



MEMO

TO : Town of Pelham
FROM : CIMA+
DATE : June 14, 2023
SUBJECT : [Traffic Studies on Port Robinson Road](#)

1. Introduction

The purpose of this memo is to present the findings of a number of traffic studies requested by and Town and undertaken by CIMA along Port Robinson Road, as follows:

- Speed and volume study on Port Robinson Road between Station Street and Rice Road (and options for passive and active traffic calming)
- Stop Control Study at Port Robinson and Lametti Drive
- Stop Control Study at proposed Klager Avenue (based on development data)

The traffic data received from Pyramid Traffic is provided in **Appendix A**.

2. Speed and Volume Study on Port Robinson Road between Station Street and Rice Road

The first study involved a review of speed and traffic volumes along Port Robinson Road between Station Street and Rice Road and options for passive and active traffic calming.

2.1. Existing Conditions

This section of Port Robinson Road has a posted speed of 50 km/h and has a two lane urban cross section (raised barrier curbs and storm sewers). This area is rapidly transitioning from a rural area with vacant lands to a built up area with residential development on both sides of the roadway. **Figure 1** shows the traffic controls in place on this section of roadway based on a site visit conducted on May 31st, 2023. The following is noted:

- Three 50 km/h signs are posted on Port Robinson Road (one westbound and two eastbound) – the 50 km/h sign facing eastbound traffic just past Station Street is a 50 km/h begins sign
- The intersection of Rice Road and Port Robinson Road is signalized
- Lametti Drive has a stop control on the north leg
- Station Street (a three-legged intersection) is under all-way Stop control
- A Speed display sign is provided facing westbound traffic in the vicinity of the future location of Klager Avenue
- A 40 km/h School Zone is introduced on westbound Port Robinson Road approaching Station Street (for Glynn A Green Public School) and
- School Crossing Guard Ahead and School Crossing Guard signs are displayed on the approach to Station Street and on the east leg respectively.



Figure 1 – Existing Traffic Control (Port Robinson Road between Station Street and Rice Road)

A yellow centreline is provided along a majority of Port Robinson Road with the exception of a short section just west of Lametti Drive. White edgelines are used intermittently on both sides of the roadway west of Lametti Drive.

The width of the cross section approximately 9.7 metres. The white edgelines, where provided, narrow the travel lanes to approximately 6.8 metres, resulting in 3.4 metre travel lanes.

2.2. Traffic Study

Automated traffic recorder data was collected on Port Robinson Road within the 50 km/h speed zone on Wednesday, May 10th, 2023. **Table 1** summarizes the findings of the data. The following was noted:

- Daily traffic volumes along Port Robinson Road (both directions) are in the range of 4,000 vehicles, exhibiting characteristics of a collector roadway (2017 Transportation Association of Canada *Geometric Design Guide for Canadian Roads*, Table 2.6.5)
- Peak traffic periods were noted in both the morning and afternoon, corresponding to commuter traffic
- Average speeds and particularly 85th percentile speeds are higher in the eastbound direction as compared to the westbound traffic, average speeds are 58 km/h eastbound and 53 km/h westbound and 85th percentile speeds are 68.5 km/h eastbound and 59.7 km/h westbound respectively.
- Truck percentages are higher in the eastbound direction compared to the westbound direction.

Table 1 –Volume, Speed and Classification Characteristics

Direction	24 Hour Volume	15 Minute Peak Volume (Starting At)	Average Speed	85 th Percentile Speed	Truck Percentages
Eastbound	1944	60 (0830)	58 km/h	68.5 km/h	5 %
Westbound	2075	57 (0445)	53 km/h	59.7 km/h	2 %

2.3. Options for Traffic Calming

The Town requested that CIMA present different options for traffic calming in context of the field investigation and the traffic study. The lower observed speeds in the westbound direction, particularly the 85th percentile speeds indicate that the speed display board located west of Lametti Drive appears to be having a calming effect on westbound speeds. The 40 km/h speed zone and school crossing guard signs are also likely contributing to lower operating speeds. In contrast, eastbound traffic was significantly higher. The higher eastbound speeds can be explained by the absence of the speed feedback sign and the roadway transitioning to more rural surroundings. However, there is a clear need to further calm traffic, particularly as the residential areas on both sides of this roadway fully develop.

Table 2 shows different options for traffic calming that range from low-cost options (passive) to higher-cost options (active) that would be suitable for use on Port Robinson Road based on the 2017 Transportation Association of Canada's *Canadian Road to Traffic Calming* (second edition) and have been widely used elsewhere in Ontario.

Table 2 – Options for Traffic Calming

Option	Description	Considerations
Ladder Crosswalk	Highlight the presence of the crossing guard supervised crossing on the east leg of Port Robinson Road at Station Street 	- Low cost - Currently used elsewhere in Ontario
Lane Narrowing	Use of pavement markings to cause drivers to perceive the roadway to be less comfortable at higher speeds 	- Low cost - Town already have implemented this treatment; note – markings should be extended along entire length of roadway

Option	Description	Considerations
Vertical Centreline Treatment	Flexible post-mounted delineators or raised pavement markers; give drivers a perception of lane narrowing and create a sense of constriction 	- Low cost - Vehicle speed reduction up to 5 km/h - Town may consider removing in the winter months - Rapidly gaining popularity in Ontario
Curb Extension	- Horizontal intrusion of the curb into the roadway resulting in a narrowed section of roadway - Purpose is to reduce vehicle speeds and reduce crossing distance for pedestrians 	- Medium cost - Vehicle speed reduction between 2 and 8 km/h - Can be implemented at one of the intersections (Station Street, Lametti Drive or Klager Avenue in the future) - Not best option if cycling facilities planned on Port Robinson Road
Raised Median Island	- Elevated median constructed on the centreline of a two-way roadway to reduce the overall width of the adjacent travel lanes - Purpose is to reduce vehicle speeds and to reduce pedestrian-vehicle conflicts 	- Medium cost - Vehicle speed reduction between 3 and 8 km/h - Can be implemented at one of the intersections (Station Street, Lametti Drive or Klager Avenue in the future)

3. Stop Control Study at Port Robinson Road and Lametti Drive

A stop control study was undertaken at the intersection of Port Robinson Road and Lametti Drive. As noted earlier, currently the intersection is stop controlled on the north approach. A eight-hour turning movement count was conducted on Tuesday, May 9th, 2023.

The All-Way Stop Minimum Volume Warrant (Collector Roads and Rural Arterial Roads) in Ontario Traffic Manual Book 5: Regulatory Signs was used to determine whether this location warranted an all-way stop control. At these locations, all-way stop control may be considered if:

- **Criterion #1** - The total vehicle volume on all intersection approaches exceeds 375 vehicles per hour for each of the highest eight hours of the day; and
- **Criterion #2** - The combined vehicle and pedestrian volume on the minor street (Lametti Drive) exceeds 150 units per hour (all vehicle plus pedestrians wishing to enter the intersection) for each of the same eight hours as the total volume; and
- **Criterion #3** - The volume split between the major and minor roads does not exceed 70/30 over the eight hour period.

The results of the analysis indicate that this intersection is *not* a suitable candidate for an all-way Stop control. The location only meets the total vehicle volume threshold for four of the eight hours and does not meet the minor street combined vehicle and pedestrian volume threshold for any of the eight hours. The combined vehicle volume on the major street approach was 2709 vehicles compared to on the minor street approach which was only 365 vehicles, yielding a volume split of roughly 86 / 14, therefore the location does not meet the volume split criterion either.

Table 3: All Way Stop Warrant Findings (Bolded Values Meet Criteria)

Time Period	Total Vehicle Volume	Combined Vehicle and Pedestrian Volume
7:00 – 8:00 am	237	37
8:00 – 9:00 am	434	54
11:00 am – 12:00 pm	342	49
12:00 pm – 1:00 pm	435	52
1:00 pm – 2:00 pm	345	51
3:00 pm – 4:00 pm	441	60
4:00 pm – 5:00 pm	455	45
5:00 pm – 6:00 pm	388	49

4. Stop Control Study at Port Robinson Road and Klager Avenue (Future Road)

The final stop control study requested was to determine if a future road (Klager Avenue) would require an all-way Stop control when it is built. As noted on Figure 1, Klager Avenue is planned to intersect with Port Robinson Road at a location west of Lametti Drive. The Town provided CIMA with a number of drawings showing proposed development (road network and lots) for areas north and south of Port Robinson Road.

For this review, it was assumed that the road network and proposed lots would not significantly change from those indicated in the drawings provided to CIMA and the development would consist of single family dwellings (either detached or attached).

4.1. Proposed Development

River Estates Phase 2

The River Realty Development (1976) Inc. drawing of River Estates Phase 2 was used to assess future development on the north side of Port Robinson Road. According to the drawing, Klager Avenue will extend south from a roundabout built on Summersides Boulevard and connect to Port Robinson Road west of Lametti Drive. The road will form part of a grid street system with another unnamed future road connecting (in a north-south orientation) to Port Robinson Road closer to Station Street. As a result of this, the residential area that will be serviced by Klager Avenue is anticipated to be relatively small (compared to Lametti Drive) as the future unnamed road to the west will be used by residents living on or directly adjacent to it. Development adjacent

to or north of Summersides Boulevard is assumed to use Summersides Boulevard to access Station Street, Rice Road or Highway 20 instead.

Saffron Meadows

A second drawing (Saffron Meadows Overall Water Distribution Plan) showing future development on the south side of Port Robinson Road was used to assess future development on the opposite side of the roadway. The future development shows that Klager Avenue will extend southward with a few local streets branching off the road to the east and west. The map shows that Lametti Drive to the east is already servicing a large portion of the development on the southwest corner of Port Robinson Road and Rice Road. Further to the south, Walker Road, Lymburner Street, Myrtle Street and an unnamed road within an unopened road allowance (adjacent to Steve Bauer Trail) will service much of the planned development, residents on the east side of the development either use Lametti Road or will likely use Walker Road, Lymburner Street, Myrtle Street to access Rice Road instead. Residents on the west side of the development are assumed to use the unnamed road adjacent to Steve Bauer Trail.

Appendix B shows the areas shaded in pink that is anticipated to be serviced by Klager Avenue, in consideration of the surrounding roads (both existing and proposed) that will service other areas of the development. The lots were used to determine the number of residential units that will be within the area shaded in pink where they were available and estimated otherwise based on the overall size of the parcel. For the area north of Port Robinson Road, it was estimated that there would be 58 residential units on or adjacent to Klager Avenue that would likely use the Klager Avenue access (north leg). For the area south of Port Robinson Road, it was estimated that there would be 165 residential units on or adjacent to Klager Avenue that would likely use the access at Port Robinson Road (south leg).

The Institute of Traffic Engineers' *Trip Generation Manual 11th Edition* was used to estimate the future traffic volumes. As the drawings did not indicate the type of residential dwelling, both single family detached and single family attached (duplexes or townhouses) were used (Land Use 210 and 215). **Table 3** and **4** shows the estimated traffic using the equations provided in the manual, on both the south and north legs separately and exiting traffic (leaving the development onto Port Robinson Road from either leg), entering traffic (entering the development from Port Robinson Road from either leg) in percentages (as provided in the manual) and for estimated trips for single family detached and single family attached homes.

Table 4: Estimated Traffic Generated At Klager Avenue (South and North Legs) Assuming Single Family Detached Homes

Time Period	South Leg (1)	North Leg (2)	Exiting %	Entering %	Exiting Trips (3)	Entering Trips (4)
AM peak hour	124	48	74%	26%	128	45
PM peak hour	161	61	36%	64%	80	142
Weekday (24 hrs)	1291	493	50%	50%	892	892
Notes: (1) Assuming 165 residential units (2) Assuming 58 resident units (3) Combined South and North Leg Leg Trips Exiting Klager Avenue onto Port Robinson Road (4) Trips Entering South and North Leg of Klager Avenue from Port Robinson Road						

Table 5: Estimated Traffic Generated At Klager Avenue (South and North Legs) Assuming Single Family Attached Homes

Time Period	South Leg (1)	North Leg (2)	Exiting %	Entering %	Exiting Trips (3)	Entering Trips (4)
AM peak hour	86	33	74%	26%	88	31
PM peak hour	94	38	36%	64%	47	84
Weekday (24 hrs)	1207	391	50%	50%	799	799
Notes: (1) Assuming 165 residential units (2) Assuming 58 resident units (3) Combined South and North Leg Leg Trips Exiting Klager Avenue onto Port Robinson Road (4) Trips Entering South and North Leg of Klager Avenue from Port Robinson Road						

The results indicate during the AM peak hour, there is anticipated to be a maximum of 128 trips exiting Klager Avenue onto Port Robinson Road assuming that all residential units were single family detached homes. The number would drop to 88 trips if all residential units were single family attached homes (i.e. townhomes or duplexes). For the entire day (24-hours), a total of 892 trips are estimated assuming that all residential units were single family detached homes, dropping to 799 trips if all residential units were single family attached homes. As noted earlier, for an all-way stop control to be warranted, the minimal threshold for the minor street (in this case, Klager Avenue) is 150 trips per hour for eight hours (or 1200 trips in total). As such, there appears to be no evidence that the intersection of Port Robinson Road and Klager Avenue will require an all-way Stop control, under the assumption that the road network proposed in the drawings reviewed by CIMA do not significantly change nor is there any significant change in the proposed amount (number of lots) or type of development (i.e a multi-story apartment building).

The results are further validated by the traffic currently generated by the development along Lametti Boulevard as noted in the previous section. This development, consisting of 125 residential units, generated a total of 369 vehicles over an eight hour period with a maximum of 60 vehicles in the PM peak hour.

Sincerely,

Jeff Suggett, M. Sc.
Senior Project Manager



Appendix A – Traffic Counts

DRAFT

Port Robinson Rd @ Lametti Dr

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 9:00:00

One Hour Peak

From: 8:00:00

To: 9:00:00

Municipality: Pelham

Site #: 0000000001

Intersection: Port Robinson Rd & Lametti Dr

TFR File #: 1

Count date: 9-May-2023

Weather conditions:

Clear/Dry

Person(s) who counted:

Cam

** Non-Signalized Intersection **

Major Road: Port Robinson Rd runs W/E

North Leg Total: 79

North Entering: 43

North Peds: 13

Peds Cross: $\times$

Heavys	0	0	3	3
Trucks	0	0	0	0
Cars	20	1	19	40
Totals	20	1	22	

Heavys	5
Trucks	0
Cars	31
Totals	36

East Leg Total: 399

East Entering: 197

East Peds: 1

Peds Cross: $\times$

Heavys	Trucks	Cars	Totals
5	1	189	195



Port Robinson Rd

Heavys	Trucks	Cars	Totals
2	0	11	13
13	1	160	174
0	0	0	0
15	1	171	

Peds Cross: $\times$
 West Peds: 3
 West Entering: 187
 West Leg Total: 382

Cars	1
Trucks	0
Heavys	0
Totals	1

Lametti Dr

Cars	1	0	6	7
Trucks	0	0	0	0
Heavys	0	0	0	0
Totals	1	0	6	

Cars	Trucks	Heavys	Totals
20	0	3	23
168	1	5	174
0	0	0	0
188	1	8	

Port Robinson Rd



Cars	Trucks	Heavys	Totals
185	1	16	202

Peds Cross: $\times$
 South Peds: 8
 South Entering: 7
 South Leg Total: 8

Comments

Port Robinson Rd @ Lametti Dr

Mid-day Peak Diagram

Specified Period

From: 11:00:00

To: 14:00:00

One Hour Peak

From: 12:00:00

To: 13:00:00

Municipality: Pelham

Site #: 0000000001

Intersection: Port Robinson Rd & Lametti Dr

TFR File #: 1

Count date: 9-May-2023

Weather conditions:

Clear/Dry

Person(s) who counted:

Cam

** Non-Signalized Intersection **

Major Road: Port Robinson Rd runs W/E

North Leg Total: 77

North Entering: 38

North Peds: 5

Peds Cross: $\times$

Heavys	0	0	1	1
Trucks	1	0	1	2
Cars	13	4	18	35
Totals	14	4	20	

Heavys 1

Trucks 0

Cars 38

Totals 39

East Leg Total: 402

East Entering: 229

East Peds: 3

Peds Cross: $\times$

Heavys	Trucks	Cars	Totals
4	5	202	211



Port Robinson Rd

Heavys	Trucks	Cars	Totals
0	0	8	8
4	3	141	148
0	0	2	2
4	3	151	

Peds Cross: $\times$

West Peds: 1

West Entering: 158

West Leg Total: 369

Cars	12	Cars	4	1	5	10
Trucks	0	Trucks	0	0	0	0
Heavys	0	Heavys	0	0	0	0
Totals	12	Totals	4	1	5	

Cars	Trucks	Heavys	Totals
29	0	1	30
185	4	4	193
6	0	0	6
220	4	5	

Port Robinson Rd

Cars	Trucks	Heavys	Totals
164	4	5	173

Peds Cross: $\times$

South Peds: 6

South Entering: 10

South Leg Total: 22

Comments

Port Robinson Rd @ Lametti Dr

Afternoon Peak Diagram

Specified Period

From: 15:00:00

To: 18:00:00

One Hour Peak

From: 15:15:00

To: 16:15:00

Municipality: Pelham

Site #: 0000000001

Intersection: Port Robinson Rd & Lametti Dr

TFR File #: 1

Count date: 9-May-2023

Weather conditions:

Clear/Dry

Person(s) who counted:

Cam

** Non-Signalized Intersection **

Major Road: Port Robinson Rd runs W/E

North Leg Total: 115

North Entering: 50

North Peds: 6

Peds Cross: $\times$

Heavys	0	0	1	1
Trucks	0	0	0	0
Cars	21	2	26	49
Totals	21	2	27	

Heavys 2

Trucks 0

Cars 63

Totals 65

East Leg Total: 416

East Entering: 224

East Peds: 5

Peds Cross: $\times$

Heavys	Trucks	Cars	Totals
3	2	192	197



Port Robinson Rd

Heavys	Trucks	Cars	Totals
1	0	19	20
7	3	151	161
0	0	0	0
8	3	170	

Peds Cross: $\times$

West Peds: 2

West Entering: 181

West Leg Total: 378

Cars	8
Trucks	0
Heavys	0
Totals	8



Lametti Dr



Lametti Dr

Cars	Trucks	Heavys	Totals
42	0	1	43
170	2	3	175
6	0	0	6
218	2	4	

Port Robinson Rd



Cars	Trucks	Heavys	Totals
181	3	8	192

Peds Cross: $\times$

South Peds: 5

South Entering: 7

South Leg Total: 15

Comments

Port Robinson Rd @ Lametti Dr

Total Count Diagram

Municipality: Pelham

Site #: 0000000001

Intersection: Port Robinson Rd & Lametti Dr

TFR File #: 1

Count date: 9-May-2023

Weather conditions:

Clear/Dry

Person(s) who counted:

Cam

**** Non-Signalized Intersection ****

Major Road: Port Robinson Rd runs W/E

North Leg Total: 616

North Entering: 307

North Peds: 44

Peds Cross: $\times$

	Heavys	Trucks	Cars	Totals
North	3	0	9	12
East	2	0	3	5
South	108	16	166	290
Totals	113	16	178	

Heavys 12

Trucks 2

Cars 295

Totals 309

East Leg Total: 2828

East Entering: 1496

East Peds: 20

Peds Cross: $\times$

Heavys	Trucks	Cars	Totals
28	18	1318	1364



Port Robinson Rd

Heavys	Trucks	Cars	Totals
4	0	84	88
43	17	1058	1118
0	0	7	7
47	17	1149	

Peds Cross: $\times$

West Peds: 12

West Entering: 1213

West Leg Total: 2577

	Cars	Trucks	Heavys	Totals
West	68	1	0	69
North	14	0	0	14
East	8	0	0	8
South	35	1	0	36
Totals	117	2	0	

Lametti Dr

Cars	Trucks	Heavys	Totals
203	2	8	213
1196	16	25	1237
45	1	0	46
1444	19	33	

Port Robinson Rd



Cars	Trucks	Heavys	Totals
1259	21	52	1332

Peds Cross: $\times$

South Peds: 27

South Entering: 58

South Leg Total: 127

Comments

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Pelham
Street: Port Robinson Rd - EB
Location: 1

A study of vehicle traffic was conducted with the device having serial number 403606. The study was done in the EB lane at Port Robinson Rd - EB in Pelham, ON in btwn Station St & Rice Rd county. The study began on 2023-05-09 at 12:00 AM and concluded on 2023-05-10 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 1,944 vehicles passed through the location with a peak volume of 60 on 2023-05-09 at [08:30 AM-08:45 AM] and a minimum volume of 0 on 2023-05-09 at [11:45 PM-12:00 AM]. The AADT count for this study was 1,944.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 50 - 60 KM/H range or lower. The average speed for all classified vehicles was 58 KM/H with 85.13% vehicles exceeding the posted speed of 50 KM/H. 1.87% percent of the total vehicles were traveling in excess of 89 KM/H. The mode speed for this traffic study was 50KM/H and the 85th percentile was 68.50 KM/H.

< to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 to 99	100 to 109	110 to 119	120 to 129	130 to 139	140 to >
0	3	9	49	226	859	581	167	31	5	0	0	0	0	0

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 1843 which represents 95 percent of the total classified vehicles. The number of Small Trucks in the study was 23 which represents 1 percent of the total classified vehicles. The number of Trucks/Buses in the study was 46 which represents 2 percent of the total classified vehicles. The number of Tractor Trailers in the study was 18 which represents 1 percent of the total classified vehicles.

< to 4.9	5.0 to 7.9	8.0 to 9.9	10.0 to 12.9	13.0 to 15.9	16.0 to 18.9	19.0 to 21.9	22.0 to >							
753	1090	23	46	17	0	0	1							

CHART 2

HEADWAY

During the peak traffic period, on 2023-05-09 at [08:30 AM-08:45 AM] the average headway between vehicles was 14.754 seconds. During the slowest traffic period, on 2023-05-09 at [11:45 PM-12:00 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 12.00 and 38.00 degrees C.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Pelham
Street: Port Robinson Rd - WB
Location: 1

A study of vehicle traffic was conducted with the device having serial number 406310. The study was done in the WB lane at Port Robinson Rd - WB in Pelham, ON in btwn Station St & Rice Rd county. The study began on 2023-05-09 at 12:00 AM and concluded on 2023-05-10 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 2,075 vehicles passed through the location with a peak volume of 57 on 2023-05-09 at [04:45 PM-05:00 PM] and a minimum volume of 0 on 2023-05-09 at [12:30 AM-12:45 AM]. The AADT count for this study was 2,075.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 50 - 60 KM/H range or lower. The average speed for all classified vehicles was 53 KM/H with 64.75% vehicles exceeding the posted speed of 50 KM/H. 0.48% percent of the total vehicles were traveling in excess of 89 KM/H. The mode speed for this traffic study was 50KM/H and the 85th percentile was 59.73 KM/H.

< to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 to 99	100 to 109	110 to 119	120 to 129	130 to 139	140 to >
0	2	11	102	614	1057	234	38	7	3	0	0	0	0	0

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin. Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 2012 which represents 97 percent of the total classified vehicles. The number of Small Trucks in the study was 27 which represents 1 percent of the total classified vehicles. The number of Trucks/Buses in the study was 21 which represents 1 percent of the total classified vehicles. The number of Tractor Trailers in the study was 8 which represents 0 percent of the total classified vehicles.

< to 4.9	5.0 to 7.9	8.0 to 9.9	10.0 to 12.9	13.0 to 15.9	16.0 to 18.9	19.0 to 21.9	22.0 to >							
1032	980	27	21	7	0	1	0							

CHART 2

HEADWAY

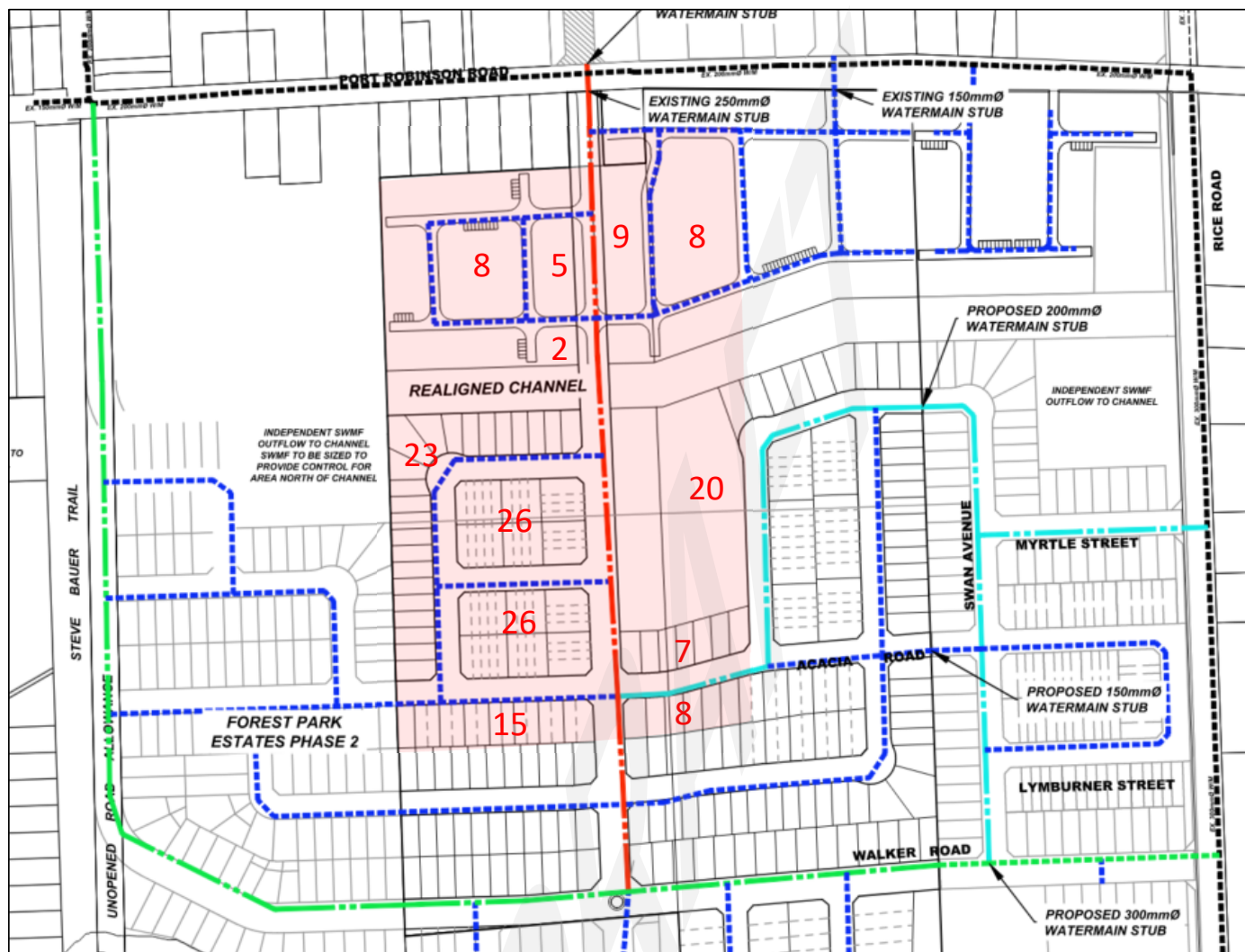
During the peak traffic period, on 2023-05-09 at [04:45 PM-05:00 PM] the average headway between vehicles was 15.517 seconds. During the slowest traffic period, on 2023-05-09 at [12:30 AM-12:45 AM] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 12.00 and 40.00 degrees C.

Appendix B – Assumed Developments

DRAFT



Total estimated residential units:
165 units

