



Technical Memorandum

To: Jeremy Silburt – Theberge Homes Date: 2023-05-31

Cc: Christopher Gordon, John Kingsley – CGH

From: Louis Wickline – CGH Project Number: 2023-056

Re: Theberge 1158 Old Second Line Transportation Review

1 Background

CGH Transportation Inc. has been retained by Theberge Homes to review the transportation conditions for a proposed stacked townhouse development at 1158 Second Line, Ottawa. Per the request from the City, the review the forecasted impact on the adjacent transportation network, including a sight line review and a left-turn lane warrant analysis for the development access, and will also include an analysis of the trips generated by the site and review of the TIA triggers. The proposed development consists of 100 stacked townhouse units with a single full-movement access proposed onto Old Second Line Road, which is proposed to be stop-controlled on the minor site access approach. Old Second Line Road is a two-lane major collector roadway with a posted speed limit of 60 km/h.

2 Site Travel Demand

2.1 Trip Generation

The development consists of a 3.5-storey, stacked townhouse units. From the TRANS Trip Generation Manual (2020), residential trip generation rates for a Multi-Unit High-Rise development (for residential buildings of 3 storeys or more), the person trip rates for the AM and PM peak periods are summarized in Table 1 below:

Table 1: Total Residential Person Trip Generation by Peak Period

Land Use	Land Use Code	Peak Period	Person Trip Rates
Multi-Unit High-Rise	221 and 222 (TRANS)	AM	0.80
		PM	0.90

Based on the person trip rates, the total person trips for the AM and PM peak period have been forecast and summarized in Table 2.

Table 2: Total Residential Person Trip Generation by Peak Period

Land Use	Units	AM Peak Period			PM Peak Period		
		In	Out	Total	In	Out	Total
Multi-Unit High-Rise	100	5	12	17	13	9	21

The recommended mode shares for the subject district of Kanata/Stittsville from the TRANS Trip Generation Manual (2020) have been summarized in Table 3.

Table 3: TRANS Trip Generation Manual Recommended Mode Shares – Kanata/Stittsville

Travel Mode	Multi-Unit (High-Rise)	
	AM	PM
Auto Driver	43%	55%
Auto Passenger	26%	19%
Transit	28%	21%
Cycling	0%	0%
Walking	4%	5%
Total	100%	100%

Using the peak period person trip generation and employing the above mode shares, and using the prescribed peak hour conversion factors, the total trips generated by mode and peak hour have been summarized in Table 4.

Table 4: Trip Generation by Mode and Peak Hour

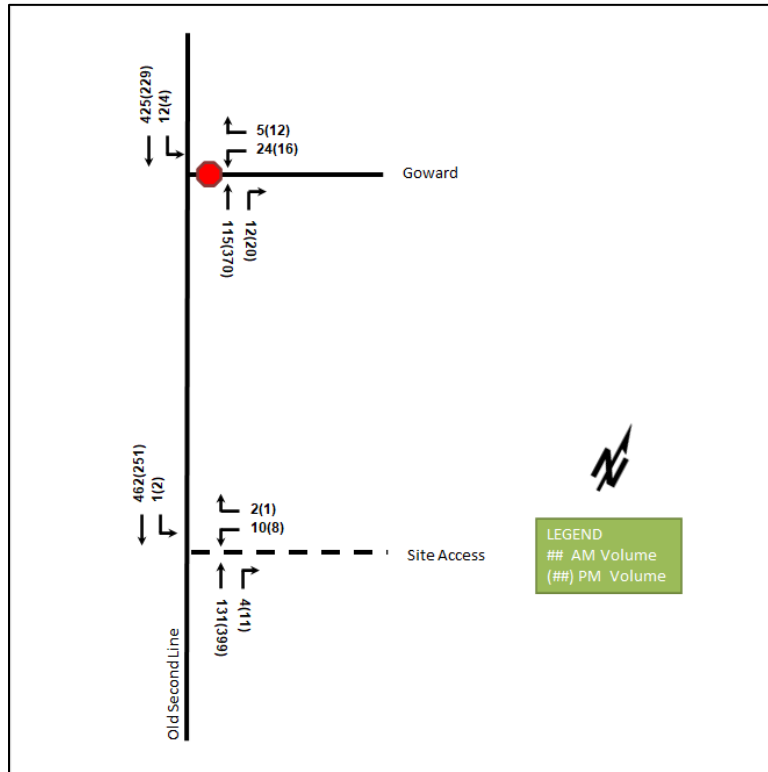
Travel Mode		AM Peak Hour				PM Peak Hour			
		Mode Share	In	Out	Total	Mode Share	In	Out	Total
Multi-Unit (High-Rise)	Auto Driver	43%	5	12	17	55%	13	9	22
	Auto Passenger	26%	3	7	10	19%	4	3	7
	Transit	28%	4	8	12	21%	5	4	9
	Cycling	0%	0	0	0	0%	0	0	0
	Walking	4%	1	1	2	5%	2	1	3
	Total	100%	13	28	41	100%	24	17	41

As shown above, a total of 17 new AM and 22 new PM peak hour two-way vehicle trips are projected as a result of the proposed development. It is noted that 41 new AM and PM peak hour person trips are forecast from the subject development, confirming the TIA Trip Generation Trigger was not met. The TIA Screening Form is provided in Attachment A.

2.2 Trip Assignment and Background Traffic

Using most recent Origin-Destination Survey, access to transportation infrastructure, and existing area turning movement splits, the forecasted auto trips have been assigned to the area road network. Background volumes were taken from a City-conducted traffic count at the intersection of Old Second Line Road at Goward Drive conducted on Wednesday, May 27, 2015, which is provided in Attachment B. Examining historical aerial imagery, as no area development has taken place since this count in the study area, a conservative 2.5% annual background growth rate has been applied to Old Second Line Road to the assumed buildout horizon year of 2025. Figure 1 illustrates the forecasted AM and PM peak hour volumes at the 2025 future total horizon.

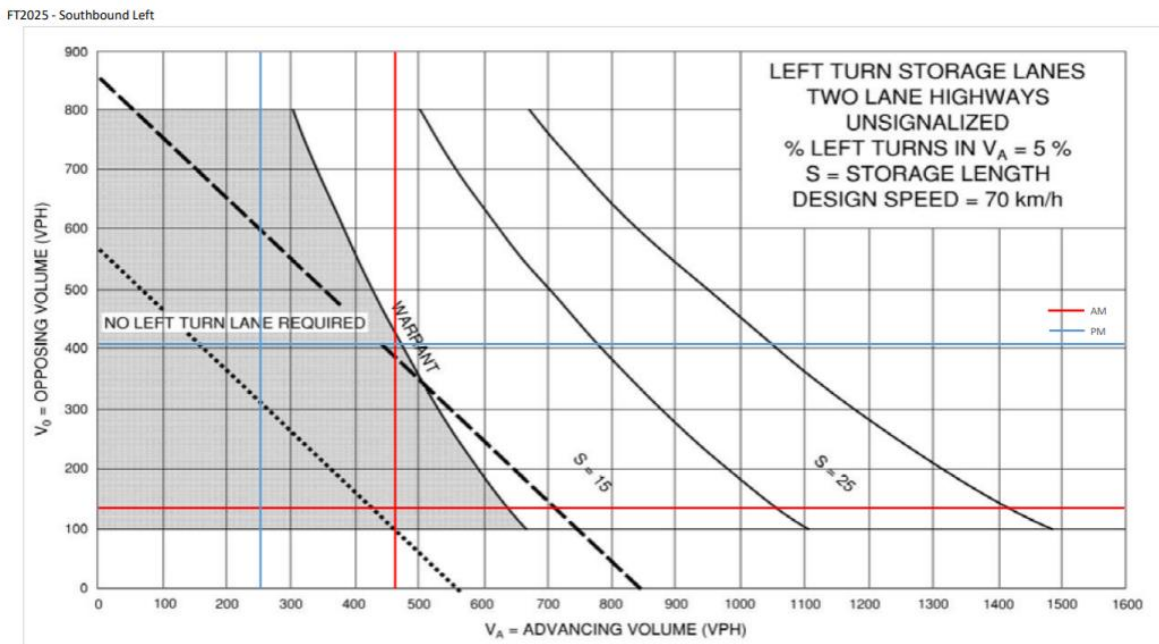
Figure 1: Future Total 2025 Volumes



3 Left-Turn Lane Warrant Analysis

The left-turn lane warrants were examined using the intersection volumes projected at the 2025 horizon. The completed warrants by peak hour are illustrated below in Figure 2.

Figure 2: AM and PM Peak Hour Left-turn Lane Warrant Analysis



At the site buildout horizon, left-turn warrants are not forecast to be met during both the AM and PM peak hours.

4 Sightline Review and Access Throat Design

4.1 Sightline Review

Sightlines for the proposed site access onto Old Second Line Road were assessed on May 15, 2023 through a site visit. Required sight distance values were calculated using the tabulated values from the Geometric Design Guide for Canadian Roads' (TAC, 2017) departure sight triangle Tables 9.9.4 and 9.9.6. Table 5 summarizes the analysis results, site photos are provided in Attachment C, and sightline figures are provided in Attachment D. For the sightline analysis, a design speed of 70 km/h has been used, a value 10 km/h higher than the posted speed limit.

Table 5: Sight Distance of Area Intersections

Intersection	Movement	Required Sight Distance	Available Sight Distance	Compliant?
Proposed Access at Old Second Line Road	Left Turn from Stop	150m	350m+	Yes
	Right Turn from Stop	130m	180m+	Yes

As shown above, the proposed site access intersection location provides the required sight distance for both departure movements. No mitigation is required for sight distance.

4.2 Access Throat Design

The development plan proposes 100 dwelling units with a full-movement vehicular access on Old Second Line, a major collector road. The suggested minimum clear throat lengths provided within the Geometric Design Guidelines for Canadian Roads (TAC, 2017) are eight metres on a collector road for sites comprising fewer than 100 dwelling units and 15 metres for sites comprising 100-200 dwelling units. The subject development unit count is on the threshold between these suggested values, and an evaluation of the forecast traffic at the site access will be used to select an appropriate value for application. It is noted that the forecasted inbound volumes are five vehicles during the AM peak hour and 13 vehicles during the PM peak hour. The forecasted outbound volumes are 12 vehicles during the AM peak hour and nine vehicles during the PM peak hour. Averaging these values, over the peak hour, a resultant one vehicle every four to five minutes is anticipated to enter the site and one vehicle every four to six minutes is anticipated to exit the site. Given this context, a clear throat length of eight metres is recommended to be provided at the site access. The site plan is functionally providing approximately 11 metres between the intersecting Old Second Line Road curb line and the first point of conflict on the driveway, and thus no mitigation is required.

5 Summary and Conclusions

The following is a summary of the contents of this memo:

- The development consists of 100 stacked townhouse residential dwellings
- Based upon the recommended trip generation rates and mode shares the site is forecast to generate 17 two-way vehicle trips during the AM peak period, and 22 two-way vehicle trips during the PM peak period.
- Based on the person trips generated by the new development it is confirmed that the TIA Trip Generation trigger was not met

- Turning lane warrants were assessed for the southbound left-turn movement at the site access and warrants were not met for the installation of a southbound left-turn lane during either the AM or PM peak hours
- No mitigation is required for the proposed access as sightlines exceed the minimum requirements
- The proposed site access is recommended to have a throat length of eight metres, which is functionally being provided

It is recommended that, from a transportation perspective, the proposed development applications proceed.



Louis Wickline, CET

CGH Transportation Inc.

P: 613-240-9699

E: Louis.Wickline@CGHTransportation.com



Christopher Gordon, P.Eng.

CGH Transportation Inc.

P: 343-999-9117

E: Christopher.Gordon@CGHTransportation.com

Attachment A

TIA Screening Form

City of Ottawa 2017 TIA Guidelines
Step 1 - Screening Form

Date: 29-Mar-23
Project Number: 2023-056
Project Reference: 1158 Second Line

1.1 Description of Proposed Development	
Municipal Address	1158 Old Second Line Road
Description of Location	East side of Old Second Line Road south of Goward Drive
Land Use Classification	Residential Third Density (R3Z)
Development Size	100 stacked townhouse units
Accesses	One full-moves on Old Second Line
Phase of Development	Single
Buildout Year	2026
TIA Requirement	No TIA Required

1.2 Trip Generation Trigger	
Land Use Type	Townhomes or apartments
Development Size	100 Units
Trip Generation Trigger	No

1.3 Location Triggers	
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?	No
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?	No
Location Trigger	No

1.4. Safety Triggers	
Are posted speed limits on a boundary street 80 km/hr or greater?	No
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	No Adequate intersection/stopping sight distance on Old Second Line Rd for vertical curvature
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)?	No
Is the proposed driveway within auxiliary lanes of an intersection?	No
Does the proposed driveway make use of an existing median break that serves an existing site?	No
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	No
Does the development include a drive-thru facility?	No
Safety Trigger	No



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 appropriate field(s)] is either transportation engineering or transportation planning .

1,2 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
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 Ottawa this 20 day of September, 2018.
(City)

Name: Andrew Harte
(Please Print)

Professional Title: Professional Engineer


Signature of Individual certifier that s/he meets the above four criteria

Office Contact Information (Please Print)
Address: 6 Plaza Court
City / Postal Code: Ottawa / K2H 7W1
Telephone / Extension: (613) 697-3797
E-Mail Address: Andrew.Harte@CGHTransportation.com



Attachment B

Turning Movement Count – Goward Drive at Old Second Line Road

Turning Movement Count - Study Results

GOWARD DR @ OLD SECOND LINE RD

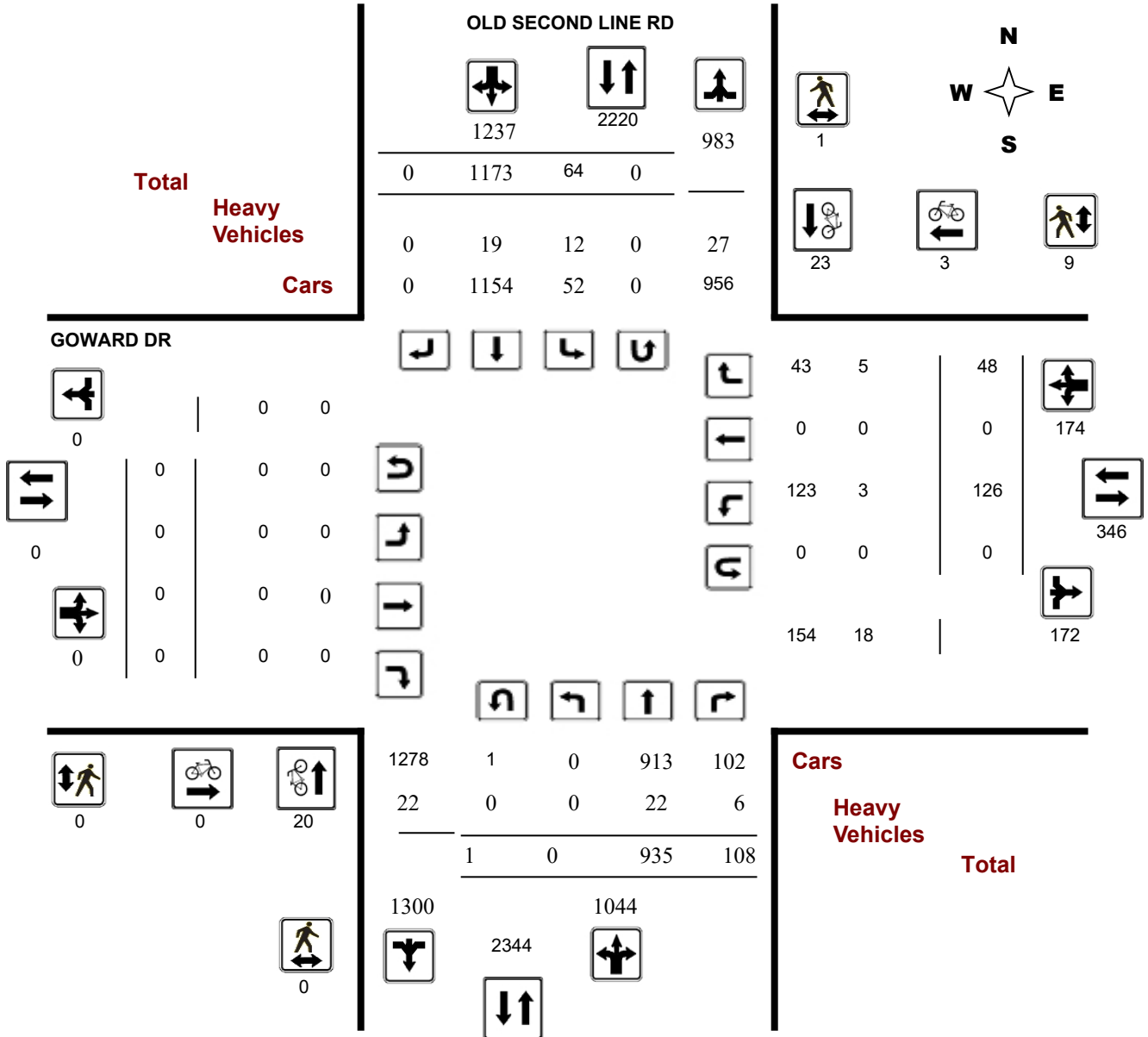
Survey Date: Wednesday, May 27, 2015

WO No: 35085

Start Time: 07:00

Device: Miovision

Full Study Diagram



Turning Movement Count - Study Results

GOWARD DR @ OLD SECOND LINE RD

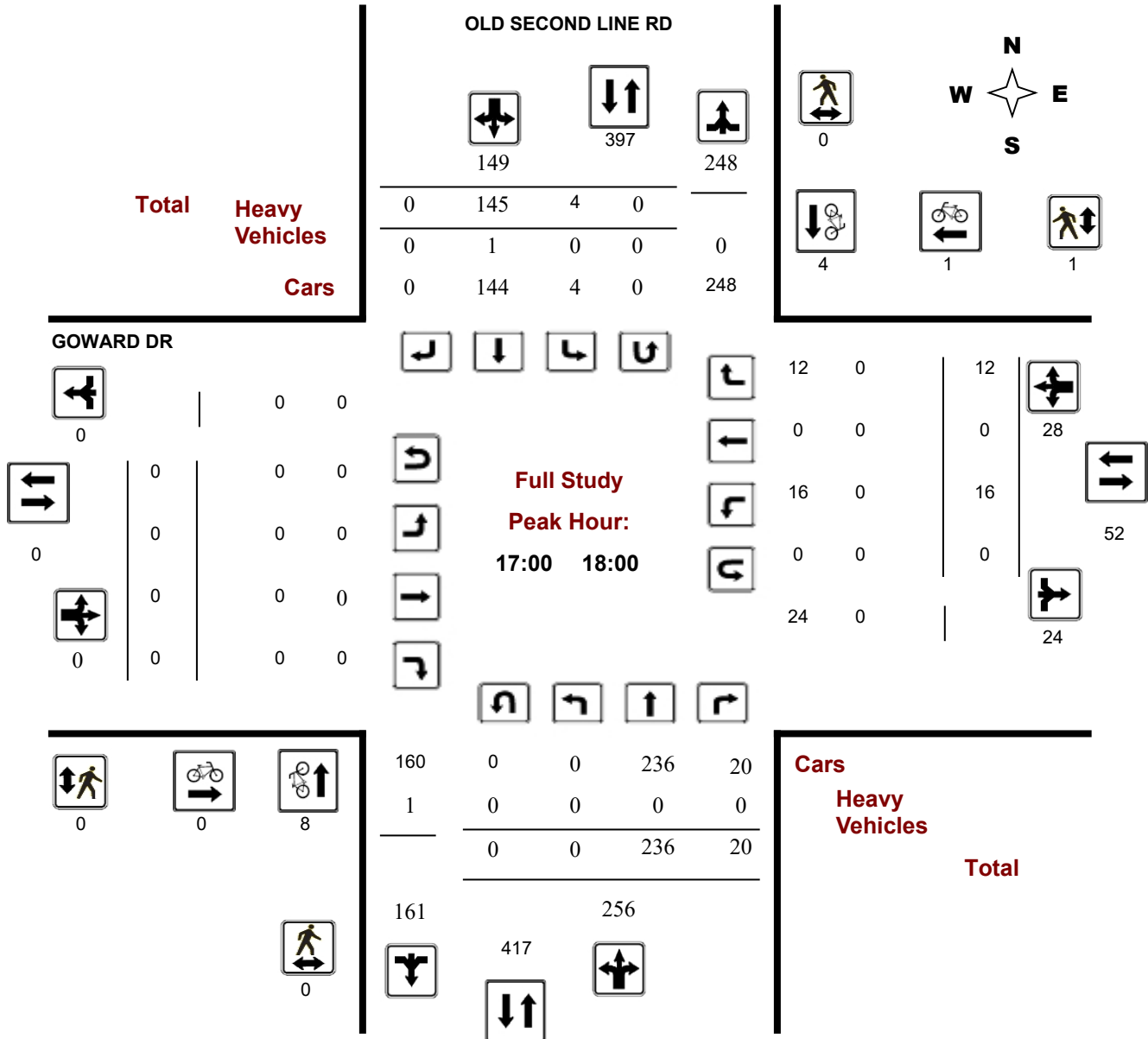
Survey Date: Wednesday, May 27, 2015

WO No: 35085

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Turning Movement Count - Peak Hour Diagram

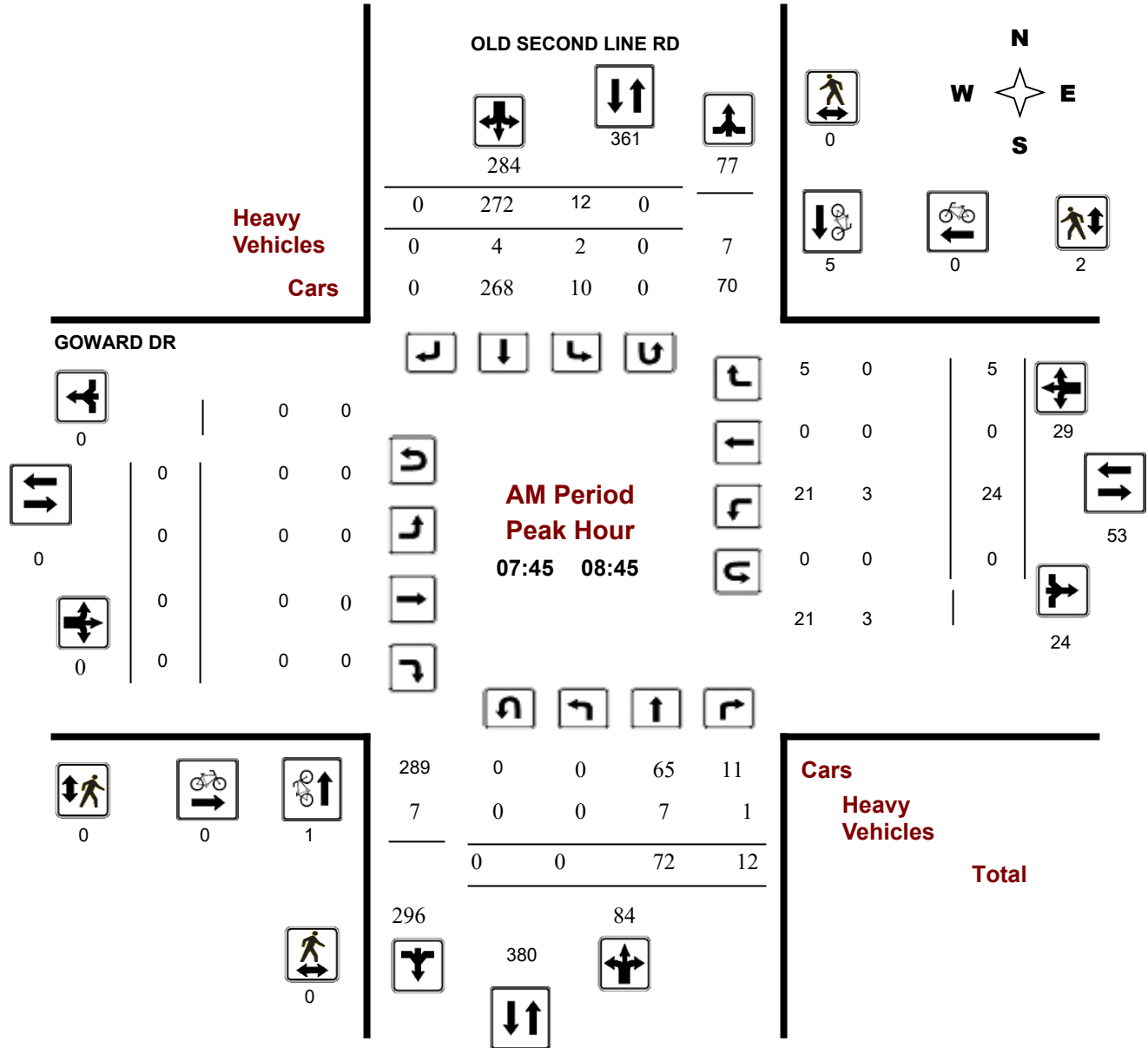
GOWARD DR @ OLD SECOND LINE RD

Survey Date: Wednesday, May 27, 2015

Start Time: 07:00

WO No: 35085

Device: Miovision



Turning Movement Count - Peak Hour Diagram

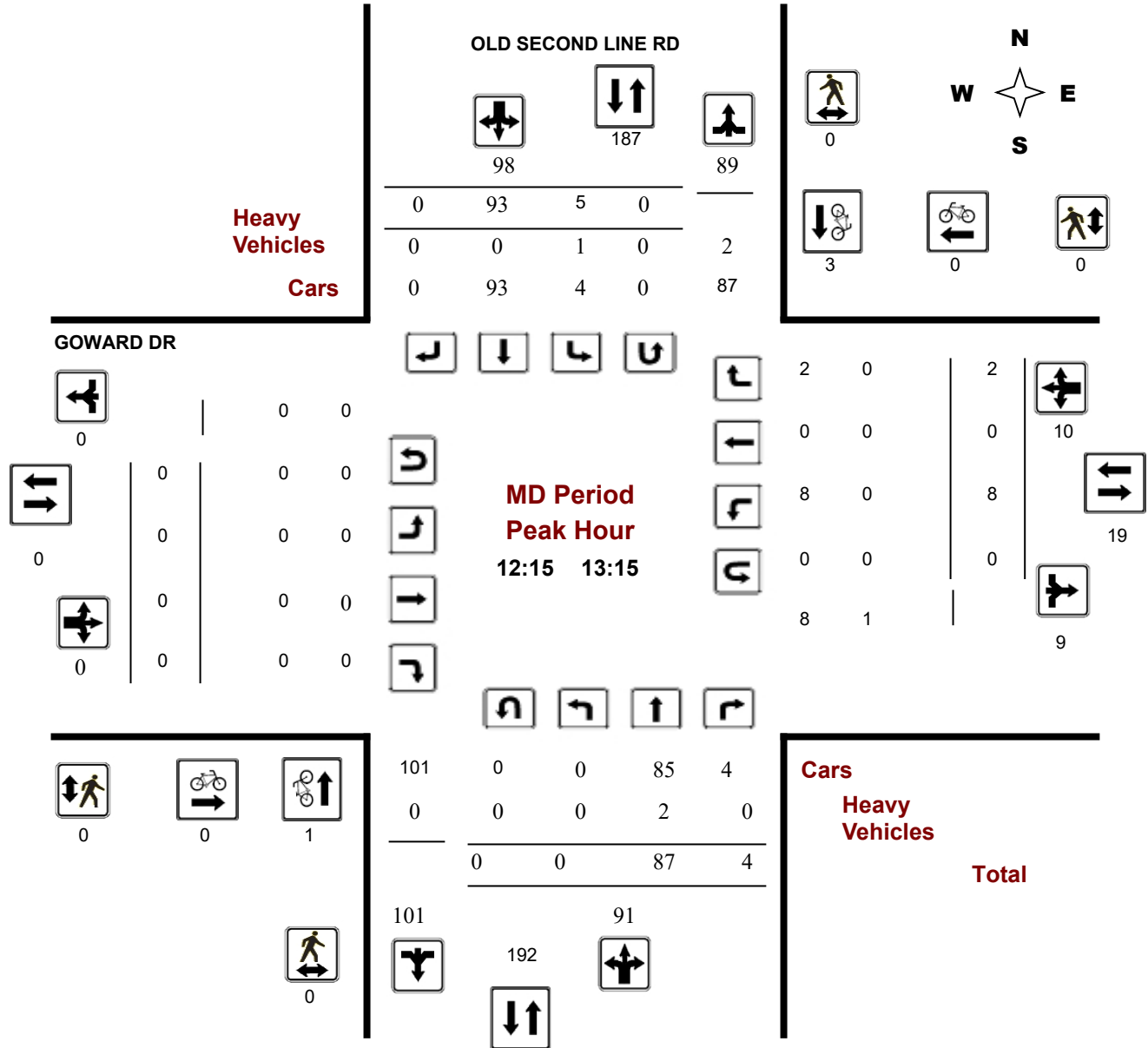
GOWARD DR @ OLD SECOND LINE RD

Survey Date: Wednesday, May 27, 2015

Start Time: 07:00

WO No: 35085

Device: Miovision



Comments

Turning Movement Count - Peak Hour Diagram

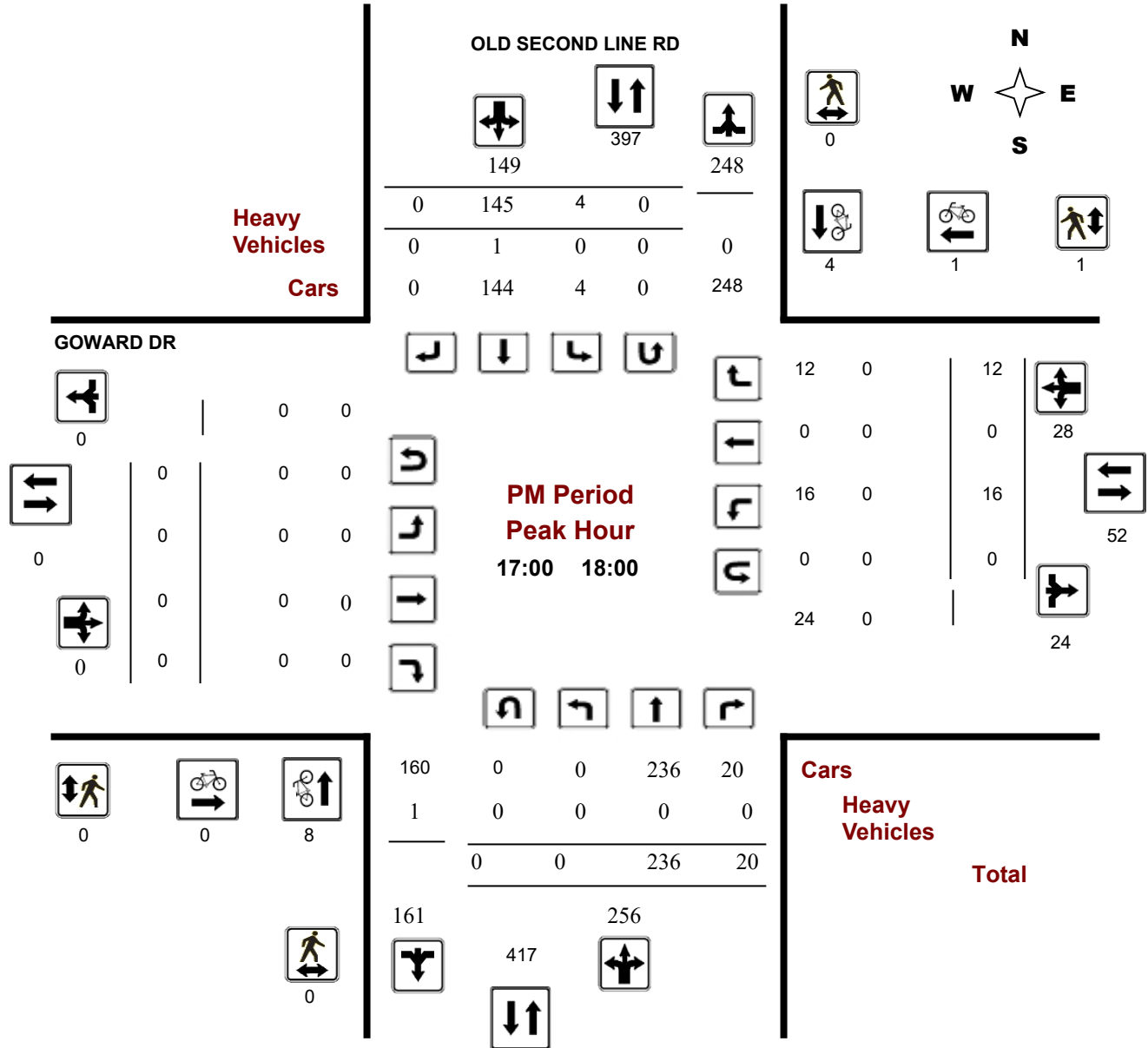
GOWARD DR @ OLD SECOND LINE RD

Survey Date: Wednesday, May 27, 2015

Start Time: 07:00

WO No: 35085

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Study Results

GOWARD DR @ OLD SECOND LINE RD

Survey Date: Wednesday, May 27, 2015

WO No: 35085

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, May 27, 2015

Total Observed U-Turns

AADT Factor

Northbound: 1 Southbound: 0
 Eastbound: 0 Westbound: 0

.90

Period	OLD SECOND LINE RD										GOWARD DR										Grand Total
	Northbound					Southbound					Eastbound					Westbound					
	LT	ST	RT	NB TOT	STR TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	STR TOT	LT	ST	RT	WB TOT	STR TOT	
07:00 08:00	0	47	6	53	300	7	240	0	247	225	0	0	0	0	30	0	5	35	35	335	
08:00 09:00	0	72	13	85	355	18	252	0	270	225	0	0	0	0	19	0	3	22	22	377	
09:00 10:00	0	60	6	66	225	5	154	0	159	225	0	0	0	0	17	0	4	21	21	246	
11:30 12:30	0	73	9	82	166	4	80	0	84	166	0	0	0	0	9	0	1	10	10	176	
12:30 13:30	0	84	4	88	177	5	84	0	89	177	0	0	0	0	10	0	3	13	13	190	
15:00 16:00	0	145	22	167	286	14	105	0	119	286	0	0	0	0	7	0	9	16	16	302	
16:00 17:00	0	218	28	246	366	7	113	0	120	366	0	0	0	0	18	0	11	29	29	395	
17:00 18:00	0	236	20	256	405	4	145	0	149	405	0	0	0	0	16	0	12	28	28	433	
Sub Total	0	935	108	1043	2280	64	1173	0	1237	2280	0	0	0	0	126	0	48	174	174	2454	
U Turns				1	1				0	1				0				0	0	1	
Total	0	935	108	1044	2281	64	1173	0	1237	2281	0	0	0	0	126	0	48	174	174	2455	
EQ 12Hr	0	1300	150	1451	3171	89	1630	0	1719	3171	0	0	0	0	175	0	67	242	242	3412	
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														1.39							
AVG 12Hr	0	1170	135	1306	2854	80	1922	0	1547	2854	0	0	0	0	158	0	60	218	218	3071	
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														.90							
AVG 24Hr	0	1533	177	1711	3739	105	2518	0	2027	3739	0	0	0	0	207	0	79	286	286	4023	
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														1.31							
Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.																					



Transportation Services - Traffic Services

Turning Movement Count - Study Results

GOWARD DR @ OLD SECOND LINE RD

Survey Date: Wednesday, May 27, 2015

WO No: 35085

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

OLD SECOND LINE RD

GOWARD DR

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 07:15	0	8	0	8	1	43	0	44	52	0	0	0	0	3	0	2	5	5	57
07:15 07:30	0	8	0	8	1	59	0	60	68	0	0	0	0	7	0	0	7	7	75
07:30 07:45	0	17	2	19	2	61	0	63	82	0	0	0	0	11	0	1	12	12	94
07:45 08:00	0	14	4	18	3	77	0	80	98	0	0	0	0	9	0	2	11	11	109
08:00 08:15	0	17	1	18	3	67	0	70	88	0	0	0	0	4	0	0	4	4	92
08:15 08:30	0	17	3	20	5	66	0	71	91	0	0	0	0	3	0	2	5	5	96
08:30 08:45	0	24	4	28	1	62	0	63	91	0	0	0	0	8	0	1	9	9	100
08:45 09:00	0	14	5	19	9	57	0	66	85	0	0	0	0	4	0	0	4	4	89
09:00 09:15	0	25	6	31	4	42	0	46	77	0	0	0	0	7	0	2	9	9	86
09:15 09:30	0	12	0	12	1	55	0	56	68	0	0	0	0	5	0	1	6	6	74
09:30 09:45	0	13	0	13	0	29	0	29	42	0	0	0	0	3	0	1	4	4	46
09:45 10:00	0	10	0	10	0	28	0	28	38	0	0	0	0	2	0	0	2	2	40
11:30 11:45	0	21	1	22	1	19	0	20	42	0	0	0	0	2	0	0	2	2	44
11:45 12:00	0	14	3	17	2	26	0	28	45	0	0	0	0	4	0	0	4	4	49
12:00 12:15	0	15	4	19	0	16	0	16	35	0	0	0	0	1	0	1	2	2	37
12:15 12:30	0	23	1	24	1	19	0	20	44	0	0	0	0	2	0	0	2	2	46
12:30 12:45	0	25	0	25	2	27	0	29	54	0	0	0	0	0	0	0	0	0	54
12:45 13:00	0	26	2	28	0	25	0	25	53	0	0	0	0	5	0	1	6	6	59
13:00 13:15	0	13	1	14	2	22	0	24	38	0	0	0	0	1	0	1	2	2	40
13:15 13:30	0	20	1	21	1	10	0	11	32	0	0	0	0	4	0	1	5	5	37
15:00 15:15	0	27	2	29	1	19	0	20	49	0	0	0	0	2	0	1	3	3	52
15:15 15:30	0	24	6	31	6	27	0	33	64	0	0	0	0	2	0	2	4	4	68
15:30 15:45	0	31	6	37	6	29	0	35	72	0	0	0	0	1	0	3	4	4	76
15:45 16:00	0	63	8	71	1	30	0	31	102	0	0	0	0	2	0	3	5	5	107
16:00 16:15	0	38	8	46	1	29	0	30	76	0	0	0	0	2	0	2	4	4	80
16:15 16:30	0	61	10	71	2	27	0	29	100	0	0	0	0	8	0	5	13	13	113
16:30 16:45	0	57	4	61	1	29	0	30	91	0	0	0	0	4	0	2	6	6	97
16:45 17:00	0	62	6	68	3	28	0	31	99	0	0	0	0	4	0	2	6	6	105
17:00 17:15	0	63	6	69	2	37	0	39	108	0	0	0	0	1	0	3	4	4	112
17:15 17:30	0	59	4	63	1	34	0	35	98	0	0	0	0	1	0	2	3	3	101
17:30 17:45	0	59	5	64	0	30	0	30	94	0	0	0	0	6	0	1	7	7	101
17:45 18:00	0	55	5	60	1	44	0	45	105	0	0	0	0	8	0	6	14	14	119
Total:	0	935	108	1044	64	1173	0	1237	2281	0	0	0	0	126	0	48	174	174	2,455

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

GOWARD DR @ OLD SECOND LINE RD

Survey Date: Wednesday, May 27, 2015

WO No: 35085

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

OLD SECOND LINE RD

GOWARD DR

Time Period	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00 07:15	0	1	1	0	0	0	1
07:15 07:30	1	2	3	0	1	1	4
07:30 07:45	0	2	2	0	1	1	3
07:45 08:00	0	1	1	0	0	0	1
08:00 08:15	0	0	0	0	0	0	0
08:15 08:30	0	3	3	0	0	0	3
08:30 08:45	1	1	2	0	0	0	2
08:45 09:00	1	0	1	0	0	0	1
09:00 09:15	0	0	0	0	0	0	0
09:15 09:30	0	0	0	0	0	0	0
09:30 09:45	1	0	1	0	0	0	1
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	1	1	0	0	0	1
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	1	1	0	0	0	1
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	0	0	0	0	0	0
12:45 13:00	1	2	3	0	0	0	3
13:00 13:15	0	1	1	0	0	0	1
13:15 13:30	1	0	1	0	0	0	1
15:00 15:15	1	0	1	0	0	0	1
15:15 15:30	0	1	1	0	0	0	1
15:30 15:45	1	0	1	0	0	0	1
15:45 16:00	1	2	3	0	0	0	3
16:00 16:15	1	0	1	0	0	0	1
16:15 16:30	1	1	2	0	0	0	2
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	1	0	1	0	0	0	1
17:00 17:15	3	1	4	0	0	0	4
17:15 17:30	2	0	2	0	0	0	2
17:30 17:45	1	1	2	0	1	1	3
17:45 18:00	2	2	4	0	0	0	4
Total	20	23	43	0	3	3	46



Transportation Services - Traffic Services

Turning Movement Count - Study Results

GOWARD DR @ OLD SECOND LINE RD

Survey Date: Wednesday, May 27, 2015

WO No: 35085

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

OLD SECOND LINE RD

GOWARD DR

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	0	0	0	0	0	0
07:15 07:30	0	0	0	0	0	0	0
07:30 07:45	0	0	0	0	1	1	1
07:45 08:00	0	0	0	0	2	2	2
08:00 08:15	0	0	0	0	0	0	0
08:15 08:30	0	0	0	0	0	0	0
08:30 08:45	0	0	0	0	0	0	0
08:45 09:00	0	1	1	0	1	1	2
09:00 09:15	0	0	0	0	1	1	1
09:15 09:30	0	0	0	0	0	0	0
09:30 09:45	0	0	0	0	0	0	0
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	0	0	0	0	0	0
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	0	0	0	0	0	0
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	0	0	0	0	0	0
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	0	0	0	0	0	0	0
13:15 13:30	0	0	0	0	0	0	0
15:00 15:15	0	0	0	0	0	0	0
15:15 15:30	0	0	0	0	0	0	0
15:30 15:45	0	0	0	0	0	0	0
15:45 16:00	0	0	0	0	1	1	1
16:00 16:15	0	0	0	0	0	0	0
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	1	1	1
16:45 17:00	0	0	0	0	1	1	1
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	1	1	1
17:30 17:45	0	0	0	0	0	0	0
17:45 18:00	0	0	0	0	0	0	0
Total	0	1	1	0	9	9	10



Transportation Services - Traffic Services

Turning Movement Count - Study Results

GOWARD DR @ OLD SECOND LINE RD

Survey Date: Wednesday, May 27, 2015

WO No: 35085

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

OLD SECOND LINE RD

GOWARD DR

Northbound Southbound Eastbound Westbound

Time Period	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
07:00 07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 07:30	0	0	0	2	1	2	0	3	5	0	0	0	0	0	0	0	1	1	3
07:30 07:45	0	0	0	2	1	2	0	4	6	0	0	0	0	0	0	1	2	2	4
07:45 08:00	0	2	0	3	0	0	0	2	5	0	0	0	0	1	0	0	1	1	3
08:00 08:15	0	2	0	2	0	0	0	2	4	0	0	0	0	0	0	0	0	0	2
08:15 08:30	0	2	1	6	2	1	0	5	11	0	0	0	0	2	0	0	5	5	8
08:30 08:45	0	1	0	4	0	3	0	4	8	0	0	0	0	0	0	0	0	0	4
08:45 09:00	0	0	0	2	2	2	0	4	6	0	0	0	0	0	0	0	2	2	4
09:00 09:15	0	6	0	6	0	0	0	7	13	0	0	0	0	0	0	1	1	1	7
09:15 09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 10:00	0	0	0	1	0	1	0	1	2	0	0	0	0	0	0	0	0	0	1
11:30 11:45	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	1	1
11:45 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 12:15	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	1
12:15 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 12:45	0	1	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	1
12:45 13:00	0	1	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	1
13:00 13:15	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	1	1
13:15 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 15:15	0	1	0	3	0	2	0	3	6	0	0	0	0	0	0	0	0	0	3
15:15 15:30	0	0	0	3	2	3	0	5	8	0	0	0	0	0	0	0	2	2	5
15:30 15:45	0	0	0	1	0	1	0	1	2	0	0	0	0	0	0	0	0	0	1
15:45 16:00	0	3	2	5	0	0	0	4	9	0	0	0	0	0	0	1	3	3	6
16:00 16:15	0	1	2	4	0	1	0	2	6	0	0	0	0	0	0	0	2	2	4
16:15 16:30	0	2	1	3	1	0	0	4	7	0	0	0	0	0	0	1	3	3	5
16:30 16:45	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	1	1
16:45 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45 18:00	0	0	0	1	0	1	0	1	2	0	0	0	0	0	0	0	0	0	1
Total: None	0	22	6	50	12	19	0	58	108	0	0	0	0	3	0	5	26	26	67



Transportation Services - Traffic Services

Turning Movement Count - Study Results

GOWARD DR @ OLD SECOND LINE RD

Survey Date: Wednesday, May 27, 2015

WO No: 35085

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

OLD SECOND LINE RD

GOWARD DR

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	1	0	0	0	1
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		1	0	0	0	1

Attachment C

Site Visit Photos

Attachment C – Site Photos

1158 Old Second Line Road – Viewing North

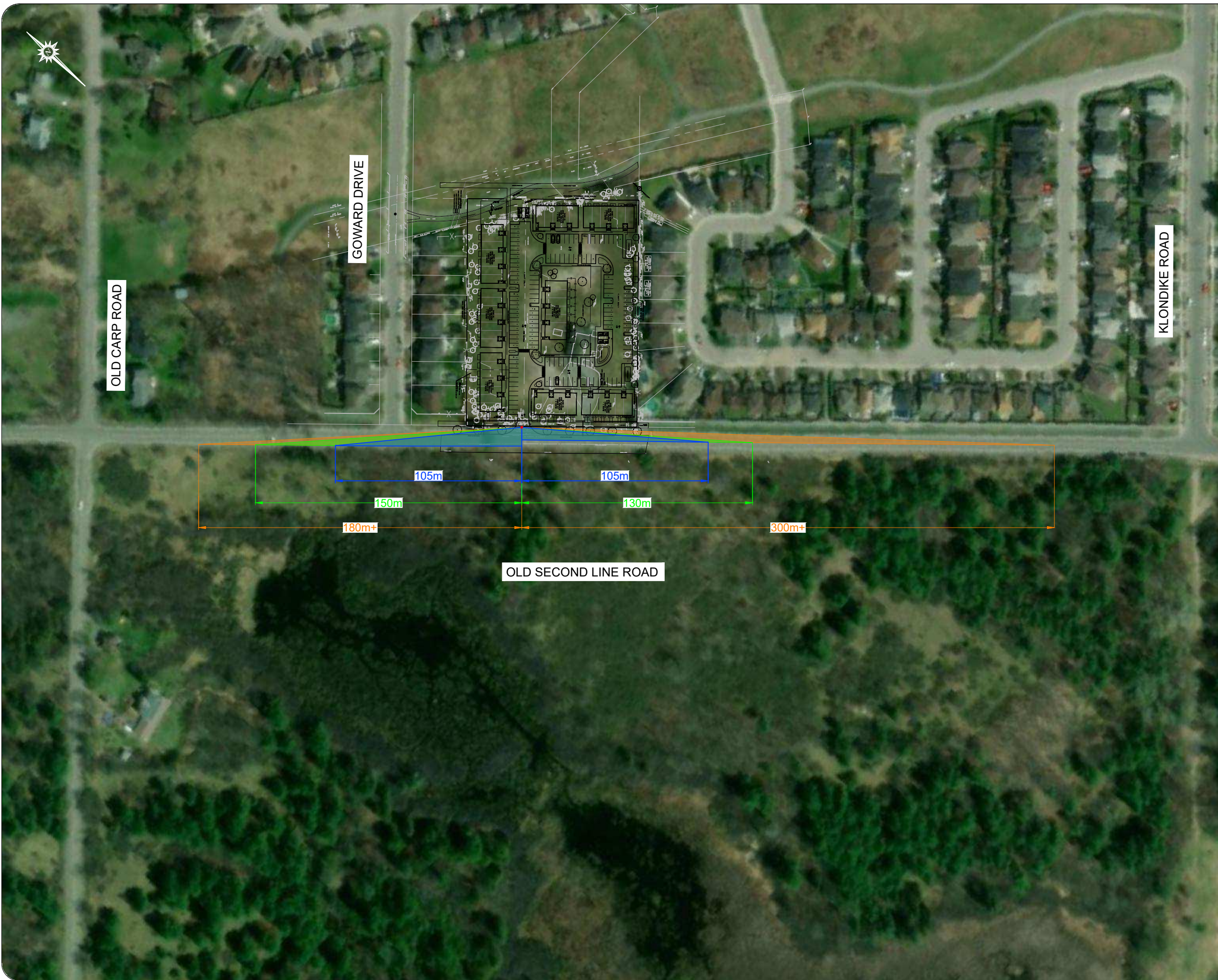


1158 Old Second Line Road – Viewing South



Attachment D

1158 Old Second Line Road – Vertical Sightline Analysis



Notes:

- STOPPING SIGHT DISTANCE
- DEPARTURE SIGHT DISTANCE
- AVAILABLE SIGHT DISTANCE

OBJECT HEIGHT = 0.60m
 DRIVERS EYE HEIGHT = 1.08m

- DESIGN SPEED 70KM/H
- STOPPING SIGHT DISTANCE = 105m
 - DEPARTURE SIGHT DISTANCE (LEFT TURN) = 150m
 - DEPARTURE SIGHT DISTANCE (RIGHT TURN) = 130m

AVAILABLE SIGHT DISTANCE (LOOKING LEFT) = 300m+

AVAILABLE SIGHT DISTANCE (LOOKING RIGHT) = 180m+

01	Issued for Review	BB	2023-05-15
REV:	DESCRIPTION:	BY:	DATE:
STATUS:			



CGH Transportation
 6 Plaza Court
 Ottawa, ON
 K2H 7W1
 (343) 999-9117

CLIENT: Theberge Homes

ARCHITECT:

SITE:
 1158 Old Second Line Road

TITLE: Vertical Sightline Analysis

SCALE AT A3: NTS	DATE: 2023-05-15	DRAWN: drawn	CHECKED: JK
PROJECT NO: 2023-056	DRAWING NO: 001	REVISION: 01	