.59
v/s Ratio Prot												
v/s Ratio Perm	60.00			0.11			0.01				0.48	0.48
v/c Ratio	0.11			0.01			0.01				0.62	0.77
Uniform Delay, d1	21.4			21.3			2.2				2.8	2.8
Progression Factor	1.00			1.00			1.00				1.00	1.00
Incremental Delay, d2	1.0			0.1			2.6				4.6	4.6
Delay (s)	22.4			22.4			21.4				7.5	7.5
Level of Service	C			C			C				A	A
Approach Delay (s)	22.4			21.4			21.4				4.9	7.5
Approach LOS	C			C			C				A	A
Intersection Summary												
HCM 2000 Control Delay	6.5			6.5			HCM 2000 Level of Service	A			A	
HCM 2000 Volume to Capacity ratio	0.74			0.74			Sum of lost time (s)	9.0				
Actuated Cycle Length (s)	45.0			45.0			ICU Level of Service	D				
Intersection Capacity Utilization	73.3%			73.3%			Analysis Period (min)	15				
e Critical Lane Group												

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

HCM Unsignalized Intersection Capacity Analysis

8: Dixie Road & 12489 Site Access 1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (veh/h)	0	0	640	10	0	850
Future Volume (veh/h)	0	0	640	10	0	850
Sign Control	Stop	0%	Free	0%	Free	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	640	10	0	850
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (Veh)						
Median Type			None			None
Median storage (veh)						
Upstream signal (m)	0.83					394
pX, platoon unblocked	1490		640			650
vC, conflicting volume						
wC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCn, unblocked vol	1488		640			650
IC, single (s)	6.4		6.2			4.1
IC, 2 stage (s)						
IF (s)	3.5		3.3			2.2
p0 queue free %	100		100			100
CM capacity (veh/h)	115		479			946
Direction, Lane #						
Volume Total	0	640	10	850		
Volume Left	0	0	0	0		
Volume Right	0	0	10	0		
SSH	1700	1700	1700	946		
Volume to Capacity	0.00	0.38	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			A		
Intersection Summary						
Average Delay	0.0			0.0		A
Intersection Capacity Utilization	54.7%			54.7%		
Analysis Period (min)	15			15		

Tribal Lands Dixie

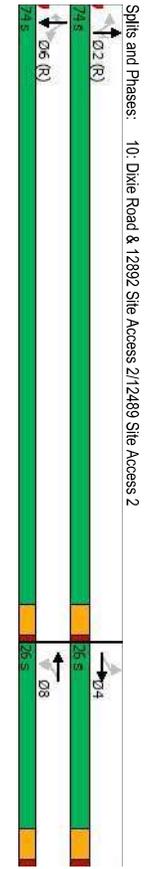
Synchro 11 Report
FT_2033.syn

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	90	0	20	595	25	15	710	5
Traffic Volume (vph)	35	0	90	0	20	595	25	15	710	5
Future Volume (vph)	35	55	90	55	20	595	25	15	710	5
Lane Group Flow (vph)	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Turn Type	4	8	8	8	2	2	2	6	6	6
Protected Phases	4	4	8	8	2	2	2	6	6	6
Detector Phases	4	4	8	8	2	2	2	6	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Minimum Split (s)	26.0	26.0	26.0	26.0	74.0	74.0	74.0	74.0	74.0	74.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5

Lead-Lag Optimizer?

Recall Mode	None	None	None	C-Max						
v/c Ratio	0.22	0.13	0.62	0.11	0.06	0.47	0.03	0.04	0.54	0.00
Control Delay	39.1	0.6	58.1	0.4	4.3	6.1	1.7	4.2	7.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	0.6	58.1	0.4	4.3	6.1	1.7	4.2	7.0	0.6
Queue Length 50th (m)	6.4	0.0	17.6	0.0	0.8	35.6	0.0	0.6	46.8	0.0
Queue Length 95th (m)	14.7	0.0	32.2	0.0	3.5	75.1	2.3	2.8	98.6	0.4
Internal Link Dist (m)	161.0		124.2		369.7			813.5		
Turn Bay Length (m)	15.0	15.0	580	350	1276	718	370	1320	1287	60.0
Base Capacity (vph)	295	503	225	580	350	1276	718	370	1320	1287
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Starvation 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	0.14	0.11	0.40	0.09	0.06	0.47	0.03	0.04	0.54	0.00

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Natural Cycle: 60
 Offset: 0 (0%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green
 Control Type: Actuated-Coordinated



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	35	0	55	90	0	55	20	595	25	15	710	5
Traffic Volume (vph)	35	0	55	90	0	55	20	595	25	15	710	5
Future Volume (vph)	35	55	90	55	20	595	25	15	710	5	710	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	3.5	3.5	3.5	3.7	3.5
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	1.00
Flt	1.00	0.85	1.00	0.85	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	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)	1566	1286	1381	1384	1381	1384	1566	1286	1381	1384	1566	1286
Flt Permitted	0.72	1.00	0.72	1.00	0.72	1.00	0.35	1.00	0.41	1.00	1.00	0.72
Satd. Flow (perm)	1189	1286	1048	1384	1384	1384	436	1588	887	459	1597	1189
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	595	25	15	710	5
RTOR Reduction (vph)	0	48	0	0	48	0	0	0	0	0	0	0
Lane Group Flow (vph)	35	7	0	90	7	0	20	595	20	15	710	4
Heavy Vehicles (%)	14%	0%	27%	22%	0%	18%	50%	21%	80%	66%	17%	0%
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4	4	8	8	2	2	6	6	6	6	6	6

Actuated Green, G (s)	12.4	12.4	12.4	12.4	12.4	78.6	78.6	78.6	78.6	78.6	78.6	78.6
Effective Green, g (s)	12.4	12.4	12.4	12.4	12.4	78.6	78.6	78.6	78.6	78.6	78.6	78.6
Actuated G/C Ratio	0.12	0.12	0.12	0.12	0.12	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	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)	147	159	129	171	129	342	1248	697	360	1290	1255	147
v/s Ratio Prot	0.01		0.00			0.37				0.43		
v/s Ratio Perm	0.03	0.04	0.09	0.04	0.04	0.05	0.48	0.03	0.04	0.05	0.00	0.00
Uniform Delay, d1	39.5	38.6	42.0	38.6	2.4	3.7	2.3	2.4	4.0	2.3	2.3	3.9
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	0.8	0.1	15.2	0.1	0.3	1.3	0.1	0.2	1.7	0.0	0.0	0.0
Delay (s)	40.4	38.7	57.2	38.7	2.7	5.0	2.4	2.6	5.7	2.3	2.3	3.9
Level of Service	D	D	E	D	A	A	A	A	A	A	A	A
Approach Delay (s)	39.3		50.2			4.8			5.6			
Approach LOS	D		D			A			A			

Intersection Summary	11.2	HCM 2000 Level of Service	B
HCM 2000 Control Delay	0.57		
HCM 2000 Volume to Capacity ratio	100.0		
Actuated Cycle Length (s)	56.5%	ICU Level of Service	B
Intersection Capacity Utilization	15		
Analysis Period (min)			
c Critical Lane Group			

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)	65	160	30	200	385	15	70	515	105	20	290	35
Future Volume (vph)	65	160	30	200	385	15	70	515	105	20	290	35
Ideal Flow (vph/pl)	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00
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)	1785	3544	1166	1130	3614	1493	1159	1830	1465	568	1685	1521
Flt Permitted	0.52	1.00	1.00	0.65	1.00	1.00	0.58	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	994	3544	1166	774	3614	1493	710	1830	1465	224	1685	1521
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)	65	160	30	200	385	15	70	515	105	20	290	35
RTOR Reduction (vph)	0	0	21	0	0	10	0	0	53	0	0	18
Lane Group Flow (vph)	65	160	9	200	385	5	70	515	52	20	290	17
Heavy Vehicles (%)	0%	3%	37%	58%	1%	7%	54%	5%	9%	214%	14%	5%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	8	8	8	2	2	6	6	6	6	6
Actuated Green, G (s)	20.0	20.0	20.0	20.0	20.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
Effective Green, g (s)	20.0	20.0	20.0	20.0	20.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
Actuated Q/C Ratio	0.31	0.31	0.31	0.31	0.31	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Clearance Time (s)	6.5	6.5	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	3.0
Lane Gap Cap (vph)	302	1090	358	238	1112	459	349	900	721	110	829	748
v/s Ratio Prot	0.05	0.05	0.01	0.11	0.11	0.00	0.10	0.04	0.09	0.17	0.04	0.17
v/s Ratio Perm	0.22	0.15	0.03	0.84	0.35	0.01	0.20	0.57	0.07	0.18	0.35	0.02
v/c Ratio	16.7	16.3	15.7	21.0	17.4	15.6	9.3	11.7	8.7	9.2	10.1	8.5
Uniform Delay, d1	1.00	1.00	1.00	1.43	1.15	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.4	0.1	0.0	22.2	0.2	0.0	1.3	2.6	0.2	3.6	1.2	0.1
Incremental Delay, d2	17.0	16.4	15.7	52.2	20.2	15.6	10.6	14.3	8.9	12.8	11.3	8.5
Level of Service	B	B	B	D	C	B	B	A	B	B	B	A
Approach Delay (s)	16.5	16.5	30.7	13.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
Approach LOS	B	B	C	B	B	B	B	B	B	B	B	B
Intersection Summary												
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service										
HCM 2000 Volume to Capacity ratio	0.67	B										
Actuated Cycle Length (s)	65.0	Sum of lost time (s)										
Intersection Capacity Utilization	68.4%	ICU Level of Service										
Analysis Period (min)	15	C										

Tribal Lands Dixie

Synchro 11 Report
FT_2033.syn

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)	265	15	0	595	0	10
Future Volume (veh/h)	265	15	0	595	0	10
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	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	595	0	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Upstream signal (m)	66					
PX, platform unblocked			0.98		0.98	0.98
WC, conflicting volume			280		570	140
WC1, stage 1 conf vol						
WC2, stage 2 conf vol						
VCU, unblocked vol			233		528	90
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)						
FF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
CM capacity (veh/h)			1324		477	940
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	177	103	298	298	10	
Volume Left	0	0	0	0	0	
Volume Right	0	15	0	0	10	
SSH	1700	1700	1700	1700	940	
Volume to Capacity	0.10	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	8.9	
Lane LOS	A	A	A	A	A	
Approach Delay (s)	0.0	0.0	8.9	8.9	8.9	
Approach LOS	A	A	A	A	A	
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	19.8%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					

Tribal Lands Dixie

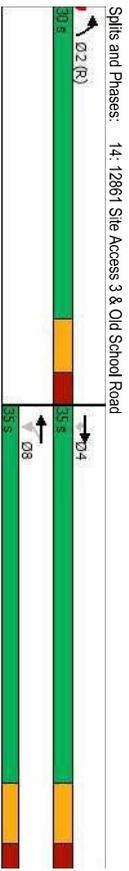
Synchro 11 Report
FT_2033.syn

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)	275	10	465	130
Future Volume (vph)	275	10	465	130
Lane Group Flow (vph)	275	10	465	150
Turn Type	NA	Perm	NA	Prot
Protected Phases	4		8	2
Permitted Phases		4	8	2
Detector Phases		4	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	25.0	24.5
Total Split (s)	35.0	35.0	35.0	30.0
Total Split (%)	53.8%	53.8%	53.8%	46.2%
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 Optimizer?				
Recall Mode	None	None	None	C-Min
v/c Ratio	0.35	0.04	0.60	0.14
Control Delay	19.2	18.7	26.0	6.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.2	18.7	26.0	6.8
Queue Length 50th (m)	17.3	1.0	28.2	6.9
Queue Length 95th (m)	24.8	4.1	38.1	17.0
Internal Link Dist (m)	433.3		157.0	183.7
Turn Bay Length (m)		95.0		
Base Capacity (vph)	1584	480	1584	1040
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	0.02	0.29	0.14

Intersection Summary
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBL and 6.: Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated



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)	275	0	10	465	130	20
Future Volume (vph)	275	0	10	465	130	20
Ideal Flow (vph/pl)	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	0.98	1.00
Flt Protected	1.00		1.00	1.00	0.96	
Satd. Flow (prot)	3614		1785	3614	1768	
Flt Permitted	1.00		0.58	1.00	0.96	
Satd. Flow (perm)	3614		1095	3614	1768	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	275	0	10	465	130	20
RTOR Reduction (vph)	0	0	0	0	5	0
Lane Group Flow (vph)	275	0	10	465	145	0
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Turn Type	NA	Perm	Perm	NA	Prot	Prot
Protected Phases	4		8		8	2
Permitted Phases		4	8		8	2
Actuated Green, G (s)	13.9		13.9		13.9	38.1
Effective Green, g (s)	13.9		13.9		13.9	38.1
Actuated G/C Ratio	0.21		0.21		0.21	0.59
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)	772		234		772	1036
v/s Ratio Prot	0.08		0.13		0.13	0.08
v/s Ratio Perm		0.01		0.01		0.14
Uniform Delay, d1	0.36		0.04		0.60	0.14
Progression Factor	0.85		1.00		1.00	1.00
Incremental Delay, d2	0.3		0.1		1.3	0.3
Delay (s)	18.8		20.3		24.4	6.3
Level of Service	B		C		C	A
Approach Delay (s)	18.8		24.3		6.3	
Approach LOS	B		C		C	A

Intersection Summary
 HCM 2000 Control Delay: 19.6
 HCM 2000 Volume to Capacity ratio: 0.28
 Actuated Cycle Length (s): 65.0
 Intersection Capacity Utilization: 32.1%
 Analysis Period (min): 15
 Critical Lane Group: c

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		Stop			Stop			Stop			Stop	
Sign Control												
Traffic Volume (vph)	45	225	25	15	390	10	60	220	35	10	60	25
Future Volume (vph)	45	225	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	225	25	15	390	10	60	220	35	10	60	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	295	415	315	95								
Volume Left (vph)	45	15	60	10								
Volume Right (vph)	25	10	35	25								
Head (s)	0.20	0.03	-0.03	0.13								
Departure Headway (s)	6.3	5.9	6.3	7.0								
Degree Utilization	0.52	0.88	0.55	0.19								
Capacity (veh/h)	532	573	531	414								
Control Delay (s)	15.8	20.6	16.6	11.6								
Approach Delay (s)	15.8	20.6	16.6	11.6								
Approach LOS	C	C	C	B								
Intersection Summary												
Delay	17.5											
Level of Service	C											
Intersection Capacity Utilization	63.7%											
ICU Level of Service	B											
Analysis Period (min)	15											

Appendix C: Bramalea Road / Old School Road Intersection Operations

Table 2 Unsignalized Intersection Capacity Analysis Results

Key Movements	2028 Horizon Year		2033 Horizon Year	
	Future Total		Future Total	
	LOS	Delay (s)	LOS	Delay (s)
Bramalea Road / Old School Road				
EBLTR	C (B)	15.9 (14.1)	C (C)	19.3 (15.8)
WBLTR	B (C)	11.8 (17.0)	B (C)	12.9 (20.6)
NBLTR	B (B)	11.0 (14.7)	B (C)	11.8 (16.6)
SBLTR	B (B)	12.0 (10.9)	B (B)	13.3 (11.6)

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		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	300	85	25	195	0	40	75	20	5	155	60
Future Volume (vph)	20	300	85	25	195	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	300	85	25	195	0	40	75	20	5	155	60
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	405	220	135	220								
Volume Left (vph)	20	25	40	5								
Volume Right (vph)	85	0	20	60								
Head (s)	-0.06	0.08	0.06	-0.09								
Departure Headway (s)	5.3	5.7	6.2	5.8								
Degree Utilization, x	0.60	0.35	0.23	0.36								
Capacity (veh/h)	645	574	506	555								
Control Delay (s)	15.9	11.8	11.0	12.0								
Approach Delay (s)	15.9	11.8	11.0	12.0								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay	13.4											
Level of Service	B											
Intersection Capacity Utilization	54.4%											
ICU Level of Service	A											
Analysis Period (min)	15											

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		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	330	85	25	210	0	40	85	20	5	170	60
Future Volume (vph)	20	330	85	25	210	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	330	85	25	210	0	40	85	20	5	170	60
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	435	235	145	235								
Volume Left (vph)	20	25	40	5								
Volume Right (vph)	85	0	20	60								
Head (s)	-0.02	0.09	0.07	-0.02								
Departure Headway (s)	5.6	6.0	6.5	6.2								
Degree Utilization, x	0.67	0.39	0.26	0.40								
Capacity (veh/h)	620	539	477	527								
Control Delay (s)	19.3	12.9	11.8	13.3								
Approach Delay (s)	19.3	12.9	11.8	13.3								
Approach LOS	C	B	B	B								
Intersection Summary												
Delay	15.5											
Level of Service	C											
Intersection Capacity Utilization	57.5%											
ICU Level of Service	B											
Analysis Period (min)	15											

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		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	45	215	25	15	355	10	60	200	35	10	55	25
Future Volume (vph)	45	215	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	215	25	15	355	10	60	200	35	10	55	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	285	380	295	90								
Volume Left (vph)	45	15	60	10								
Volume Right (vph)	25	10	35	25								
Head (s)	0.10	0.03	-0.03	0.05								
Departure Headway (s)	5.9	5.7	6.0	6.6								
Degree Utilization, x	0.47	0.60	0.49	0.17								
Capacity (veh/h)	563	602	550	448								
Control Delay (s)	14.1	17.0	14.7	10.9								
Approach Delay (s)	14.1	17.0	14.7	10.9								
Approach LOS	B	C	B	B								
Intersection Summary												
Delay	15.0											
Level of Service	C											
Intersection Capacity Utilization	61.4%											
ICU Level of Service	B											
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

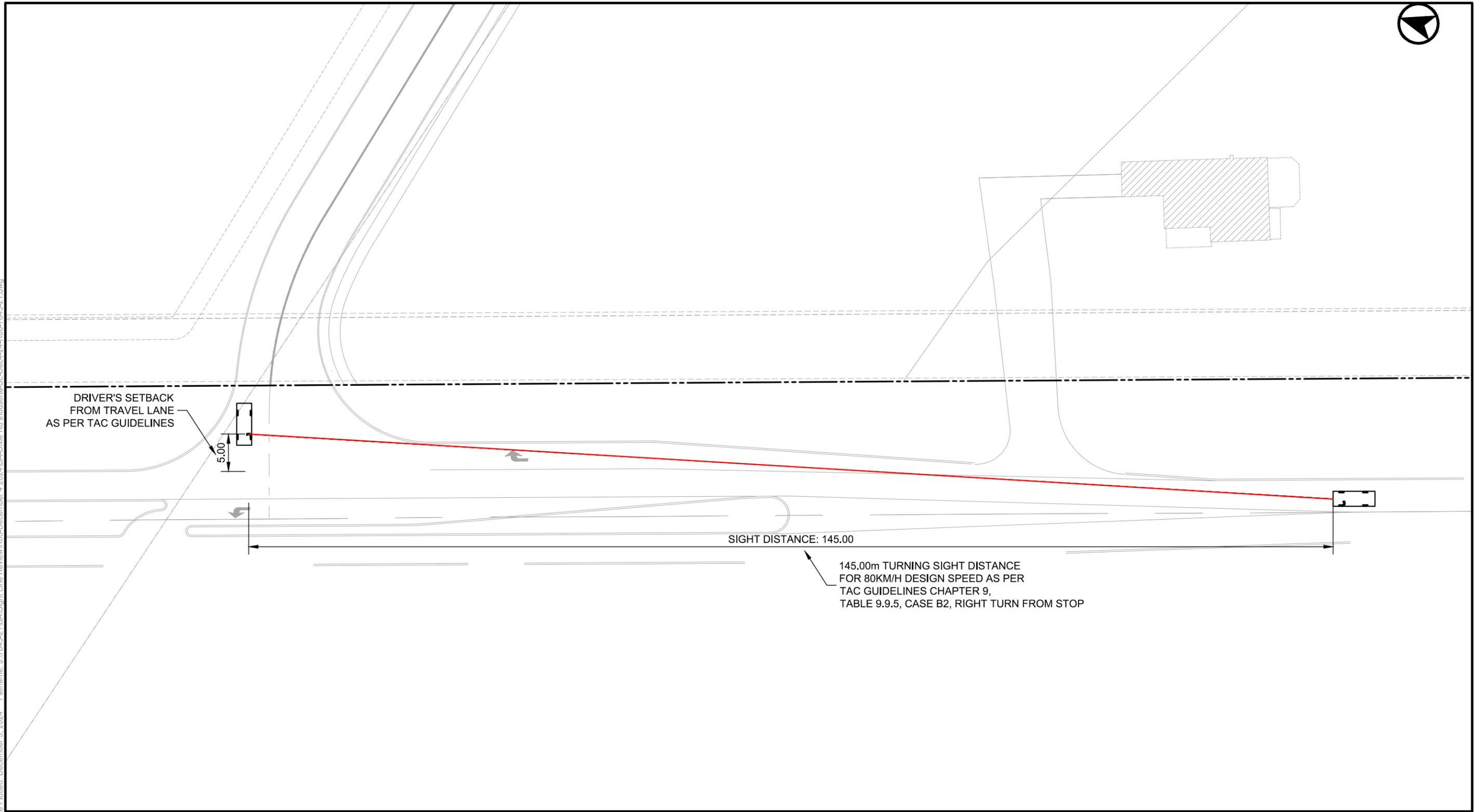
15: Bramalea Road & Old School Road

Future Total 2033 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	45	225	25	15	390	10	60	220	35	10	60	25
Future Volume (vph)	45	225	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	225	25	15	390	10	60	220	35	10	60	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	295	415	315	95								
Volume Left (vph)	45	15	60	10								
Volume Right (vph)	25	10	35	25								
Head (s)	0.20	0.03	-0.03	0.13								
Departure Headway (s)	6.3	5.9	6.3	7.0								
Degree Utilization, x	0.52	0.68	0.55	0.19								
Capacity (veh/h)	532	573	531	414								
Control Delay (s)	15.8	20.6	16.6	11.6								
Approach Delay (s)	15.8	20.6	16.6	11.6								
Approach LOS	C	C	C	B								
Intersection Summary												
Delay	17.5											
Level of Service	C											
Intersection Capacity Utilization	63.7%											
ICU Level of Service	B											
Analysis Period (min)	15											

Appendix D: Sight Line Review

Date Plotted: December 5, 2024. Filename: J:\7843-21\BA\Sight Line Review\R00-December 4, 2024\BA-Dixie Rd Industrial-SL-December 4, 2024-R00-7843-21.dwg



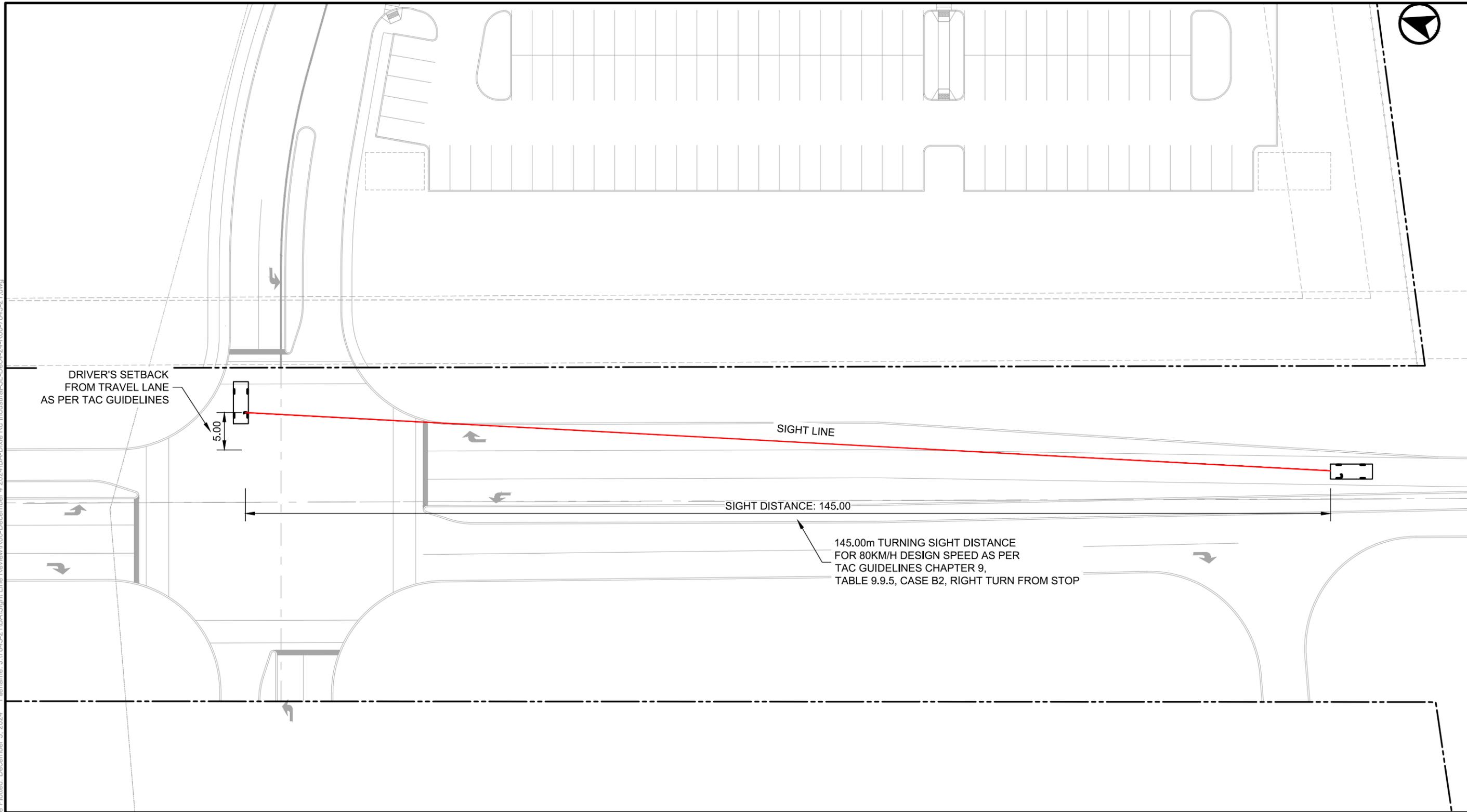
DIXIE ROAD INDUSTRIAL
 SIGHT LINE REVIEW
 NES INDUSTRIAL SITE - DIXIE ROAD SOUTHERN RIGHT-IN/RIGHT-OUT DRIVEWAY

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



Drawing No. **SL-01**

Date Plotted: December 5, 2024. Filename: J:\7843-21\BA\Sight Line Review\R00-December 4, 2024\BA-Dixie Rd Industrial-SL-December 4-24-R00-7843-21.dwg



DIXIE ROAD INDUSTRIAL
 SIGHT LINE REVIEW
 NES INDUSTRIAL SITE - DIXIE ROAD NORTHERN ALL-MOVES DRIVEWAY

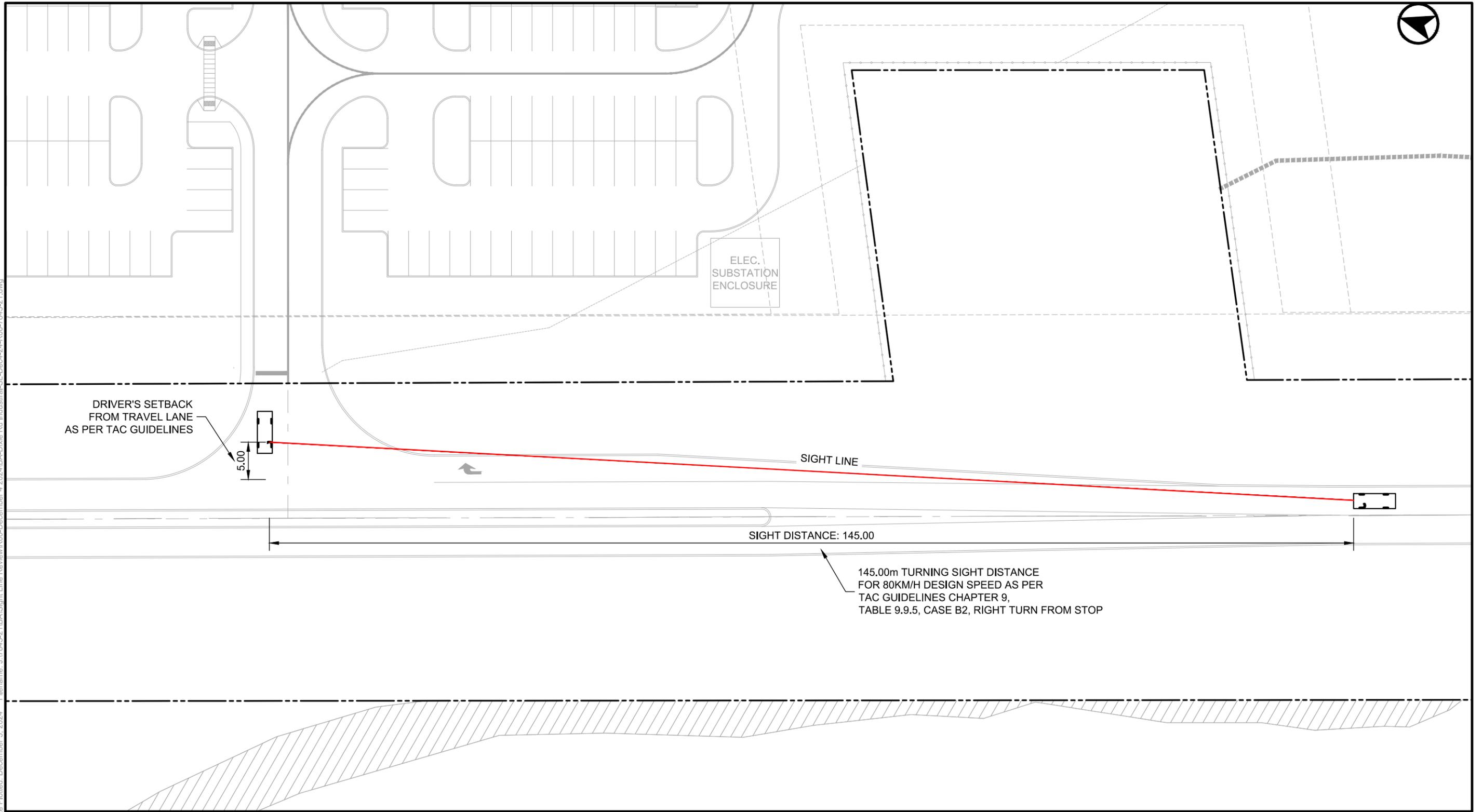
Project: DIXIE INDUSTRIAL
 Project No. 7843-21
 Date: DECEMBER 4, 2024
 Revised: -



Drawing No.

SL-02

Date Plotted: December 5, 2024. Filename: J:\7843-21\BA\Sight Line Review\R00-December 4, 2024\BA-Dixie Rd Industrial-SL-December 4, 2024-R00-7843-21.dwg



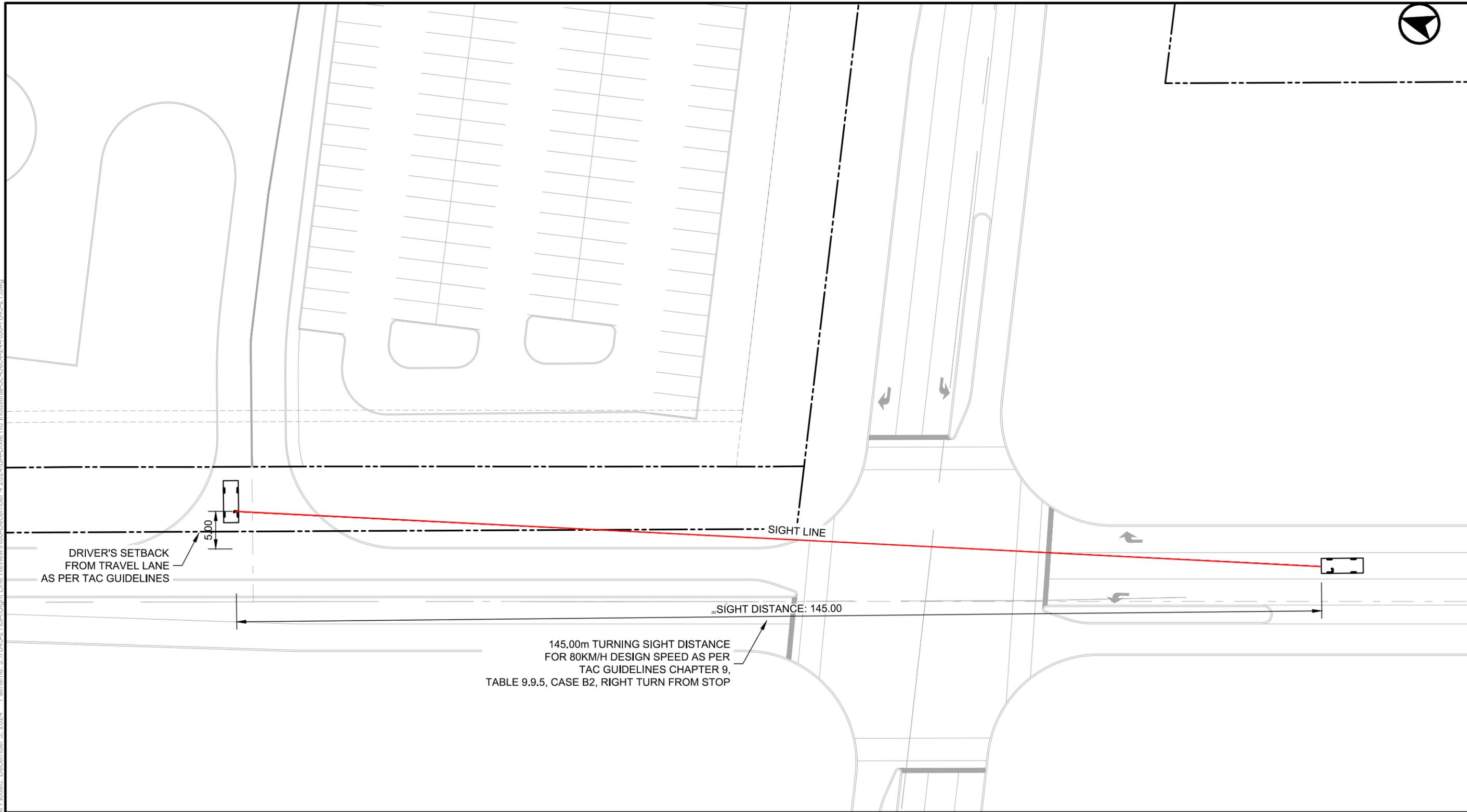
DIXIE ROAD INDUSTRIAL
 SIGHT LINE REVIEW
 NEN INDUSTRIAL SITE - DIXIE ROAD RIGHT-IN/RIGHT-OUT DRIVEWAY

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



Drawing No. **SL-03**

Date Plotted: December 5, 2024. Filename: J:\7843-21\BA\Sight Line Review\R00-December 4, 2024\BA-Dixie Rd Industrial-SL-December 4, 2024-R00-7843-21.dwg



DIXIE ROAD INDUSTRIAL
 SIGHT LINE REVIEW
 NEN INDUSTRIAL SITE - OLD SCHOOL ROAD RIGHT-IN/RIGHT-OUT DRIVEWAY

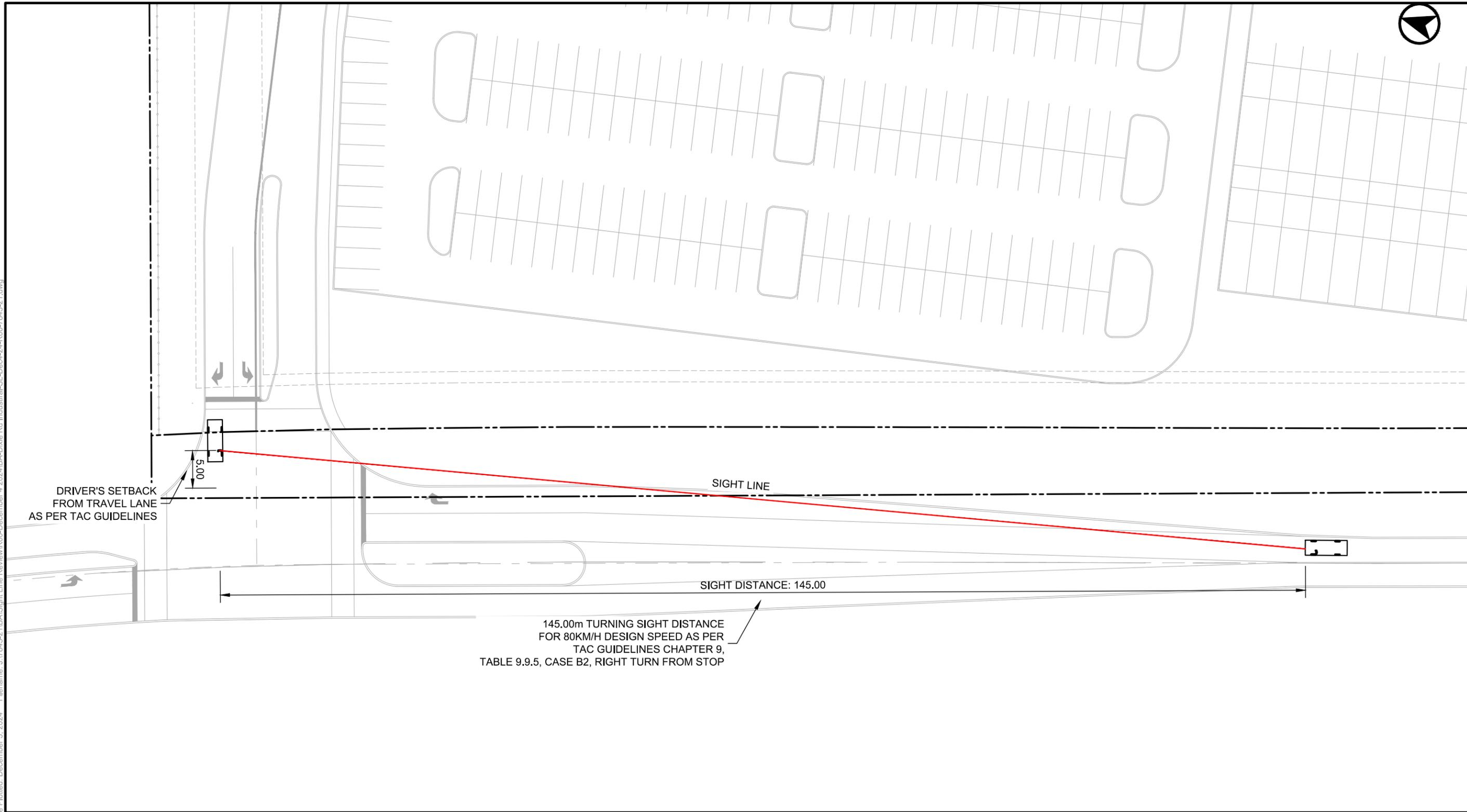
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 Project No. 7843-21
 Date: DECEMBER 4, 2024
 Revised: -



Drawing No.

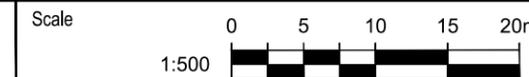
SL-04

Date Plotted: December 5, 2024. Filename: J:\7843-21\BA\Sight Line Review\R00-December 4, 2024\BA-Dixie Rd Industrial-SL-December 4-24-R00-7843-21.dwg



DIXIE ROAD INDUSTRIAL
 SIGHT LINE REVIEW
 NEN INDUSTRIAL SITE - OLD SCHOOL ROAD ALL MOVES DRIVEWAY

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



Drawing No.

SL-05

Appendix E: TTS Data

Count: Population Quality Event: Top: 2016 v1.1

How: Planning Method: 0 of population: 0.0, 0.0

Column: 2022 OEA Zone of origin: gsa00_010

Files:

Start Date of Top: 0001, Date to 1000 1700

and

Primary Street Order: M P S T U

and

The presence of origin: 0001_010_010 to

and

	3012	3013	3014	3015	3191	3438	3439		
PO 1 of Toronto	0	0	0	0	63	0	0	63	1%
PO 2 of Toronto	7	0	0	0	12	0	0	19	0%
PO 3 of Toronto	0	0	19	0	81	0	0	100	2%
PO 4 of Toronto	0	0	0	0	42	0	0	42	1%
PO 5 of Toronto	0	0	0	0	7	0	0	7	0%
PO 6 of Toronto	0	0	37	0	17	0	0	54	0%
PO 7 of Toronto	0	0	0	0	13	0	0	13	0%
PO 8 of Toronto	0	0	0	0	146	0	0	146	3%
PO 9 of Toronto	0	0	0	57	66	0	0	123	2%
PO 10 of Toronto	0	0	0	0	44	0	0	44	1%
PO 11 of Toronto	0	0	0	0	14	0	0	14	0%
PO 12 of Toronto	0	0	0	0	38	0	0	38	1%
PO 13 of Toronto	0	0	0	0	21	0	0	21	0%
East Oshesheey	0	0	0	0	28	0	0	28	1%
Arava	0	0	17	0	14	0	0	31	1%
Highway	0	55	0	0	61	0	0	116	2%
Highway	0	0	20	0	217	0	0	237	5%
Canada								0	0%
3000			26	0	0	0	0	26	1%
3010			37	0	0	0	0	37	1%
3020			4	0	0	0	0	4	0%
3030			0	0	144	0	0	144	3%
3040			0	0	53	0	0	53	1%
3050			14	0	0	0	0	14	0%
3060			49	34	0	0	0	83	2%
3070			0	0	116	0	0	116	2%
3080			0	0	0	26	0	26	1%
3090			0	0	76	0	0	76	2%
3100			0	0	164	0	0	164	3%
3110			0	0	210	0	0	210	4%
3120			0	0	139	0	0	139	3%
3130			10	0	45	0	0	55	1%
3140			0	0	7	0	0	7	0%
3150			0	0	68	0	0	68	1%
3160								0	0%
3200	0	0	0	0	52	0	0	52	1%
3210	0	0	0	0	39	0	0	39	1%
3220	0	0	0	0	29	0	0	29	1%
3230	0	0	0	13	0	0	0	13	0%
3240	0	0	0	0	12	0	0	12	0%
3250	0	0	0	7	0	0	0	7	0%
3260	0	0	0	0	42	0	0	42	1%
3270	0	0	0	0	19	25	44	88	1%
3280	0	0	0	0	104	0	0	104	2%
3290	0	0	0	0	13	42	55	110	1%
3300	0	0	0	0	41	0	0	41	1%
3310	0	0	0	0	63	0	0	63	1%
3320	0	0	0	31	135	0	0	166	3%
3330	0	0	0	9	0	0	0	9	0%
3340	0	0	26	99	59	0	0	184	4%
3350	0	0	0	0	14	0	0	14	0%
3360	0	13	0	0	0	0	0	13	0%
3370	0	0	8	0	0	0	0	8	0%
3380	0	0	0	0	18	0	0	18	0%
3390	0	0	0	10	0	0	0	10	0%
3400	0	14	0	0	51	0	0	65	1%
3410	0	0	0	0	14	0	0	14	0%
3420	0	0	0	38	0	0	0	38	1%
3430	0	0	0	0	14	0	0	14	0%
3440	0	0	0	0	14	0	0	14	0%
3450	0	0	0	0	18	0	0	18	0%
3460	0	0	0	0	23	0	0	23	0%
3470	0	0	0	0	18	0	0	18	0%
3480	0	0	0	0	27	0	0	27	1%
3490	0	0	0	0	13	0	0	13	0%
3500	0	0	0	0	106	0	0	106	2%
3510	0	0	0	0	16	0	0	16	0%
3520	0	0	0	0	272	24	0	296	6%
3530	0	0	74	11	33	0	0	118	3%
3540	0	0	0	0	109	0	0	109	3%
3550	0	0	0	0	19	0	0	19	0%
3560	0	0	0	47	32	0	0	79	2%
3570	0	0	0	0	42	0	0	42	1%
3580	0	0	0	0	111	0	0	111	2%
3590	0	0	0	0	27	0	0	27	1%
3600	0	0	0	0	76	0	0	76	2%
3610	0	0	0	0	17	0	0	17	0%
3620	0	0	0	0	223	24	0	247	5%
3630	0	0	0	0	126	0	0	126	2%
3640	0	0	0	0	28	0	0	28	1%
3650	0	0	11	0	0	0	0	11	0%
3660	0	0	0	21	42	0	0	63	1%
3670								5042	100%

	North		South		East	West	Total
	Hwy 10	Dixie Road	Hwy 410	Dixie Road	Mayfield Rd	Mayfield Rd	
			90%		10%		100%
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