REPORT NO. 17M-02201-00

Transportation Impact Assessment

Phoenix Homes Subdivision Old Montreal Road

March 2018 CONFIDENTIAL





ABOUT US

WSP is one of the world's leading professional services consulting firms. We are dedicated to our local communities and propelled by international brainpower. We are technical experts and strategic advisors including engineers, technicians, scientists, planners, surveyors and environmental specialists, as well as other design, program and construction management professionals. We design lasting solutions in the Buildings, Transportation, Infrastructure, Oil & Gas, Environment, Geomatics, Mining, Power and Industrial sectors as well as project delivery and strategic consulting services. With over 7,500 talented people across Canada and 36,000 people globally we engineer projects that will help societies grow for generations to come.

WSP CANADA GROUP LTD. 1145 HUNT CLUB ROAD, SUITE 200 OTTAWA, ONTARIO K1V 0Y3

T +1 613-736-7200 F +1 613-836-8710 **WSP.COM**





TIA Plan Reports

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that s/he meets the four criteria listed below.

CERTIFICATION

- 1. I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
- 2. I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review:
- 3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
- 4. I am either a licensed¹ or registered² professional in good standing, whose field of expertise [check $\sqrt{\text{appropriate field(s)}}$] is either transportation engineering \boxtimes or transportation planning \square .

License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

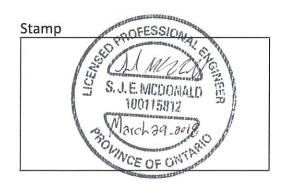
City Of Ottawa Infrastructure Services and Community Sustainability Planning and Growth Management 110 Laurier Avenue West, 4th fl. Ottawa, ON K1P 1J1 Tel : 613-580-2424

Ottawa, ON K1P 1J1 Tel.: 613-580-2424 Fax: 613-560-6006 Ville d'Ottawa Services d'infrastructure et Viabilité des collectivités Urbanisme et Gestion de la croissance 110, avenue Laurier Ouest Ottawa (Ontario) K1P 1J1 Tél.: 613-580-2424 Télécopieur: 613-560-6006



Dated at OHawa .	$\frac{\partial N}{\partial N}$ this $\frac{\partial 9}{\partial N}$ day of $\frac{M_{asc}}{N}$, 2018.
(City)	
Name:	Sarah McDonald, P. Eng. (Please Print)
Professional Title:	Project Manager, Transportation Planning
Signature	of Individual certifier that s/he meets the above four criteria

Office Contact Information (Please Print)	
Address:	*
1145 Hunt Club Road, Suite 200	
City / Postal Code:	
Ottawa- ON KIV 043	
Telephone / Extension:	
613-690-1178	
E-Mail Address: Sarah.j. mcdonald @ wsp. com	





City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	1154, 1172, 1180, and 1208 Old Montreal Road	
Description of Location	South side of Old Montreal Road, 800m east of Trim Road	
Land Use Classification		
Development Size (units)	16 semi-detached, 467 town/terrace	
Development Size (m²)		
Number of Accesses and Locations	2 x full movement (800m + 1000m east of Trim), 2 x RIRO (880m + 9	940m e of T
Phase of Development		
Buildout Year		

If available, please attach a sketch of the development or site plan to this form.

2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Land Use Type	Minimum Development Size
Single-family homes	40 units
Townhomes or apartments	90 units
Office	3,500 m ²
Industrial	5,000 m ²
Fast-food restaurant or coffee shop	100 m ²
Destination retail	1,000 m ²
Gas station or convenience market	75 m²

^{*} If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.

If the proposed development size is greater than the sizes identified above, <u>the Trip Generation</u> <u>Trigger is satisfied.</u>

71



3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks?	Spine	
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*	DPA, Arterial Mainstreet	

^{*}DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).

If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		X
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	Х	
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?		X
Is the proposed driveway within auxiliary lanes of an intersection?		X
Does the proposed driveway make use of an existing median break that serves an existing site?		X
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		X
Does the development include a drive-thru facility?		Х

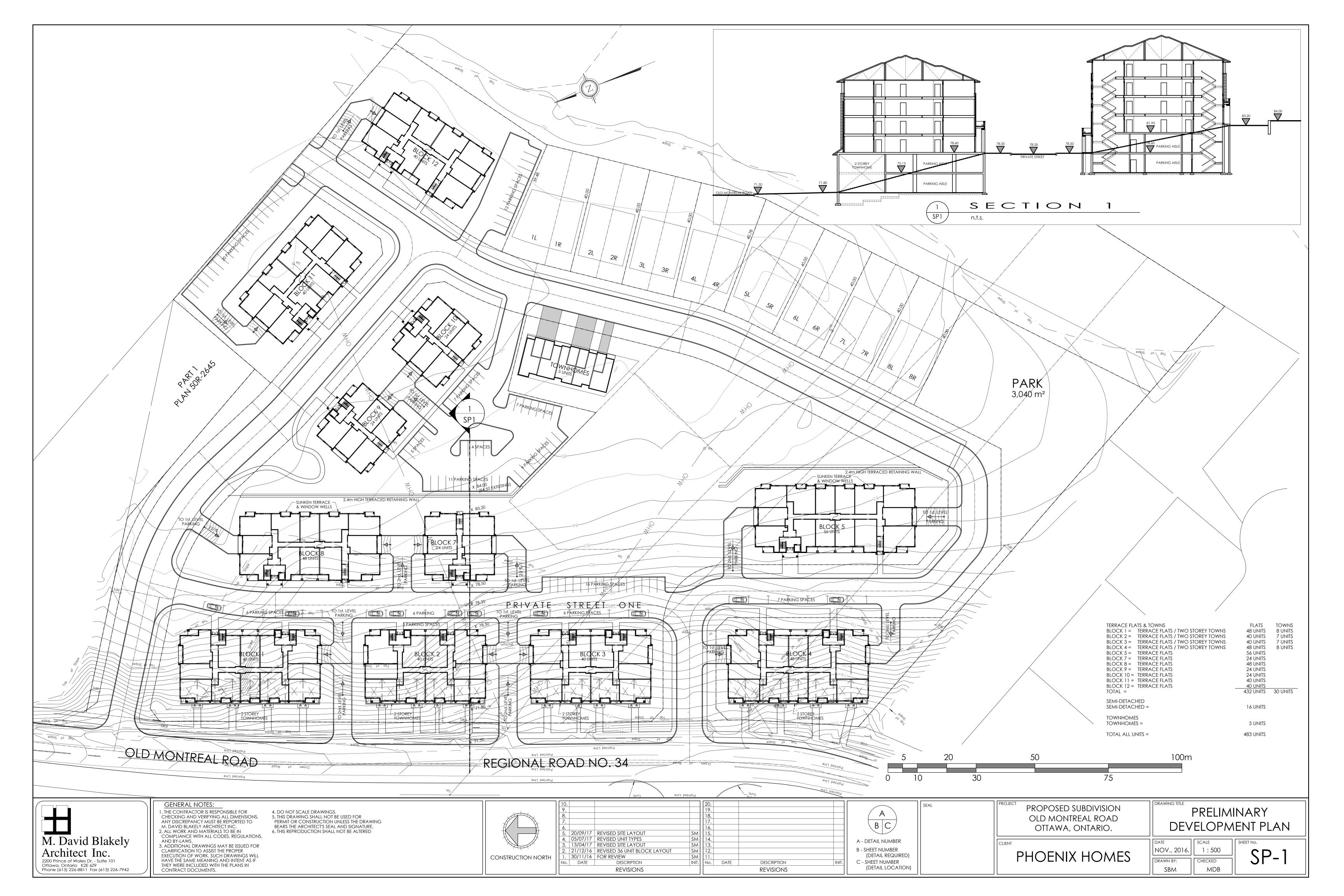
If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.

5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?	X	
Does the development satisfy the Location Trigger?	X	
Does the development satisfy the Safety Trigger?		X

72

If none of the triggers are satisfied, <u>the TIA Study is complete</u>. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).





TRANSPORTATION IMPACT ASSESSMENT SCOPING REPORT

TO: Asad Yousfani, Project Manager, Infrastructure Approvals, City of Ottawa

FROM: Sarah McDonald, P. Eng. Project Manager, Transportation Planning, WSP

SUBJECT: Phoenix Homes, Proposed Subdivision Old Montreal Road, Ottawa, ON

DATE: November 2017

SCREENING FORM

This Transportation Impact Assessment (TIA) is being prepared in support of a Plan of Subdivision and Zoning By-Law Amendment Application. The screening form and preliminary site plan are attached.

DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development is located at 1154, 1172, 1180, and 1208 Old Montreal Road. It is approximately 800m east of Trim Road and within the general urban area defined by the City of Ottawa's Official Plan. The existing zoning on the properties is:

- Rural Residential (RR7), 1154 and 1180 Old Montreal Road
- RR7(19r), 1172 Old Montreal Road
- Rural Countryside (RU), 1208 Old Montreal Road

The rural exception on 1172 Old Montreal Road notes that the property is developable despite the lack of frontage onto a public street (Zoning By-Law 2008-250 Consolidation, Section.59).

The proposed development by Phoenix Homes includes 432 terrace flats, 35 townhomes, and 16 semi-detached homes. It includes the construction of one new public road and one private street as shown in the attached preliminary development plan (SP-1).

The timeline for the development has not been determined. For the purpose of this TIA it is assumed that the development will be fully occupied in December 2022, five years from now.

The exact number of parking spaces provided has not been determined at the time of this report. However, each of the 12 blocks with terrace flats will have two levels of indoor parking. Additionally, the following surface parking facilities are proposed:

- 25 street parking spaces on the south side of Private Street One
- 16 parking stalls on the north side of Private Street One
- 36 parking stalls for Blocks 9 & 10; 20 parking stalls adjacent to Block 11
- 12 parking stalls adjacent to Block 12
- 7 parking stalls behind the 5 townhomes that front onto the new public road
- Private driveways at each of the 16 semi-detached homes



There are four proposed accesses to this development from Old Montreal Road as described in Table 1.

Table 1. Development Accesses onto Old Montreal Road

IDENTIFIER	LOCATION	RESTRICTIONS	PROVIDES ACCESS TO
West Access	Opposite Famille- Laporte Avenue (800m east of Trim)	Full movement	New public road
Block 2/3 Parking	880m east of Trim	Right-In / Right-Out (RIRO)	Second level parking for Block 2 and Block 3
Block 1 Parking	940m east of Trim	RIRO	Second level parking for Block 1
East Access	1000m east of Trim	Full movement	New public road

EXISTING CONDITIONS

ROAD NETWORK

All roads in the study area are under the jurisdiction of the City of Ottawa.

Old Montreal Road is a two-lane arterial road that runs in an east-west direction between Trim Road and Ottawa Road 174 near the eastern edge of the City. The posted speed limit adjacent to the development property is 60 km/h.

Trim Road is a four-lane divided arterial road that runs in a north-south direction south from Ottawa Road 174. The posted speed limit is 70 km/h.

Dairy Drive is a two-lane local road that connects to Trim Road at a two-lane roundabout and to Old Montreal Road at stop control. It provides access to business and industry.

Famille-Laporte Avenue is a two-lane collector road that is part of the new Cardinal Creek subdivision. It is directly opposite the development property on Old Montreal Road.

INTERSECTIONS AND DRIVEWAYS

There are three intersections in the study area:

- Old Montreal Road and Trim Road (two lane roundabout, new summer 2015)
- Old Montreal Road and Dairy Drive (two-way stop control)
- Old Montreal and Famille-Laporte Avenue (one-way stop control, new 2014/2015)

There are a number of private residential driveways along Old Montreal Road in the study area. However, there are no existing commercial accesses.



CYCLE AND TRANSIT FACILITIES

There are eastbound and westbound cycling lanes on Old Montreal Road from Trim Road to Dairy Drive. There is a paved shoulder that could be used by cyclists from Dairy Drive eastward.

There is a separated sidewalk on the north side of Old Montreal Road between Trim Road and Dairy Drive that can be used by pedestrians.

OC Transpo bus route #221 travels along Old Montreal Road east of Trim Road, providing a connection between Cumberland and Downtown Ottawa. Bus service on this route includes two westbound trips in the morning and two eastbound trips in the evening.

The Trim Transit Station / Trim Park & Ride is located at Trim Road and Ottawa Road 174 and is accessible from Dairy Drive. It is served by rapid transit route 95, route 22, connection route 221, and local route 122. This Park & Ride can currently accommodate 1,089 vehicles.

AREA TRAFFIC MANAGEMENT MEASURES

There does not appear to be existing Area Traffic Management (ATM) measures along this section of Old Montreal Road.

PEAK HOUR TRAVEL DEMAND BY MODE

The results from the 2011 Origin-Destination (O-D) survey were reviewed to identify the existing peak hour travel demands by mode. Given the proximity of the development near the eastern boundary of the Orléans district, it was assumed that any trip without an O-D of the Rural East district would be to/from the Old Montreal Road / Trim Road intersection. According to the O-D survey, in the AM peak 2% of all Orléans trips go to Rural East and 5% originate from Rural East.

Based on the O-D survey, the peak hour travel demands by mode are:

Table 2. Peak Hour Travel Demands

MODE	AM PEAK (TO/FROM)	PM PEAK (TO/FROM)
Auto Driver	55% / 61%	64% / 56%
Auto Passenger	8% / 13%	21% / 11%
Transit	35% / 10%	12% / 32%
Bicycle	1% / 0%	0% / 1%
Walk	0% / 0%	0% / 0%
Other (primarily school bus)	2% / 16%	3% / 1%



CRASH HISTORY

The past 5-years of crash data (January 2012 – January 2017) for the three intersections in our study area and the section of Old Montreal Road adjacent to the development were obtained from the City of Ottawa and reviewed to determine any trends in collision history. The data available along Old Montreal Road is for the 1500m section between Grand Chene Cour Du Court and Ted Kelly Lane making it difficult to identify crash trends in the vicinity of the proposed development.

The intersection of Old Montreal Road and Trim Road was reconstructed from a signalized intersection to a two-lane roundabout in the summer of 2015. The crash history of the previous configuration has not been reviewed.

Table 3. Five-Year Review of Crash History (January 2012-January 2017)

LOCATION	TOTAL CRASHES	PROPERY DAMANGE ONLY	NON-FATAL
Old Montreal / Trim*	35	32	3
Old Montreal / Dairy	1	0	1
Old Montreal / Famille-Laporte	0	0	0
Old Montreal Segment (Frank Kenny Road to Grand- Chene Cour du Court)	16	12	4

^{*} reviewed with roundabout configuration only (September 2015 – January 2017)

Some of the crash trends identified from the crash reports include:

Old Montreal Road / Trim Road

- Majority of crashes occur between 12:00pm and 4:00pm
- 86% of all crashes occurred during clear weather with dry roads
- 17 angle and 12 sideswipe crashes indicate that drivers are adjusting to entering and manoeuvring through the roundabout
- The average crash rate doubled with the introduction of the roundabout (signalized 1.1 crashes per month, roundabout 2.2 crashes per month)

Old Montreal Road Segment

- 40% of crashes occur between 6:00pm and 11:00pm
- More than half the crashes occurred on adverse surface conditions (snow, ice, wet)
- 13 of 16 crashes involved a single motor vehicle
- There were no crashes reported between September 2015 and January 2017



PLANNED CONDITIONS

In the City of Ottawa's 2013 Transportation Master Plan (TMP), the section of Old Montreal Road between Trim Road and the edge of the urban boundary is planned to be widened from two to four lanes by 2031. The widening is proposed to provide capacity for development areas east of Trim Road. To be conservative, this widening will not be included in the traffic impact assessment for this development. This section of Old Montreal Road is designated as part of the cycling Spine Route and as a conceptual future transit corridor in the TMP.

Cardinal Creek Village is a large subdivision being developed opposite our proposed development on the north side of Old Montreal Road. The subdivision will ultimately accommodate 569 single/semi-detached dwellings and 681 attached dwellings, and several large blocks for mixed-use/commercial, school, and parkland purposes. We can use the Transportation Impact Study (October 2013) completed for the development to estimate vehicle trips generated by Cardinal Creek Village.

There is a proposed commercial development at 1015 Dairy Drive to relocate the corporate headquarters of Drytech International (disaster restoration equipment and services). The Transportation Brief (December 2013) for this development can be used to estimate vehicle trips generated by this development. The application file has been pending since February 2014.

There is a proposed commercial development at 1375 Trim Road, in the north-east corner of the Old Montreal Road / Trim Road intersection. The development includes a high-end coffee shop, a restaurant with a drive-thru, a sit-down restaurant, a retail building, and a medical building. One of the proposed accesses is directly onto Old Montreal Road. The Transportation Impact Study (July 2016) can be used to estimate vehicle trips generated by this development. The agreement was registered and final legal clearance given in July 2017.

STUDY AREA

Our proposed study area includes:

- Old Montreal Road between Trim Road and 200m east of the proposed development
- Three intersections along Old Montreal Road at:
 - Trim Road
 - Dairy Drive
 - Famille-Laporte Avenue

TIME PERIODS

Our proposed analysis periods for this traffic impact assessment are based on the 2017 turning movement counts at Old Montreal Road and Trim Road. We have selected the AM and PM peak hours: 7:15am – 8:15am and 4:30pm – 5:30pm.

HORIZON YEARS

Our assumed horizon years for the traffic analysis are:

- Full occupancy: 2022
- Occupancy plus five years: 2027



EXEMPTIONS REVIEW

The following table identifies the exemptions to the fourth step (Analysis) of the TIA process.

Table 4. Traffic Impact Module Exemptions

MODULE	ELEMENT	REQUIRED
4.1 Development Design	4.1.2 Circulation and Access	NO, only required for site plans
	4.1.3 New Street Networks	YES, plan of subdivision
4.2 Parking	4.2.1 Parking Supply	NO, only required for site plans
	4.2.2 Spillover Parking	NO, only required for site plans
4.5 Transportation Demand Management	All elements	NO, no employees or students
4.6 Neighbourhood Traffic Management	4.6.1 Adjacent Neighbourhoods	NO, does not rely on local or collector streets
4.8 Network Concept	-	NO, will not generate more than 200 person-trips in excess of the established zoning permissions



TRAFFIC IMPACT ASSESSMENT FORECASTING REPORT

TO: Asad Yousfani, Project Manager, Infrastructure Approvals, City of Ottawa **FROM:** Sarah McDonald, P. Eng. Project Manager, Transportation Planning, WSP

CC: Paul Black, FOTENN

SUBJECT: Phoenix Homes, Proposed Subdivision Old Montreal Road, Ottawa, ON

DATE: Revised March 9, 2018

DEVELOPMENT GENERATED TRAFFIC

TRIP GENERATION

TRIP GENERATION RATES

Residential trip generation rates were selected from the 2009 TRANS Trip Generation Study. The semi-detached dwellings, townhouses, rowhouses land use from the TRANS Trip Generation Study was used to identify trip generation rates for the proposed development (Table 1).

Table 1. Trip Generation Rates, Semi-Detached, Townhouses, Rowhouses (Land Use 224)

PEAK PERIOD	TRANS RATE	INBOUND	OUTBOUND
AM	0.52	37%	64%
PM	0.61	53%	47%

The 2009 TRANS study provides residential mode shares by dwelling type for urban and suburban areas. The travel mode share for suburban areas is shown in Table 2.

Table 2. TRANS Trip Generation Study Suburban Mode Shares for Townhouses

TRAVEL MODE	AM	PM
Vehicle	55%	61%
Transit	27%	22%
Non-Motorised	8%	6%

Suite 200 1145 Hunt Club Road Ottawa, ON, Canada K1V 0Y3

T +1 613 736-7200 F +1 613 736-8710

The development has 538 units whose vehicle trips were estimated using the TRANS trip generation rates (Table 1). To forecast the person trips, the total calculated vehicle trips were



divided by the vehicle percentage (Table 2). The resulting trips generated by this development are shown in the following table.

Table 3. Development Generated Vehicle and Person Trips

	AM			PM		
Trips	Total	Enter	Exit	Total	Enter	Exit
Vehicle	251	93	161	295	156	138
Person	457	169	292	483	256	227

There are no existing trips to deduct since this is a new development and not a redevelopment.

Since this is a residential development, it is not expected to attract any trips from the adjacent roadway (pass-by trips). Furthermore, there will be no synergy (internal capture) since this is a single use development.

MODE SHARES

The study mode shares were estimated by averaging the peak hour travel demands from the 2011 O-D survey data provided in the TIA Scoping Report. Mode share targets were applied to the person trips calculated in Table 3 to determine the number of peak period trips for each mode.

The following table summarizes the mode share targets and person trips generated by the proposed development.

Table 4. Future Mode Share Targets for the Development (TIA Guidelines Table 5)

TRAVEL MODE	MODE SHARE TARGET	AM PERSON TRIPS	PM PERSON TRIPS	TARGET RATIONALE
Transit	20%	102	108	Limited transit service along corridor, but close to Trim Transit Station. Old Montreal Road is part of a conceptual future transit corridor which will likely not be implemented during our study timeframe.
Walk	0%	0	0	Rural cross section with few amenities within walking distance.
Bicycle	5%	25	27	Rural cross section with few amenities within cycling distance.



Auto Passenger	15%	76	81	Vehicle occupancy unlikely to deviate significantly from existing O-D tendencies.
Auto Driver	60%	305	323	Rural cross section with no significant transit or pedestrian improvements in our study timeframe.

TRIP DISTRIBUTION

According to the O-D survey, in the AM peak 2% of all Orléans trips go to Rural East and 5% originate from Rural East. Therefore, to be conservative the assumption was made that 5% of all trips in both peak periods are to/from the east and the remaining 95% are to/from the west.

TRIP ASSIGNMENT

Vehicle trips were assigned to development accesses based on the proximity of dwellings to the two full access entrances and the right-in / right-out parking structure entrances. Intersections turning movements were assigned based on existing traffic patterns. The assignment is shown in the following figure.

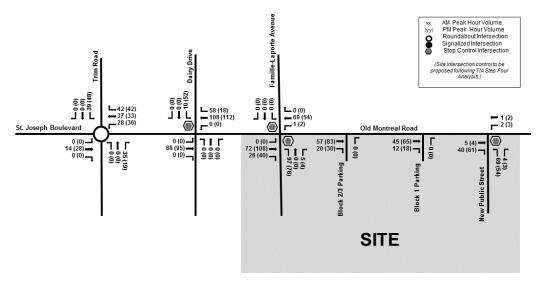


Figure 1. Development Trip Assignment

BACKGROUND NETWORK TRAFFIC

CHANGES TO THE BACKGROUND TRANSPORTATION NETWORK

The 2016 Ottawa Road 174-Prescott-Russel County Road Study 17 Environmental Assessment proposed widening of OR174 and CR17 to provide an additional arterial lane to address capacity deficiencies across the Frank Kenny screenline. The proposed widening includes:

Widening OR 174 to 3 lanes in each direction between Highway 417 and Trim Road



- Widening OR 174 to 2 lanes in each direction between Trim Road and Canaan Road
- Widening CR 17 to 2 lanes in each direction between Canaan Road and Landry Road

These measures could reduce volumes on Old Montreal Road by attracting a higher percentage of trips from the City of Clarence Rockland to the OR174 / CR17 corridor.

Alternatively, the widening of Old Montreal Road from two lanes to four lanes east of Trim Road is part of the Network Concept in the City of Ottawa's 2013 Transportation Master Plan. The rationale of this widening is to provide capacity for the development areas east of Trim Road.

To be conservative, neither of these potential changes are considered in the analysis since their timeframes are unknown.

GENERAL BACKGROUND GROWTH RATES

The background growth rate along Old Montreal Road east of Trim Road is 1.8%. This is based on an analysis of historical traffic growth.

The 8-hour counts at Old Montreal Road / Trim Road were used to determine the 8-hour traffic volume east of the intersection in 2006, 2010, and 2011. The volumes were then plotted on an x-y scatter chart which identified 1.8% as the growth rate. Traffic counts from 2017 were available, but included the recent development growth from Cardinal Creek Village which is not representative of sustainable background growth. Future growth from Cardinal Creek Village will be considered as part of the other area development.

OTHER AREA DEVELOPMENT

We identified three developments in our Scoping Report that could impact our study area:

- Cardinal Creek Village
- 1015 Dairy Drive (Drytech International Headquarters)
- 1375 Trim Road (multi-use commercial development)

Estimated trips for these developments were taken from their TIAs at the appropriate time horizon.

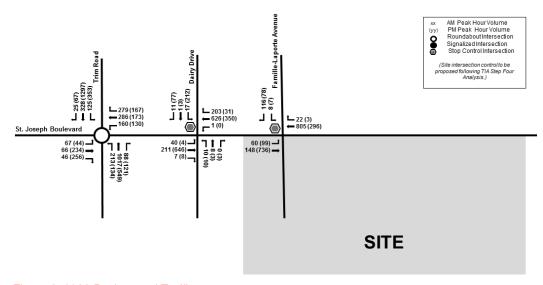


Figure 2. 2022 Background Traffic



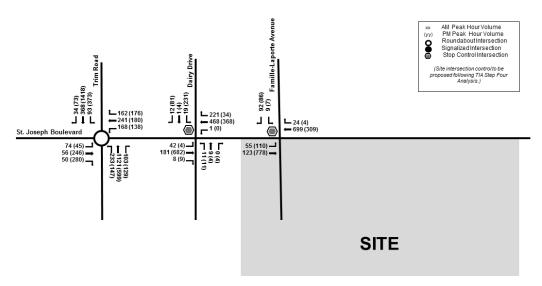


Figure 3. 2027 Background Traffic

DEMAND RATIONALIZATION

DESCRIPTION OF CAPACITY ISSUE(S)

Total traffic volumes for the 2022 and 2027 time horizons were estimated by:

- Applying a 1.8% annual growth rate to the 2017 traffic volumes
- Adding trips generated by other area development
- Adding trips generated by the Phoenix development (Figure 1)

The estimated total traffic volumes are shown in the following two figures.

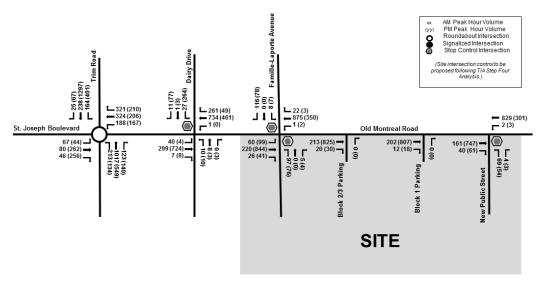


Figure 4. 2022 Total Traffic (Background + Other Development + Development)



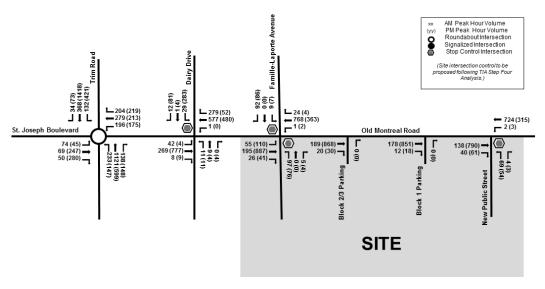


Figure 5. 2027 Total Traffic (Background + Other Development + Development)

The directional capacity of Old Montreal Road across the Frank Kenny screenline is 1050vph (2008 City of Ottawa Road Needs Study). The capacity at the proposed development should also be 1050vph since the same cross section (single lane in each direction) exists at the screenline and through our study area. The directional capacity of Old Montreal Road west of Famille-Laporte will be exceeded in the 2022 total traffic scenario with 1087 AM westbound trips (**Figure 4**). When considering the 2027 total traffic scenario, the AM westbound trips are expected to decrease to 957 vehicles as a result of the proposed Ottawa Road 174 connection in Cardinal Creek Village. The phasing of Cardinal Creek Village and timing of the proposed OR174 connection introduces uncertainty into the trip forecasting of the 2027 time horizon (background and total traffic). Any deviation from the assumptions of the Cardinal Creek TIA will have an impact on traffic operations in our study area. We applied the Cardinal Creek Village site generated traffic volumes as shown in the Cardinal Creek Village Phases 1-7 TIA (October 2013) Exhibits 10, 11, and 12.

The intersection of Old Montreal Road and Trim Road is a two-lane roundabout and capacity issues are not anticipated (to be confirmed in Step 4 Analysis).

ADJUSTMENT TO DEVELOPMENT GENERATED DEMANDS

Adjustment to the development generated demands will not reduce peak direction traffic volumes along Old Montreal Road enough to mitigate the long term capacity concerns. It is noted that as the area becomes more urbanised, increases in the active modes of transportation can be expected as well as used to access the future LRT station located to the north of this site. In general, the proposed development will generate approximately 165 and 150 peak direction vehicle trips during the AM and PM hour when the 2027 total traffic volumes along Old Montreal Rd, west of Famille-Laporte are 957vph and 1,064vph, respectively. Both the current TMP and the OR174/CR17 EA provide support for additional screenline capacity and would provide relief for the potential capacity deficiencies resulting from the Cardinal Creek Village and the planned office commercial development proposed within the broader area.

ADJUSTMENT TO BACKGROUND NETWORK DEMANDS



Adjustments to the background network demand might be able to reduce capacity issues along Old Montreal Road. However, mitigating network capacity concerns such as proposed in the City's TMP and OR174/CR17 EA are considered beyond the scope of this TIA. As indicated previously, these potential capacity issues within the broader study area are discussed and assessed in the OR174/CR17 EA and considered as part of the City's TMP Network Concept.



TRAFFIC IMPACT ASSESSMENT STRATEGY REPORT

TO: Asad Yousfani, Project Manager, Infrastructure Approvals, City of Ottawa

FROM: Sarah McDonald, P. Eng. Project Manager, Transportation Planning, WSP

CC: Paul Black, Senior Planner, FOTENN

Michael Boucher, Manager of Planning, Phoenix Homes

Don Stephens, P. Eng, Director, Transportation Planning, WSP

SUBJECT: Proposed Subdivision Old Montreal Road, Ottawa, ON; Phoenix Homes

DATE: March 12, 2018

1. INTRODUCTION

This Strategy Report was prepared on behalf of Phoenix Homes in support of a Plan of Subdivision and Zoning By-Law Amendment Application. The format and outline of the Strategy Report is based on the City of Ottawa's Transportation Impact Assessment (TIA) Guidelines (2017). The purpose of the Strategy Report is to confirm the transportation elements of the development align with the City of Ottawa's broader city-building objectives.

2. DEVELOPMENT DESIGN

The proposed development by Phoenix Homes is located at 1154, 1172, 1180, and 1208 Old Montreal Road. It is approximately 800m east of Trim Road and within the general urban area defined by the City of Ottawa's Official Plan. The development includes 432 terrace flats, 35 townhomes, and 16 semi-detached homes. It includes the construction of one new public road and one private street as shown in the attached preliminary development plan (SP-1).

2.1. DESIGN FOR SUSTAINABLE MODES

As required by the TIA Guidelines, the TDM-supportive Development Design and Infrastructure Checklist was completed to assess the opportunity to implement facilities that are supportive of sustainable modes. The checklist should be reassessed as part of the site plan submission when more detailed information is available related to both vehicle and bicycle parking supply and layout. The completed checklist is attached to this report as **Appendix A.**

Sustainable modes include cycling, walking, and transit. The proposed site accommodates these modes in the following ways:

- Provision for pedestrian sidewalks along the new public road and new private road
- The existing transit stops (two) located on Old Montreal Road adjacent to the proposed development.



A westbound transit stop is located at the northwest corner of the Famille-Laporte Avenue intersection. An eastbound transit stop is located at the northeast corner of the Grand Chène Court intersection that is located approximately 70m west of the site.

Approximately 87% and 71% of the proposed units are within a five minute walk (400m) of the westbound bus stop and eastbound bus stop, respectively. The following measures could be implemented to improve the percentage of units within walking distance to transit:

- Remove the deviation in the proposed sidewalk north of Block 9, if not otherwise required to comply with 5% maximum running slope per the Ottawa Accessibility Design Standards (2014)
- The City consider moving the nearby eastbound bus stop from Grand Chène Crescent to the northeast (far-side) corner of the intersection of Old Montreal Road with Famille-Laporte Avenue to reduce the walking distance from both Cardinal Creek Village and the proposed Phoenix development

2.2. CIRCULATION AND ACCESS

These design elements are not required for applications involving plans of subdivisions.

2.3. NEW STREET NETWORKS

The City of Ottawa's Urban Design Guides for Greenfield Neighbourhoods (2007) provide guidance for neighbourhood design during the subdivision review and zoning process. The TIA Guidelines suggest assessing the planned street network using the methods described in the Urban Design Guide. Guidelines relevant to the TIA process and notes on the planned development are shown in **Table 1**. Generally, the network design is consistent with a local road designed to distribute traffic from arterial and collector streets to individual properties. The design encourages travel by sustainable modes by providing side walks and connectivity to existing bus stops and paved shoulders for cycling on Old Montreal Road.

Table 1. Urban Design Guidelines Review

NO.	GUIDELINE DESCRIPTION	PLANNED STREET NETWORK
10	Create a walkable neighbourhood with pathways, trails and sidewalks that are accessible year-round and that connect destinations such as transit stops, commercial areas, schools, community facilities and parks.	The internal street network provides sidewalks that connect to Old Montreal Road. The intersection of Famille Laporte provides access to amenities located within the Cardinal Creek development to the north.
11	Connect new streets to existing streets in adjacent developments and plan for future connections to land that has yet to be developed.	One of the two proposed full-access movements onto Old Montreal Road is opposite the existing access to Cardinal Creek (Famille-Laporte). There is a proposed connection at the south-east corner of the property to a future development at 1296 Old Montreal Road.



NO.	GUIDELINE DESCRIPTION	PLANNED STREET NETWORK
12	Layer collector streets to be direct and continuous through the neighbourhood so homes are within 400m of transit and other destinations along them.	87% of the proposed units are within 400m of the westbound bus stop at Famille Laporte. 71% of the proposed units are within 400m from the eastbound bus stop at Grand Chène Crescent.
13	Layout local street patterns so that development blocks are easily walkable – between 150 and 250 m in length	The local street patterns are easily walkable with north-south connections to Old Montreal Road at each end of the development.
21	Select the most suitable zoning setback and road ROW width for the land use context and road function. Provide sufficient space for the various elements in the front yard, the boulevard, and the road including trees, sidewalks, utilities, cycling facilities, parking and travel lanes	Space for entrances, sidewalks, some on-street parking, and two drive lanes has been included in the proposed development plan.
25	Design roads at entrances to neighbourhoods to create a sense of arrival with such elements as enhanced landscape treatment in the boulevard and the median.	Inclusion of entrance features to be determined as part of the site planning.
26	Construct sidewalks on both sides of the street that serve key destinations, such as transit stops, greenspaces, or to community facilities like schools. Select the correct road ROW standard to allow sufficient space for sidewalks and all streetscape elements.	Sidewalks are proposed on at least one side of the street as per the site plan P1.
28	Design crosswalks in areas with higher pedestrian and vehicular volumes to be visually different form the street surface. Ensure they are universally accessible.	Inclusion of enhanced pedestrian crossing facilities to be determined as part of the site planning.
31	Create a cycling-supportive neighbourhood with bicycle routes that serve local destinations, and that are linked to the citywide network of bicycle routes. Routes include wide shared-use curb lanes, designated on-road bicycle lanes or multi-use pathways.	Internal road network links to Old Montreal Road that has paved shoulders that can be used by bicycles.
32	Design pathways, trails and walkways that are connected to the road right-of-way so that they link to a sidewalk and cross at an intersection.	Internal sidewalks all connect to Old Montreal Road at proposed intersections.



NO.	GUIDELINE DESCRIPTION	PLANNED STREET NETWORK
33	Construct streets, sidewalks, crosswalks and access to buildings that are universally accessible to a wide range of residents and abilities. Refer to accessibility standards such as the CSA (B651-04) "Accessible design for the built environment".	Accessibility features to be identified as part of the site planning.

3. PARKING

The Scoping Report submitted to the City of Ottawa on November 30, 2017 excluded scope associated with Parking.

4. BOUNDARY STREET DESIGN

Old Montreal Road is the only boundary street to the proposed development. The City of Ottawa has not prepared a Complete Street concept for this boundary street. As required by the TIA guidelines, we are providing a high level complete street concept for this boundary street considering mobility, road safety, and neighbourhood traffic management. This complete street concept could be considered as part of a larger study determining the feasibility of widening Old Montreal Road to provide additional arterial capacity in the rural east area of Ottawa.

4.1. MOBILITY

The City's Multi-Modal Level of Service (MMLOS) targets consider road classification, adjacent land-use designation, and special policy areas. The segment of Old Montreal Road adjacent to the development is an arterial road within the general urban area. It is not an arterial main street, within 600m of a rapid transit station, or within 300m of a school. The 2013 City of Ottawa Transportation Master Plan also designates this segment of Old Montreal Road as a Full Load Truck Route, a Cycling Spine Route, and a Conceptual Future Transit Corridor. Note that the 2015 MMLOS Guidelines do not specify a transit target for Conceptual Future Transit Corridor, and this study has instead used the target for Isolated Transit Priority Measures.

The resulting MMLOS targets range from 'C' for pedestrians and cycling to 'D' for transit and trucks, see **Table 2**.

Table 2. Segment MMLOS for Old Montreal Road Adjacent to the Proposed Development (2027)

	PLOS	BLOS	TLOS	TKLOS	VLOS
Target	C	C	D	D	VLOS Not
Status Quo	F	Е	D	С	Reported
Proposed Development	D	Е	D	С	for
Conceptual Complete Street	С	A	D	A	Segments

PLOS = Pedestrian Level of Service, BLOS = Bike Level of Service, TLOS = Transit Level of Service, TkLOS = Truck Level of Service, VLOS = Vehicle Level of Service



The **Status Quo** option assumes that infrastructure remains as is along Old Montreal Road. The MMLOS was assessed as:

- No sidewalk = PLOS 'F'
- Paved shoulder of 1.8m which is assessed as a bike lane without parking = BLOS 'E'
- Transit operating in mixed traffic with limited to no parking = TLOS 'D'
- Bi-directional traffic in two travel lanes of 3.5m = TkLOS 'C'

The **Development Buildout** option assumes that infrastructure is built as proposed by the current development plan. The MMLOS was assessed as:

- NEW 2.0m sidewalk along Old Montreal Road within the development = PLOS 'D'
- No changes to the cycling infrastructure = BLOS 'E'
- No changes to the existing lane geometry = TLOS 'D' and TkLOS 'C'

The **Conceptual Complete Street** concept considers the City's Official Plan (which protects Old Montreal Road between Trim Road and the East Urban Community limit for a 37.5m right-of-way) and City's Transportation Master Plan (which indicates that this section of Old Montreal Road is planned to be widened from two to four lanes by 2031). A conceptual complete street concept could be considered as part of a larger road widening project. Such a project might consider a road design similar to Cross-Section 2 proposed in the City of Ottawa's Arterial Road Cross-sections (**Figure 1**). This cross section was used to assess the Conceptual Complete Street MMLOS.

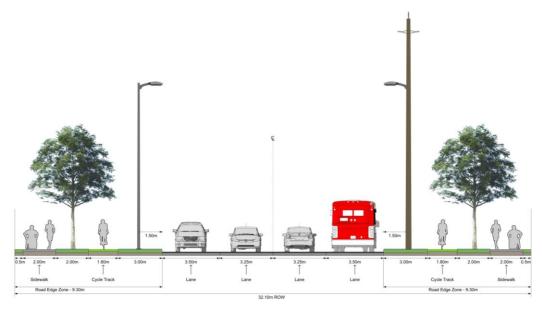


Figure 1. City of Ottawa Arterial Road Concept 2 - Separated Cycle Tracks / Sidewalks

4.2. ROAD SAFETY

Historical collision records for the study area were reviewed in the Collision Analysis section of the Scoping Report. The analysis reviewed the past 5-years of City of Ottawa crash data (January 2012 – January 2017) for roads and intersections within the study area. The data available along Old Montreal Road was for the 1500m section between Grand Chène Court and Ted Kelly Lane, which makes it difficult to identify specific crash trends in the more limited length of road that borders the proposed development. Following the TIA Guidelines we have identified patterns with six or more crashes in five years along this 1500m road segment; they include:



Seven crashes occurred between 6:00pm and 11:00pm

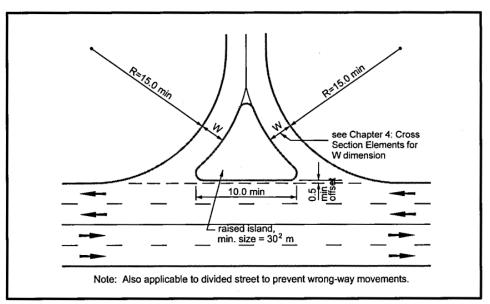
The area reviewed has a rural cross section and illumination is only provided in some sections which could have contributed to the time of day of the seven crashes. The City of Ottawa's Arterial Road Concept 2 (**Figure 1**) includes illumination on each side of the road.

5. ACCESS INTERSECTIONS

5.1. LOCATION AND DESIGN OF ACCESS

There are four proposed access points for this development from Old Montreal Road. They are all located at a distance greater than 800m from the nearest major intersection, which is the existing roundabout located at Montreal and Trim Road.

The existing cross section of Old Montreal Road in this area does not include a median. Therefore access restriction, such as left turn restrictions could be implemented at the two proposed "right-in and right-out" (RIRO) accesses to the Block 1, 2, 3 parking structures include a channelized triangular island similar to the one shown in **Figure 2.**



Source: Figure 8.9.1 of Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads

Figure 2. Left-Turn Restrictions, Undivided Road



5.2. INTERSECTION CONTROL

Traffic control signal warrants following Ontario Traffic Manual (OTM) Book 12 (2012) were completed for the four proposed accesses to the development under both scenarios (background and total) and future planning horizons (2022 and 2027).

Justification 7 (future volumes) was used to determine if a signal will be warranted. Justification 7 uses Average Hourly Volumes (AHV), which is defined as follows:

Average Hourly Volume (AHV) = (AM Peak Hour Volume + PM Peak Hour Volume) / 4

Based on future volumes, none of the accesses to the proposed development trigger a traffic signal warrant. The traffic signal warrant sheets are provided in **Appendix B**.

A capacity analysis was completed for both accesses and is provided in Section 9.2.2.

5.3. INTERSECTION DESIGN

An auxiliary left-turn lane analysis for the new accesses was completed for the worst case (2027 future total) traffic conditions. The analysis followed the left-turn warrant in the MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads, June 2017 – Appendix 9A.

In the peak hours, the forecasted number of vehicles making a left turn into one of the site accesses is 3 or less. The percent left-turn volume compared to advancing traffic volumes is 1%. The left-turn warrant charts in the MTO Design Supplement are provided for locations where the perfect left-turn volume compared to advancing traffic volumes is 5% or higher. Therefore, the implementation of a left-turn lane is not warranted for either of the development accesses. Transportation Demand Management

The Scoping Report submitted to the City of Ottawa on November 30, 2017 excluded scope associated with Transportation Demand Management.

6. NEIGHBOURHOOD TRAFFIC MANAGEMENT

The Scoping Report submitted to the City of Ottawa on November 30, 2017 excluded scope associated with Neighbourhood Traffic Management.

7. TRANSIT

7.1. ROUTE CAPACITY

OC Transpo bus route #221 travels along Old Montreal Road east of Trim Road, providing a connection between Cumberland and Downtown Ottawa. Bus service on this route includes two westbound trips in the morning and two eastbound trips in the evening.

The Trim Transit Station / Trim Park & Ride is located at Trim Road and Ottawa Road 174 and is accessible from Dairy Drive. It is served by rapid transit route 95, route 22, connection route 221, and local route 122. This Park & Ride can currently accommodate 1,089 vehicles.

The Forecasting Report submitted to the City of Ottawa on December 12, 2017 indicated that this development would generate 102 new transit trips in the AM peak hour and 108 new transit trips in the PM peak hour. Applying the inbound and outbound trip percentages from the Forecasting Report provides an estimate of transit trips generated by this development as presented in the following table.



Table 3. Estimated Transit Trips Generated by Development (AM and PM Peak Hours)

PEAK HOUR	TOTALTRANSIT TRIPS	INBOUND %	INBOUND #	OUTBOUND %	OUTBOUND #
AM	102	37%	38	64%	65
PM	108	53%	57	47%	51

A measured and need based increase in transit service through the Old Montreal Road corridor should be provided. It is expected that the need for transit services will be driven by Cardinal Creek Village with a smaller ridership contribution from the proposed Phoenix development.

7.2. TRANSIT PRIORITY

This is a rural area transitioning into an urban area. It is not a candidate for transit priority measures.

8. REVIEW OF NETWORK CONCEPT

The Scoping Report submitted to the City of Ottawa on November 30, 2017 excluded scope associated with the Review of Network Concept.

9. INTERSECTION DESIGN

The study area includes three existing network intersections in the study area:

- Old Montreal Road and Trim Road (two lane roundabout)
- Old Montreal Road and Dairy Drive (two-way stop control)
- Old Montreal and Famille-Laporte Avenue (one-way stop control)

The development also proposes two new full-movement accesses:

the West Access opposing the existing Famille-Laporte Avenue
 the East Access approximately 200m east of the West Access / Famille-Laporte Avenue intersection

The study area intersections were evaluated in the morning and afternoon (AM and PM) peak hour traffic conditions at the following planning horizons:

- Existing (2017)
- Future Background (2022 and 2027)
- Future Total (2022 and 2027)

9.1. INTERSECTION CONTROL

Traffic control signal warrants following Ontario Traffic Manual (OTM) Book 12 (2012) Justification 7 were completed the Dairy Drive intersection under both scenarios (background and total) and future planning horizons (2022 and 2027). Traffic signal warrants for the two full movement accesses were presented in **Section 5**. The warrant calculations are provided in **Appendix B**.

At the Old Montreal Road and Dairy Drive intersection a traffic signal is not warranted under either future background scenario. However, they are warranted under both future total scenarios. When considering the 2022 background scenario, the Average Hourly Volume (equation in **Section 0**) on Old Montreal is within



45 vehicles of triggering the traffic signal warrant. This indicates that any proposed development growth on Old Montreal Road that generates vehicular traffic would likely satisfy the warrant.

The following table provides the AM and PM peak hour traffic volumes on Old Montreal Road in the existing, 2022 total, and 2027 total traffic scenarios to compare the estimated traffic contribution from both Cardinal Creek Village and the proposed Phoenix Development. In 2022, Cardinal Creek contributes over 65% of the new development traffic growth along this corridor. The contribution of Cardinal Creek in 2027 is highly dependant on the availability of the proposed Ottawa Road 174 access; without this new access then the contribution of Cardinal Creek to traffic on Old Montreal Road will increase instead of decrease as presented in the Cardinal Creek TIA and shown below.

Table 4. AM and PM volumes on Old Montreal Road at Dairy Drive

TRAFFIC	2018	2022	2027
Old Montreal Road at Dairy Drive (Total)	668 / (753)	1321 / (1519)	1155 / (1596)
Trips to/from Cardinal Creek Village	159 / (205)	478 / (618)	243 / (293)
Trips to/from Proposed Development	0 / (0)	264 / (277)	264 / (277)

Following the OTM Book 12 traffic signal warrants (Justification 7), the Dairy Drive / Old Montreal Road intersection warrants a traffic signal with known development traffic. An upgrade to the intersection should be considered by the City of Ottawa to provide more capacity through the maturing rural east sector

9.2. INTERSECTION DESIGN (OPERATIONS)

9.2.1. MMLOS ANALYSIS

Multi-Modal Level of Service (MMLOS) analysis methodology outlined in the City of Ottawa's MMLOS Guidelines (2015) states that intersection LOS measures are only to be evaluated at signalized intersections. Analysis of Vehicle Level of Service (VLOS) is detailed in **Section 9.2.2**.

Based on the traffic signal warrants (**Section 9.1**), Dairy Drive will warrant a traffic signal under 2022 and 2027 total traffic conditions. As discussed in **Section 9.1**, total traffic volumes are expected to be highest in 2022 at this intersection since the proposed OR 174 connection to Cardinal Creek will not have been constructed. Therefore, we have prepared an MMLOS analysis at this intersection for the 2022 total traffic scenario only since it will represent the worst case. Targets are taken from the General Urban Area Arterial Road Class.



Table 5. Intersection MMLOS for Old Montreal Road / Diary Drive under 2022 Total Traffic Conditions

	PLOS	BLOS	TLOS	TKLOS	VLOS
Target	C	C	D	D	Caption
Old Montreal Road / Dairy Drive Intersection	С	F	D	Е	Section 9.2.2

PLOS = Pedestrian Level of Service, BLOS = Bike Level of Service, TLOS = Transit Level of Service, TkLOS = Truck Level of Service, VLOS = Vehicle Level of Service

9.2.2. VEHICLE CAPACITY ANALYSIS

METHODOLOGY

The existing and future conditions were analyzed using the weekday peak hour traffic volumes presented during the previous Traffic Impact Assessment Forecasting Report.

All intersections in the study area are currently roundabouts or unsignalized (stop controlled) intersections. The Highway Capacity Manual (HCM) 2010, assigns the vehicle level of service (VLOS) based on ranges of movement delay, as indicated in **Table 6**. Delay is the increase in travel time due to an intersection control.

Table 6. Highway Capacity Manual 2010, LOS Criteria

VLOS	UNSIGNALIED INTERSECTIONS DELAY (SECONDS)	SIGNALIZED INTERSECTIONS DELAY (SECONDS)
A	0-10	0-10
В	>10-15	>10-20
C	>15-25	>20-35
D	>25-35	>35-55
E	>35-50	>55-80
F	>50	>80

The City's MMLOS Guidelines recommend a target VLOS of 'E' for the City's Central Area, for within 600m of a rapid transit station, or for within 300m of a school. The Guidelines recommend a target VLOS of 'D' for locations, such as the study area, that are not located in the aforementioned policy areas.

The following sections present the results of the intersection capacity analysis. Movement delay and VLOS are shown alongside volume, volume / capacity (v/c), and 95th percentile queue length. Unsignalized (stop-controlled) intersections were analyzed using Synchro 9, while the roundabout at Old Montreal Road and Trim Road was analyzed using SIDRA 7. **Appendix C** contains the detailed Synchro analysis sheets.



EXISTING CONDITIONS (2017)

The existing (2017) intersection capacity analysis results are summarized in **Table 7**. Both AM peak hour and PM peak hour are shown within the table, with the PM peak results shown within brackets. All three intersections currently operate with an acceptable VLOS. The highest volume to capacity (v/c) ratios are the southbound movements in the PM peak hour at the Old Montreal Road / Trim Road roundabout. The v/c ratio is 0.77 which indicates there is available capacity for future volumes.

Table 7. Intersection Capacity Summary – Existing (2017)

	VOLUME	DELAY	VLOS	V/C	Q50th	Q95th		
MOVEMENT	(VPH)	(SEC)			(m)	(m)		
	Old	d Montreal Ro		m Road				
(Roundabout)								
EBL	21 (17)	5.2 (16.7)	A(C)	0.03 (0.23)	-	0.9 (5.6)		
EBT	24 (116)	4.7 (15.3)	A (C)	0.03 (0.23)	-	0.9 (5.6)		
EBR	42 (234)	4.7 (24.4)	A(C)	0.05 (0.62)	-	1.4 (22.6)		
WBL	98 (77)	14.6 (5.8)	B (A)	0.30 (0.11)	-	8.1 (3.0)		
WBT	130 (70)	12.4 (6.4)	B (A)	0.30 (0.11)	-	8.2 (3.1)		
WBR	147 (89)	10.3 (5.3)	B (A)	0.29 (0.12	-	8.2 (3.2)		
NBL	195 (123)	9.3 (8.3)	A(A)	0.54 (0.40)	-	28.1 (14.7)		
NBT	910 (490)	9.1 (8.1)	A (A)	0.54 (0.40)	-	28.1 (14.7)		
NBR	61 (77)	9.2 (7.9)	A (A)	0.54 (0.40)	-	27.3 (14.7)		
SBL	68 (199)	7.2 (18.1)	A(C)	0.26 (0.77)	-	8.0 (67.6)		
SBT	300 (1186)	7.0 (17.6)	A(C)	0.26 (0.77)	-	8.0 (67.6)		
SBR	23 (61)	6.8 (17.2)	A (C)	0.26 (0.77)	-	7.9 (67.2)		
	Old	Montreal Ro	ad and Daii	y Drive				
		(Two-Way	Stop Contro	ol)				
EBL	14 (1)	8.6 (7.7)	A (A)	0.02 (0.00)	-	0.3 (0.0)		
EBTR	134 (354)	0.0 (0.0)	A (A)	0.09 (0.23)	-	0.0 (0.0)		
WBL	1 (0)	7.5 (0.0)	A (A)	0.00 (0.00)	-	0.0 (0.0)		
WBTR	522 (210)	0.0 (0.0)	A (A)	0.34 (0.14)	-	0.0 (0.0)		
NBTLR	16 (15)	15.9 (14.2)	C (B)	0.05 (0.04)	-	1.1 (0.9)		
SBL	14 (190)	15.3 (23.6)	C (C)	0.04 (0.52)	-	1.0 (20.6)		
SBTR	9 (48)	11.6 (10.0)	B (A)	0.02 (0.07)	-	0.4 (1.5)		
Old Montreal Road and Famille-Laporte Avenue								
(Two-Way Stop Control)								
EBL	57 (101)	8.8 (7.7)	A (A)	0.06 (0.08)	-	1.4 (1.8)		
EBTR	69 (418)	0.0 (0.0)	A (A)	0.05 (0.27)	-	0.0 (0.0)		
WBTLR	516 (132)	0.0 (0.0)	A (A)	0.34 (0.09)	-	0.0 (0.0)		
NBTLR	0 (0)	0.0 (0.0)	A (A)	0.00 (0.00)	-	0.0 (0.0)		
SBTLR	123 (84)	14.6 (10.2)	B (B)	0.27 (0.12)	-	7.7 (3.0)		
	•			•	•	•		

Movement Legend:

NB / SB / EB / WB – northbound, southbound, eastbound, westbound

L/T/R – left, through, right

Examples: WBL – westbound left-turn, SBTLR – shared southbound through / left-turn / right-turn lane.



FUTURE BACKGROUND CONDITIONS (2022)

The 2022 background intersection capacity analysis results are summarized in **Table 8**. Both AM peak hour and PM peak hour are shown within the table, with the PM peak results shown within brackets. Results that do not meet the City's target VLOS of 'D' are highlighted in red. With the future background and other development traffic the southbound left turning movements at both Trim Road and Dairy Drive are expected to experience a poor LOS in the PM peak hour. Notably drivers making a SBL at Dairy Drive are expected to experience approximately 110s (just under 2 minutes) of delay with a stop control.

Table 8. Intersection Capacity Summary – Future Background (2022)

	VOLUME	DELAY	VLOS	V/C	Q50th	Q95th	
MOVEMENT	(VPH)	(SEC)			(m)	(m)	
	Old	d Montreal Ro (Rour	oad and Triindabout)	n Road			
EBL	67 (44)	5.4 (29.1)	A (D)	0.09 (0.49)	-	2.4 (14.1)	
EBT	66 (234)	5.9 (26.3)	A (D)	0.09 (0.49)	-	2.4 (14.4)	
EBR	46 (256)	4.8 (25.0)	A (C)	0.06 (0.62)	-	1.5 (22.6)	
WBL	160 (130)	21.7 (7.8)	C (A)	0.53 (0.21)	-	17.7 (6.1)	
WBT	286 (173)	19.2 (7.2)	C (A)	0.53 (0.21)	-	18.1 (6.1)	
WBR	279 (167)	15.4 (6.3)	C (A)	0.50 (0.20)	-	18.2 (5.8)	
NBL	213 (134)	11.7 (12.7)	B (B)	0.61 (0.52)	-	35.7 (22.5)	
NBT	1017 (549)	11.5 (12.2)	B (B)	0.61 (0.52)	-	35.7 (22.5)	
NBR	88 (121)	11.2 (11.8)	B (B)	0.61 (0.52)	-	34.6 (22.4)	
SBL	125 (353)	9.3 (35.8)	A (E)	0.33 (0.92)	-	10.5 (129.2)	
SBT	328 (1297)	9.0 (34.6)	A (D)	0.33 (0.92)	-	10.5 (131.1)	
SBR	25 (67)	8.8 (34.0)	A (D)	0.33 (0.92)	-	10.3 (131.1)	
	Old	Montreal Ro	ad and Dair	y Drive			
		(Two-Way	Stop Contro	ol)			
EBL	40 (4)	9.7 (8.0)	A (A)	0.05 (0.00)	-	1.1 (0.1)	
EBTR	216 (654)	0.0 (0.0)	A (A)	0.13 (0.38)	-	0.0 (0.0)	
WBL	1 (0)	7.7 (0.0)	A (A)	0.00 (0.00)	-	0.0 (0.0)	
WBTR	827 (380)	0.0 (0.0)	A (A)	0.49 (0.22)	-	0.0 (0.0)	
NBTLR	18 (16)	25.1 (23.5)	C (C)	0.08 (0.08)	-	1.9 (1.8)	
SBL	17 (211)	24.7 (111.3)	C (F)	0.08 (1.00)	-	1.9 (62.5)	
SBTR	12 (79)	14.3 (11.5)	B (B)	0.03 (0.12)	-	0.7 (3.0)	
Old Montreal Road and Famille-Laporte Avenue (Two-Way Stop Control)							
EBL	60 (99)	9.8 (8.1)	A (A)	0.07 (0.08)	_	1.7 (1.8)	
EBTR	148 (736)	0.0 (0.0)	A (A)	0.09 (0.43)	-	0.0 (0.0)	
WBTLR	826 (298)	0.0 (0.0)	A (A)	0.49 (0.18)	-	0.0 (0.0)	
NBTLR	0 (0)	0.0 (0.0)	A (A)	0.00 (0.00)	-	0.0 (0.0)	
SBTLR	122 (84)	19.7 (11.9)	C (B)	0.34 (0.15)	-	10.3 (3.6)	

Movement Legend:

NB / SB / EB / WB – northbound, southbound, eastbound, westbound

L/T/R – left, through, right

Examples: WBL - westbound left-turn, SBTLR - shared southbound through / left-turn / right-turn lane.



FUTURE BACKGROUND CONDITIONS (2027)

The 2027 background intersection capacity analysis results are summarized in **Table 9**. Both AM peak hour and PM peak hour are shown within the table, with the PM peak results shown within brackets. Results that do not meet the City's target VLOS of 'D' are highlighted in red. Under 2027 background traffic conditions, all the SB movements at the Trim Road roundabout are expected operate with a LOS 'F' in the PM peak hour. The EBL movement has a reduction in LOS to an 'E' as a result of high SB volumes. The SBL movement at Dairy Drive continues to operate with a LOS 'F' and high delays with a stop control.

Table 9. Intersection Capacity Summary – Future Background (2027)

MOVEMENT	VOLUME (VPH)	DELAY (SEC)	VLOS	V/C	Q50th (m)	Q95th (m)		
	Old Montreal Road and Trim Road (Roundabout)							
EBL	74 (45)	9.3 (36.1)	A (E)	0.09 (0.56)	-	2.6 (16.6)		
EBT	56 (246)	8.9 (32.6)	A (D)	0.08 (0.56)	-	2.2 (17.0)		
EBR	50 (280)	8.7 (34.9)	A (D)	0.06 (0.73)	-	1.6 (29.9)		
WBL	168 (138)	25.0 (8.5)	D (A)	0.54 (0.24)	-	17.8 (6.8)		
WBT	241 (180)	21.6 (7.8)	C (A)	0.54 (0.24)	-	18.2 (6.8)		
WBR	162 (176)	12.3 (6.8)	B (A)	0.32 (0.22)	-	9.4 (6.4)		
NBL	233 (147)	12.7 (14.5)	B (B)	0.66 (0.58)	-	42.9 (27.1)		
NBT	1121 (599)	12.4 (13.9)	B (B)	0.66 (0.58)	-	42.9 (27.1)		
NBR	103 (129)	12.2 (13.5)	B (B)	0.66 (0.58)	-	41.4 (27.0)		
SBL	93 (373)	9.3 (59.4)	A (F)	0.34 (1.03)	-	10.8 (243.8)		
SBT	368 (1418)	8.9 (58.1)	A (F)	0.34 (1.03)	-	10.8 (254.6)		
SBR	34 (73)	8.7 (57.3)	A (F)	0.34 (1.03)	-	10.6 (254.6)		
	Old Montreal Road and Dairy Drive							
		· · · · · · · · · · · · · · · · · · ·	Stop Contro					
EBL	41 (4)	9.1 (8.1)	A (A)	0.04 (0.00)	-	1.0 (0.1)		
EBTR	187 (689)	0.0 (0.0)	A (A)	0.11 (0.41)	-	0.0 (0.0)		
WBL	1 (0)	7.6 (0.0)	A (A)	0.00 (0.00)	-	0.0 (0.0)		
WBTR	689 (402)	0.0 (0.0)	A (A)	0.41 (0.24)	-	0.0 (0.0)		
NBTLR	19 (17)	20.3 (25.9)	C (D)	0.07 (0.09)	-	1.5 (2.1)		
SBL	18 (231)	19.6 (177.5)	C (F)	0.07 (1.20)	-	1.5 (84.0)		
SBTR	13 (84)	12.6 (11.7)	B (B)	0.03 (0.14)	-	0.6 (3.3)		
Old Montreal Road and Famille-Laporte Avenue (Two-Way Stop Control)								
EBL	55 (109)	9.3 (8.1)	A (A)	0.06 (0.09)	-	1.4 (2.0)		
EBTR	123 (779)	0.0 (0.0)	A (A)	0.07 (0.46)	-	0.0 (0.0)		
WBTLR	722 (311)	0.0 (0.0)	A (A)	0.42 (0.18)	-	0.0 (0.0)		
NBTLR	0 (0)	0.0 (0.0)	A (A)	0.00 (0.00)	-	0.0 (0.0)		
SBTLR	100 (93)	16.3 (12.4)	C (B)	0.24 (0.17)	-	6.6 (4.3)		
	/ED/WD	41 1 4				1		

Movement Legend: NB / SB / EB / WB – northbound, southbound, eastbound, westbound L / T/ R – left, through, right.



FUTURE TOTAL CONDITIONS (2022)

The 2022 future total (future background plus additional site generated traffic) intersection capacity analysis results are summarized in **Table 10**. Both AM peak hour and PM peak hour are shown within the table, with the PM peak results shown within brackets. Results that do not meet the City's target VLOS of 'D' are highlighted in red.

With the addition of the development traffic, the SB movements at Trim Road experience a LOS 'F' in the 2022 planning horizon instead of the 2027 planning horizon that was anticipated as part of the background traffic analysis.

The delay experienced by vehicles making a SBL at Dairy Drive in the PM period increases from 110s to over 420s. This assumes that regular commuters do not adjust their route based on known conditions; it is unlikely that over 260 drivers will knowingly wait over 7 minutes at an intersection when there are other routes with less delay available.

Vehicles exiting the development at Famille-Laporte will experience high delay in the peak hours due to the existing high volumes along Old Montreal Road. It is likely that some residents will shift their exit point from the west access to the east access based on known traffic conditions. Anticipated delay is lower at the east access since there is not a north leg to the intersection, whichresults in fewer turning movements competing for the same gaps in traffic. Alternative future scenarios for Famille-Laporte, including traffic re-assignment and alternative intersection control, are presented in **Section 0**.

Table 10. Intersection Capacity Summary - Future Total (2022)

MOVEMENT	VOLUME (VPH)	DELAY (SEC)	VLOS	V/C	Q50th (m)	Q95th (m)		
Old Montreal Road and Trim Road (Roundabout)								
EBL	67 (44)	6.4 (36.0)	A (E)	0.10 (0.57)	-	2.8 (17.3)		
EBT	80 (262)	5.8 (32.6)	A (D)	0.10 (0.57)	-	2.8 (17.6)		
EBR	46 (256)	4.9 (26.2)	A (D)	0.06 (0.63)	-	1.5 (23.2)		
WBL	188 (167)	25.2 (8.5)	D(A)	0.60 (0.26)	-	21.9 (7.8)		
WBT	324 (206)	22.4 (7.8)	C (A)	0.60 (0.26)	-	22.5 (7.8)		
WBR	321 (210)	18.0 (6.9)	C (A)	0.58 (0.26)	-	22.9 (7.6)		
NBL	213 (134)	13.5 (14.7)	B (B)	0.66 (0.57)	-	42.7 (25.6)		
NBT	1017 (549)	13.2 (14.1)	B (B)	0.66 (0.57)	-	42.7 (25.6)		
NBR	123 (140)	12.9 (13.6)	B (B)	0.66 (0.57)	-	41.7 (25.6)		
SBL	164 (401)	10.6 (55.6)	B (F)	0.38 (1.01)	-	12.8 (208.9)		
SBT	328 (1297)	10.2 (54.2)	B (F)	0.38 (1.01)	-	12.8 (217.5)		
SBR	25 (67)	10.0 (53.4)	A (F)	0.38 (1.01)	-	12.5 (217.5)		



MOVEMENT	VOLUME (VPH)	DELAY (SEC)	VLOS	V/C	Q50th (m)	Q95th (m)		
	Old Montreal Road and Dairy Drive (Signalized)							
EBL	40 (4)	4.7 (6.6)	A(A)	0.22 (0.01)	1.3 (0.2)	4.7 (1.3)		
EBTR	304 (741)	4.3 (18.0)	A (B)	0.25 (0.84)	10.1 (50.0)	17.1 (117.6)		
WBL	1 ()	3.5 (0.0)	A(A)	0.00 (0.00)	0.0 (0.0)	0.3 (0.0)		
WBTR	733 ()	13.7 (10.0)	B (A)	0.84 (0.57)	60.6 (27.2)	110.5 (54.9)		
NBTLR	18 ()	21.6 (12.5)	C (B)	0.07 (0.03)	1.7 (0.9)	6.7 (3.9)		
SBL	27 ()	21.9 (18.7)	C (B)	0.12 (0.64)	2.5 (21.4)	8.8 (41.1)		
SBTR	12 ()	21.3 (12.6)	C (B)	0.01 (0.06)	0.1 (0.2)	4.0 (6.9)		
Old Montreal Road and Famille-Laporte Avenue / West Access (Two-Way Stop Control)								
EBL	60 (99)	10.1 (8.2)	B (A)	0.08 (0.08)	-	1.8 (1.9)		
EBTR	245 (884)	0.0 (0.0)	A(A)	0.14 (0.52)	-	0.0 (0.0)		
WBL	1 (2)	7.7 (9.7)	A(A)	0.00 (0.00)	-	0.0 (0.1)		
WBTR	895 (352)	0.0 (0.0)	A (A)	0.53 (0.21)	-	0.0 (0.0)		
NBTLR	103 (78)	210.4 (133.6)	F (F)	1.19 (0.89)	-	51.0 (34.0)		
SBTLR	122 (84)	22.9 (13.7)	C (B)	0.38 (0.17)	-	12.0 (4.2)		
Old Montreal Road and East Access (Two-Way Stop Control)								
EBTR	201 (806)	0.0 (0.0)	A (A)	0.12 (0.47)	-	0.0 (0.0		
WBL	2 (3)	7.6 (9.4)	A (A)	0.00 (0.00)	-	0.0 (0.1)		
WBT	828 (301)	0.0 (0.0)	A (A)	0.49 (0.18)	-	0.0 (0.0)		
NBLR	72 (55)	22.8 (23.8)	C (C)	0.26 (0.22)	-	7.2 (5.9)		

Movement Legend:

NB / SB / EB / WB – northbound, southbound, eastbound, westbound

L / T/ R – left, through, right

 $Examples: WBL-westbound \ left-turn, SBTLR-shared \ southbound \ through \ / \ left-turn \ / \ right-turn \ lane.$



FUTURE TOTAL CONDITIONS (2027)

The 2027 future total (future background plus additional site generated traffic) intersection capacity analysis results are summarized in **Table 11**. Both AM peak hour and PM peak hour are shown within the table, with the PM peak results shown within brackets. Results that do not meet the City's target VLOS of 'D' are highlighted in red.

Movements that had high delay and a poor LOS in the 2022 total traffic scenario continue to experience high delays.

Table 11. Intersection Capacity Summary – Future Total (2027)

MOVEMENT	VOLUME (VPH)	DELAY (SEC)	VLOS	V/C	Q50th (m)	Q95th (m)	
Old Montreal Road and Trim Road (Roundabout)							
EBL	74 (45)	5.9 (35.5)	A (E)	0.10 (0.58)	-	2.7 (17.7)	
EBT	69 (274)	6.5 (32.2)	A (D)	0.10 (0.58)	-	2.8 (18.1)	
EBR	50 (280)	5.2 (29.3)	A (D)	0.06 (0.69)	-	1.7 (27.0)	
WBL	196 (175)	29.6 (9.3)	D (A)	0.63 (0.29)	-	22.4 (8.6)	
WBT	279 (213)	25.8 (8.5)	D (A)	0.63 (0.29)	-	23.1 (8.6)	
WBR	204 (219)	14.0 (7.5)	B (A)	0.41 (0.27)	-	12.8 (8.3)	
NBL	233 (147)	14.8 (16.1)	B (C)	0.70 (0.61)	-	51.9 (29.7)	
NBT	1121 (599)	14.4 (15.5)	B (C)	0.70 (0.61)	-	51.9 (29.7)	
NBR	138 (148)	14.1 (14.9)	B (B)	0.70 (0.61)	-	50.6 (29.7)	
SBL	132 (421)	10.6 (91.0)	B (F)	0.38 (1.12)	-	13.1 (374.3)	
SBT	368 (1418)	10.1 (89.6)	B (F)	0.38 (1.12)	-	13.1 (399.6)	
SBR	34 (73)	9.9 (89.9)	A (F)	0.38 (1.12)	-	12.9 (399.6)	
Old Montreal Road and Dairy Drive (Signalized)							
EBL	41 (4)	5.2 (6.6)	A (A)	0.20 (0.01)	1.3 (0.2)	4.7 (1.3)	
EBTR	275 (784)	5.0 (11.5)	A (B)	0.25 (0.86)	9.0 (5.9)	16.5 (126.4)	
WBL	1 (0)	4.2 (0.0)	A (A)	0.00 (0.00)	0.0 (0.0)	0.4 (0.0)	
WBTR	855 (531)	8.0 (10.2)	A (B)	0.81 (0.59)	42.8 (30.1)	84.2 (58.4)	
NBTLR	18 (17)	16.3 (12.9)	B (B)	0.06 (0.03)	1.4 (0.9)	5.5 (4.2)	
SBL	28 (283)	16.6 (21.1)	B (C)	0.10 (0.69)	2.1 (23.8)	7.2 (44.5)	
SBTR	13 (84)	16.2 (13.0)	B (B)	0.01 (0.06)	0.1 (0.2)	3.4 (7.1)	
Old Montreal Road and Famille-Laporte Avenue / West Access (Two-Way Stop Control)							
EBL	55 (109)	9.6 (8.3)	A (A)	0.07 (0.09)	-	1.5 (2.1)	
EBTR	221 (927)	0.0 (0.0)	A (A)	0.13 (0.55)	-	0.0 (0.0)	
WBL	1 (2)	7.6 (9.8)	A (A)	0.00 (0.00)	-	0.0 (0.1)	
WBTR	791 (365)	0.0 (0.0)	A (A)	0.47 (0.21)		0.0 (0.0)	
NBTLR	102 (78)	85.2 (185.0)	F (F)	0.79 (1.04)	-	33.1 (39.3)	
SBTLR	100 (93)	18.6 (14.8)	C (B)	0.27 (0.20)	-	7.7 (5.1)	



MOVEMENT	VOLUME (VPH)	DELAY (SEC)	VLOS	V/C	Q50th (m)	Q95th (m)		
Old Montreal Road and East Access (Two-Way Stop Control)								
EBTR	177 (849)	0.0 (0.0)	A (A)	0.10 (0.50)	-	0.0 (0.0)		
WBL	2 (3)	7.6 (9.5)	A (A)	0.00 (0.00)	-	0.0 (0.1)		
WBT	724 (314)	0.0 (0.0)	A (A)	0.43 (0.18)	-	0.0 (0.0)		
NBLR	72 (55)	19.1 (25.8)	C (D)	0.22 (0.24)	-	5.8 (6.4)		

Movement Legend:

NB / SB / EB / WB – northbound, southbound, eastbound, westbound

L/T/R-left, through, right

Examples: WBL - westbound left-turn, SBTLR - shared southbound through / left-turn / right-turn lane.

SUMMARY OF VEHICLE CAPACITY ANALYSIS

Old Montreal Road and Trim Road

- Analysed as a roundabout using the existing lane arrangement for all scenarios
- All southbound and the eastbound left movements operate over capacity in the PM peak hour by 2027 under the background traffic scenario

Old Montreal Road and Dairy Drive

- Analysed as a two-way stop control under existing, 2022 background, and 2027 background scenarios
- Analysed as a traffic signal under the 2022 total and 2027 total scenarios (the scenarios that traffic signal warrants were met)
- A traffic signal improves the intersection operations by reducing the delay experienced by vehicles making a northbound or southbound left/through movement

Old Montreal Road and Famille Laporte Avenue

- Analyzed as a two-way stop control using the existing lane arrangement on Old Montreal Road for all scenarios (no traffic signal warrant was met)
- Vehicles making a northbound left movement out of the proposed Phoenix development experience high delay
- Alternative intersection configurations are considered in Section 0

Old Montreal Road and East Access

- Analyzed as a two-way stop control with no eastbound left turn lane (left turn lane warrant not met)
- Intersection operates with an acceptable level of service for all scenarios



9.3. FAMILLE-LAPORTE AVENUE ALTERNATIVES

The analysis of intersection operations for the 2022 and 2027 future total conditions show that vehicles exiting the development at Famille-Laporte will experience high delay in the peak hours due to the existing high volumes along Old Montreal Road and conflicting vehicle movements entering/existing Cardinal Creek Village. Additional alternative scenarios at Famille-Laporte were considered and include

- 1 Reassignment of traffic from the west full movement access to east full movement access to determine if / when a balanced v/c ratio can be achieved
- 2 Roundabout (single lane)
- 3 Traffic signal with east & west left turn lanes

Reassignment: High delay at Famille-Laporte Avenue under baseline conditions would likely see a redistribution of exiting traffic to the East Access. The northbound approach delay at these two intersections is expected to be approximately equal if 95% of exiting left-turn traffic uses the East Access. While feasible as an interim measure, this is not a long-term solution.

Roundabout: Roundabouts are not generally implemented along corridors with insufficient gaps in the major traffic flow to accommodate the minor flow or at intersections with significantly unbalanced traffic volumes on the approach roads which is the case at this location, therefore a roundabout was not further considered.

Crash history at this intersection was provided as part of the larger road segment. Of the nine crashes in this area, eight were single motor vehicle and not the head-on, right angle, or left-turn across crashes that indicate that a roundabout may be suitable. There were no fatal crashes.

Roundabouts are suitable for locations where there is a transition from a rural to an urban environment. In the 2022 and 2027 planning horizon it is expected that there will be two new accesses to Cardinal Creek Village to the east within the general urban area.

Traffic Signals: The addition of a traffic signal reduces the average delay for exiting northbound traffic at the West Access to approximately 20s during both peak hours. A signal introduces some minor delays to eastbound and westbound traffic. Overall average intersection delay is comparable to baseline conditions. See **Table 12** for the intersection operations summary.

Table 12. Intersection Capacity Summary - Famille Laporte Avenue Traffic Signal - 2027 Total

MOVEMENT	VOLUME	DELAY (S)	VLOS	V/C	Q50th (M)	Q95th (M)			
Old Montreal Road and Famille-Laporte Avenue / West Access									
EBL	55 (109)	4.1 (3.5)	A (A)	0.12 (0.15)	1.9 (3.8)	6.1 (9.2)			
EBTR	221 (927)	4.0 (8.7)	A (B)	0.18 (0.70)	7.3 (58.7)	16.4 (111.3)			
WBLTR	791 (365)	8.3 (3.9)	B (A)	0.64 (0.28)	43.4 (14.2)	87.7 (26.2)			
NBTLR	102 (78)	26.6 (31.8)	C (C)	0.34 (0.29)	5.9 (4.9)	16.5 (15.2)			
SBTLR	100 (93)	24.8 (30.3)	C (C)	0.09 (0.09)	0.7 (0.8)	10.4 (11.3)			

Movement Legend:

 $\ensuremath{\mathsf{NB}}\xspace / \ensuremath{\mathsf{EB}}\xspace / \ensuremath{\mathsf{EB}}\xspace / \ensuremath{\mathsf{WB}}\xspace - \ensuremath{\mathsf{northbound}}\xspace,$ southbound, eastbound, westbound

L / T/ R – left, through, right

Examples: WBL – westbound left-turn, SBTLR – shared southbound through / left-turn / right-turn lane.

Considering the baseline conditions and three alternatives, a traffic signal is most appropriate at this location.



10. SUMMARY OF IMPROVEMENTS AND MODIFICATION OPTIONS

10.1. CONCLUSIONS

Background traffic analysed includes known developments in the area. The largest known development is the multi-phased Cardinal Creek Village located directly to the north of the proposed Phoenix Development. Cardinal Creek Village is a major generator of traffic in this area. The 2022 planning horizon has indicated that an additional 374 westbound trips during the AM peak hour and 398 eastbound trips during the PM peak hour have been assigned to Old Montreal Road. By the 2027 planning horizon year, the Cardinal Creek Village will have a new signalized connection to Highway 174 approximately 1.5km east of Trim Road. This new intersection is expected to change internal traffic patterns and reduce the number of trips on Old Montreal Road. Also for the 2027 planning horizon, the Cardinal Creek Village will have added 182 westbound trips during the AM peak hour and 170 eastbound trips during the PM peak hour to Old Montreal Road.

As background traffic continues to increase there is a corresponding decrease in LOS and v/c ratios at existing intersections in the study area. By 2027, SB movements and the EBL movement at the Trim Road / Old Montreal Road roundabout are operating over capacity with a LOS 'E' or 'F'. This represents a degradation in the LOS when compared with the existing conditions. These reductions in LOS are typical as neighborhoods mature and as greenfields are developed for residential, commercial, or industrial uses.

The development of the Phoenix lands will increase pressures on the intersection LOS when compared to the background traffic scenarios. However, it is noted that new development growth along Old Montreal Road will also place additional pressure on the existing intersection conditions and cause similar reductions in LOS. Specifically, changes to the Cardinal Creek Village development (development plan, access locations, phasing) would impact on the Dairy Drive and Famille Laporte intersection operations.

In conclusion, the proposed development by Phoenix Homes located at 1154, 1172, 1180, and 1208 Old Montreal:

- a) is appropriately designed for sustainable modes,
- b) is aligned with the City of Ottawa's broader city-building objectives,
- c) generates fewer vehicle trips than the Cardinal Creek Village development,
- d) can be accommodated with impacts to traffic operations for the 2022 and 2027 planning horizons being managed.

The proposed development is appropriate from a transportation planning perspective taking into consideration the City of Ottawa's Transportation Master Plan, Official Plan, and the recommendations of this report (Section 0).



10.2. RECOMMENDATIONS

1. Designing for Sustainable Modes

To reduce walking distance to existing transit stops, consider:

- a) Removing the deviation in the proposed sidewalk north of Block 9, if not otherwise required to comply with a 5% running slope.
- b) Moving the nearby eastbound bus stop from Grand Chène Crescent to the northeast (far-side) corner of the intersection of Old Montreal Road with Famille-Laporte Avenue.

Reference: Section 2.1

2. Boundary Street Design

No modifications to the boundary street design are required to accommodate this development. The future widening of Old Montreal Road in this area proposed in the City's Transportation Master Plan could provide additional capacity and improved facilities for all transportation modes.

Reference: Section 4

3. Intersection Design

- a) Old Montreal Road and Trim Road. No modifications are proposed. It is noted that southbound traffic movements at this location will exceed available intersection capacity without the addition of the proposed development generated traffic.
- b) Old Montreal Road and Dairy Drive. The installation of a traffic signal is proposed as part of a City assessment focused on the provision of increased capacity to serve the rural areas located to the east. Alternatively, potential changes either in scale or phasing of the Cardinal Creek Village development (located to the north) would reduce pressure on Old Montreal Road.
- c) Old Montreal Road and Famille-Laporte Avenue. The installation of a traffic signal is proposed to provide opportunities for vehicles to make left-turns to and from the north and south legs of the intersection without high levels of delay. The intersection should include accessible pedestrian crosswalks following OTM Book 11 (Pavement Markings) and Book 15 (Pedestrian Crossing Treatments).
- d) <u>Right-in / Right-out Accesses</u>. Include a channelized island (**Figure 2**) to restrict left turns onto Old Montreal Road from the Famille-Laporte Avenue access location.
- e) Old Montreal Road and East Access: One-way (northbound) stop control intersection with east-west accessible pedestrian crosswalk following OTM Book 11 (Pavement Markings) and Book 15 (Pedestrian Crossing Treatments). Westbound left turn volumes are expected to be low and do not require a left turn lane. Traffic signal warrants were not met.

Reference: Sections 0 and 9



11. ROAD MODIFICATION APPROVAL DRAWINGS

Following the City of Ottawa's acceptance of the TIA Strategy Report, one RMA drawings would be prepared and submitted as follows:

- Famille Laporte Intersection to be upgraded to a traffic signal with the following lane arrangement (Section 0):
 - Eastbound Left (as existing)
 - Eastbound Through / Right
 - Westbound Left / Through / Right
 - Northbound Left / Through / Right
 - Southbound Left / Through / Right (as existing)

APPENDIX

A TDM CHECKLIST

1154, 1172, 1180, and 1208 Old Montreal Road

TDM-Supportive Development Design and Infrastructure Checklist:

Residential Developments (multi-family or condominium)

Legend The Official Plan or Zoning By-law provides related guidance that must be followed The measure is generally feasible and effective, and in most cases would benefit the development and its users The measure could maximize support for users of sustainable modes, and optimize development performance

	TDM-s	supportive design & infrastructure measures: Residential developments		Check if completed & descriptions, explanations plan/drawing references
	1.	WALKING & CYCLING: ROUTES		
	1.1	Building location & access points		
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	\square	No parking is located between any multi-unit building and the street / sidewalk
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	V	Direct connections (<10m) between sidewalk and main building entrances. Majority of multi-unit buildings located closer to Old Montreal Road and nearest transit stop
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	\square	Building doors and windows face Old Montreal Road or internal site pedestrian facilities
	1.2	Facilities for walking & cycling		
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations (see Official Plan policy 4.3.3)	7	Trim Road is nearest rapid transit station, at approximately 1250m walking distance. Concrete sidewalks provided on-site to connect to nearest transit stop on Old Montreal Road
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing	V	Direct connections (<10m) between main building entrances and sidewalks on Old Montreal Road or new internal roadways. Sidewalks are located in front of all multi-unit buildings

	TDM-s	supportive design & infrastructure measures: Residential developments		Check if completed & descriptions, explanations r plan/drawing references
		weather protection through canopies, colonnades, and other design elements wherever possible (see Official Plan policy 4.3.12)		
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks (see Official Plan policy 4.3.10)	M	Sidewalks to be constructed of concrete to differentiate pedestrian areas from vehicle areas (to be confirmed during development of site plan). Crosswalks provided at all accesses along Old Montreal Road
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps (see Official Plan policy 4.3.10)	\square	Sidewalks will have gradual grade transitions, depressed curbs at street corners, and access to the required number of accessible parking spaces. (to be confirmed during development of site plan)
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and onroad cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians (see Official Plan policy 4.3.11)	$\overline{\mathbf{Z}}$	Pedestrian connections provided at east and west accesses. The proposed accesses also connect to paved shoulders / future bike lanes on Old Montreal Road. To be detailed during development of site plan.
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	Ø	On-site pedestrian pathways / sidewalks connect to existing transit stops on Old Montreal Road
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	×	Eastbound transit stop on Old Montreal Road without direct pedestrian facilities
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	Ø	Internal roads designed using a low target operating speed
	1.3	Amenities for walking & cycling		
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails		To be confirmed during site plan development
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	X	

	TDM-s	supportive design & infrastructure measures: Residential developments		Check if completed & descriptions, explanations r plan/drawing references
	2.	WALKING & CYCLING: END-OF-TRIP FACILITY	TIES	8
	2.1	Bicycle parking		
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible (see Official Plan policy 4.3.6)		To be confirmed during site plan development
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas (see Zoning By-law Section 111)		To be confirmed during site plan development
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored (see Zoning By-law Section 111)		To be confirmed during site plan development
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	×	
	2.2	Secure bicycle parking		
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single residential building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers (see Zoning By-law Section 111)		To be confirmed during site plan development
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multifamily residential developments	×	
	2.3	Bicycle repair station		
BETTER	2.3.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	×	
	3.	TRANSIT		
	3.1	Customer amenities	:	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	×	There are no on-site transit stops proposed
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	×	The site does not abut any off-site transit stops
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	×	There are no on-site transit stops proposed

	TDM-s	supportive design & infrastructure measures: Residential developments	Check if completed & add descriptions, explanations or plan/drawing references
	4.	RIDESHARING	
	4.1	Pick-up & drop-off facilities	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	E
	5.	CARSHARING & BIKESHARING	
	5.1	Carshare parking spaces	
BETTER	5.1.1	Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses (see Zoning By-law Section 94)	
	5.2	Bikeshare station location	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	E
	6.	PARKING	
	6.1	Number of parking spaces	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	The proposed number of parking spaces will meet the requirements of the City's Zoning By-law
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	On-road and visitor parking spaces provided for short-term users.
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly (see Zoning By-law Section 104)	⊠
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking (see Zoning By-law Section 111)	⊠
	6.2	Separate long-term & short-term parking areas	
BETTER	6.2.1	Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	To be confirmed during site plan development

APPENDIX

B TRAFFIC SIGNAL WARRANTS

2B - Crossing Major Road



SCENARIO	Future Backgroun	nd	YEAR	20)22
MAJOR ROAD	Old Montreal Roa	ad M	INOR ROAD	Dairy	Drive
FLOW TYPE	Restricted		ROAD TYPE	DAD TYPE 1 I	
NEW ROAD / INT.	No		"T" INT.	No	
	MINIMUM RI	EQUIREMENT	COMPI	LIANCE	
JUSTIFICATION	FLOW	ADJ. FLOW	AHV	%	OVERALL %
1A - All Approaches	470	565	620	110%	62%
1B - Minor Road	120	145	90	62%	0270
2A - Major Road	480	575	530	92%	92%

60

50

65

108%

SCENARIO	Future Backgrou	nd	YEAR	20	22
MAJOR ROAD	Old Montreal Roa	ad M	INOR ROAD	Famille-Laporte / West Acc	
FLOW TYPE	Restricted		ROAD TYPE	1 Lane	
NEW ROAD / INT.	No		"T" INT.	No	
	MINIMUM RI	COMPI	LIANCE		
JUSTIFICATION	FLOW	ADJ. FLOW	AHV	%	OVERALL %
1A - All Approaches	470	565	595	105%	34%
1B - Minor Road	120	145	50	34%	34 70
2A - Major Road	480	575	545	95%	17%
2B - Crossing Major Road	50	60	10	17%	1 / %



SCENARIO	Future Backgroui	nd	YEAR	2027	
MAJOR ROAD (Old Montreal Roa	ad M	INOR ROAD	Dairy	Drive
FLOW TYPE	Restricted		ROAD TYPE	1 L	ane
NEW ROAD / INT.	No		"T" INT.	N	lo
	MINIMUM REQUIREMENT			COMPI	LIANCE
JUSTIFICATION	FLOW	ADJ. FLOW	AHV	%	OVERALL %
1A - All Approaches	470	565	600	106%	66%
1B - Minor Road	120	145	95	66%	00 70
2A - Major Road	480	575	505	88%	88%
2B - Crossing Major Road	50	60	75	125%	00%

SCENARIO	Future Backgrou	nd	YEAR	20)27
MAJOR ROAD	Old Montreal Roa	ad M	INOR ROAD	Famille-Laport	e / West Access
FLOW TYPE	Restricted		ROAD TYPE	1 L	ane
NEW ROAD / INT.	No		"T" INT.	No	
	MINIMUM RI	EQUIREMENT		COMPI	LIANCE
JUSTIFICATION	FLOW	ADJ. FLOW	AHV	%	OVERALL %
1A - All Approaches	470	565	575	102%	34%
1B - Minor Road	120	145	50	34%	J 4 70
2A - Major Road	480	575	525	91%	17%
2B - Crossing Major Road	50	60	10	17%	1 / %

2A - Major Road

2B - Crossing Major Road



SCENARIO	Future Total		YEAR	20)22
MAJOR ROAD	Old Montreal Roa	ad M	INOR ROAD	Dairy	Drive
FLOW TYPE	Restricted		ROAD TYPE	AD TYPE 1 Lane	
NEW ROAD / INT.	No		"T" INT.	No	
	MINIMUM RI	EQUIREMENT	COMPI	LIANCE	
JUSTIFICATION	FLOW	ADJ. FLOW	AHV	%	OVERALL %
1A - All Approaches	470	565	755	134%	72%
1B - Minor Road	120	145	105	72%	1270
2A - Major Road	480	575	650	113%	113%
2B - Crossing Major Road	50	60	85	142%	11370

SCENARIO	Future Total		YEAR	2022	
MAJOR ROAD	Old Montreal Ro	ad M	INOR ROAD	Famille-Laport	e / West Access
FLOW TYPE	Restricted		ROAD TYPE	1 Lane	
NEW ROAD / INT.	Yes		"T" INT.	No	
	MINIMUM R	EQUIREMENT	COMPI	LIANCE	
JUSTIFICATION	FLOW	ADJ. FLOW	AHV	%	OVERALL %
1A - All Approaches	470	705	735	104%	56%
1B - Minor Road	120	180	100	56%	30%

720

75

88%

73%

73%

635

55

480

50

SCENARIO	Future Total	YEAR	2022
MAJOR ROAD	Old Montreal Road	MINOR ROAD	East Access
FLOW TYPE	Restricted	ROAD TYPE	1 Lane
NEW ROAD / INT.	Yes	"T" INT.	Yes

	MINIMUM RI	EQUIREMENT		COMPI	LIANCE
JUSTIFICATION	FLOW	ADJ. FLOW	AHV	%	OVERALL %
1A - All Approaches	470	705	570	81%	11%
1B - Minor Road	120	270	30	11%	1170
2A - Major Road	480	720	535	74%	40%
2B - Crossing Major Road	50	75	30	40%	40%

2B - Crossing Major Road



SCENARIO	Future Total		YEAR	20)27		
MAJOR ROAD C	old Montreal Roa	ad M	INOR ROAD	Dairy Drive			
FLOW TYPE	Restricted		ROAD TYPE	1 L	ane		
NEW ROAD / INT.	No		"T" INT.	N	lo .		
	MINIMUM RE	EQUIREMENT		COMPI	LIANCE		
JUSTIFICATION	FLOW	ADJ. FLOW	AHV	%	OVERALL %		
1A - All Approaches	470	565	735	130%	76%		
1B - Minor Road	120	145	110	76%	7070		
2A - Major Road	480	575	625	109%	109%		
2B - Crossing Major Road	50	60	90	150%	10970		

SCENARIO	Future Total		YEAR	. 20)27		
MAJOR ROAD	Old Montreal Ro	ad M	INOR ROAD	Famille-Laporte / West Access			
FLOW TYPE	Restricted		ROAD TYPE	1 Lane			
NEW ROAD / INT.	Yes		"T" INT.	N	lo .		
	MINIMUM R	EQUIREMENT		COMPI	LIANCE		
JUSTIFICATION	FLOW	ADJ. FLOW	AHV	%	OVERALL %		
1A - All Approaches	470	705	715	101%	53%		
1B - Minor Road	120	180	95	53%	3370		
2A - Major Road	480	720	620	86%	73%		
an G : 14: n :	5 0			5 2.07	13%		

75

55

73%

50

SCENARIO	Future Total	YEAR	2027
MAJOR ROAD	Old Montreal Road	MINOR ROAD	East Access
FLOW TYPE	Restricted	ROAD TYPE	1 Lane
NEW ROAD / INT.	Yes	"T" INT.	Yes

	MINIMUM RI	EQUIREMENT		COMPI	LIANCE
JUSTIFICATION	FLOW	ADJ. FLOW	AHV	%	OVERALL %
1A - All Approaches	470	705	550	78%	11%
1B - Minor Road	120	270	30	11%	1170
2A - Major Road	480	720	520	72%	40%
2B - Crossing Major Road	50	75	30	40%	40 %

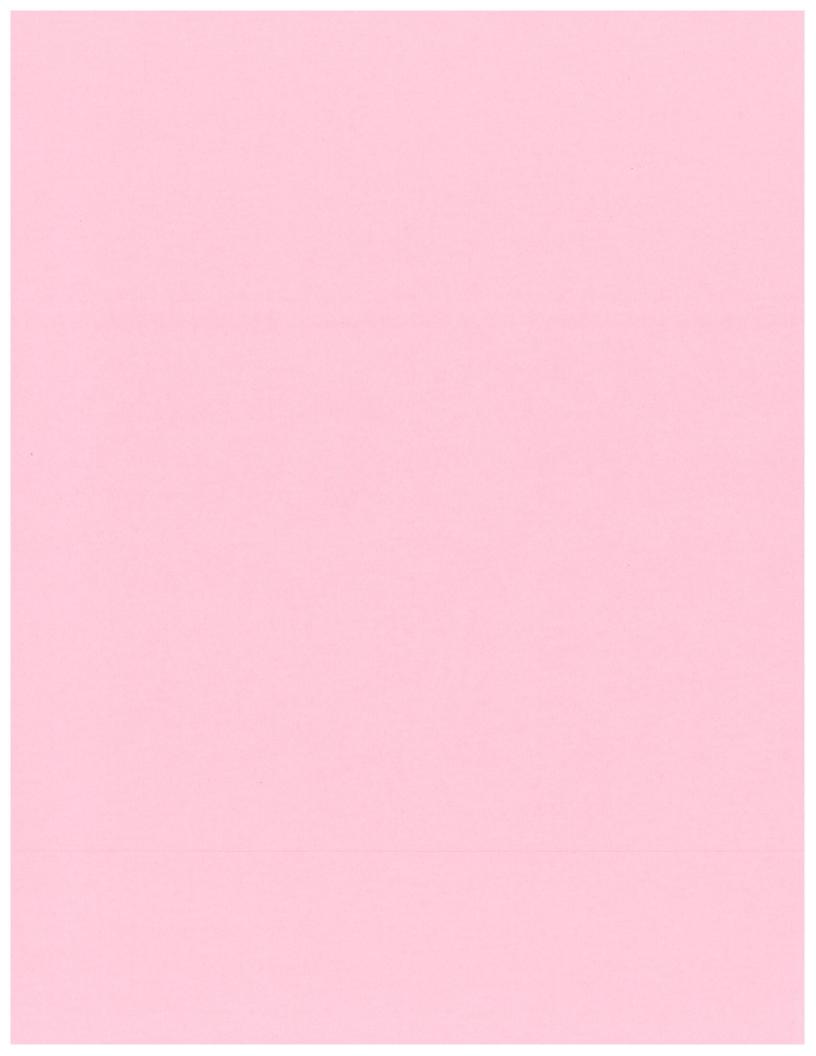
APPENDIX

C DETAILED SYNCHRO SHEETS

Intersection	
Int Delay, s/veh 6.3	
Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR	
Lane Configurations 为 为 为 为 为	
Traffic Vol, veh/h 1 347 7 0 182 28 9 3 3 190 3 45	
Future Vol, veh/h 1 347 7 0 182 28 9 3 3 190 3 45	an en en automo ban eng manag baan di minasa ng
Conflicting Peds, #/hr 0 0 2 2 0 0 2 0 2 2 0 2	
Sign Control Free Free Free Free Free Stop Stop Stop Stop Stop	ennas incastaestantain i taaban 6 kees.
RT Channelized None None None	
Storage Length 500 400 200	
Veh in Median Storage, # - 0 0 0 0 -	
Grade, % - 0 0 0 0 -	
Peak Hour Factor 90 90 90 90 90 90 90 90 90 90 90 90 90	
Heavy Vehicles, % 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Mvmt Flow 1 386 8 0 202 31 10 3 3 211 3 50	

Major/Minor Major1 Major2 Minor1 Minor2	
Conflicting Flow All 233 0 0 395 0 0 640 627 393 615 616 220	carecono increases insertos estado á
Stage 1 394 394 - 218 218 -	And the second second second second
Stage 2 246 233 - 397 398 -	
Critical Hdwy 4.1 4.1 7.1 6.5 6.2 7.1 6.5 6.2	
Critical Hdwy Stg 1 6.1 5.5 - 6.1 5.5 -	
Critical Hdwy Stg 2 6.1 5.5 - 6.1 5.5 -	
Follow-up Hdwy 2.2 2.2 3.5 4 3.3 3.5 4 3.3	alan makimpani Samberi
Pot Cap-1 Maneuver 1346 1175 391 403 660 406 409 825	
Stage 1 635 609 - 789 726 -	
Stage 2 762 716 - 633 606 -	
Platoon blocked, %	
The state of the s	
Stage 1 633 608 - 788 726 - Stage 2 711 716 - 625 605 -	
Stage 2 - 711 710 - 025 005	and the second second
Approach EB WB NB SB	
HCM Control Delay, s 0 0 14.2 20.9	
HCM LOS B C	esection 65kg/csell5040
	escure do Escar
Minor Lane/Major Mvmt NBLn1 EBL EBT EBR WBL WBT WBR SBLn1 SBLn2	
Capacity (veh/h) 408 1344 1173 400 775	
HCM Lane V/C Ratio 0.041 0.001 0.528 0.069	
HCM Control Delay (s) 14.2 7.7 0 23.6 10	
HCM Lane LOS B A A C B	
HCM 95th %tile Q(veh) 0.1 0 0 3 0.2	

Intersection Int Delay, s/veh	2,2						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	<u> </u>	<u></u>	<u>}</u>		k _A 4		
Traffic Vol, veh/h	101	417	128	4	7	77	
Future Vol, veh/h	101	417	128	4	7	77	
Conflicting Peds, #/hr	2	0	0	2	2	1	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized		None		None		None	
Storage Length	1250	-	-	-	0	-	
Veh in Median Storage,	# -	0	0		0		
Grade, %	_	0	0		0	-	
Peak Hour Factor	90	90	90	90	90	90	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	112	463	142	4	8	86	
Major/Minor N	lajor1	ı	Major2		Minor2		
Conflicting Flow All	149	0	-	0	836	147	
Stage 1		•			· 146		
Stage 2	-	-	·	-	690	-	
Critical Hdwy	4.1				6.4	6.2	
Critical Hdwy Stg 1		-	•	-	5.4	-	
Critical Hdwy Stg 2					5.4		
Follow-up Hdwy	2.2	-	-	-	3.5	3.3	
Pot Cap-1 Maneuver	1445		::::::::::::::::::::::::::::::::::::::		340	905	
Stage 1			-	-	886	-	
Stage 2	-			5.65.5	502	•	
Platoon blocked, %		-		-	Lanning vannum av Silva	species of the first sectors	
Mov Cap-1 Maneuver	1444				313	903	
Mov Cap-2 Maneuver	-	-	-	- 380,539,539	313	-	
Stage 1	•	•	-	-	884		
Stage 2	- -			• •	462		
Approach HCM Control Delay, s	EB 1.5		WB 0		SB 10.2		
	1.0		U	uerd gwalling (1911) 2018 (betre 1911)	10.2 B		
HCM LOS	7.455.00E				U		
Minor Lane/Major Mvm	t =	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)		1444				780	
HCM Lane V/C Ratio	personal de l'Espera ()	0.078	aaraa atee keessakkak -	***********	e de terres proces	0.12	
HCM Control Delay (s)		7.7				postar a transp	
HCM Lane LOS		Α			-	В	
HCM 95th %tile Q(veh)	29490400000000	0.3	98010050136765	2003-0039	1004101201000	0.4	

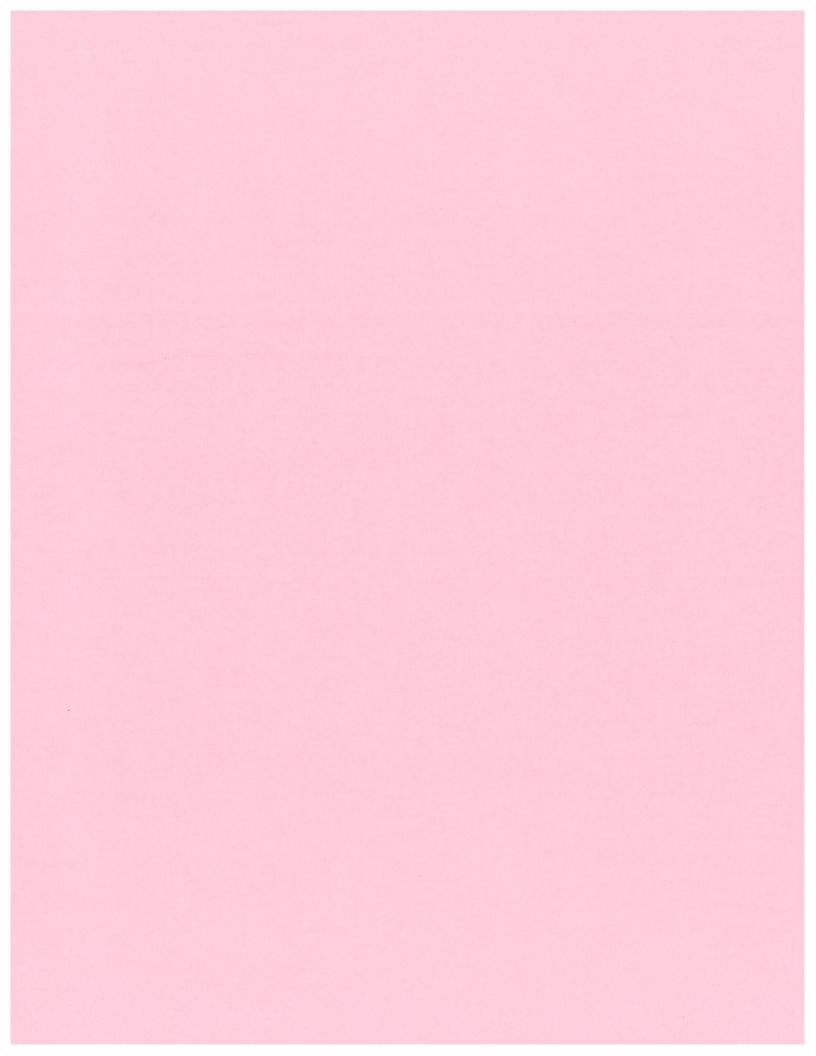


Intersection															
Int Delay, s/veh	1.3														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR			
Lane Configurations	ሻ	4		F	<u> </u>			€}>		ሻ	1				
Traffic Vol, veh/h	40	210	6	1	625	202	10	- 8	0	17	1	11			
Future Vol, veh/h	40	210	6	1	625	202	10	8	0	17	1	11	Olean State and markets	To regard Constitute Sci	recomment scores al escriptiva (se
Conflicting Peds, #/hr	0.	0	4	4	- 0	0	0	0 🧓	2	_ 2	0	0	18 SS		
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	ometementsver		98.0489.0879.0809090
RT Channelized			None			None			None			None			
Storage Length	500	- ************************************	# ####################################	400	**************************************		- 876/2000/2004	- 044038429		200	- ::::::::::::::::::::::::::::::::::::	- ::::::::::::::::::::::::::::::::::::	wiecz okcześci		
Veh in Median Storage	# -	0	-	_	0		3 3 3	0	_	•	0				
Grade, %	- **************	0	Sisseyezinis	energaliste	0	- **********	- **********	0	-	-	0	- *******		ungangayaka	saminanska (st.)
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100			
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0		54503978597555	
Mvmt Flow	40	210	6	1	625	202	_ 10	8	0	17	1	11			
Major/Minor N	/lajor1		ı	vlajor2			Vinor1		١	Ainor2					
Conflicting Flow All	827	0	0	220	0	0	1031	1126	219	1027	1028	726			
Stage 1						•	297	297	-	728	728	•			medical district entered design
Stage 2	-	-	**	_	-	-	734	829	-	299	300	-			
Critical Hdwy	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2			
Critical Hdwy Stg 1		-		-	-		6.1	5.5	-	6.1	5.5				
Critical Hdwy Stg 2	•		•	(1982 - 1	•		6.1	5.5	6 6 ·	6.1	5.5	60 00 - 00			
Follow-up Hdwy	2.2	-	-	2.2			3.5	4	3.3	3.5	4	3.3	eneralos carros	e de Concessor de la Maria de Cale	erastati kaitetiksta tiita aree
Pot Cap-1 Maneuver	813			1361	•		213	207	826	215	236	428			54.55.56.60.
Stage 1			₩ existences/intent/dist	este omatient navolungs	m columnos de columnos (e	-	716	671		418	432	- Andrianskopskin	0.60000000000000	tervest et valeaurise es	MSS CONTRACTOR CONTRACTOR
Stage 2			_				415	388		714	669				
Platoon blocked, %	*0000 <u>0</u> 1/910160	• **************			-	-	essaria de la compania del compania del compania de la compania del la compania de la compania della compania d	88868 92 1200	ossieres		se azze				02075255666
Mov Cap-1 Maneuver	813	•	•	1359	•	-	198	196	822	200	223	428			
Mov Cap-2 Maneuver	465986446	- Singlemenside		= Substantiskasu	- Rogeografia		198	196	- 0020000000000000000000000000000000000	200	223		U19948844		nadosa kasilismo
Stage 1	105/9 5 10						678	636 388		397	432 634	6.2 2.3			
Stage 2	- (2008/465/69)	- 96885864	5050875505	35088689			403	J00	- -	669	034	-			
in a property of the control of the	V8:19.03							STATE STATES							
Approach	EB			WB			NB			SB					
HCM Control Delay, s	1.5			0			25.1		686	20.4			6.5		5.5 5.5
HCM LOS		at account of the city of the	are extensive encour	and the other parties	Errano di Sana Bredio	naci kandarika danak sa	D	no ha anar to bar miliana	Na sa wakean e esaner	C	attraction statement transmits		enemakturiskihtel	e laste etters laketer	Macantino and a manifest factor
Minor Lane/Major Mvm	, h	IBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1 (BLn2					
Capacity (veh/h)		197	813			1359			200	398	0. 75 7E				
HCM Lane V/C Ratio			0.049	-		0.001	C20/20000000000000000000000000000000000		0.085	0.03			en e		erane en e
HCM Control Delay (s)		25.1	9.7			7.7			anaren erabea	14.3					
HCM Lane LOS	an parametra per esta de la composition de la composition de la composition de la composition de la compositio	D	Α	-	era propriata de 1944. •	Α	and the second s	-	С	В	,	a a compression de la compresión de la comp		and the second s	.,
HCM 95th %tile Q(veh)		0.3	0.2			0			0.3	0.1					

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<u></u>	*		14	
Traffic Vol. veh/h	60	148	80 5	21	7	115
Future Vol, veh/h	60	148	805	21	7	115
Conflicting Peds, #/hr	_ 0	0	_ 0	0	_ 0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	er time per en en transcription	None		None		None
	1250	- -	- -	- 5:20:28:54:	0 ი	
Veh in Median Storage,	#	0	0		0	
Grade, % Peak Hour Factor	100	0 100	0 100	- 100	0 100	- 100
Heavy Vehicles, %	0	001	0	001	0	0
Mymt Flow	60	148	805	21	7	115
	Des A All	referiel. (**)	en EXX	eret g.T. Alt	markar CP	ార్జర్స్ కోల
Major/Minor A	ninet		//ajor2	i.	Minor2	
Major/Minor M Conflicting Flow All	<u>ajor1</u> 826	0	najviz		1084	816
Stage:1	020	U		U	816	010
Stage 2	-	_	-	-	268	_
Critical Hdwy	4.1		vornervite tel Service vol.		6.4	6.2
Critical Hdwy Stg 1	. gal. t. t. t. tati;	, ang sarafagsal styl	- (DA-1904)	#5x3x6x6x6	5.4	**************************************
Critical Hdwy Stg 2					5.4	
Follow-up Hdwy	2.2			+ 	3.5	3.3
Pot Cap-1 Maneuver	813	· ·		-	242	380
Stage 1				-	438	
Stage 2			5 6 6 5		782	
Platoon blocked, %	300 <u>2</u> 01 120 200		• ************		00000 PEC 12 0000	apanan <u>uni</u> naka
Mov Cap-1 Maneuver	813				224	380
Mov Cap-2 Maneuver	<u>.</u>	-	- 509959	-	224	-
Stage 1		•	es (s	•	438 724	
Stage 2—	utempresier		-		724	#6589 KARTINASA
Approach	EB		WB		SB	
HCM Control Delay, s	2.8		0		19.7	
HCM LOS	93090148144	ggggegegegegege	Jegovenske state	descentation de m	С	nen an krisens
Minor Lane/Major Mvmt		EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)		813				name and a serie
HCM Lane V/C Ratio	aname and the W	0.074	- en de 1500 -			0.334
HCM Control Delay (s)		9.8	•	S (S) .=		19.7
HCM Lane LOS	charles and the	Α		*		С
HCM 95th %tile Q(veh)		0.2				1.4

Intersection																
Int Delay, s/veh	18.4															
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBA				
Lane Configurations	*			*	^}			€}>		7	∱}					
Traffic Vol, veh/h	4	646	8	- 0	349	31	10	3	≥ 3-	211	3	76		3 5 3	80.80	
Future Vol, veh/h	4	646	8	0	349	31	10	3	3	211	3	76				
Conflicting Peds, #/hr	0	0	2	2	0	- 0	2	0	2	2	0	2			6.6.6	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop		street on the Control of the	Liverantivanceannean (s. c	racelantaries
RT Channelized		-	None			None	•	•	None	99 (2) (2) -		None				
Storage Length	500	#		400	-	-	-	-	•	200	•	- (*************************	Service and a service	ustas straka koras		anakhakan
Veh in Median Storage	,# -	0	•		0	-		0	-		0					
Grade, %		0	energia de la compansión de la compansió	Ecostos de de la companya del companya del companya de la companya	0	·	e desembleden en skal	0	was the good message		0	# September 27275	9001090444501	pinandhydagg	raskinistratik	CASSASSAS
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100				
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0	sandisated taked	irotoleeeleelee	SAGRAGORINASAN	5858WH958
Mvmt Flow	4	646	8	0	349	31	10	3	3	211	3	76				
Major/Minor I	Vlajor1		۱	/lajor2			Vinor1		۱	Minor2						
Conflicting Flow All	380	0	0	656	0	0	1066	1040	654	1028	1029	367				
Stage 1		-			- 10 T	-	660	660		365	365					
Stage 2		•	-	-	OMNICO DE COMPANIO		406	380	##	663	664		A-1000-1-1-2-2-4-1		<u> </u>	Salatan nasaattiin ta
Critical Hdwy	4.1	•		4.1			7.1	6.5	6.2	7.1	6.5	6.2				
Critical Hdwy Stg 1	-	-	er over masser over	**	-	-	6.1	5.5	-	6.1	5.5	-				
Critical Hdwy Stg 2		•		-	•		6.1	5.5	•	6.1	5.5					
Follow-up Hdwy	2.2		-	2.2	-	-	3.5	4	3.3	3.5	4	3.3				
Pot Cap-1 Maneuver	1190			941			202	232	470	214	236	683				
Stage 1	-	-	-	-	-	-	455	463	-	658	627	•				
Stage 2							626	617	0.00	454	461			10,100.19		
Platoon blocked, %		-	-		<u>.</u>						a tanana ant matana				a dan da campa sa ma sa sa	national and the second
Mov Cap-1 Maneuver	1188	38 (3 4)	-	939	•		177	231	-coechars-er-er-ere	~ 210	235	682				
Mov Cap-2 Maneuver	-	-	-			-	177	231	-	~ 210	235	-	era e era era e a union	na misarinana anna	e explored a supposition of the	transfer transfer
Stage 1		-	•	•			453	461		656	627	_				
Stage 2		Herb.	-	-			553	617	·	446	459					energenergenergenergenergenergenergener
Approach	EB			WB			NB			SB						
HCM Control Delay, s	0			0			23.5			84.1					et a company	
HCM LOS	Y						 C	\$\$\$\$\$\$\$\$\$\$\$\$\$	000000000000	F	WSN/SD/189		984981081818	GBCBBV96446EB		62556525566572
TIOW LOO		903693600		01650075018			gravis									
		161	COL		e pro	Mari	MIDT	MES	opi	מב ותכ						Commence of the Control
Minor Lane/Major Mvm	II A	IBLn1	EBL	EBT	EBR	WBL	WBT	WRH!	SBLn1							
Capacity (veh/h)		211	1188	-	-	939			210	636					888	
HCM Lane V/C Ratio	and a second control to the second	A RESIDENCE OF THE PARTY OF THE PARTY OF	0.003	•	• 1556584159549	- 20038844 - 14	- estacitation		1.005	AND RESIDENCE AND ADDRESS.		900 <u>0</u> 900000	95/02950900	V25000000000		2200000000
HCM Control Delay (s)		23.5	8			0			111.3	11.5						
HCM Lane LOS		C	A		- \$26562788888	A	• 3500704453	- -	F	B	(8/65) (8/65) BB					
HCM 95th %tile Q(veh))	0.2	0	: 1000000 1 00000	<u>.</u>	0	<u>.</u>		9	0.4						
Notes																
~; Volume exceeds cap	cacity	\$: De	lay exc	eeds 30)0s -	+: Com	putation	Not De	efined	*: All	major v	/olume ir	plato	nc		

						eni estima esti susua sin	
Intersection							
Int Delay, s/veh	1.5						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	7	<u></u>	^		14		
Traffic Vol, veh/h	99	735	295	3	6	78	
Future Vol, veh/h	99	735	295	3	6	78	
Conflicting Peds, #/hr	2	- 0	- O	2	2	1	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized		None		None		กระทำการแรกของเป็นกราย	
Storage Length	1250	anganganagan •			0	erana a raganesa •	
Veh in Median Storage,		0	0		0		
Grade, %	s, parejuledal •	0	0	alle e te Ad Ta	0		and the second
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	99	735	295	3	6	78	
inne a a casa a la una regulada a quae rapida e de area esta e el dante. El	a e discert Seserio			riger at refre is dis		. ,	
Major/Minor N	/lajor1		Vlajor2		Minor2		
Conflicting Flow All	300	0	- 		1234	300	
Stage 1	-			-	299	-	
Stage 2	nos Angural es Missiles	u promotorova (1905)	e antonion sono de	overzanienowanienienienienienienienienienienienienien	935		
Critical Hdwy	4.1				6.4	6.2	
Critical Hdwy Stg 1	y Pow. † † † † † † #	367031186K	::::::::::::::::::::::::::::::::::::::	0.000000000000000000000000000000000000	5.4	negla T.A. T.	
Critical Hdwy Stg 2					5.4	-	
Follow-up Hdwy	2,2	petarinisel •		roverskiji •	3.5	3.3	
Pot Cap-1 Maneuver	1273				197	744	
Stage 1		:,;:::::::::::::::::::::::::::::::::::	a, subact Histori •		757	austromikiliiii	
Stage 2					385		
Platoon blocked, %	- 2- 25 25 25 25 25 25 25	s og 1991 (1999) •	er segera salar eta est. ••	eservaciones	ersen introffe	y ara-au-aritharita	
Mov Cap-1 Maneuver	1272			18 12 S	181	742	
Mov Cap-2 Maneuver			-		181	eredenjarije erengen dane	
Stage 1			-	9.9.5	756	5 5 .	
Stage 2	-	***		-	354	-	
And the second s							
Approach	EB		WB		SB		
HCM Control Delay, s	1		0		11.9		
HCM LOS	e utetu de euleik		general en gantan die A		В		
Minor Lane/Major Mvm	1	EBL	EBT	WBT	WAR	SBLn1	
Capacity (veh/h)	·	1272		1121	TTUI	608	
HCM Lane V/C Ratio		0.078				0.138	
HCM Control Delay (s)		8,1		Lisene nyaétakan Lisene nyaétakan		11.9	
HCM Lane LOS		ο, ι	ecological -	ogiodingili •		тт. э В	
HCM 95th %tile Q(veh)		0.3				una como mucho como con	
LIONI SOUT VOID MIACH)		U.U	od wie jak			A SA MAN	

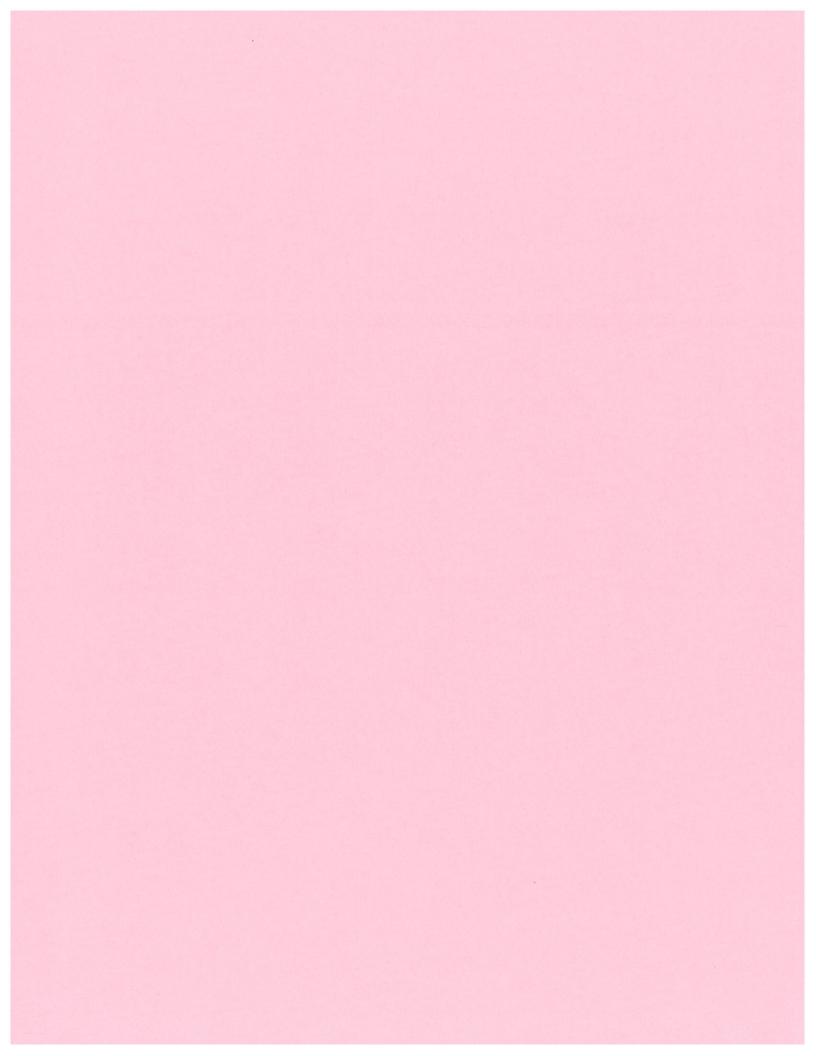


							······································					
Intersection												
Int Delay, s/veh	1.3											
	EBL	EBT	EBR	AA/DI	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	PV X 40001 (3)45 1 (4)45	***************************************	COM	WBL	eraxx////////sillistr	YYON	INOL		NON	<u>odl</u> ौ	Chapter Special Colors	חטט
Lane Configurations	١	}	-	ሻ	4 ↑	004		€ }}		er ar en en en ar en	\$	40
Traffic Vol, veh/h	41	180	7	1	468	221	11	8	0	18	1	12
Future Vol, veh/h	41	180	7	1	468	221	11	8	0	18	1	12
Conflicting Peds, #/hr	0	0	_ 4 _	_ 4 _	0	_ 0 _	0	_ 0	2	2	_ 0.	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized			None		9.50.5	None		9.5.5	None	65668/69/	a Esta	None
Storage Length	500	- Safekara 16	= Sovetsovirina	400	endonisk a ni		• 644569935996	- Kansakaran	- 1993/1935/1935/193	200	• *************	- Hannakanakan
Veh in Median Storage	2.0000000000000000000000000000000000000	0		_	0	-		0	•		0	-
Grade, %	- 04/9-09- <u>0</u> -249-	0	·	- 	0		- 6008-1111-00	0	- **************	- 	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	41	180	7	1	468	221	11	8	0	18	1	12
Major/Minor N	/lajor1		ı	Vlajor2		N	/linor1		٨	/linor2		
Conflicting Flow All	689	0	0	191	0	0	857	961	190	853	854	579
Stage 1	-		•	3 8 8 6 .			270	270	osentokinisen Kirolii (* 10	581	581	
Stage-2	en construction and				in in the second se		-587	691-		272	273	
Critical Hdwy	4.1			4.1		364.157.625.1	7.1	6.5	6.2	7.1	6.5	6,2
Critical Hdwy Stg 1	4846 4 04554764		\$74\$75445CE1105 ••	Syfen Sayes	-	::::::::::::::::::::::::::::::::::::::	6.1	5.5	::::::::::::::::::::::::::::::::::::::	6.1	5.5	(0.00000000000000000000000000000000000
Critical Hdwy Stg 2			_				6.1	5.5		6.1	5.5	
Follow-up Hdwy	2.2	-	0.000.000 -	2.2	388355555 -	•	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	915		•	1395	o voi o o o o o o o o o o o o o o o o o		280	258	857	281	298	519
Stage 1	99941.Y.G -	57.600647.6557.65 -	0002521450046 -	-	8///27//0907/ •	-	740	690	- -	503	503	seelana alkii
Stage 2							499	449		738	688	(\$100 (50)
Platoon blocked, %	0.569.////				2000 (1804) (1804) -	-	delesti. Milli	soroetis Louis		William III	signal sagrada di	
Mov Cap-1 Maneuver	915			1393	-	5 8 6	262	245	853	264	283	519
Mov Cap-1 Maneuver		_	######################################	-	-	-	262	245	-	264	283	
Stage 1	100 (100 € - 100 € 100 € 100 € 100 € 100 € 100 € 100 € 100 € 100 € 100 € 100 € 100 € 100 € 100 € 100 € 100 €			santa da sa		::00::25::/20::0 //44:/26::00 ■ :0	704	657		480	503	
Stage 2								==449=		- 695 <u>=</u>		455/457
- Jugur			THE STATE OF									
				was in the second						on.		
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.6			0			20.3			16.7		
HCM LOS	Seciescus militares	80166408480185	U0009400854900	880/18/60/89/89	entrenuent/s	etrouscopposition	C	sanaa-kentestri		C	3003/300u095:	saggava eskaragg
						ia (61 /41)			ST SE SES			
Minor Lane/Major Mvm	t 1	IBLn1	EBL	EBT	EBR	WBL	WBT	WBR:	SBLn1 S	BLn2		
Capacity (veh/h)		255	915	-		1393			264	488		888
HCM Lane V/C Ratio		0.075	- Carried Service September 1997	5005019500 •		0.001	-	58499(29)(-	0.068			
HCM Control Delay (s)		20.3	9.1			7.6			19.6	12.6	044003-048 08-000-04	
HCM Lane LOS	675554554VS	20.0 C	Α	50/655/659/6 •	79/59/59/59/59 -	Α.	50/0/200000000 -	91804169/2956 •	C	в В	VELSANDADI MEDDI	egalette (1000)
HCM 95th %tile Q(veh)		0.2	0.1			0			0.2	0.1		
	sucesi (uestes)	valeta n din Se	04/04/04/05/05	owner-ross	-cuent/jorsii	nepadipolasion (198	yaqquesiy silebilik	2-18-02C2-02E5E5	nerissa. Manada	estudentilistä.	vesiministi (1650)	umienteterikkilik

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	WBT	WBR	SBL	SBR						
Lane Configurations	Ŧ	†	٨		¥γ			و موروع کا در واقع موروع مورد و در و موروع در و مورد و در استان و در و د	والمساور والمراجع والمراجع والمساور والمساور		er er en	-01044-1000/00/00/01/00/04
Traffic Vol, veh/h	- 55	123	698	24	8	92						
Future Vol, veh/h	55	123	698	24	8	92	in second and the sec		::00:1980 : 880 : 1984 : 198	201/2011/2020/02/03/2018		
Conflicting Peds, #/hr	0	0	_ 0	_ 0	_ 0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop					020900983688	
RT Channelized	an and anti-more all f	None		None	•	None						
Storage Length	1250	- Poddadwa	- 2000/2007		0				powery groups by		secures de areete	200000000000000000000000000000000000000
Veh in Median Storage,	# -	0	0		0							
Grade, %	400	400	0	400	0	- 100			e andro väladeada.			Brand Adviso
Peak Hour Factor	100	100 0	100	100	100	100						
Heavy Vehicles, % Mvmt Flow	0 55	123	0 698	0 24	0 8	0 92						
MAIII LIOM	- 55	120	090	24	0	۵۷						E BORRES AND A STATE OF THE STA
	/lajor1		Aajor2	*****	Minor2							
Conflicting Flow All	722	0		0	943	710						
-Stage 1		•	•	•	710	•						
Stage 2	eranan yan yad	= Sveno to confrontito		≖ Paganayayya	233	= pagapaga <u>=</u> 20			ernogen gorgonyaya	stromanen en	:549189594989058880	294,500 (150 (150 (150 (150 (150 (150 (150 (
Critical Hdwy	4.1				6.4	6.2						
Critical Hdwy Stg 1	- 1448/1998/88	- 2001572087208	- 2017(250)(98)	- 89900000000	5.4	• 8890/6589/68			aci karancada saanca	2016:1811:1812:1813:1813:1813:1813:1813:1813	768768768768	\$45.000 (CA)
Critical Hdwy Stg 2	2,2	Participal and Section 1			5.4 3.5	3.3						
Follow-up Hdwy	2.2 889			-	3.5 294	د.د 437					iso netvidentos	
Pot Cap-1 Maneuver Stage 1	009				491	401 -						
Stage 2	Ki epain Keele Kanada Keele				810							
Platoon blocked, %	04.0994636565	banaan •	Salamiyasi. •		Web MAM	MO (MAGAGA)			L::24092::000:66940	Maring Andrews (1977)		
Mov Cap-1 Maneuver	889				276	437						
Mov Cap-2 Maneuver	***************************************	#5#4#5################################	-	econocione •	276	\$\$45\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$	evatern eigen (periody ein) en beken betitek hieren er.	igaga megangan tengan yang ang ang anang ra	a mannan man maa amaa ah maa	en kalan Mala mengelah dan	Albert and anger engine personal	one produce and a second of
Stage 1	((S) (•		.	-	491							
Stage 2	-				760	-						
Approach	EB		WB		SB							
HCM Control Delay, s	2.9		0		16.3							
HCM LOS					C						Microbyles phonographics (i)	
TOMEOU												
16 4 × V+				(Lieve	MINN	oni -				ero episcolippi (fer	** ***********************************	
Minor Lane/Major Mvm	I	EBL	EBT	WBT	1000000 00000 00000	SBLn1						
Capacity (veh/h)		889			-	418						
HCM Lane V/C Ratio	609500667	0.062			•	0.239						
HCM Control Delay (s)		9.3	•			16.3						
HCM Lane LOS	\$105004064	A			• 25/10/25/12/20	C 0.9						
HCM 95th %tile Q(veh)		0.2				U.9						GNEN GSTES

Intersection	00.7														
Int Delay, s/veh	29.7	FOT	E 00	14/51	MOT	MDG	NE	NOT	VIDD	001	001	000			
Movement Lane Configurations	EBL	EBT ♣	EBR	WBL N	WBT •1	WBR	NBL	NBT ∰	NBR	SBL ሻ	SBT 4	SBA			
Traffic Vol., veh/h	- '] - 4	681	- 8	- 0 - 0	⊶ 368	- 34	=11	• •••	- 3	231	- 3	-81			
Future Vol, veh/h	т 4	681	8	0	368	34	11	3	3	231	3	81			
Conflicting Peds, #/hr	0	0	2	2	000	0	_ 2	0	2	2	0	2			ingsin og kada (1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop			
RT Channelized			None			None			None			None			
Storage Length	500	morenegocoae	indenezaren erakia	400	-	antivertarionii	ente (i esta processor	oesayossa, avessar •	-	200	-	-	energani venere ac	the reductive description of the	STANDER COMMUNICADO ESTANOS
Veh in Median Storage	,# -	0	-		0			0	•	200	0	909 30	V9) (\$16		100000
Grade, %	•	0		-	0	-	-	0	-	-	0				
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100			
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0	and the second	anthorized becomes	unese orennaeree eer (8)
Mvmt Flow	4	681	8	0	368	34	11	3	3	231	3	81			
Major/Minor I	Vlajor1		١	/lajor2		1	Minor1			Vinor2					
Conflicting Flow All	402	0	0	691	0	0	1124	1097	689	1083	1084	387			
Stage 1					_	-	695	695	-	385	385				a Aspertment comme
Stage 2	-	-	-	-			429	402		698	699	er consistent en traction	-2000	ent de anarytetett verti	the the first state of the Land Co.
Critical Hdwy	4.1			4,1	_		7.1	6.5	6.2	7.1	6.5	6.2			
Critical Hdwy Stg 1	·	u Orași est a est de la constante	m Smootalida essecti	emasses dan 195	novice substitute in the	e-redadrosteros	6.1	5.5	en e	6.1	5.5		eresentistika	aktinasy menyagawa	tyraty rakety a kojetná
Critical Hdwy Stg 2	•	(•	•	•	0/65 S *	6.1	5.5		6.1	5.5	•			
Follow-up Hdwy	2.2	-	erastesastesast	2.2	504800004049889	-	3.5	4	3.3	3.5	4	3.3	encentares	x4056066888	s (1/4/10/10/10/10/10/10/10/10/10/10/10/10/10/
Pot Cap-1 Maneuver	1168		53865	913		-	184	215	449	~ 197	219	665			
Stage 1	- ::::::::::::::::::::::::::::::::::::	- 0/888/4989/49		• 8:038658560		• 000000000000000000000000000000000000	436	447	- 4050455555	642	614	. September	900000000000		
Stage 2							608	604		434	445	_			
Platoon blocked, %	1100	•		044		-	450	04.4	447	400	218	664			
Mov Cap-1 Maneuver	1166		•	911	•		159 159	214 214		~ 193 ~ 193	218	004			
Mov Cap-2 Maneuver					- 20180149140	- -	434	445		~ 193 - 640	614			Bedden station	syggelepsyddydd
Stage 1	. 6162 7 63						530	604	16 16 15 15 15 15 15 15 15 15 15 15 15 15 15	426	443	- -		7. ISBN 1881-188	
Stage 2		- -					300	004		720	410				
	_														
Approach	EB			WB			NB			SB					
HCM Control Delay, s	0			0			25.9		5/8/5	133.3					
HCM LOS	odania kastelaan	n/0005/5104799/608	Rowston Sandron (Sandron		55040905505400	5580050005000	D	kelindisonentiilijasi	0/20/03/5/05/5/5/	F	688056056		iaup 60 ozoso W6	entiles (Local Collecti	W/8800800000000000
			owacześció Administracji			500 (500 (500) Singapo (500)	res destinación Percesso			-grangetisti Serialen (teo					
Minor Lane/Major Mvm	t N	IBLn1	EBL	EBT	EBR	WBL	WBT	WBR:	SBLn1 (SBLn2					
Capacity (veh/h)		189	1166		•	911			193	619		6.75.65			
HCM Lane V/C Ratio		0.09	0.003	-	-	-	-	-	1.197	0.136					
HCM Control Delay (s)		25.9	8.1			0			177.5	11.7					
HCM Lane LOS		D	Α	-	-	Α	-	-	F	В					
HCM 95th %tile Q(veh)		0.3	0	•		0			12	0.5					
Notes															
~: Volume exceeds cap	acity	\$∙ D≏	lay exc	apye J	nne -	r. Comi	outation	Not Do	ofined	*· ΔII	maiory	olume in	platoor		
volume exceeds cal	<i>r</i> uoity	ψ, υσ	idy GAO	ocus ot	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Julianon	HOUDE	JIII IGU	2002 /NIL	11100011		Piulooi	Laconomic (A)	

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
			THE STATE OF THE S	WOIT	N/	OUL
Lane Configurations	ሻ	<u>ቀ</u>	^	CONTROL AND		00
Traffic Vol, veh/h	109	778	308	3	7	86
Future Vol, veh/h	109	778	308	3	7	86
Conflicting Peds, #/hr	_ 2	_ 0	0	2	_ 2	- 1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	and the second second second second	None	•	None	•	None
Storage Length	1250	-	-	-	0	-
Veh in Median Storage	# -	0	0		0	
Grade, %	#2s	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	109	778	308	3	7	86
MAINTLIOM	109	110	J00	J		00
Major/Minor N	Vlajor1		Major2		Vinor2	
Conflicting Flow All	313	0	-	0	1310	313
Stage 1		Significant S			312	•
Stage 2		-	-	-	998	•
Critical Hdwy	4.1			958/455945594	6.4	6.2
	ene nt.			eser freedig	5.4	
Critical Hdwy Stg 1		- Denistrator		- 4555375557575		- 979:5111:50:95:5
Critical Hdwy Stg 2		•			5.4	
Follow-up Hdwy	2.2	=	enteretente de par	e between twenty and	3.5	3.3
Pot Cap-1 Maneuver	1259	•	•		177	732
Stage 1	-	•	-	-	747	-
Stage 2				999 (1999 (1999) 489 (1999 (1999)	360	
Platoon blocked, %		-		-		
Mov Cap-1 Maneuver	1258		997576 <u>5</u>		161	730
Mov Cap-2 Maneuver	::::::::::::::::::::::::::::::::::::::				161	
					746	
Stage 1	-			50	103040304000411057	
Stage 2	- 12:27:09419:094	- vasonasidesso		Viinnesvest	328	
	8.86					
Approach	EB		WB		SB	
HCM Control Delay, s	1		0		12.4	
HCM LOS		\$5000000000000000000000000000000000000		A STORY STORY AND STORY	В	erangen gebook en en
TIONICO			sama a recordes to Después de la companya de la company			
						90:57 (45,445)
Minor Lane/Major Mvm	nt .	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)		1258				577
HCM Lane V/C Ratio	SEARGESTAND	0.087		1640-990-990- -	eren eren eren eren eren eren eren eren	0.161
HCM Control Delay (s)		8.1				12.4
HCM Lane LOS		and the second section of the second of the	700 MP 1105 To			ب.ء. B
	C 1500 1500 1500 1500 1500 1500 1500 150	A 0.3	- Berolanisky			0.6
HCM 95th %tile Q(veh		2224				Uh



	<i>></i>		*	•		4	*	†	<i>></i>	*	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Y 5	ĵ∍		*5	ĵ»			€}>		ኻ	1 >	
Traffic Volume (vph)	40	298	6	i	733	260	10	8	0	27	i	11
Future Volume (vph)	40	298	6	1	733	260	10	8	0	27	1	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.2	5.2	te (1000) et i same e sant et i i i	5.2	5.2	(3850) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	a personal a resulta a ser esta a race	5.2		5.2	5.2	25 x 100 x 2 x 2 x 2 x 1
Lane Util. Factor	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	
Flpb, ped/bikes	1.00	1,00		1.00	1.00			1.00		1,00	1.00	
Frt	1.00	1.00		1.00	0.96			1.00		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1729	1814		1721	1749			1771		1723	1570	·
Flt Permitted	0.15	1.00		0.57	1.00			0.86		0.75	1,00	
Satd. Flow (perm)	277	1814		1042	1749			1574		1353	1570	
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	298	6	1	733	260	10	8	0	27	1	11
RTOR Reduction (vph)	0	1	0	0	14	0	0	0	0	0	9	0
Lane Group Flow (vph)	40	303	0	1	979	0	0	18	0	27	3	0
Confl. Peds. (#/hr)			4	4					2	2		
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	. 0%	0%
Turn Type	Perm	NA	5-516	Perm	NA	59 (4 (5) 6	Perm	NA-		Perm	NA	
Protected Phases		4			8			2		and the second second	6	and the first section of the section
Permitted Phases	4			8	8 8 8 B	8 9 8 9	2			6		
Actuated Green, G (s)	40.5	40.5		40.5	40.5			10.2	tetas vivi turi tura utan turi virsu di	10.2	10.2	mesenanska tundak
Effective Green, g (s)	40.5	40.5		40.5	40.5			10.2		10.2	10,2	
Actuated g/C Ratio	0.66	0.66		0.66	0.66	r August e sestus dues est meste	na sa be nath-fallennan	0.17	TERMINEN SHOWS	0.17	0.17	Spanist of the Spanis
Clearance Time (s)	5.2	5.2		5.2	5.2			5.2		5,2	5.2	
Vehicle Extension (s)	3.0	3.0	anadi Probalanca da	3.0	3.0	ensorverserre ensor	A	3.0		3.0	3.0	estatteastan en en
Lane Grp Cap (vph)	183	1202		690	1159			262		225	262	
v/s Ratio Prot	n ver verene væren i helvere e sketse	0.17	en aner et transcomment e	de Andreas de Marie de Labora, de	c0.56	endanasi teresa tida	na kana kana kana kana a	44.485 <u>2.482</u> 55555	unio del cipo e fot ancho	designation designation designation designation designation designation designation designation designation de	0.00	4464664464646
v/s Ratio Perm	0.14			0.00	(10) (10) (10) (10)			0.01		c0.02		
v/c Ratio	0.22	0.25	00000000000000000000000000000000000000	0.00	0.84	650 mes ilmae 850		0.07		0.12	0.01	
Uniform Delay, d1	4.1	4.2		3.5	7.9			21.4		21.6	21.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	2200000000000
Incremental Delay, d2	0.6	0.1		0.0	5.8			0.1		0.2	0.0	
Delay (s)	4.7	4.3		3.5	13.7	lozonychokonych		21.6		21.9	21.3	
Level of Service	Α	. A		Α	B			. C		С	01.7	\$2000 (SDE
Approach Delay (s)		4.3	000000000000000000000000000000000000000	98.668868868	13.7		100000000000000000000000000000000000000	21.6			21.7	ADDRESS STORY
Approach LOS		Α			В			С			С	
Intersection Summary												
HCM 2000 Control Delay			11.7	Н	CM 2000	Level of S	Service		В			
HCM 2000 Volume to Capa	city ratio		0.70									
Actuated Cycle Length (s)			61.1		um of lost				10.4			
Intersection Capacity Utiliza	tion	Andreas (The Control of the	74.9%	IC	U Level c	f Service	estra countri di cumanni il 1889 e	engagara engagara an antara e	D		Deliyate and over 10 or e	Anggrade Color
Analysis Period (min)			15									
c Critical Lane Group												

Intersection																
Int Delay, s/veh	17.4															
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations	*5	₽			4			€}>			↔					
Traffic Vol, veh/h	60	219	26	1	874	21	97	0	5	7	0	115				
Future Vol, veh/h	60	219	26	1	874	21	97	0	5	7	0	115				
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop				
RT Channelized			None	.	•	None			None			None				
Storage Length	1250	-	-	-	-	-	*		-	-	-	-				
Veh in Median Storage	,# -	0		98.69.69 .	0	8 60 6 2 6		0	60 00 3		0	-		(S) (S) (S)		
Grade, %	-	0		-	0		-	0	-		0	-	200000000000000000000000000000000000000			
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100				
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0	SS STATE OF THE ST			The State of the S
Mvmt Flow	60	219	26	1	874	21	97	0	5	7	0	115				
	2000 Z.T.09	A88577.AS	ningin g s ac	384/05/1645/59				APINARIO (N. T.A.)	GOMBE W.T.C.	Respectation (1999)		anana pesta Talawa		020//6029/606	*30.000.0200.000	100001000
Major/Minor	Majari			vlajor2			Minor1			/linor2						
	Major1	^	************			00000///00000V///00000V//	~ ////	1040			1050	ODE				
Conflicting Flow All	895	0	0	245	0	0	1296	1249	232	1242	1252	885	82243838888	9629888888		
Stage 1							352	352		887	887				0.000 (550)(2)	
Stage 2	- ::::::::::::::::::::::::::::::::::::		-	_ 	# \$1508.0050958505	• ************************************	944	897	- ***********	355	365	- *************	A-1878/0999	September	- 4.08.994689.1608	096861046
Critical Hdwy	4,1			4.1			7.1	6,5	6.2	7.1	6.5	6.2				
Critical Hdwy Stg 1	encentral encoder	·	esta esta esta esta esta esta esta esta	economic mercennes	en e	=	6.1	5.5	=	6.1	5.5	-	oki parakete en	binerykkihingk	direction and second	anekanyisi in
Critical Hdwy Stg 2	-	,	•		•		6.1	5.5	- B	6.1	5.5	99.				
Follow-up Hdwy	2.2		-	2.2	-	-	3.5	4	3.3	3.5	4	3.3	et to attend to attend	a control to at Lathy	With the second section	doran mesa
Pot Cap-1 Maneuver	767			1333			140	175	812	153	174	347				
Stage 1	-	-	-	-	-	-	669	635	-	341	365	-			مداني بخامعة إحمار خارجيس مان	nave S. Crare S
Stage 2				_			317	361		666	627					
Platoon blocked, %		-	-		-	_										
Mov Cap-1 Maneuver	767	•	-	1333		•	~ 88	161	812	143	160	347				
Mov Cap-2 Maneuver		_	-	-	-	-	~ 88	161	-	143	160	-				
Stage 1		ulusi etaloh Gibari et a					617	585		314	365					
Stage 2	- Charles Common of the Color of the Color	-	-	-	·		212	361	-	610	578	` -			1	
															-99 kg kg	
Assessab	EB			WB			NB			SB						,,
Approach				and the contract of the contract			210.4									
HCM Control Delay, s	2			0			200000000000000000000000000000000000000	8 6 6		22.9						
HCM LOS		overviews:	BO 6000 (450a)	5005080085646	100005/0/65004		F	4906890696	000040505000	С	ASAS SASS SASSES	X5100045004000	Souskaker O			5055563
						50,650,650										
Minor Lane/Major Mvn	nt P	IBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1							
Capacity (veh/h)		92	767			1333	•		321			8 8 8				
HCM Lane V/C Ratio		1.109	0.078	•	_	0.001	-	-	0.38							
HCM Control Delay (s)	Annual Contract Contract	210.4	10.1			7.7	0		amount promise							
HCM Lane LOS	ana ya manga 19 an 19 an 19 an	F	В	en e	sunracciative (Sili	A	Α	-	C	an an an an in the control	. com com dell'alle	and the same that described		ph-7-ph-175751	a contratable de la c	a agrantità
HCM 95th %tile Q(veh)	6,8	0.3			0			1.7							
**************************************													c v 1100 d 1			
Notes	Action Control of the															
~: Volume exceeds cap	cacity	\$: De	lay exc	eeds 30)0s ·	+: Com _l	outation	Not De	efined	*: All	major v	olume in	platoc	n		

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL V	VBT NBI	NBR	
Lane Configurations	<u>}</u>		*****	<u>^</u>	7	
Traffic Vol, veh/h	213	19	0) <u> </u>	
Future Vol, veh/h	213	19			0	
Conflicting Peds, #/hr	_ 0	_ 0	_ 0) _ 0	
Sign Control	Free	Free None		Free Stop		
RT Channelized Storage Length	•	None	- N	lone -	- None - 0	
Veh in Median Storage	# 0			0 () -	
Grade, %	0	tin is Allahaban •	Artikaritatika •) -	taskulo iki, jera dia sasari Patatika Aba Masha kari tari tari kureng Pata kata dalah basa ba Masha terah dia Ka
Peak Hour Factor	100	100	100	100 100	100	
Heavy Vehicles, %	0	0	0		0 0	
Mvmt Flow	213	19	0	897 (0	
	/lajor1		Major2	Minor		
Conflicting Flow All	0	0	-		- 223	
Stage 1	-		•	-	•	
Stage 2 Critical Hdwy	**************************************	ger har drent	V (100 (100 (100 (100 (100 (100 (100 (10	vestimologija edile	- 6.2	
Critical Hdwy Stg 1	Garanese. •	551955413-61 •	::::::::::::::::::::::::::::::::::::::			
Critical Hdwy Stg 2			_			
Follow-up Hdwy	-	•	-		- 3.3	and the second s
Pot Cap-1 Maneuver		•	0	en e	0 822	
Stage 1	= Silderanger	Saudaksisesis	0		0 -	
Stage 2 Platoon blocked, %			. 0	-	0 -	
Mov Cap-1 Maneuver					- 822	
Mov Cap-2 Maneuver		ndivitanetas •	0;00;000;00;000;000 -	-		
Stage 1		-	-			
Stage 2			-		- 4	
Approach	EB		WB	N	3	
HCM Control Delay, s	0		0		0	
HCM LOS	er tit som en er er ett e	valendo e o o o elemento	es to to the description for	Heriota varia a rati di stati di st	4 	ra wrota heer a when brone he was a tree an abree da even a too Decate tagets remay. Alega a Notte crasta March
		Vicinio Vicinio				
Minor Lane/Major Mvm	t	NBLn1	EBT	EBR WB	T	
Capacity (veh/h)				i	•	
HCM Lane V/C Ratio	ag ngaggiggalek k	Secuelarer 200		≖ Versyngskiterierski		
HCM Long LOS		0	-	•		
HCM Lane LOS HCM 95th %tile Q(veh)		A	- 1915 (1915)	<u>-</u>		
LICIVI BOILL 70the C(VEH)	Developed in	enegalisati				

Intersection							
Int Delay, s/veh	0	0					
-			n e	viie:	VA (PS-T	A (C)	NCC
Movement	EBT		BR	WBL	WBT	NBL	NBR
Lane Configurations	₽				Ť		7
Traffic Vol, veh/h	201	01	11	0	897	0	0
Future Vol, veh/h	201	01	11	0	897	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	recombigation relies	ree	Free	Free	Stop	Stop
RT Channelized		- No			None		None
Storage Length	indicasticasticas -	89980.0X		WEEKSER VEE •			0
Veh in Median Storage	- ∋,# 0	n =			0	0	
		**************************************	(9089) (Sin	atteit/httpa:	ette kan tertasta garan takan	and the Color between	-
Grade, %	0		- (00%)	-	0	0	
Peak Hour Factor	100	or only words and only	100	100	100	100	100
Heavy Vehicles, %	0		0	0	0	0	0
Mvmt Flow	201	01	11	0	897	0	0
Molar/Miner	Majari		1	nin-n	ĭ	linari	
	Major1			ajor2	l)	/linor1	007
Conflicting Flow All	0	0	0	- Ionaleonaetien	- ::::::::::::::::::::::::::::::::::::	÷ ≃rassasisseso	207
Stage 1							
Stage 2	-	-	-	•	•	-	-
Critical Hdwy	_						6.2
Critical Hdwy Stg 1	-	-		-	-	-	
Critical Hdwy Stg 2			///				
Follow-up Hdwy	-	nestra estrates.	2:90:80286 •		::::::::::::::::::::::::::::::::::::::	-	3.3
Pot Cap-1 Maneuver				0		0	839
The Control of the Control of Con	PERSONAL PROPERTY OF THE			0	::::::::::::::::::::::::::::::::::::::	0	- -
Stage 1	- Valentarie	US\$4,6000000000000000000000000000000000000	846999996	0	90/09/09/09/09/09/09	0	onenetrikaleanen
Stage 2		ALCOHOLOGY				≥9909909 [] 3	
Platoon blocked, %		\$00076868090 5 05	-	U			estastinisiilis
	-			U			
Mov Cap-1 Maneuver	-		9999999000				
Mov Cap-2 Maneuver	ans communication	-					
	-	- - -		•	-		839
Mov Cap-2 Maneuver Stage 1	- -	- - -		•	-	-	839 -
Mov Cap-2 Maneuver	- -	- - -		•	-	- -	839 -
Mov Cap-2 Maneuver Stage 1 Stage 2	- -	- - - - - - - - -		- - - - -	-	-	839 -
Mov Cap-2 Maneuver Stage 1 Stage 2 Approach	- - - -	- - - -		- - - -	-	- - - - NB	839 -
Mov Cap-2 Maneuver Stage 1 Stage 2	- -	- - - -		- - - - -	-	-	839 -
Mov Cap-2 Maneuver Stage 1 Stage 2 Approach	- - - -	- - - -		- - - -	-	- - - - NB	839 -
Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s	- - - -	- - - -		- - - -	-		839 -
Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS	EB 0	- - - - - 0	-	- - - WB 0		- - - NB 0 A	839 -
Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s	EB 0	- - - -	-	- - - -	-		839 -
Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS Minor Lane/Major Mvn	EB 0	- - - - - 0	-	- - - WB 0		- - - NB 0 A	839 -
Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS Minor Lane/Major Mvn Capacity (veh/h)	EB 0	- - - - - 0	-	- - - WB 0		- - - - NB 0 A	839 -
Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS Minor Lane/Major Mvn Capacity (veh/h) HCM Lane V/C Ratio	- - - - EB 0	- - - - - 0		- - - WB 0		- - - - NB 0 A	839 -
Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS Minor Lane/Major Mvn Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)	- - - - EB 0	- - - - - 0	- - - - - -	- - - WB 0		- - - - NB 0 A	839 -
Mov Cap-2 Maneuver Stage 1 Stage 2 Approach HCM Control Delay, s HCM LOS Minor Lane/Major Mvn Capacity (veh/h) HCM Lane V/C Ratio	- - - - EB 0	- - - - - 0		- - - WB 0		- - - - NB 0 A	839 -

Intersection							
Int Delay, s/veh	1.5						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	₽			લી	ች _ን ኛ		
Traffic Vol, veh/h	161	40	2	828	69	3	
Future Vol, veh/h	161	40	2	828	69	3	
Conflicting Peds, #/hr	0	· 0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized		None	randina. Tanàna	None		None	
Storage Length	-	-	-	-	0	-	
Veh in Median Storage,	# 0			0	0		
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	161	40	2	828	69	3	
Major/Minor N	/lajor1		Vlajor2		Minor1		
Conflicting Flow All	0	0	201	0	1013	181	
Stage 1		_			181	101	
Stage 2	5/4/5/357/ -	_	-	-	832		
Critical Hdwy			4.1		6.4	6.2	
Critical Hdwy Stg 1	gaygggvar •		and the		5.4	3333 935)	en en betrekt de krijkeling van de krijde het de mendel de heter ander het en van de heter en de met de bestek De krijkeling de krijkeling van de krijde heter de mendel de heter ander heter bestekning de de krijkeling de
Critical Hdwy Stg 2					5.4		
Follow-up Hdwy			2.2		3.5	3.3	
Pot Cap-1 Maneuver			1383		267	867	
Stage 1			-	-	855	1000 XX 100 -	A british di Baran da bengan ara da da sa
Stage 2					431		
Platoon blocked, %	-	(0) 11/1 (0) (0) (0) (0) (0) (0) (0) (0) (0) (0)		98999899999	tettet Met	alla fe Vergelber	
Mov Cap-1 Maneuver			1383		266	867	
Mov Cap-2 Maneuver	2000000000000000		· · · · · · · · · · · · · · · · · · ·		266	经分别 医动脉性皮肤性坏疽	
Stage 1	-				855		
Stage 2	9904055546550 -		ovistini(14498) •		430	9,004,946,940,955	
				115/155/155/ 54 (45)			
Approach	EB		WB		NB		
HCM Control Delay, s	0		VVD 0		22.8		
	U.		U		Artificial Control	30,000,000	
HCM LOS			6900000000	eranta (esc	C		
			nestedikofi katolekolokoi				
Minor Lane/Major Mvm	t	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)		274			1383	•	
HCM Lane V/C Ratio		0,263	-		0.001	•	
HCM Control Delay (s)		22.8			7.6	0	
HCM Lane LOS	,	С	-	-	Α		
HCM 95th %tile Q(veh)		1		•	0		

	٠	-	•	•	←	1	*	†	<i>/</i> *	-	↓	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	f)		*5	ት			€\$		ነ ሻ	f }	
Traffic Volume (vph)	4	741	8	Ō	461	48	10	3	3	264	3	76
Future Volume (vph)	4	741	8	0	461	48	10	3	3	264	3	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.2	5.2	\$0.00 CONT. 100 CO. 10	ene i i provincio se contractive	5.2	11 11 702 11 11 11 11 11 11 11 11 11 11 11		5.2	-11,4114,7411111111111111111111111111111	5.2	5,2	
Lane Util. Factor	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	0.98	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	1.00			0.99			0.97		1.00	0.86	
Flt Protected	0.95	1.00			1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1729	1817			1794			1710		1724	1523	
Flt Permitted	0.38	1.00			1.00			0.87		0.75	1.00	
Satd. Flow (perm)	695	1817			1794			1529		1356	1523	
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)	4	741	8	0	461	48	10	3	3	264	3	76
RTOR Reduction (vph)	0	1	0	0	6	0	0	2	0	0	53	0
Lane Group Flow (vph)	4	748	0	0	503	0	0	14	0	264	26	0
Confl. Peds. (#/hr)			2	2			2		2	2		2
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA	68,620,081.00	Perm	NA	(a) (4) (b) (b)	Perm	NA	(e) (C) (C)
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.9	24.9			24.9			15.3		15.3	15.3	
Effective Green, g (s)	24.9	24.9			24.9			15.3		15.3	15.3	
Actuated g/C Ratio	0.49	0.49			0.49			0.30		0.30	0.30	
Clearance Time (s)	5.2	5.2			5,2			5.2		5.2	5.2	
Vehicle Extension (s)	3.0	3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	342	894			882			462		410	460	
v/s Ratio Prot		c0.41			0.28						0.02	
v/s Ratio Perm	0.01							0.01		c0.19		
v/c Ratio	0.01	0.84			0.57			0.03		0.64	0.06	an anna fi tha ann anna an
Uniform Delay, d1	6.6	11.1			9.1			12.4		15.3	12.5	
Progression Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.0	6.9			0.9			0.0		3.5	0.1	
Delay (s)	6.6	18.0			10.0		and the second decision of the second	12.5		18.7	12.6	and the state of the state of the state of
Level of Service	Α	В		3000 (50) (50) 30((50) (50) (50)	Α			В		В	В	
Approach Delay (s)		17.9			10.0			12.5	na ang antonion na taonan		17.3	
Approach LOS		В			Α			В			В	
Intersection Summary												
HCM 2000 Control Delay			15.2	Н	CM 2000	Level of S	Service		В			
HCM 2000 Volume to Cap	acity ratio	764974828978767476	0.76						94::149::5449:1 117 ,11981		261 2020 2012 2013 2013	9300380000000000
Actuated Cycle Length (s)			50.6	Si	um of lost	time (s)			10.4			
Intersection Capacity Utiliz		sa estarotativ (ve flagia	72.5%		U Level c		ven a principa para Sara Sar	alia de esta de	С	en provincia de frante 1825 (1945). Transporta	e (e) decement (1.0001.46)	na ang ang ang mang Panghal Pa
Analysis Period (min)			15									
c Critical Lane Group	, je vyena mesa vyeta prema 1960-	un per ar auto en alaba en 196				,,			19 - 2 - 10 - 10 - 10 - 10 - 10 - 10 - 10	en en la la la ración el recome en river	e a li para e a transfer	
r												

Synchro 9 Report Page 1 Future Total (2022)

Intersection												<u>.</u>				
Int Delay, s/veh	8.3											***************************************		www.vzwolowoznieko		900000000000
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations	ሻ	Ą	anekskar pi <u>u</u> s	004000000000000000000000000000000000000	4			4			➾		4000440464	100110000000000000000000000000000000000		\$255550E
Traffic Vol, veh/h	99	844	40	2	349	3	75	0	- 3	6	· 0	78 70				
Future Vol, veh/h	99	844	40 0	2	349	3 2	75 1	0	3 2	6 2	0	78 1	Shive over	950 Beerlade	opiografica	\$25555
Conflicting Peds, #/hr	2 Free	0 Free	Free	0 Free	0 Free	Free	Stop	0 Stop	Stop	Stop	Stop	Stop				99/35/AL
Sign Control RT Channelized	LIEE	riee -	None	riee		None	Olop _	olop -	None	Stop		None				
Storage Length	1250		-			-		66.550.656.6 •	-	#300\$76466 •	•	-				
Veh in Median Storage		0			0			0	8 /6 / .		0	-				
Grade, %	₹6%(Sections) -	0	-	-	0	-	-	0	-	-	0	-				S. S. C. S.
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100				
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0				
Mvmt Flow	99	844	40	2	349	3	75	0	3	6	0	78				
Major/Minor I	Vlajor1			Vajor2			Vinor1		1	Vinor2						
Conflicting Flow All	354	0	0	884	0	0	1457	1420	866	1423	1439	354				
Stage 1	-		•				1062	1062		357	357		is of the second			
Stage 2		-	-	-	-	•	395	358	-	1066	1082	_				nan e natus
Critical Hdwy	4.1			4.1			7.1	6,5	6.2	7.1	6.5	6,2				
Critical Hdwy Stg 1	esta serveta este este	energe state and a	m January and January	en en en en en en en en	= enconocidada	and some pare	6.1	5.5	- comproves	6.1	5.5		PRINCE NO. 174.	enengaraktor	raestoor astocation	55000000
Critical Hdwy Stg 2	•	- (a) (a) - (a)	- (a)	•	•	•	6.1	-5.5		6.1	5.5	•		646	\$ 42 SH &	
Follow-up Hdwy	2.2	MONEYA ROKEK	Sowerskarsk	2.2	= Sandokokokoko	Barrostrasisco	3.5	4	3.3	3.5	4	3.3	SAGRGANYSAY	9001/0081/4800	9550054694644655	K#2065019
Pot Cap-1 Maneuver	1216			774	9 - 65 - 65 T	Saucensen.	109	138	356	115	134	694			asa san satura	
Stage 1	• 1008-1008-100		- 973555505	- 261160 86018	- 86066606866	• 1658/00/4/554/6	273 634	303 631	- % % 1	665 271	632 296	-	ie salazie	30.70.000		\$408.6V
Stage 2 Platoon blocked, %	_			a	-	-	004	001		L 11	230					
Mov Cap-1 Maneuver	1215			773	-		90	126	355	106	- 122	692			0.50 x 50	
Mov Cap-2 Maneuver	-	900000000 •			-	599504502 •	90	126	-	106	122	-				888840
Stage 1			-				251	278		609	629	-				
Stage 2	•		-	-	-	-	560	628	-	246	272	-	-011/118641/05640			20030022200
												6203 840				
Approach	EB			WB			NB			SB						
HCM Control Delay, s	0.8			0.1			133.6			13.7						
HCM LOS				26/26/M.C.199	AU 99 545 556		F	19405768584		В	(933,030,050,052)	1956538860665046	5504455V6554V		S0000000000000000000000000000000000000	Bergestere.co
Minari ana Majar Men		VBLn1	EBL	EBT	EBR	WBL	NA/DT	WBR	001.44							
Minor Lane/Major Mvm	l I	and the second processing the		EDI	EDN	773	WOI	VVOR	496							
Capacity (veh/h) HCM Lane V/C Ratio		93 0.839	1215 0.081	S 150 150 7 1		0.003			0.169				5/15/16/			
HCM Control Delay (s)		133.6	8.2			9.7	0		13.7		000000000000000000000000000000000000000		ewerig			
HCM Lane LOS		F	0, <u>2</u> A	entre (de ili) •		3. <i>1</i> A	A		15.7 B	iseries (1969).					resulter i i i i i i i i i i i i i i i i i i i	standeri.
HCM 95th %tile Q(veh)		4.6	0.3			0			0.6						5 9 5 9	
	anders a deadar	selikeristi.Til	ummatet i	uzaj stapijškajiši	nggaran ing ikili dikilih	per septis Tili	agaatag ti ki	e plestegrafi ediladi.	umantită	ve protesta (1926)	ronunggate@Waddi	uu uu maaan sootiinia			erusenski filologiesk	are a same transfer of

Synchro 9 Report Page 1 Future Total (2022)

Intersection								
Int Delay, s/veh	0							
Movement	EBT EBR	WBL WBT	NBL NBR					
Lane Configurations	ቕ	^	*					
Traffic Vol, veh/h	825 29	0 355	0 0					
Future Vol, veh/h	825 29	0 355	0 0	engga et Brosslennead et so				
Conflicting Peds, #/hr	0 0	0 0	0 0					
Sign Control	Free Free	Free Free	Stop Stop		7024 (STATE STATE ST	on a d'Espaigne de la company de la comp		
RT Channelized	- None	- None	- None					
Storage Length Veh in Median Storage,	# 0 -	- 0	- 0 0 -					
Grade, %	0 -	- 0	6 0 - 0 -	kerrakan baharan da Part				AND CONTRACTORS ARE BOTH
Peak Hour Factor	100 100	100 100	100 100					
Heavy Vehicles, %	0 0	0 0	0 0	Haratola da barata d	eenta die Durlot i Neditse bat of it tole	en went to a to date of the other		u este submitar a la la Miles de la com-
Mvmt Flow	825 29	0 355	0 0					
e de la deservación de la estada	** ** * * * * ******** ****					***************************************		
Major/Minor N	Najor1	Major2	Minor1					
Conflicting Flow All	0 0		- 840					
Stage 1				55556	(5.75 (5.07 (6.75))			
Stage 2	-			Appropriate the contract of the contract of				
Critical Hdwy		-	- 6.2					
Critical Hdwy Stg 1	-							naan noonan na haana Santak Saladahaa
Critical Hdwy Stg 2			2					
Follow-up Hdwy			- 3.3			deleta en de la ciaza en la ciada en		are New Townstein ().
Pot Cap-1 Maneuver		0 -	0 368					
Stage 1		0 - 0 -	0 - 0 -				64080136069V86008	
Stage 2 Platoon blocked, %		U •	U		78.18.009.08.78.78.71			
Mov Cap-1 Maneuver			- 368					
Mov Cap-1 Maneuver								
Stage 1				A 30 00 00 00				
Stage 2	-				entiden i Austrian en die en gegester de gewone gegen gegen geg	ang manang mang pang pang pinggan pang pang bang bang	aaaaa aa aa aa aa aa aa aa aa aa ah aa aa	
Approach	EB	WB	NB					
HCM Control Delay, s HCM LOS	0	0	0 A					
TOM LOO								
Minor Lane/Major Mvm	t NBLn1	EBT EBR	WBT					
Capacity (veh/h)	-							
HCM Lane V/C Ratio	+ carangganggangganana caranca			ger versterkelse en				igas jangsang sajar kalangalaran.
HCM Control Delay (s)	0	•	•					
HCM Lane LOS	A	- Policia exterioration	• 690-391/2016/1916					
HCM 95th %tile Q(veh)								

Synchro 9 Report Page 2 Future Total (2022)

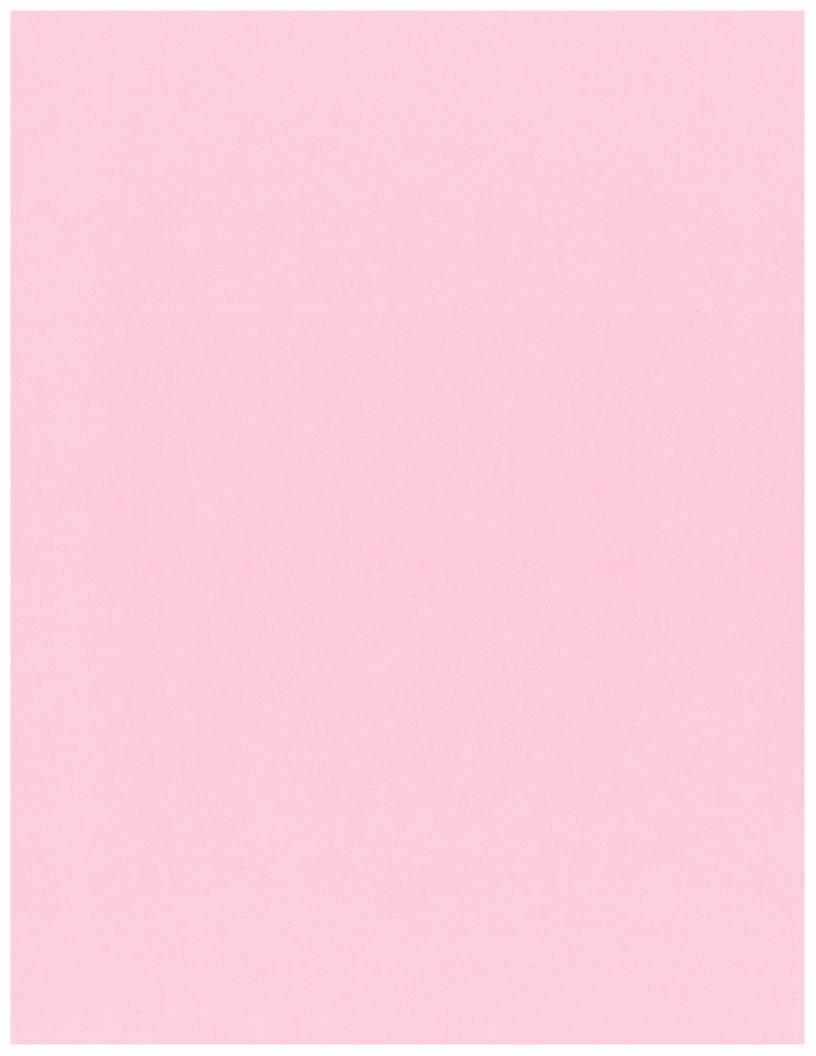
Intersection						
Int Delay, s/veh	0					
int Delay, S/Veri	U					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1,			^		7
Traffic Vol, veh/h	807	17	0	355	0	0
Future Vol, veh/h	807	17	0	355	0	0
		0	. 0	ანნ 0	0	0
Conflicting Peds, #/hr	0	per transcription of environment	valor consider connectivity.	CONTRACTOR STATE OF S	Grant market and a strategic rep-	gasonan pantan keming ta
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized		None		None		None
Storage Length	-	-		-	-	0
Veh in Median Storage	,# 0			0	0	•
Grade, %	0			0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
		17				An extrem traffers to
Mvmt Flow	807	11	0	355	0	, U
Major/Minor I	Vajor1	٨	Vajor2	ı	vlinor1	
Conflicting Flow All	0	0				816
	and gradient and			54945344554	9841605046616968	949600006060-6466
Stage 1		57007/4000				
Stage 2	#	·		e Januari (1905)	E	= 02000/0607 /070000
Critical Hdwy					•	6.2
Critical Hdwy Stg 1	-	_	-	-	-	-
Critical Hdwy Stg 2	•		•			
Follow-up Hdwy		. envesti (Section)			5;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	3.3
Pot Cap-1 Maneuver		\$9-55/9 <u>/2</u> /8	0		0	380
		87/868/885/88	sociations became when		0	
Stage 1	- 200525059245	- 80000880088899	0			/00/07/09/00/00/00/00/00
Stage 2	24 (229 (294 <u>)</u> 20 (29) (20) (4		0		0	
Platoon blocked, %				_		
Mov Cap-1 Maneuver					•	380
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	giorgiagais Solomologia					
Stage 2	eenseenseern -	ensennensiin -	::::::::::::::::::::::::::::::::::::::	BERTEIN SOUR	26600000000	.5051005000105000 -
Juge 2						
syculote parameter activities activities activities (a	de la companya de la					Alon Populario
Approach	EΒ		WB		NB	
HCM Control Delay, s	0		0		0	
HCM LOS	8.68.68 . 7.9	86066066046	PERSONATAS	Stave Spokenska	A	Web medical solution
LIOINI EOO				98000000000		
				Karagarajan		
	consequencias		EMONORION CONTRACTORIO	COD	WBT	
Minor Lane/Major Mym	1 1	VBLn1	ERT			
Minor Lane/Major Mvm	t I	VBLn1	EBT	EBR	11111	
Capacity (veh/h)	it 1	VBLn1	<u>EBT</u> -	COM .	•	
Capacity (veh/h) HCM Lane V/C Ratio		-	<u>EBT</u> - -	<u>EDN</u> - -	• • •	
Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)		- 0	<u>EBT</u> - -	- EDR - -	-	
Capacity (veh/h) HCM Lane V/C Ratio		-	<u>EBT</u> - - -		- - - -	

Synchro 9 Report Page 3 Future Total (2022)

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1>			લ	ķĄ	1,11,11,11,11,11,11,11,11,11,11
Traffic Vol, veh/h	746	60	3	301	53	2
Future Vol, veh/h	746	60	3	301	53	2
Conflicting Peds, #/hr	0	0	_ 0	_ 0	0	_ 0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized		None		None	-	None
Storage Length	· ·	_ 597650457676	_ ::::::::::::::::::::::::::::::::::::	- ::::::::::::::::::::::::::::::::::::	0	- Harasanan
Veh in Median Storage		esta esta esta esta. Esta esta esta esta esta esta esta esta e		0	0	
Grade, %	0	-	-	0	0	- 100
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	746	60	3	301	53	2
	Vlajor1		vlajor2	and the second second	Vinor1	
Conflicting Flow All	0	0	806	0	1083	776
Stage 1	3 72 5 - 0	Section (#			776	
Stage 2	-		<u>.</u>	-	307	-
Critical Hdwy			4.1		6.4	6.2
Critical Hdwy Stg 1	_	-	-	.	5.4	-
Critical Hdwy Stg 2					5.4	
Follow-up Hdwy	-		2.2	-	3.5	3.3
Pot Cap-1 Maneuver			828		243	401
Stage 1		-		<u></u>	457	
Stage 2					751	
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver		•	828	_	242	401
Mov Cap-2 Maneuver	-	-	-		242	-
Stage 1			•	•	457	•
Stage 2		-		-	748	en e
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		23.8	
HCM LOS	nisti Yi		renytte		_U.U	
HOW LOO						
						e telles (161)
Minor Lane/Major Mvn	it l	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		246			828	
HCM Lane V/C Ratio		0.224			0.004	-
HCM Control Delay (s)		23.8			9.4	0
HCM Lane LOS		С	-		Α	Α
HCM 95th %tile Q(veh)	0.8			0	

Future Total (2022)

Synchro 9 Report
Page 4



	A		7	4	4-	4	*	Ť	<i>></i>	\	Į.	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	1≽		ř	₽			4		ሻ	Þ	
Traffic Volume (vph)	41	268	7	1	576	279	11	8	0	28	1	12
Future Volume (vph)	41	268	7	1	576	279	11	8	0	28	1	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.2	5.2		5.2	5.2			5.2		5.2	5.2	
Lane Util. Factor	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	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00		1.00	1,00	
Frt	1.00	1.00		1.00	0.95			1.00		1.00	0.86	ner consultation of the
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1729	1812		1722	1731		100 m m m m m m m m m m m m m m m m m m	1769	wer harvern and of our endag	1724	1568	en an angenda ann a' a
Fit Permitted	0.19	1.00		0.59	1.00			0.86		0.75	1.00	
Satd. Flow (perm)	348	1812		1070	1731			1567		1352	1568	
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)	41	268	7	1	576	279	11	8	0	28	1	12
RTOR Reduction (vph)	0	1	0	0	24	0	0	0	0	_ 0	10	0
Lane Group Flow (vph)	41	274	0	1	831	0	0	19	0	28	3	0
Confl. Peds. (#/hr)			4	4					2	2		
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA :		Perm	NA NA		Perm	NA		Perm	NA	
Protected Phases		4		un nonemperature and menoral de	8	turnistaa saartassa erissa.	North Stage I Stage of Stage Constitution and	2		ek ethanike elada elektrolik kana	6	eerdadaast saasida
Permitted Phases	4			- 8			2			6		
Actuated Green, G (s)	29.9	29.9		29.9	29.9	nanna wasani a silawa sa sa	n na sanan kalangan yang sanat	10.1		10.1	10.1	AAL-Caspronies of v
Effective Green, g (s)	29.9	29.9		29.9	29.9			10.1		10.1	10.1	
Actuated g/C Ratio	0.59	0.59	tarin samatos et et em Gataen	0.59	0.59	sections continues (outstantes (trecentes)	0.20	mawaan oo si ilaa	0.20	0.20	eren er en toesen er
Clearance Time (s)	5.2	5.2		5.2	5.2			5.2		5.2	5.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		and the state of t	3.0		3.0	3.0	Secure and Secure as
Lane Grp Cap (vph)	206	1074		634	1026			314		270	314	
v/s Ratio Prot	during specially during to the day in Section	0.15	ation intentions	re deservadores de estadores de e Constituição de estadores de est	c0.48	anas na garnang nagga	encertament mand stands	en negative	estatenta bilandari ora		0.00	SECURES GRADE
v/s Ratio Perm	0.12			0.00	8/86/68/68			0.01		c0.02		
v/c Ratio	0.20	0.25		0.00	0.81	e important est construit de la construit de l La construit de la construit d		0.06		0.10	0.01	5er50rrass/65113
Uniform Delay, d1	4.7	4.9		4.2	8,0			16.3		16.5	16.1	
Progression Factor	1.00	1.00		1.00	1.00	::::::::::::::::::::::::::::::::::::::	Santin Armaid Agentus Arc	1.00	Samo model	1.00	1.00	ajaasiilatoik
Incremental Delay, d2	0.5	0.1		0.0	4.9			0.1		0.2	0.0	
Delay (s)	5.2	5.0	918 × 198080 8980 918	4.2	13.0	(aguaganistas	818564858656565	16.4		16.6	16.2	BOGGERAGESTAN
Level of Service	Α	A		A	В			В		В	B	
Approach Delay (s)		5.1	2020 BERSESE		13.0	325255500550055		16.4		U601/00000000000	16.5 B	
Approach LOS	C. 151 (S. 151)	Α			В			В			D	
Intersection Summary												
HCM 2000 Control Delay			11.1	H(CM 2000	Level of S	Service		В			
HCM 2000 Volume to Capa	city ratio	Gerfant en kalende kennen	0.63	seessa eesta ka		ng New Geographic Process	8189.8959W684W6	S119 SD (59 W S2 PA	egeography neg	94939865746565F	61455046c0c0c0c	x60164489945
Actuated Cycle Length (s)			50.4		ım of lost				10.4			
Intersection Capacity Utiliza	ition	5389598	67.4%	IC	U Level C	of Service		Parestante	С	angagegyarkanek		Benganasi (
Analysis Period (min)			15									
c Critical Lane Group												

Synchro 9 Report Future Total (2027) AM

Int Delay, seven													
Int Delay, s/veh	Intersection												
Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR Lane Configurations Traffic Vol, veh/h 55 195 26 1 767 24 97 0 5 8 0 92		8.7											
Lane Configurations			Fnt	655	ALIEN.	MOT	WEE	MIDI	NOT	NDO	ODI	ODT	ODD
Traffic Vol, veh/h 55 195 26 1 767 24 97 0 5 8 0 92 Future Vol, veh/h 55 195 26 1 767 24 97 0 5 8 0 92 Future Vol, veh/h 55 195 26 1 767 24 97 0 5 8 0 92 Future Vol, veh/h 55 195 26 1 767 24 97 0 5 8 0 92 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				EBH	MAR		WBH	INPL		NBH	DBL		SBH
Future Vol, ven/h				portosini ili	Someosoos Filolo		SOURCE WEST		SECONDENSION FOR	eran dan a Se		eerste de beste de beer de	
Conflicting Peds, #/hr		estavitme fartemetra po-	e SPOSSON AND AND AND AND AND AND AND AND AND AN	eganeren eranan) in	kontelestatuseivat.		personal descriptions of the second section of the section	ngaga tagagata managata	design designation		properties and property for the Company	A. C.	ilga parina da la primi per a di Silana da Silana d
Sign Control Free Stop Stop Stop Stop Stop None	The state of the second of the state of the second of the		and the second second			remarka manere e							
None	and the second section of the sectio					contractores of the	depolentalment menhand	permetalization services	60000000000000000000000000000000000000	t province a video con su Punca de a			
Storage Length 1250		Free	Free		Free	Free		Stop	Stop		Stop	Stop	and the same and the same of t
Veh in Median Storage, # - 0	 Professional Control and State State Control and State Stat	00005000000000		None			None			None			None
Grade, %	Storage Length	1250	-	-	-	-	-	_	-	-	-	-	
Peak Hour Factor	Veh in Median Storage	,# -	0			0		•	0	_	-	and the state of t	
Heavy Vehicles, %	Grade, %	. .	0										
Major/Minor Major1 Major2 Minor1 Minor2 Minor2 Minor3 Minor4 Major5 Minor5 Minor5 Minor5 Minor5 Minor5 Minor6 Major6 Minor6 Major6 Minor6 Minor7 Major7 Minor7 Minor7 Major8 Minor8 Minor	Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Major/Minor Major2	Heavy Vehicles, %	0	0	0	0	0	0	0	0				
Conflicting Flow All 791 0 0 221 0 0 1145 1111 208 1102 1112 779	Mvmt Flow	55	195	26	1	767	24	97	0	5	8	0	92
Conflicting Flow All 791 0 0 221 0 0 1145 1111 208 1102 1112 779													
Conflicting Flow All 791 0 0 221 0 0 1145 1111 208 1102 1112 779	Major/Minor	Majort			(roich			Minort	•	A	Jinor2		
Stage 1			Λ	****		Λ		***************************************	1111			1110	770
Stage 2 - - - - - 827 793 - 321 331 - Critical Hdwy 4.1 - - 4.1 - - 7.1 6.5 6.2 7.1 6.5 6.2 Critical Hdwy Stg 1 - - - - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 5.5 - 6.1 3.5 4 3.3 3.5 4 3.3 3.5 4 3.3 3.5 4 3.3 3.5 4 3.3 3.5 4 3.3 3.5 4 3.3 3.9 4 0.3 9.0 6.0 6.7 9.0 6.0 7 9.0	and the contract of the second of the second contract of the second of t	344634466469466	58600548485995	U Section	221	cacadas-rentrata a	PHISGIPPE PROPERTY.			lestervicestelessie	Committee Contract	a to the second con-	000c04986646849cdb
Critical Howy 4.1 - - 4.1 - - 7.1 6.5 6.2 7.1 6.5 6.2 Critical Howy Stg 1 - - - - - 6.1 5.5 - 6.1 5.5 - Critical Howy Stg 2 - - - - 6.1 5.5 - 6.1 5.5 - Follow-up Hdwy 2.2 - - 2.2 - - 3.5 4 3.3 3.5 4 3.3 Pot Cap-1 Maneuver 838 - - 1360 - - 178 211 837 191 211 399 Stage 1 - - - - - 369 403 - 695 649 - Mov Cap-1 Maneuver 838 - - 1360 - - 130 197 837 180 197 399 Mov Cap-2 Maneuver -	-245/11040000000-0111140141 - 414446143141204232-0115/1900000		and the second standard by			entre di jugantan			\$1.00 mg 1.5 mg 1.5 mg 1.5 mm		Charles of the Control of the Contro		<u> </u>
Critical Hdwy Stg 1		- 848884848	907-54659/65	Dominio	- // // / / - / / / / / / / / / / / / /	Garlinerekkiere	697445948894			ം ഹ ഹ			
Critical Hdwy Sig 2 6.1 5.5 - 6.1 5.5 - Follow-up Hdwy 2.2 2.2 3.5 4 3.3 3.5 4 3.3 Pot Cap-1 Maneuver 838 1360 178 211 837 191 211 399 Stage 1 698 657 - 391 408 - Stage 2 369 403 - 695 649 - Platoon blocked, % 369 403 - 695 649 - Platoon blocked, % 1360 1300 197 837 180 197 399 Mov Cap-1 Maneuver 838 1360 1300 197 837 180 197 399 Mov Cap-2 Maneuver 652 614 - 365 408 - Stage 2 652 614 - 365 408 - Stage 2 284 403 - 646 606 Stage 2 284 403 - 646 606		4.			4.1		redo media deserba	COLONA DA COLO DA VARIA DA VA	2002/04/2017/400-20	٥.٢	wasananda masan	ternor mores neces	DANIES DE LA CONTRACTOR D
Follow-up Hdwy 2.2 - 2.2 - 3.5 4 3.3 3.5 4 3.3 Pot Cap-1 Maneuver 838 - 1360 - 1778 211 837 191 211 399 Stage 1 698 657 - 391 408 - Stage 2 369 403 - 695 649 - Platoon blocked, % 1360 1360 197 837 180 197 399 Mov Cap-1 Maneuver 838 - 1360 130 197 837 180 197 399 Mov Cap-2 Maneuver 652 614 - 365 408 - Stage 2 652 614 - 365 408 - Stage 2 652 614 - 365 408 - Stage 2 284 403 - 646 606 - Stage 2 284 403 - 646 606		-		- 34855535	- 14 16 16 16 16 16 16 16 16 16 16 16 16 16		::::::::::::::::::::::::::::::::::::::			<u>-</u>			energi erasikan
Pot Cap-1 Maneuver			•	•		991/95/00594	669068646666	antigade to est entre est es	astronomicals.		Decree Medical Control	Assessment and Control of the Control	
Stage 1			- 60355005508	- 766866868		c5404584094840	48000000000	and the second second		A REST OFFICE AREA			
Stage 2 - - - - 369 403 - 695 649 - Platoon blocked, % - <	2 - 1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	ಶಿವರ			1360			22 20 11 10 11 12 12 12 12 12 12 12 12 12 12 12 12	>=====================================	- 03/	entrated by the fact that the fact of the		3963636743355555555
Mov Cap-1 Maneuver		- 50475069646	- 0000995550		- 	e/ws/sec				- 95501055510568			valen annoveren na Mercei Ava
Mov Cap-1 Maneuver 838 - - 1360 - - 130 197 837 180 197 399 Mov Cap-2 Maneuver - - - - - - 130 197 - 180 197 - Stage 1 - - - - - 652 614 - 365 408 - Stage 2 - - - - - - 284 403 - 646 606 - Approach EB WB NB SB - - 403 - 646 606 - HCM Control Delay, s 1.9 0 85.2 18.6 - - C -			_	<u>.</u>				369	403		695	649	
Mov Cap-2 Maneuver -	and the second of the second o				4000		6901806806900			604	32.2		000
Stage 1 - </td <td></td> <td></td> <td>•</td> <td>S (55 (5 €)</td> <td>1360</td> <td></td> <td></td> <td>and the second of the second o</td> <td>a a seguido (de comencia de actividade a constituido de actividade a constituido de actividade a constituido a</td> <td>December of the Control of the Contr</td> <td></td> <td>and the first of a street of the street of t</td> <td>***************************************</td>			•	S (55 (5 €)	1360			and the second of the second o	a a seguido (de comencia de actividade a constituido de actividade a constituido de actividade a constituido a	December of the Control of the Contr		and the first of a street of the street of t	***************************************
Stage 2		entanentanian en	- 460:270:00:00	- Selatinsona	- constanta	==95495956943	68905666698668		total market and a	etocentococtoresvi			orosandorevador
Approach EB WB NB SB		ni ini anna ani masa	•					Circle Menor State Continues in	24/2/2015/2014/2014/2014/2014	NEEDS GESTAFFEIGE			www.
HCM Control Delay, s 1.9 0 85.2 18.6 HCM LOS	Stage 2	ecurativati reksivess	enressen résource	90,000,000,000,000	- 15101000010100460	onikarinskos	_ vandosarenan	284	403		646	606	- 9795894955938949
HCM Control Delay, s 1.9 0 85.2 18.6 HCM LOS F C C													
HCM Control Delay, s 1.9 0 85.2 18.6 HCM LOS F C C	Approach	EB			WB			NB			SB		
Minor Lane/Major Mvmt NBLn1 EBL EBT EBR WBL WBT WBR SBLn1 Capacity (veh/h) 136 838 - - 1360 - - 364 HCM Lane V/C Ratio 0.75 0.066 - - 0.001 - - 0.275 HCM Control Delay (s) 85.2 9.6 - - 7.6 0 - 18.6 HCM Lane LOS F A - A A - C					CONTRACTOR (100 CONTRACTOR (10								
Minor Lane/Major Mvmt NBLn1 EBL EBT EBR WBL WBT WBR SBLn1 Capacity (veh/h) 136 838 - - 1360 - - 364 HCM Lane V/C Ratio 0.75 0.066 - - 0.001 - - 0.275 HCM Control Delay (s) 85.2 9.6 - - 7.6 0 - 18.6 HCM Lane LOS F A - A A - C		5-551. 'Y 5		76/67/0866									
Capacity (veh/h) 136 838 1360 364 HCM Lane V/C Ratio 0.75 0.066 0.001 0.275 HCM Control Delay (s) 85.2 9.6 7.6 0 - 18.6 HCM Lane LOS F A A A - C	TIOW LOO									warestage			
Capacity (veh/h) 136 838 1360 364 HCM Lane V/C Ratio 0.75 0.066 0.001 0.275 HCM Control Delay (s) 85.2 9.6 7.6 0 - 18.6 HCM Lane LOS F A A A - C													
HCM Lane V/C Ratio 0.75 0.066 - - 0.001 - - 0.275 HCM Control Delay (s) 85.2 9.6 - - - 7.6 0 - 18.6 HCM Lane LOS F A - A A -		it 1		The state of the state of the	EBT			WBT	WBR				
HCM Control Delay (s) 85.2 9.6 7.6 0 - 18.6 HCM Lane LOS F A A A - C			136	838		•	1360	-		364			
HCM Lane LOS F A A A - C	HCM Lane V/C Ratio		0.75	0.066	-	-	0.001		-	0.275			
HCM Lane LOS F A A A - C	HCM Control Delay (s)		85.2	9.6	ynayanean Galeens		7,6	0		18.6	56/69/69 56/69/69		
	HCM Lane LOS			Α	-	-	Α	Α	-				
HCM 95th %tile Q(veh) 4.4 0.2 0 1.1	HCM 95th %tile Q(veh)	1	4.4	0.2			0			1.1			

Synchro 9 Report Page 1 Future Total (2027) AM

Intersection							
Int Delay, s/veh	0						
	EBT EBR	WBL WBT	NBL NBA				
Lane Configurations	⅓ 189 19	↑ 0 793	ام 0 0				
Traffic Vol, veh/h Future Vol, veh/h	189 19	0 793	0 0				
Conflicting Peds, #/hr	0 0	0 0	0 0				
Sign Control	Free Free	Free Free	Stop Stop		Charles and the face to the fitting the		and a state of the angle of the a
RT Channelized	- None	- None	- None				
Storage Length Veh in Median Storage,	 # 0 -	0	- 0 0 -				
Grade, %	0 -	- 0	0 -		SES RELEASED AND DE POLITAÇÃO A COMPANSA A CO	43) A Charles de la	Hypolici (alberille 64
Peak Hour Factor	100 100		100 100				
Heavy Vehicles, %	0 0	0 0	0 0	re-e-energi	era jedy ma test saken katalone et et elektrik (i.e.).	Assertas de la basa de la casa de	(1800), a spanski pratora
Mvmt Flow	189 19	0 793	0 0				
							7
			Minor1				
Conflicting Flow All Stage 1	0 0		- 199				
Stage 2							
Critical Hdwy			- 6.2				
Critical Hdwy Stg 1			energia su energia esta esta en en en en en entre en en entre en entre en en entre en entre en entre en entre en en entre en en entre en		a a um a 1 m y mai Drivarm di vide Gavardim Demandio d'ora	para annual que escuel rapidad en Artifena est	rene e e e de la consecue de e
Critical Hdwy Stg 2							
Follow-up Hdwy Pot Cap-1 Maneuver		0 -	- 3.3 0 847				
Stage 1		0 -	0 -				
Stage 2	-		0 -				
Platoon blocked, %			eresa ere ere salara eresa ere ere eresa antaño ere				ALL MARKET PARTIES AND THE
Mov Cap-1 Maneuver			- 847				
Mov Cap-2 Maneuver Stage 1							
Stage 2							
Ž							
Approach	EB	WB	NB				
HCM Control Delay, s	0	0	0				
HCM LOS		n dah dahatan dahiye Copile	A	og gant beti er diner kon er Spril tyd kir grin weled kr			1.004(5.04.05)(15.55)
Minor Lane/Major Mvmt	NBLn1	EBT EBR	WBT				
Capacity (veh/h)	<u>-</u>		-				
HCM Lane V/C Ratio HCM Control Delay (s)	- 0	 	- 2000 2000 2000				
HCM Lane LOS	A	and the first of t					262 (1941 (1946) / 1925 (1945 /
HCM 95th %tile Q(veh)		2875318631863600 ₋ 68859669					

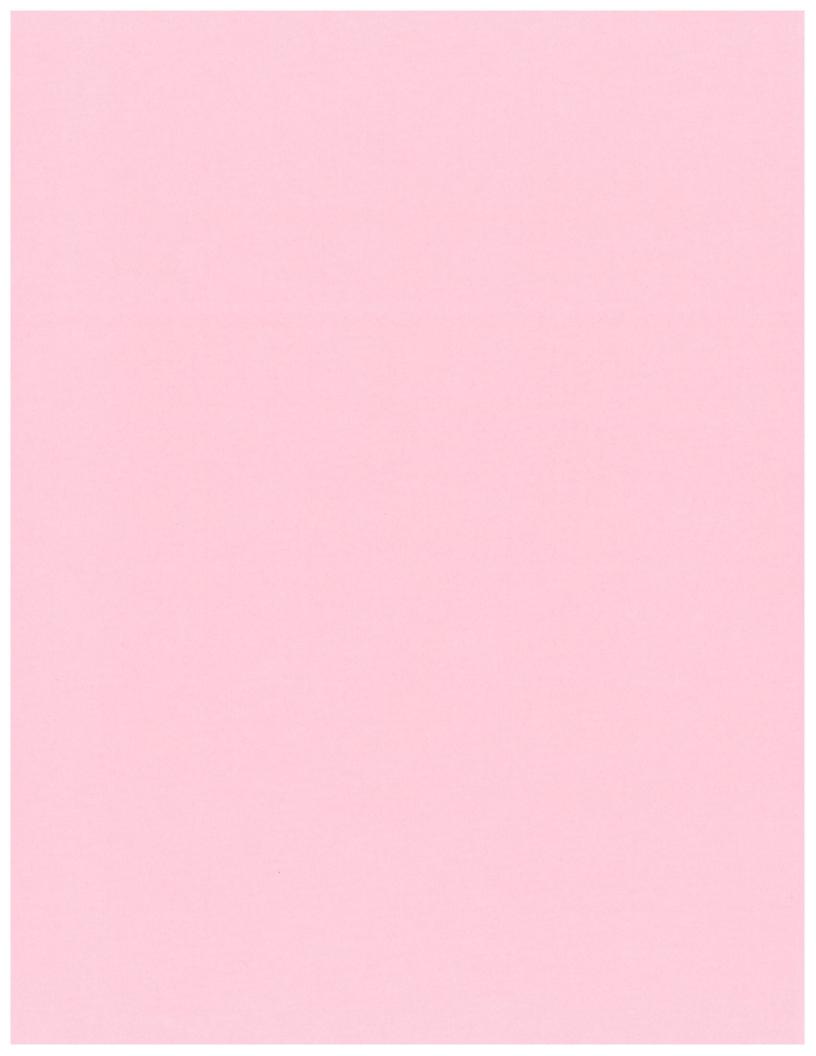
Future Total (2027) AM Synchro 9 Report Page 2

					Pww.					
Intersection										
Int Delay, s/veh	0									
Movement	EBT	EBR	WBL WBT	NBL N	BR					
Lane Configurations	<u></u> }	- FDII	**************************************	NDC N	/					
Traffic Vol, veh/h	ייו 177	11	0 793	0	0				Buss Buss	
Future Vol, veh/h	177	11	0 793	0	0					
Conflicting Peds, #/hr	0	0	0 0	Ö	0					
Sign Control	Free		Free Free	underlanden) mer Menderenden	top					
RT Channelized		and the second section of the second	- None	- No						
Storage Length	-	***************************************		energene en	0					santabiharian ana akama
/eh in Median Storage	e.# 0	-	- 0	0	•					
Grade, %	0		- 0	0.4354443000.000.000.00.00.0000	-					(Compagno de Servicio de S
Peak Hour Factor	100	100	100 100	and the second second second	100					
Heavy Vehicles, %	0	0	0 0		0			and the second second production of the first		
Vivmt Flow	177	11	0 793		0					
The state of the s	.,									
Major/Minor	Major1	M	ajor2	Minor1						
Conflicting Flow All	0	0			183					
Stage 1				Respondentable						
Stage 2		•		•	-	internation of the state of the		300575010545641860418661		
Critical Hdwy	_				6.2					
Critical Hdwy Stg 1	ryskinch korker •	padinesii selendeed •	-	rikok alto eretintoloriko. •			riecelle-essentiatellite	a, atten, at popul est est est est est	300-1440-1147-1447-1447-1447-1447-1447-14	
Critical Hdwy Stg 2	•			-					3 5 5 6	
Follow-up Hdwy	-	-		•	3.3					
ot Cap-1 Maneuver			0 -	0 8	365					
Stage 1	-		0 -	0	-					
Stage 2	<u>.</u>		0 -	0						
Platoon blocked, %	-	-	-							
Nov Cap-1 Maneuver	-	•		- 8	365				3 3 3 3	
Mov Cap-2 Maneuver	_	-		·			terminente tenenda italia eta eta eta eta eta eta eta eta eta et		anno Cross Sound (of more retirely for	
Stage 1				-						
Stage 2		Amerikan esteratusak		Televisiones veriore	• HESTOREN FORMANDOS (A)					
)pproach	EΒ		WB	NB						
HCM Control Delay, s	0		0	0						
HCM LOS		September 200 September 20	er on the state of	Α	***************************************					
Ainor Lane/Major Myrr	at I	VBLn1	EBT EBR	WBT						
vilnor carre/wajor wwn Capacity (veh/h)	n I		LUI EDA	WUI						
Sapacity (ven/n) ICM Lane V/C Ratio		•		-					-95 (S) (S) (S)	
		- 0		- 					150100000000000000000000000000000000000	
ICM Control Delay (s) ICM Lane LOS										
1CM Lane LOS 1CM 95th %tile Q(veh	1	A	• •	• •	gregoria (i		6,6,6,6			
IOM SOUT VOIDE OF A]									

Synchro 9 Report Page 3 Future Total (2027) AM

									·	***	
tersection											
t Delay, s/veh	1.4										
ovement	EBT	EBR	WBL	WBT	NBL	NBR					
	A CONTRACTOR OF THE PARTY OF TH	EUN	AADL	<u>wor</u> स	NDL NDL	ווטא					
ne Configurations affic Vol, veh/h	∱ 137	40	2	~ 1 724	·T· 69	3					
anic voi, ven/n iture Vol, veh/h	137	40 40	2	724 724	69	3 3					70 600 800 800 80
onflicting Peds, #/hr	0	40 0	0	- 0	09	0					
gn Control	Free	Free	Free	Free	Stop	Stop					
Gir Control T Channelized	1100			None	Olop •	None					
orage Length	#150 HS 516 -	INOITE		-	0	-	26609 65679 FR056				\$
eh in Median Storage,	# 0			0	Ö						
rade, %	0		rididhada •	0	0	Francisco (Contractor)	985440 EARCH AR	Participate Control Graph Bib	klerik lelatorinkanska oktober	trus (1986-septembris 1990-1997)	ar, golaka a tati ba
eak Hour Factor	100	100	100	100	100	100					
eavy Vehicles, %	0	0	0	0	0	0	a v sturet, SP Eur C		e e nombe en destreto do los	e graeu gale e e tyr y righte frits Eutrisen)	and the street of the street o
mt Flow	137	40	2	724	69	3		an e transferigen a eerstele v Angelegen een anderstele			La securit de l'actives de Payves a vera verside
parparenta da Rigir Colorida (1969-1964)	ali veta in Turbi de	artina I,Titl	escara i Telli	arge sattleft 9	್ಯಾಗಿಯನ್ನು ಪ್ರತಿಕ್ಕ	van upang kitap tabah metalik t	enterior per di ser al tres	este en	11 - 25 - 24 - 24 - 25 - 25 - 25 - 25 - 25	a espara a transferio de la composição de La composição de la composição	e e i i a su superiorent dan alt
jor/Minar M	lajor1	ı	Major2	ı	Minor1						
inflicting Flow All	0	0	177	0	885	157					
Stage 1	eunoselvenia-ee	· ·	Organizations (CD)	Ganner and Tar	- 157	107					
Stage 2			•	•	728	-					Salet control of the salet con
tical Hdwy	105651-88099		4.1		6.4	6.2	2009, MARIO (50) (50)				
tical Hdwy Stg 1	egiesii se en •	Pergradi karige •	gaprakter •	ATHEROPHIA -	5.4	-	of the states are seen	er dere etter blev berete b	09/01/3/19/3/19/02/19/3/19/3/19/3/	BH Avistrija Posta Dirivit SAN Abbah	ergik turkgi dik diki tur tu dikir kilik
tical Hdwy Stg 2					5.4	2 8 8 8 8 B					
llow-up Hdwy	aritiriya galar •		2.2		3.5	3.3	e e fille e gregoria (ne pe en gre e d	a gregor gregoristas per es produceres e		en parameter en	
Cap-1 Maneuver		4. S. S.	1411		318	894					
Stage 1		and the soll in the end to	-	- 1-11	876			and the second second second second	,		
Stage 2		200 (000 (000) 200 (000 (000)			482						
atoon blocked, %	-	•		-							
v Cap-1 Maneuver	•		1411	•	317	894					
ov Cap-2 Maneuver	-	-	-	-	317		anna sata est e co	many to promit the Control of the	na ann ann ann an an ann ann an an an an		esan Nassan Nassan Series
Stage 1	negasia)	•	-		876				depospico <u>si</u> ppopoles		
Stage 2		SCHOOL SECTION	-	Terri saayii aaris	481						
er tre er affret annes an med tre er e			The state of the s								
proach	EB		WB		NB						
M Control Delay, s	0		0		19.1						
MLOS					С					and the second s	er automorphism en
or Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT					
pacity (veh/h)		326	-		1411	-					
M Lane V/C Ratio		0.221	nangingan •	Transferration of the second	0.001	ecologic per estat (4 est 1). •	er og vætsterfillige	was miss the man set (APP).	, autoriar ya umang lahung tahun 1955 tahun 1965 tahun	g a consistent perme central to establish to me 400 Mi	
M Control Delay (s)		19.1	1940 Maria (1940) 1851 Maria (1941)		7.6	. 0					
M Lane LOS		C	e santa ya 1915 ili. •	and Gelitikali.	A	A	ng ngarang kangangan bandak di S	an authorite at the reset (1969) See (1969)		и на в него сови сонио и в негий и уповой болебо с	uus vaata askat keepi sii teelii.
M 95th %tile Q(veh)	runa takturun kasas aksuka	0.8	cumeann (agene	9-community	0	etheraniche (na Supracionite Communication		ti tuntene e reteritorio dell'ume eti escettico e	and the second s	entre de la companya	atiti - oa twaratike 64 was

Synchro 9 Report Page 4 Future Total (2027) AM



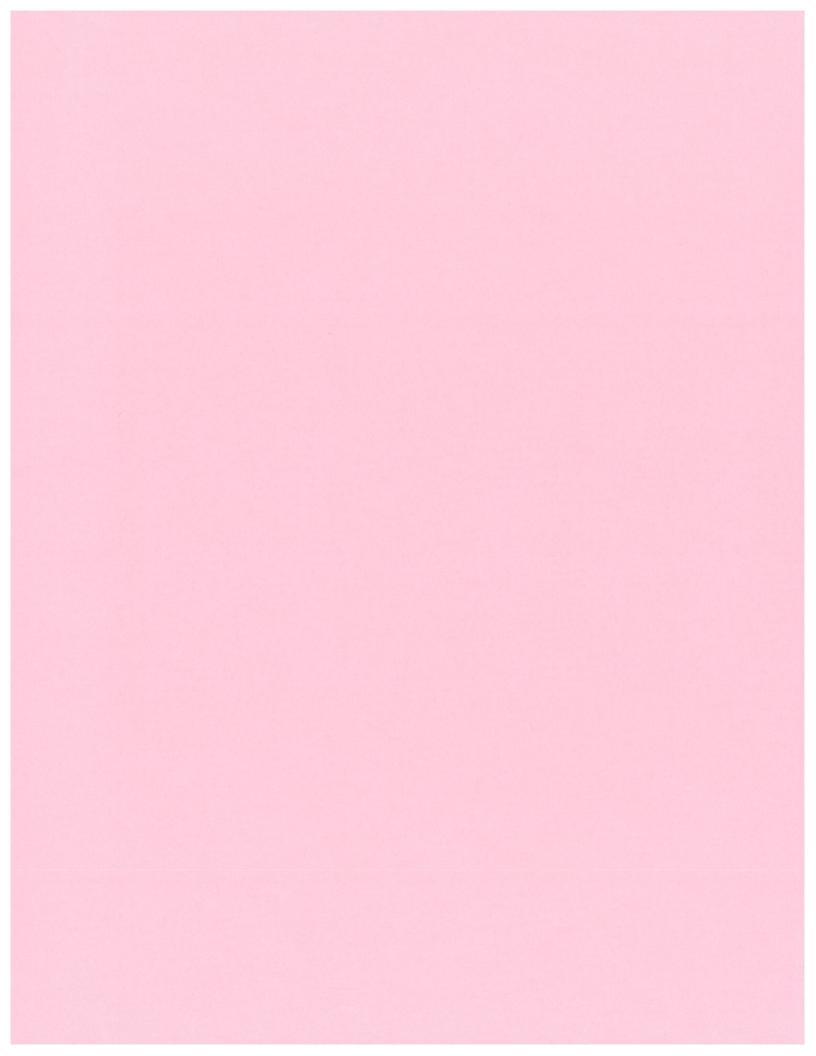
	۶	-	*	*	₩		4	†	/	\	 	4
Movement	EBL	EBT	EBA	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	P	7		শ্ব	4			€		ሻ	1>	
Traffic Volume (vph)	4	776	8	0	480	51	11	3	3	283	3	81
Future Volume (vph)	4	776	8	0	480	51	11	3	3	283	3	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.2	5.2			5.2			5.2		5.2	5.2	
Lane Util. Factor	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	0.98	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	1.00			0.99			0.98		1.00	0.86	
Flt Protected	0.95	1.00			1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1729	1817			1794			1711		1724	1522	
Flt Permitted	0.36	1.00			1.00			0.86		0.75	1.00	
Satd. Flow (perm)	662	1817			1794			1520		1355	1522	
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)	4	776	8	0	480	51	11	3	3	283	3	81
RTOR Reduction (vph)	0	1	0	0	7	0	0	2	0	0	57	0
Lane Group Flow (vph)	4	783	0	0	524	0	0	15	0	283	27	0
Confl. Peds. (#/hr)			2	2			2		2	2		2
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA	e Sagra de la Madiga e esse	Perm	NA	a (an a chambard) gam garagana.	Perm	NA	Garage Control
Protected Phases	Social Mark	4			8			2		velolikaliya	6	.56Nnee5.0540N
Permitted Phases	4			8			2			6		100 150 150
Actuated Green, G (s)	26.0	26.0		renterentiare, a aerol.	26.0			15.7	100000000000000000000000000000000000000	15.7	15.7	725.04 V.J. 14.05 T.L. 14
Effective Green, g (s)	26.0	26.0			26.0			15,7		15.7	15.7	
Actuated g/C Ratio	0.50	0.50			0.50	ingestiment meter me	ANALONINA DI MATERIA DI SANTONI	0.30	STATEMENT AND TANKE OF THE STATEMENT OF	0.30	0.30	With the King Kanada
Clearance Time (s)	5.2	5.2			5,2			5.2		5.2	5.2	
Vehicle Extension (s)	3.0	3.0	111,100 × 111,100 × 141,00	00/10-40000pu-603/1-90040	3.0			3.0	y agen juliustru astro veducio	3.0	3.0	State of Con-
Lane Grp Cap (vph)	330	906	50,500,500,6		895			458	66,166,165	408	458	
v/s Ratio Prot		c0.43			0.29						0.02	2000-000-00
v/s Ratio Perm	0.01			900-5000-900-9500 900-500-500-550				0.01		c0.21		
v/c Ratio	0.01	0.86	9/8083/56BW8884988	00/96/10/96/96/20/2	0.59			0.03	ASSAS ASSAS ASSAS ASSAS	0.69	0.06	9409999999
Uniform Delay, d1	6.6	11.5			9.2			12.8		16.1	12.9	
Progression Factor	1.00	1.00		ika distribusi da marika d	1.00		a desir samuali di 19	1.00		1.00	1.00	Assertation (Assert
Incremental Delay, d2	0.0	8.6			1,0			0.0		5.0	0.1	
Delay (s)	6.6	20.1			10.2			12.9		21.1	13.0	
Level of Service	Ä	C			B	o Agricu (SAU Au Soud) Na Sui George (Sau Agricu		. В		C	В	
Approach Delay (s)		20.1		95/08/05/04/08/05/07/05/05	10.2	052000000000000000000000000000000000000		12.9	(9569)	accentina I inc	19.3	ewiterico.
Approach LOS		C			В			В			В	
Intersection Summary												
HCM 2000 Control Delay			16.8	H	CM 2000	Level of S	Service		В			
HCM 2000 Volume to Capac	city ratio		0.80									
Actuated Cycle Length (s)			52.1	Su	ım of lost	time (s)			10.4			
Intersection Capacity Utilizal	tion		75.5%			of Service			D			
Analysis Period (min)			15									
c Critical Lane Group	a yan enga dara yantaria 64097	erus a era era artistat eta eta	e un de transcrius de la Caracida d Caracida de la Caracida de la	* 1	and the second second second	a una una ruptua tu perferbi		and the second s	eur uur eur ure eeruf eyer fure			

Intersection																
Int Delay, s/veh	10.7												***			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations	ሻ	þ	n y de estande e for even		4			₩			₩		se caralesa estesa	550-550-05-500		2603590
Traffic Vol, veh/h	109	886	41	2	362	ି 3 ବ	75 	0	3	7. -	0	= 86 				
Future Vol, veh/h	109	886	41	2	362	3	75	0	3	7	0	86	1990/399 (1990)		nga kaga kan ka	(6) (S) (S) (S) (S) (S) (S) (S) (S) (S) (S
Conflicting Peds, #/hr	2	0	0 	0	0	2	j Cton	0	2 Stan	2	O Stop	1 Stan				0000 i
Sign Control RT Channelized	Free	Free	Free None	Free	Free	Free None	Stop	Stop	Stop None	Stop	Stop	Stop None	58 SS (25)	18718(175)/		3866
Storage Length	1250		INUITE		.	INUITE			INUITE.			IVUITE				
Veh in Median Storage		- 0	- -	-	0			0	-		- 0	- -	50 SQ 500			
Grade, %	у U	0	-	-	0		-	0	-	•	0	_				3903526
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100				9149447 20022
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0			93574C2574C2547455	49000000
Mvmt Flow	109	886	41	2	362	3	75	0	3	7	0	86				
- A COLUMN DA LAGARITATION Y A MACTALATRIC MACTATRIC MACTALATRIC MACTALATRIC MACTALATRIC M	T45941651444654,4745	2617726-m33-28152754	er en el transcription de la construction de la con	ang milana sa gan	MTW-example D	200111110010172	EDGG BEREIT HOVE MAG	C 2010 14 0 20 14 0 14 0 14 0 14 0 14 0 1	A. S. A. S.	theological strategies	Periodical English Services				10222444000045002000000	*********
Major/Minor	Major1		h	Major2			/linor1		Å	/linor2						
Conflicting Flow All	367	0	0	927	0	0	1537	1496	909	1498	1515	367				
Stage 1	307 -			321 -	-	-	1125	1125	303	370	370	001			12/165/15/13	
Stage 2	and a silent department		**************************************	-	E CONTRACTOR	allian estate estate es	412	371		1128	1145	-	edatelopesa			
Critical Hdwy	4.1	_		4.1			7.1	6.5	6.2	7.1	6.5	6,2				
Critical Hdwy Stg 1		i Graffian da Garaga L			-	inis pallerin Seen •	6.1	5.5	Mada editera e ras establ	6.1	5.5	-	ST4119-02-12-12-12-12-12-12-12-12-12-12-12-12-12	v0000000000000000000000000000000000000		mention.
Critical Hdwy Stg 2							6.1	5.5		6.1	5.5	- 7				
Follow-up Hdwy	2.2	-	-	2.2	•	-	3.5	4	3.3	3.5	4	3.3				
Pot Cap-1 Maneuver	1203			746			96	124	336	102	121	683				
Stage 1		-		-		·	251	283	-	654	624	•	n mystern Alberton Al		-0898-20110-20110-2	20 HOURS
Stage 2	•					•	621	623	-	250	277	•				
Platoon blocked, %	55-141-2112-11145		ensenia kong	enemani area	<u> </u>	= navenira posta	uplantum k <u>an ka</u> ntik			usgasi <u>u u</u> nas	angang Ereber		en sagastateta	55000000000000000000000000000000000000		dagayan.
Mov Cap-1 Maneuver	1202	2059/25 4 .9	-	745	•		78 ~-	112	335	93	109	681			8/9/5/8	
Mov Cap-2 Maneuver	• 000860489008	- 2008/01/2010	- 90056906600	- 151458888888	- 20/03/03/80/		78	112	- Totos (1886)	93	109	. Valendalasan				
Stage 1				acsoni.			228 540	257 620		593 225	621 252				84,545,655,56	
Stage 2		-	-	•	. -	-	34 0	020	• •	220	202	-				
Approach	EB			WB			NB			SB						
HCM Control Delay, s	0.9			0.1			185			14.8						
HCM LOS	eristeriological periodological de mon	Kanasan (Akmereta	US 40 + GAZ 150 + AZ VA 40	entrovista en el control	maka 6000 menika	area manena mane	F	Garante Garante Petrone	nosta Menste Spiele 200	В	onskovelke keel	o es Rei evos Rei es escento	Kanaceak kaca	ereninani ereni	catoli table destrictor	Skoster
Minor Lane/Major Mvm	it 1	VBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1							
Capacity (veh/h)		80	1202		•	745										
HCM Lane V/C Ratio			0.091	-	-	0.003	-		0.202	ditur and other in	anendere ere	Navana aktion to the fire	a garang ay ay sa	المارين والمستران والمستران	James I Common at James a colon	25,500.00
HCM Control Delay (s)		185	8.3			9.8	0		14.8					994 (GG) (GG) 435 (GG) (GG)		olganii Markini
HCM Lane LOS	roudroestaa soorra	F	Α	• Webbookselen	•	Α	Α	epoperyaniani.	В	Andersamser-	550400400404	selse gravitación.	ya nata eti eti ata			5855541
HCM 95th %tile Q(veh))	5.3	0.3	7.000 C.		0	_	-	0.7							

Intersection												
Int Delay, s/veh	0											
Movement	EBT	EBR	WBL WE	IT NBL	. NBA							
Lane Configurations	 }			<u>ተ</u>	7	The state of the s						
Traffic Vol, veh/h	868	29	0 30	88 0		turne determina e e demonée à describé e de tradad e term					6.6	
Future Vol, veh/h	868	29	0 30	38 O	0		en A conservation and a series of a series					
Conflicting Peds, #/hr	0	0	0	0 0								
Sign Control	Free	Free	Free Fre				sommer short and troops	recorded and sector operations	sectificas assestantes tra	entententententen	Ersselenwerendez ers	Committee on the best looks
RT Channelized	•	None	- Noi	re :	None	Carried and a series of the se						
Storage Length	_ ::::::::::::::::::::::::::::::::::::	energi (i regio)	= respective statisticans	- O ACOMO O OSOA	- 0		Bara Salama (Alas Salas Salas Salas			E LET FERR VÂRDIUWE FOR	Sansaria da mara	20030000000000000000000000000000000000
Veh in Median Storage,				0 0	And the same of the same of							
Grade, % Peak Hour Factor	0 100	100	- 100 1	0 0 00 100			Votovištvi se s		National para d			SPERIONAL
Heavy Vehicles, %	0	0	0	0 0	2000 100 120 120	to the contract of the contrac						
Mymt Flow	868	29		38 C		and the second second second		en fra e ter entetre gate ett Generalisa angles fra		gargari e Skarel (k Grypsi krazelski sk		
MINITELLION		eren t en	Asses Masse M	(MARRIES)	AND NOON A		nega 35 30 ga 245 50 6	0.0000 (0.000 (0.000) (0.000) 8 -	004,000,000,000,000	Set leads duch duch d		
Major/Minor N	/lajor1		Major2	Minor1								
Conflicting Flow All	0	0	Medar		- 883	<u> </u>						
Stage 1												ensono en
Stage 2	-	-	-			•						
Critical Hdwy					- 6.2							
Critical Hdwy Stg 1	-	· · · · · · · · · · · · · · · · · · ·	***************************************			•	ym ar w tweeth enaw, three w					
Critical Hdwy Stg 2				/ <u>.</u>								
Follow-up Hdwy	-	-	-	.	- 3.3				an artist and a second as a second		turner out the city carrier	talan da karangan katawa ka
Pot Cap-1 Maneuver	•		0	- (and the second second	1						
Stage 1	-	·	0	- (rannen verstrevet her fr		magawas mangas nggasanya		sam Pedasannana da A	5050860850919911
Stage 2			0	. () -							
Platoon blocked, %	- 	- 8997798748999	_	- ************************************	- 348	valent in the control of the control						
Mov Cap-1 Maneuver Mov Cap-2 Maneuver	-	-	-	•	- 348)						
Stage 1	<u>-</u>	- -	-		- -	•						
Stage 2	19.0509,4359.6 •	-	•	-		<u>.</u>						
21gu =												
Approach	EB		WB	NE	4							
HCM Control Delay, s	0		0	AY SPECIAL PROPERTY OF STREET)							
HCM LOS	ererga. Yo		ngsene Yasans.	,	and the second second		ele jedelaktir kritikele:	iking sina di melatanda ni At	t nombled harbet drowled a		t Oretan (Statem State	Down (Deathgreath), Rei
Minor Lane/Major Mvm)	NBLn1	EBT EI	3R WB	r							
Capacity (veh/h)	•	awathi -	ew! E									
HCM Lane V/C Ratio		::::::::::::::::::::::::::::::::::::::		- -								39-200-00-05-05-05-05-05-05-05-05-05-05-05-0
HCM Control Delay (s)		0										
HCM Lane LOS		А		generalen generalen G	· Lander state in the State of	un en comparatorio de la estada en entra fina.		ander in de de la deservición de la defenda de la defe	and the second s	en un europe a la companya de la co	au a come y commence comment	and a second of the second of
HCM 95th %tile Q(veh)												

Int Delay, siveh	Intersection												
Lane Configurations		0											
Traffic Vol, Veh/h 850 17 0 368 0 0 0 Future Vol, Veh/h 850 17 0 368 0 0 Conflicting Pots, #hr 0 0 0 0 0 0 0 Sign Control Free Free Free Free Free Free Stop Stop HT Channelized None None None None Storage Length 0 0 Veh in Median Storage, # 0 0 0 0 0 0 Grade, % 0 - 0 0 0 Peak Hour Factor 100 100 100 100 100 100 100 100 Heavy Vehicles, % 0 0 0 0 0 0 Wmt Flow 850 17 0 368 0 0 0 Wmt Flow 850 17 0 368 0 0 0 Major/Minor Majort Majort Stage 1 859 Stage 2 6.2 Critical Hdwy Stg 1 Critical Hdwy Stg 2 Follow-up Hdwy 3.3 Pot Cap-1 Maneuver 0 0 0 0 359 Stage 1 3.3 Pot Cap-1 Maneuver 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			EBR	V// 10 Co. / / co. / / co. / c	NBL								
Future Vol, veh/h Conflicting Peds, #hir O O O O O O O O O O O O O O O O O O O	Lane Configurations		17		n								
Sign Control Free Free Free Free Stop Stop RT Channelized		(A. A. Parito and States (A. A. Pari	anderstanden bereit	0 368	terral comments and relative	0							
RT Channelized		0.60000.00000000.00000	46699994445556944669			anna de comercia con como de conferencia.							
Storage Length					Heritariya Nobeliya								
Grade, % 0 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Storage Length	-	, manaz kananan m	*		endroentperio							
Peak Hour Factor		a o receso o construes esta esta esta esta esta esta esta es	1000000000000										
Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 - - 859 Stage 1 - - - - - Stage 2 - - - - - Critical Hdwy Stg 1 - - - - - Critical Hdwy Stg 2 -													
Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 - - 859 Stage 1 -								64704854486455548		Sec. 01.011.015.015.015.015.015.015.015.015.0	20054005000500	400884TEW84UA	
Stage 1	Mvmt Flow	850	1/	0 368	U	U							
Stage 1	Major/Minor 1	Maior1	٨	Maior2 I	Vinor1								
Stage 2						859						eta francia e statuna de sta	
Critical Hdwy - - - 6.2 Critical Hdwy Stg 2 - - - - Follow-up Hdwy - - - - - Pot Cap-1 Maneuver - 0 0 359 Stage 1 - 0 0 - Stage 2 - 0 0 - Platoon blocked, % - - - - Mov Cap-1 Maneuver - - - - 359 Mov Cap-2 Maneuver -<			-		594X665/X25666				erregionalista esta establica	proper state of the state of th	militaria de la companya del companya del companya de la companya	de paraglication and an an	er (v.III-live Delevije
Critical Hdwy Stg 1		- -	-		#0005809PeAF4	6.2							
Follow-up Hdwy	Critical Hdwy Stg 1	egendados validas ejentes ** zena filozofia esperantis (1.4)					e do las esto esta esta esta esta esta esta esta esta						
Pot Cap-1 Maneuver		-	*		200000000000000000000000000000000000000								
Stage 1 - - 0 - 0 - Stage 2 - - 0 - 0 - - - - 0 - <													
Platoon blocked, %	Stage 1	• · · · · · · · · · · · · · · · · · · ·	-	.		949994669406					200900 MB (1906) 400		
Mov Cap-1 Maneuver - - - 959 Mov Cap-2 Maneuver - - - - Stage 1 - - - - - Stage 2 - - - - - - Approach EB WB NB -		Miresola de Pr	_	Section of the Control of the Contro	- 0								
Stage 1 - </th <th></th> <th></th> <th>•</th> <th>0.850,000,000,000,000,000</th> <th>-</th> <th>359</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>			•	0.850,000,000,000,000,000	-	359							
Approach EB WB NB		- Kalingoliskobacierak	entra Strong Nagara		Volumento de la compositación	Anglendijanija				2011007/120700000			95/79/5/75/74
Approach		•	/880.88 7 /8			950210000005540		B194/8516516					
HCM Control Delay, s							- The second				e e e e e e e e e e e e e e e e e e e		740
Minor Lane/Major Mvmt NBLn1 EBT EBR WBT Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s) 0 HCM Lane LOS A	Approach	EB		WB	NB								
Minor Lane/Major Mvmt NBLn1 EBT EBR WBT Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s) 0 HCM Lane LOS A		0		0									
Capacity (veh/h)	HCM LUS				A								
Capacity (veh/h)	Minor Lane/Maior Mvm	t N	BLn1	EBT EBR	WBT		on the control of the						
HCM Control Delay (s) 0 HCM Lane LOS A	Capacity (veh/h)												
HCM Lane LOS A		y/sga.co/o.sa/	- -		. Sassas Sais								FE 102 (102 (102 (102 (102 (102 (102 (102
					::::::::::::::::::::::::::::::::::::::			8,157,68,23,15					
					<u>.</u>								

Intersection							
Int Delay, s/veh	1.2						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
		LUN	MOF	<u> </u>	INDL NA	NON	
Lane Configurations	∱ 789	60	3	ધ 314	T. 53	2	
Traffic Vol, veh/h Future Vol, veh/h	789 789	60	ა 3	314	53 53	2	
Conflicting Peds, #/hr	709 0	00	0	ે 0	0	0	
Sign Control		Free	Free	Free	Stop	Stop	
RT Channelized		None	1166	None	Stop -	and the second second second	
Storage Length		-		-	0	-	
Veh in Median Storage,	# 0			0	0		
Grade, %	0	# (1975)	Matridican) •	0	0	isteet tangner (Pr	kari kurinteri di katan para materiaran kanan perindah menerakan menerakan perindah perindah menerakan perinda Perindah
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	0	0	0	0	0	0	Photograph and properties of the state of the season of
Mvmt Flow	789	60	3	314	53	2	
	ver, poses	011 E T. T. 10	is alternative	SVD II ALAS AS	are water.	1 643 430063414	
Major/Minor V	lajor1	,	//ajor2		Minor1		
Conflicting Flow All	0	0	849	0	1139	819	
Stage 1	······································		UTU	ener encoder .	819	010	The second of th
Stage 2	-	_	-	_	320	-	
Critical Hdwy			4.1		6.4	6.2	
Critical Hdwy Stg 1	99 999 999 -	9,000,000,000	200-11480	00000	5.4	erea d'illo -	
Critical Hdwy Stg 2					5.4		
Follow-up Hdwy	+ 	7:114:115A: •	2.2	- -	3.5	3.3	2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -
Pot Cap-1 Maneuver			798		225	379	
Stage 1	-	•	erenge en green	-	437	duridikan tantah	ka bag saturak da pangkatan pangkatan mengatan pangkat pangkat pangkat tahun 1991 tahun 1991 tahun 1991 tahun Tahun 1991 tahun 1991 t
Stage 2	u kalengala Makalas Topi				741		
Platoon blocked, %	-	-		-			
Mov Cap-1 Maneuver		•	798	•	224	379	
Mov Cap-2 Maneuver	-	-	-	-	224	-	
Stage 1	- 10 m	-	•		437		
Stage 2	-		en e		- 737		
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.1		25.9		
HCM LOS					D		
Minor Lane/Major Mvmi	۱ ۱	IBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)		227			798		
HCM Lane V/C Ratio	eungyeriske trot (Por	0.242	e autorio estas Sintes	eur e etroeft	0.004	, euro attrace	
HCM Control Delay (s)		25.9			9.5	0	
HCM Lane LOS	and a second second second	D	essa pesamentila •	enga ang pagamang p	Α	Α	
HCM 95th %tile Q(veh)		0.9			0		



	À		7	•		1	4	†	<i>></i>	1		4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻና	1→			4			ቆ			4	
Traffic Volume (vph)	55	195	26	1	767	24	97	0	5	8	0	92
Future Volume (vph)	55	195	26	1	767	24	97	0	5	8	0	92
ldeal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.8	3.7
Total Lost time (s)	5.9	5.9			5.9			6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.98			1.00			0.99			0.88	
Flt Protected	0.95	1.00			1.00			0.95			1.00	
Satd. Flow (prot)	1729	1788			1812			1726			1780	
Flt Permitted	0.37	1.00			1.00			0.82			0.96	
Satd. Flow (perm)	671	1788			1812			1480			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)	55	195	26	1	767	24	97	0	5	8	0	92
RTOR Reduction (vph)	0	4	0	0	1	0	0	35	0	0	80	0
Lane Group Flow (vph)	55	217	0	0	791	0	0	67	0	0	20	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	44.4	44.4			44.4			8.7			8.7	
Effective Green, g (s)	44.4	44.4			44.4			8.7			8.7	
Actuated g/C Ratio	0.68	0.68			0.68			0.13			0.13	
Clearance Time (s)	5.9	5.9			5.9			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	458	1221			1237			198			230	
v/s Ratio Prot		0.12										
v/s Ratio Perm	0.08				0.44			c0.05			0.01	
v/c Ratio	0.12	0.18			0.64			0.34			0.09	
Uniform Delay, d1	3.6	3.7			5.8			25.5			24.7	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	0.5	0.3		*	2.5			1.0			0.2	
Delay (s)	4.1	4.0			8.3			26.6			24.8	
Level of Service	Α	Α			Α			С			С	
Approach Delay (s)		4.0			8.3			26.6			24.8	
Approach LOS		Α			Α			С			С	
Intersection Summary												
HCM 2000 Control Delay			10.2	H	CM 2000	Level of	Service		В			
HCM 2000 Volume to Capacity ratio			0.59	_								
Actuated Cycle Length (s)			65.0		um of lost				11.9			
Intersection Capacity Utilization			69.9%	IC	U Level o	of Service	!		С			
Analysis Period (min)			15									
c Critical Lane Group												

o. West Accessin	هر		~		4	4	4	†	<i>></i>	\	Ţ	4
			T Enn	Y Wint	(1) n=	was) Kimi	NOT	, vinn	ODI	SBT	ODD
Movement	EBL 芥	EBT	EBR	WBL	WBT	WBR	NBL	NBT ↔	NBR	SBL	- 001 - ∰	SBR
Lane Configurations	109	1}→ 886	41	2	4 } 362	3	75	0	3	7	0	86
Traffic Volume (vph) Future Volume (vph)	109	886	41	2	362	3	75 75	0	3	7	0	86
, , ,	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
ldeal Flow (vphpl) Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.8	3.7
Total Lost time (s)	5.7 5.9	5. <i>1</i> 5.9	5.1	0.7	5.9	0.7	0.1	6.0	0.7	0.7	6.0	0.7
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00			1.00			1.00			0.98	
Flpb, ped/bikes	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			1.00			0.99			0.88	
Flt Protected	0.95	1.00			1.00			0.95			1.00	
Satd. Flow (prot)	1726	1808			1817			1724			1743	
Flt Permitted	0.54	1.00			1.00			0.80			0.97	
Satd. Flow (perm)	986	1808			1812			1441			1691	
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)	109	886	41	2	362	3	75	0.00	3	7	0	86
RTOR Reduction (vph)	0	1	0	0	0	0	0	31	0	0	76	0
Lane Group Flow (vph)	109	926	0	0	367	0	0	47	Ö	Ö	17	0
Confl. Peds. (#/hr)	2	320	U	Ů	007	2	1	77	2	2	.,	1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	070	Perm	NA	0,0	Perm	NA	0 10	Perm	NA	
Protected Phases	i Çilli	2		i Giiii	6		Cilli	8		1 OIII	4	
Permitted Phases	2	-		6	J		8	Ü		4	•	
Actuated Green, G (s)	55.1	55,1		Ū	55.1		ŭ	8.4		•	8.4	
Effective Green, g (s)	55.1	55.1			55.1			8.4			8.4	
Actuated g/C Ratio	0.73	0.73			0.73			0.11			0.11	
Clearance Time (s)	5.9	5.9			5.9			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	720	1321			1324			160			188	
v/s Ratio Prot	, 20	c0.51			1021			100				
v/s Ratio Perm	0.11	00.01			0.20			c0.03			0.01	
v/c Ratio	0.15	0.70			0.28			0.29			0.09	
Uniform Delay, d1	3.1	5.6			3.4			30.8			30.1	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	0.4	3.1			0.5			1.0			0.2	
Delay (s)	3.5	8.7			3.9			31.8			30.3	
Level of Service	A	Α			Α			С			С	
Approach Delay (s)		8.2			3.9			31.8			30.3	
Approach LOS		Α			Α			С			С	
Intersection Summary												
HCM 2000 Control Delay			9.7	H	CM 2000	Level of	Service		А			
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			75.4	Sı	um of lost	time (s)			11.9			
Intersection Capacity Utilization			99.5%			of Service)		F			
Analysis Period (min)			15									
c Critical Lane Group												
•												