



**CITY OF KINGSTON**  
**REPORT TO COUNCIL**

**Report No.: 12-332**

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**TO:** Mayor and Members of Council  
**FROM:** Jim Keech, President and CEO, Utilities Kingston  
**RESOURCE STAFF:** Mark Van Buren, Director of Engineering  
**DATE OF MEETING:** November 6, 2012  
**SUBJECT:** Proposed All-Way Stop Control – Various Intersections

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**EXECUTIVE SUMMARY:**

Engineering Department staff have completed assessments at various intersections in the City and are recommending the installation of all-way stop control at the following three locations:

- Crossfield Avenue & Andersen Drive
- Main Street & Raglan Road
- Victoria Street & Oak Street

**RECOMMENDATION:**

**THAT** City Council amend By-Law No. 2003-209, “A By-Law For Regulating Traffic in the Highways Of The City of Kingston, Subject To The Provisions Of The Highway Traffic Act” as amended, in order to install all-way stop control at the following intersections: 1) Crossfield Street & Andersen Drive, 2) Main Street & Raglan Road and 3) Victoria Street & Oak Street.

**AUTHORIZING SIGNATURES:**

ORIGINAL SIGNED BY PRESIDENT & CEO, UTILITIES KINGSTON Jim Keech, President & CEO Utilities Kingston
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ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER Gerard Hunt, Chief Administrative Officer
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**CONSULTATION WITH THE FOLLOWING COMMISSIONERS:**

Cynthia Beach, <i>Sustainability &amp; Growth</i>	N/R
Lanie Hurdle, <i>Community Services</i>	N/R
Denis Leger, <i>Transportation, Properties &amp; Emergency Services</i>	N/R

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**OPTIONS/DISCUSSION:**

The City of Kingston uses guidelines, approved by Council in 2010, to determine where all-way stop control should be installed. The Guidelines consider vehicle and pedestrian volumes, vehicle splits (percentage of vehicles travelling in each direction), in addition to collision history.

The City of Kingston's guidelines for all-way stop control are as follows:

**All-way stop control may be considered on roadways when the following conditions are met:**

**1) *Total vehicle volume per hour***

The total vehicle volume on all approaches of an intersection exceeds an average of **200 vehicles per hour** over the eight hour peak period.

**AND**

**2) *Number of vehicles on minor street + Number of pedestrians crossing major street***

The total volume of vehicles on the minor street **plus** the total number of pedestrians crossing the major street exceeds an average of **80 units per hour** over the eight hour peak period.

**AND**

**3) *Vehicle volume split***

Average volume split of vehicles does not exceed 75/25 for three-way control or 65/35 for four-way control. The average vehicle volumes over the eight hour peak period are used to determine the average split.

**OR**

**4) *Collisions***

The average number of preventable collisions per year is at least three per year over at least three years.

Each of the first three conditions described above should be met for all-way stop control to be warranted at an intersection. Alternatively, if the collision condition is met, no other conditions need to be met in order for all-way stop control to be warranted.

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**Crossfield Avenue & Andersen Drive**

A review of the traffic counts completed at this intersection on September 11, 2012 revealed that this location is very close to meeting the requirements for all-way stop control. The total traffic volumes are higher than the required minimum within the warrants but the existing split (% of traffic in each direction) is currently 70%/30% instead of the minimum required of 65%/35%. Since however this area is still experiencing significant residential development, it is recommended that all-way stop control be installed at this time.

A review of the collision history at this location indicated that in the past three years, there has been one reported collision.

**Main Street & Raglan Street**

As shown in the attached figure, the intersection alignment at Main Street and Raglan Road is skewed and offset. Traffic counts were not completed at this intersection since all-way stop control is being proposed to mitigate a sight distance issue. This intersection is also a very low volume location and completing detailed traffic counts here would not be an efficient use of the City's traffic counting video cameras.

A review of the collision history at this location indicated that in the past three years, there has been one reported collision.

**Victoria Street & Oak Street**

A review of the traffic counts completed at this intersection on September 20, 2012 revealed that this location almost meets all of the required conditions for all-way stop control. Only five more cars total per hour would be needed at this intersection to meet the minimum required volume. The existing split (% of traffic in each direction) is currently 53%/47% which exceeds the minimum required of 75%/25% at a t-intersection. Since the intersection is so close to meeting the required warrants, all-way stop control is recommended for this location.

A review of the collision history at this location indicated that there have been no reported collisions at this intersection.

**EXISTING POLICY/BY LAW:**

By-Law No. 2003-209, "A By-Law For Regulating Traffic in the Highways Of The City of Kingston, Subject To The Provisions Of The Highway Traffic Act".

**NOTICE PROVISIONS:**

Not Applicable.

**ACCESSIBILITY CONSIDERATIONS:**

Not Applicable.

**FINANCIAL CONSIDERATIONS:**

There are no additional costs related to this change that need to be accommodated within the Engineering Department budget.

**CONTACTS:**

Mark VanBuren, Director of Engineering	613-546-4291, ext. 3218
Deanna Green, Manager Traffic Division	613-546-4291, ext. 3170
Chris Sleeth, Traffic Supervisor, Traffic Division	613-546-4291, ext. 3149

**OTHER CITY OF KINGSTON STAFF CONSULTED:**

Not Applicable.

**EXHIBITS ATTACHED:**

- Exhibit "A" - Draft By-Law
- Exhibit "B" - Map for Crossfield Avenue & Anderson Drive
- Exhibit "C" - Map for Raglan Road & Main Street
- Exhibit "D" - Map for Oak Street & Victoria Street
- Exhibit "E" - Traffic count and all-way stop warrant sheet for Crossfield Avenue & Anderson Drive
- Exhibit "F" - Traffic count and all-way stop warrant sheet for Oak Street & Victoria Street

**BY-LAW NO. 2012-XX**

A BY-LAW TO AMEND BY-LAW No.2003-209, "A BY-LAW FOR REGULATING TRAFFIC IN THE HIGHWAYS OF THE CITY OF KINGSTON, SUBJECT TO THE PROVISIONS OF THE HIGHWAY TRAFFIC ACT", (AMEND THROUGH HIGHWAYS and ALL-WAY STOP SIGNS)

PASSED: \_\_\_\_\_, 2012

The Council of The Corporation of the City of Kingston hereby enacts as follows:

1. By-Law No. 2003-209 entitled, "A By-law for Regulating Traffic in the Highways of the City of Kingston, Subject to the Provisions of the Highway Traffic Act", as amended, is hereby further amended as follows:
  - 1.1. Schedule C-1 (Through Highways) is hereby amended by removing the following thereto.

<b>Highway</b>	<b>From</b>	<b>To</b>
Raglan Road	West Side of York Street	Division Street
Oak Street	Kingscourt Avenue	Brant Avenue

And by adding following thereto.

<b>Highway</b>	<b>From</b>	<b>To</b>
Crossfield Avenue	Sydenham Road	East Side of Andersen Drive
Crossfield Avenue	West Side of Andersen Drive	Centennial Drive
Oak Street	Kingscourt Avenue	Victoria Street

Schedule C-3 (All-Way Stop Signs) is hereby amended by adding the following thereto.

<b>Highway</b>	<b>At</b>
Raglan Road	Main Street
Crossfield Avenue	Andersen Drive
Oak Street	Victoria Street

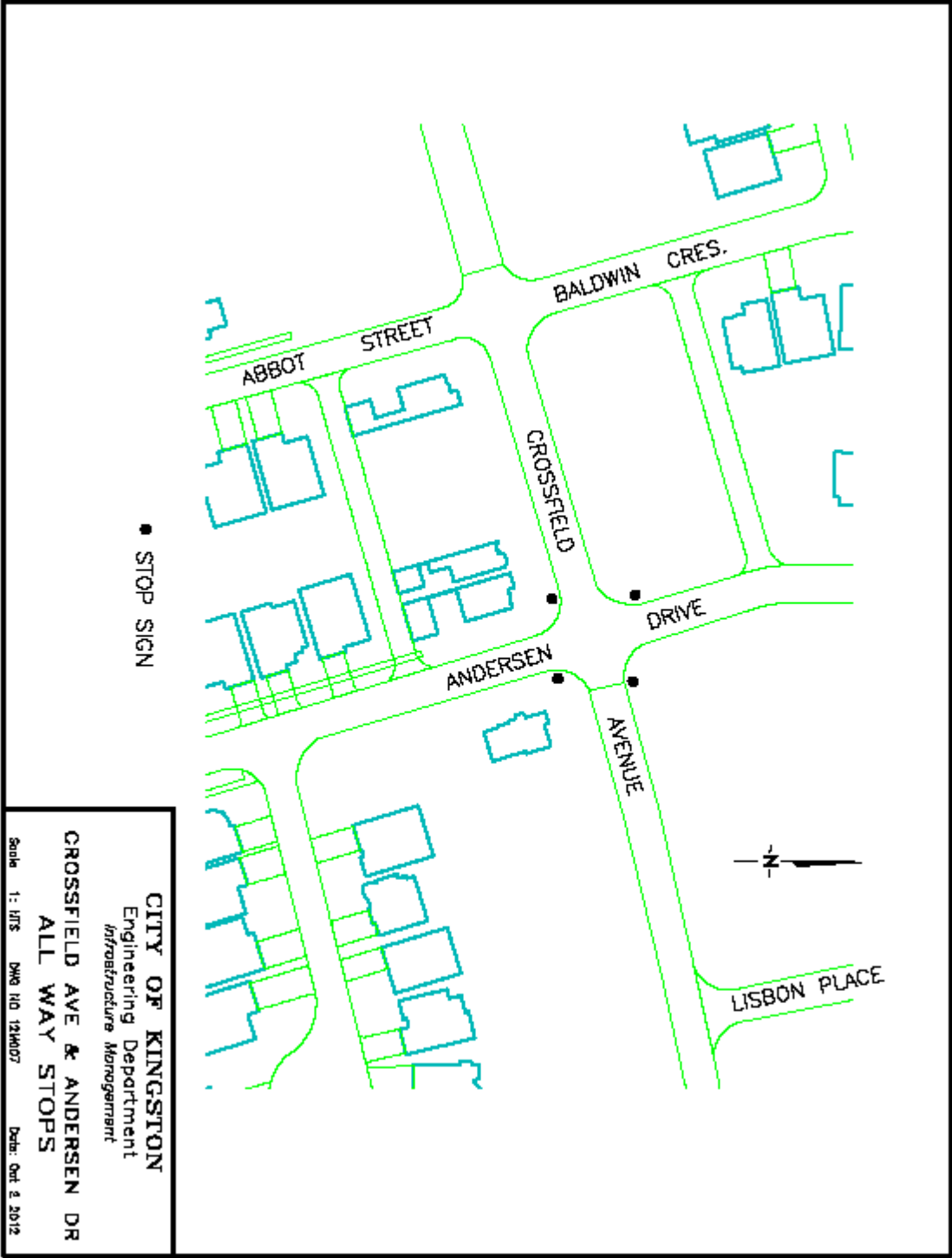
2. This by-law will come into force and take affect on the date of its passing.

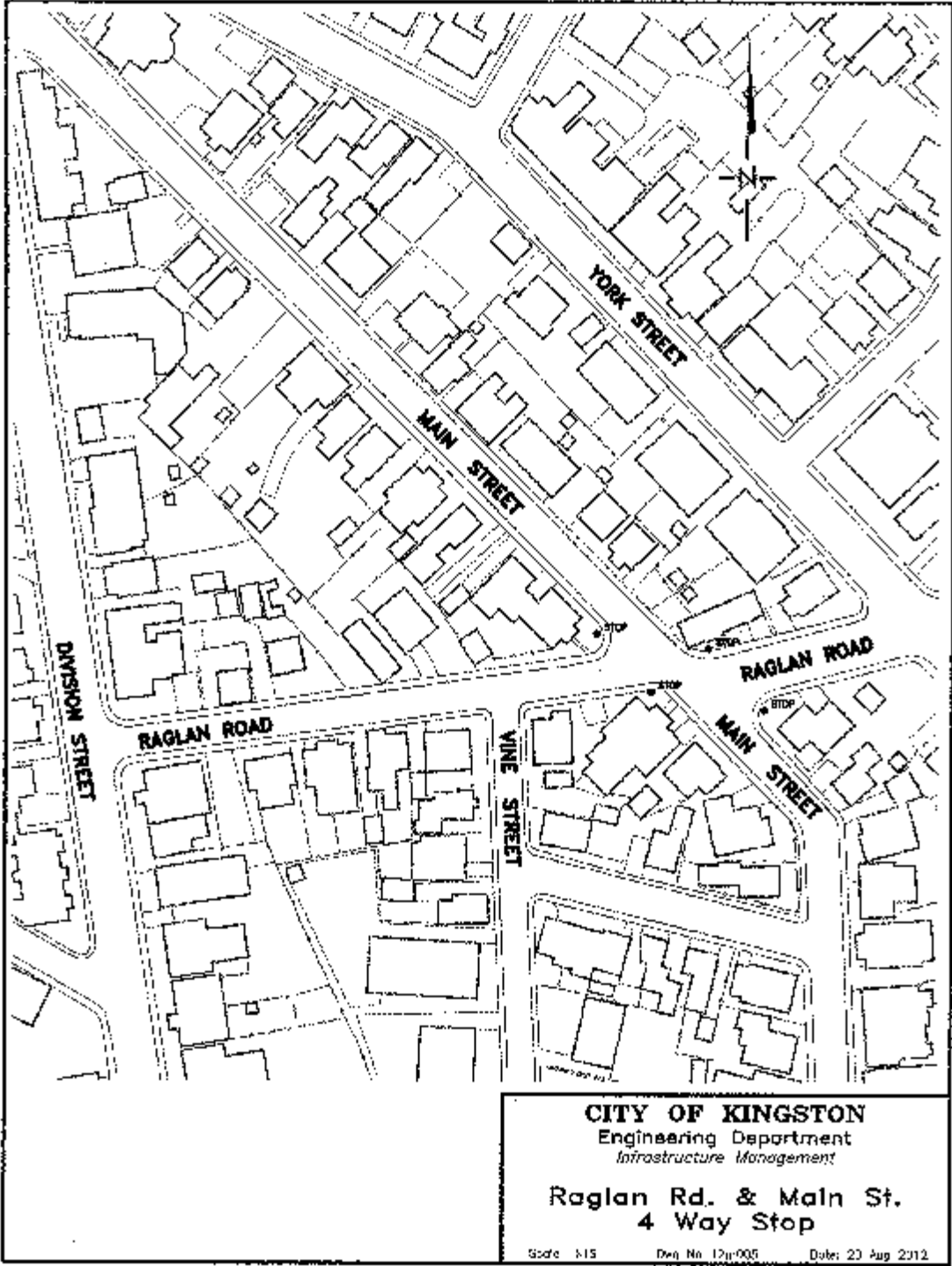
**GIVEN FIRST AND SECOND READINGS** 2012

**GIVEN THIRD READING AND PASSED** 2012

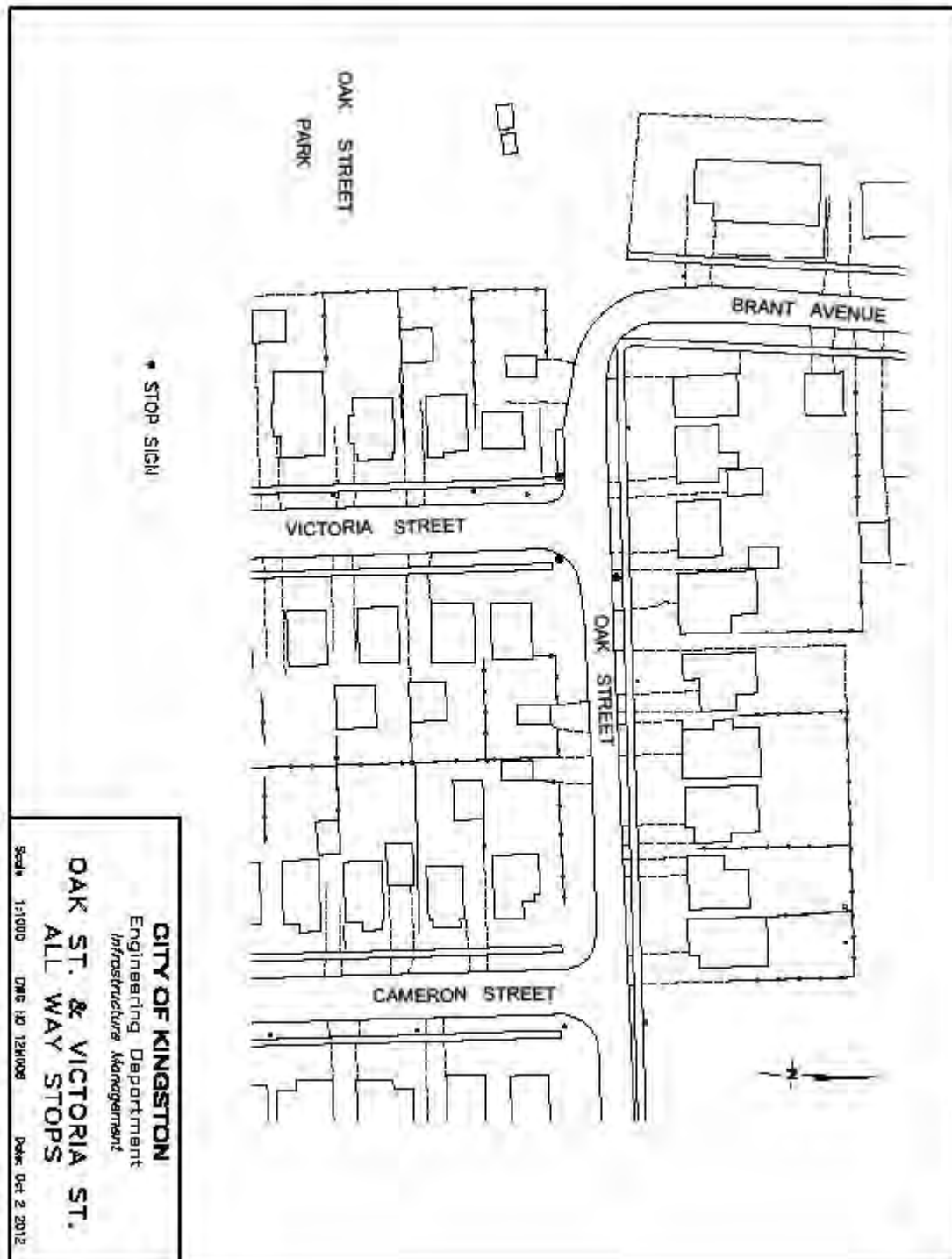
**CITY CLERK**

**MAYOR**









### 4-WAY CONTROL STOP SIGN WARRANT

Location: Crossfield Ave @ Anderson Dr  
 Date: September 11, 2012  
 Weather: Sunny

Hour Ending	Major St. Crossfield Ave	Minor St. Anderson Dr	Total Volume	Peds Crossing Crossfield Ave	Split
9:00	163	72	235	2	69% 31%
10:00	180	60	240	12	75% 25%
12:00	99	51	150	13	66% 34%
13:00	138	67	205	4	67% 33%
15:00	145	58	203	1	71% 29%
16:00	143	57	200	4	72% 29%
17:00	151	69	220	3	69% 31%
18:00	208	80	288	10	72% 28%
<b>Total</b>	<b>1227</b>	<b>514</b>	<b>1741</b>	<b>49</b>	<b>70% 30%</b>

Condition	Average per Hour or Year	Requirement	Conclusion
(1) Total Vehicle Volume	217.625	An average of 200 vehicles per hour over the eight hour peak period	WARRANTED
(2) Number of Vehicles on Minor St + Number of Pedestrians crossing major street	70	An average of 80 units per hour over the eight peak hours	NOT WARRANTED
(3) Vehicle Volume Split	70% 30%	The average vehicular volume split does not exceed 65/35	NOT WARRANTED
(4) Preventable Collisions		The average number of preventable collisions is at least three	NOT WARRANTED

**ALL WAY STOP NOT WARRANTED**

Note: For an All Way Stop to be Warranted either Condition(4) must be met or Conditions(1)(2)(3) must be met together

### 3-WAY CONTROL STOP SIGN WARRANT

Location: Victoria St @ Oak St  
 Date: September 20, 2012  
 Weather: \_\_\_\_\_

Hour Ending	Major St. Oak St	Minor St. Victoria St	Total Volume	Peds Crossing Oak St	Split
8:00	121	85	206		59% 41%
9:00	76	45	121	6	63% 37%
11:00	83	59	142	2	58% 42%
12:00	75	75	150	3	50% 50%
13:00	109	83	192	4	57% 43%
15:00	121	133	254	4	48% 52%
16:00	137	148	285		48% 52%
17:00	112	101	213	1	53% 47%
<b>Total</b>	<b>834</b>	<b>729</b>	<b>1563</b>	<b>20</b>	<b>53% 47%</b>

Condition	Average per Hour or Year	Requirement	Conclusion
(1) Total Vehicle Volume	195.375	An average of 200 vehicles per hour over the eight hour peak period	NOT WARRANTED
(2) Number of Vehicles on Minor St + Number of Pedestrians crossing major street	94	An average of 80 units per hour over the eight peak hours	WARRANTED
(3) Vehicle Volume Split	53% 47%	The average vehicular volume split does not exceed 75/25	WARRANTED
(4) Preventable Collisions		The average number of preventable collisions is at least three	NOT WARRANTED

**ALL WAY STOP NOT WARRANTED**

Note: For an All Way Stop to be Warranted either Condition(4) must be met or Conditions(1)(2)(3) must be met together