

May 20, 2009
Project: 080280

Transportation
Planning

Transit
Planning

Traffic
Engineering

Parking
Planning

Philip E. Grubb
B.A.Sc., P.Eng.
President

William B. O'Brien
M.A.Sc., P.Eng.
Vice President

James J.L. Mallett
M.A.Sc., P.Eng., PTOE
Vice President

www.ptsl.com

2109 Kerns Road
Burlington ON L7P 1P7

Email: bobrien@ptsl.com
Phone: 905-381-2229
519-896-3163

Fax: 1-866-722-5117

Norm Elmhirst, P. Eng., President
Nelson Aggregate Company
P. O. Box 1070
Burlington, ON
L7R 4L8

Dear Mr. Elmhirst:

Re: Nelson Aggregate Burlington Quarry Extension Traffic Study Update

This letter report has been prepared at your request to provide an update of the traffic study¹ carried out by Paradigm Transportation Solutions Ltd for the proposed extension of the Nelson Aggregate Burlington Quarry. That study was completed in June 2005 (and reprinted in May 2006). Since that time there has been considerable discussion on various aspects of the Burlington Quarry Extension project and a number of follow-up questions and comments by the Joint Agency Review Team (JART) on a wide variety of matters, including the traffic implications of the project. Since a considerable period of time has elapsed since the June 2005 study was completed, this update report has been prepared to assess more recent traffic data and to determine if the findings of the initial study are still valid.

Updated Traffic Count Data

The primary traffic data utilized in the June 2005 study report was collected on the following dates:

- ▶ Turning movement count at Guelph Line and Dundas Street taken in April 2003 (Halton Region)

¹ Nelson Aggregate Co. Burlington Quarry Extension Traffic Study, Prepared for Nelson Aggregate Co by Paradigm Transportation Solutions Ltd, June 2005.



- ▶ Turning movement count at Guelph Line and No 2 Sideroad taken in November 2004 (Paradigm).
- ▶ Daily volume/speed/classification count on Guelph Line near No 1 Sideroad taken in September 2004 (Halton Region)

The most recent traffic count data available from Halton Region at these locations is as follows:

- ▶ Turning movement count at Guelph Line and Dundas Street taken in November 2008
- ▶ Turning movement count at Guelph Line and No 2 Sideroad taken in October 2008
- ▶ Daily volume/speed/classification counts on Guelph Line south of No 2 Sideroad and south of Britannia Road taken in April 2008.

Traffic Estimates Comparisons

The weekday peak hour turning movement traffic volumes at the Guelph Line intersections, based on the foregoing data, are shown in Figure 1 (attached). Some selected comparisons of the June 2005 study estimates of the existing traffic volumes with the 2008 traffic counts are summarized in Table 1 below.

TABLE 1: COMPARISON OF TRAFFIC ANALYSES

	June 2005 Traffic Study Volumes	2008 Traffic Count Data
Intersection Approach Volume at Guelph Line & No. 2 Sideroad	637 vph AM 780 vph PM	649 vph AM 783 vph PM
Two way Volume on No 2 Sideroad west of Guelph Ln	130 vph AM 92 vph PM	88 Vph AM 99 vph PM
Two way Volume on Guelph Ln south of No 2 Sideroad	587 vph AM 738 vph PM	614 vph AM 756 vph PM
Intersection Approach Volume at Guelph Line & Dundas Street	3,094 vph AM 4,050 vph PM	3,845 vph AM 4,145 vph PM
Two way volume on Dundas St east of Guelph Ln	2,369 vph AM 2,991 vph PM	2,854 vph AM 2,996 vph PM

The comparisons of the traffic volumes between the June 2005 traffic study report and the 2008 traffic count data generally indicate that the earlier traffic estimates are very similar to the more recent traffic 2008 traffic counts. In most cases the differences are within the typical day to day variation in traffic volumes. The instances where the differences are more significant are as follows:

- ▶ The June 2005 traffic study estimated the weekday AM peak hour volume on No. 2 Sideroad as 130 vph while the 2008 count indicated the two way volume is about 88 vph. There is no specific reason identified for this difference although it is noted that the more recent count indicates a reduced traffic volume compared to the estimate in the June 2005 traffic study report.
- ▶ In the AM peak hour, the approach volumes at the Guelph Line and Dundas Street intersection are about 24% higher in the 2008 traffic volumes as compared to the June 2005 traffic study. This is largely related to the increased traffic volumes along Dundas Street in the AM peak hour. It is expected that this is due to the increased urban development along the Dundas Street corridor over this period and the resulting increased traffic activity.

Overall, the traffic counts taken in 2008 in the vicinity of the Nelson Aggregate Burlington Quarry are not significantly different than the estimates of the existing traffic provided in the June 2005 traffic study report.

The daily traffic count data collected by Halton Region on 30 April 2008 on Guelph Line provides additional detail on the traffic characteristics in the vicinity of the Burlington Quarry. This data is summarized in Table 2 below.

TABLE 2: GUELPH LINE 2008 DAILY TRAFFIC CHARACTERISTICS

	Station 100108 (Guelph Line south of No 2 Sideroad)	Station 100109 (Guelph Line south of Britannia Road)
Count Date	30 April 2008	30 April 2008
Total Daily Volume (all vehicles)	8,633	6,890
Posted Speed Limit/85 th Percentile Speed (km/h)	80 / 93.5	60 / 87.8
Number of Small & Medium Trucks (% of Total)	325 (3.8%)	189 (2.2%)
Number of Large Trucks (% of Total)	199 (2.3%)	146 (2.1%)

The data outlined in Table 2, based on traffic counts conducted in April 2008, may be compared to the daily traffic information provided in Section 3.2 of the June 2005 traffic study report. The key items to note are as follows:

- ▶ The June 2005 traffic study report estimated the existing daily traffic volume on Guelph Line south of No. 2 Sideroad as 8,700 vehicles per day. The more recent 2008 traffic data is consistent with that estimate and indicates the traffic volumes have remained relatively stable.
- ▶ The number of heavy trucks in 2008 of about 199 south of No. 2 Sideroad and about 146 south of Britannia Road over a 24 hour period is lower than the estimated 8 hour volume of trucks on Guelph Line in the June 2005 study.

Burlington Quarry Truck Activity Review

The June 2005 traffic study utilized shipping data provided by Nelson Aggregate Co to summarize the peak daily truck activity. The data used covered the period from February 2003 to August 2004 and indicated the number of trucks served during each month as well as the number of shipping days in each month. It should be noted by the reader that each truck served will generate one inbound trip and one outbound trip on that day at the quarry. This terminology was used in the June 2005 traffic study report and has also been used in this study report.

The June 2005 study indicated that:

- ▶ The average daily truck activity over that period was about 300 trucks served on each shipping day.
- ▶ The busiest month was May, 2004 with an average of 457 trucks served on each shipping day.

Nelson Aggregate Co. has provided detailed truck shipping records for years 2004 through 2008 as shown in Attachment 1 of this report. It is noted that these records include outgoing truck shipments of aggregate and asphalt materials as well as incoming truck shipments of fill, recycle materials and aggregate for resale. Again, it should be noted by the reader that each truck served results in one inbound truck trip and one outbound truck trip on that day. These data indicate the following:

- ▶ The quarry truck activity level is reduced during the winter months, typically January through March of each year. The peak truck activity typically occurs during the April through August period.
- ▶ The overall average level of trucking activity over this five year period was about 327 trucks served each shipping day which represents an increase of about 8% over the average daily trucking activity reported in the June 2005 study report.
- ▶ The busiest year in terms of truck activity was 2005 with a total of 336.7 trucks served per shipping day during that year. The busiest truck shipping month over this five year period occurred in April 2008 with 505.5 trucks served per shipping day during the month.

Summary and Conclusions

The primary purpose of this report is to provide an update of the June 2005 traffic study prepared for the Nelson Aggregate Co Burlington Quarry expansion project. That study utilized traffic data collected during 2003 and 2004. A concern expressed by the various reviewing agencies is that the traffic data may no longer be relevant since a considerable period of time has elapsed. To assess this concern, traffic data collected in 2008 has been obtained from the Region of Halton and truck activity records at the Burlington Quarry has been obtained from Nelson Aggregate Company.

The 2008 traffic counts provided by the Region of Halton were found to be very similar to the traffic counts used in the June 2005 study report. In almost all cases, there has not been any significant increase in the traffic volumes on the roads in the vicinity of the Burlington Quarry. The only exception noted was an increase in the weekday AM peak hour traffic volumes at the intersection of Guelph Line and Dundas Street. This appears to be a result of ongoing urban development along the Dundas Street corridor.

The five year truck shipping records provided by Nelson Aggregate Company for the Burlington Quarry indicates that the average daily truck activity was about 8% higher than the average daily truck activity levels reported in the June 2005 study report. The peak month truck activity in April 2008 was about 11% higher than the peak month truck activity reported in the June 2005 study report. The increased truck activity is related to incoming truck shipments of fill material for rehabilitation in the spring of 2008. Overall, the truck activity level over the five year period follows a similar pattern from year to year.

In our opinion, the overall changes in traffic and truck activity in 2008 in comparison to the traffic and truck activity reported in the June 2005 traffic study report are not significant. The findings of the June 2005 report in regards to traffic impact are still valid and, in fact, the relatively minor changes in traffic over that period of time reinforce the validity of those findings. We trust this report will meet your need and if there are any questions or further information required, please contact the undersigned at your convenience.

Yours very truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED



William B. O'Brien

M.A.Sc., P.Eng.

Vice President

FIGURE 1: YEAR 2008 TRAFFIC COUNT DATA

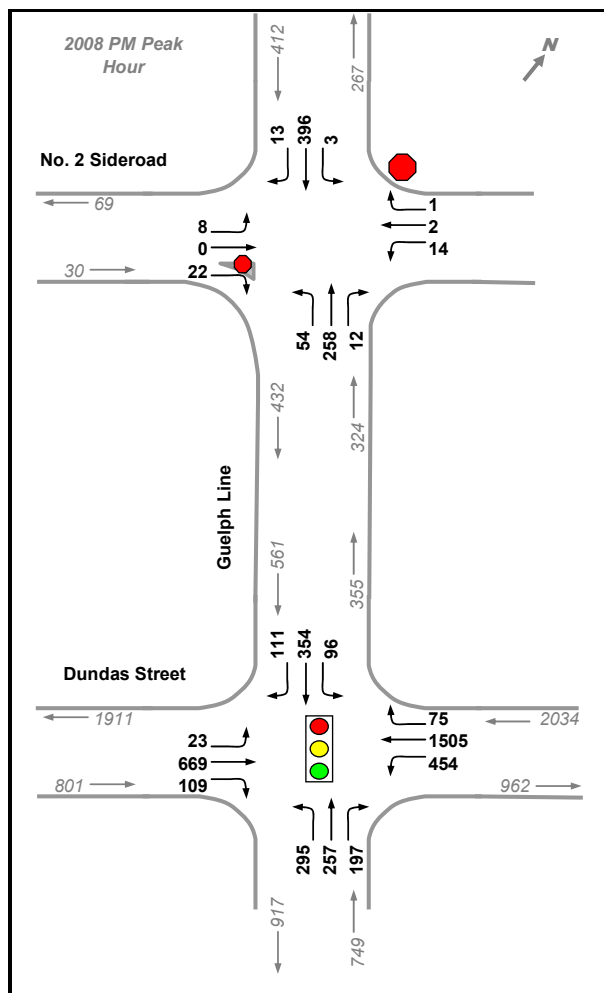
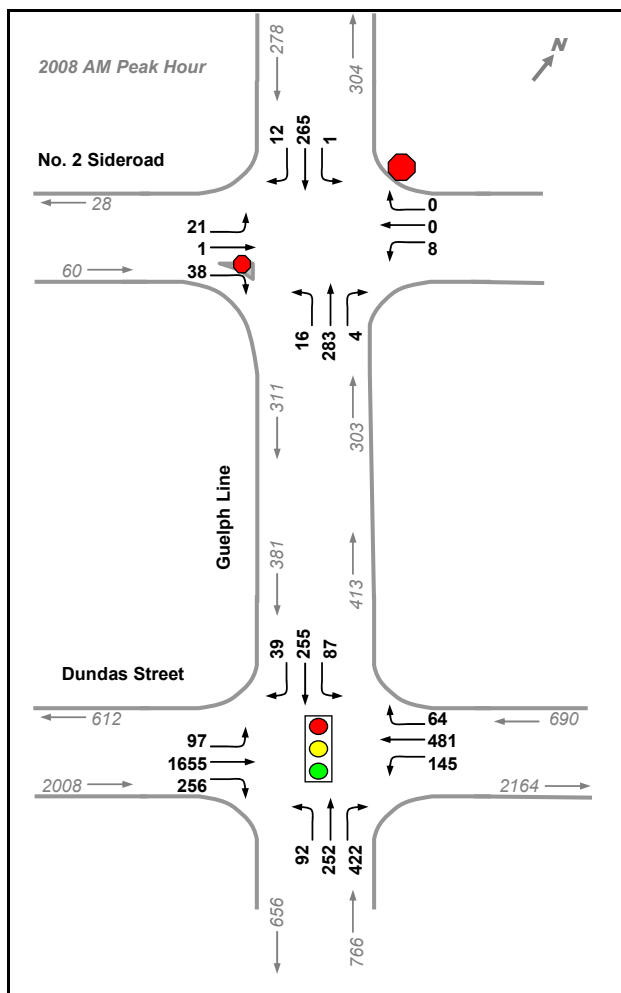
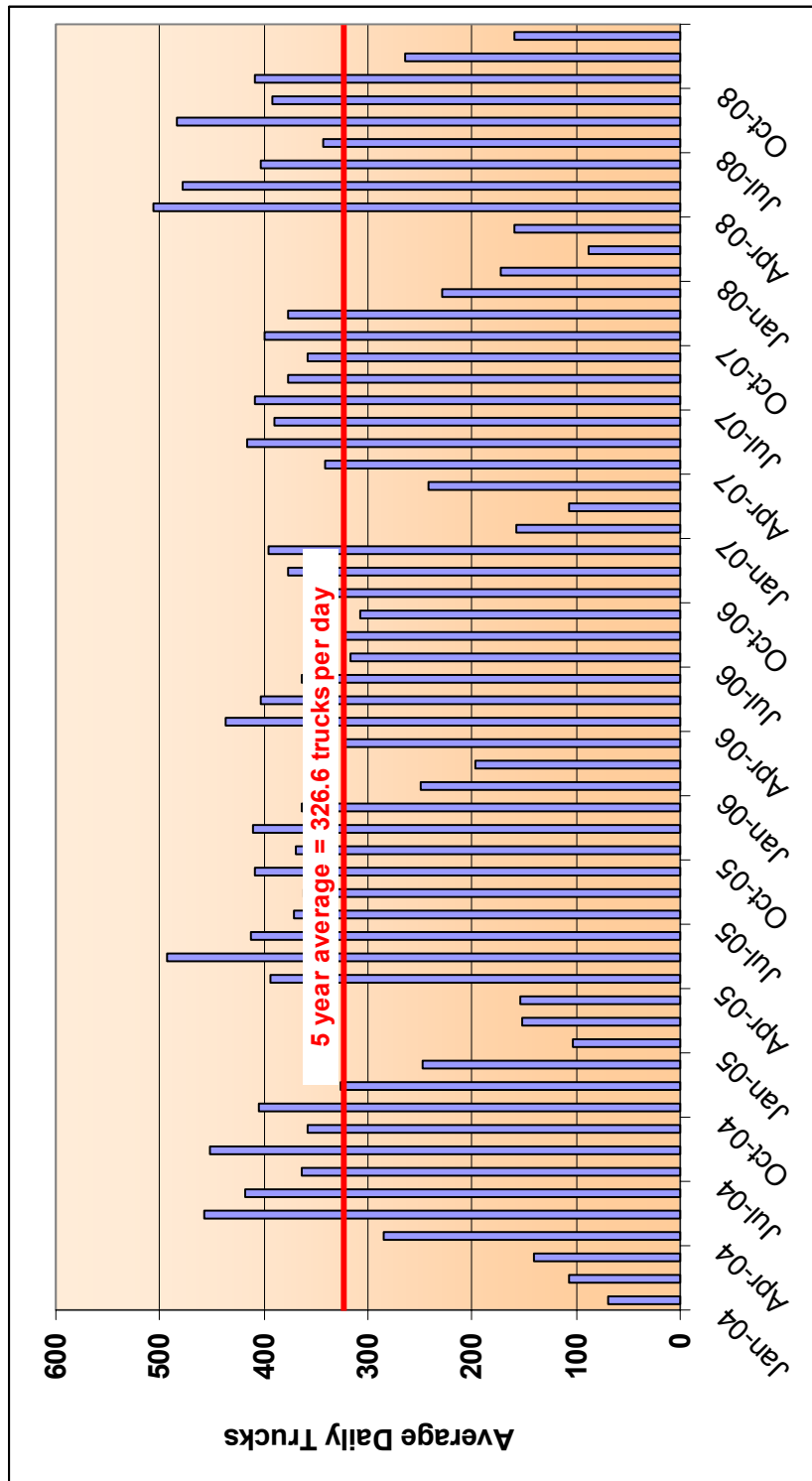


FIGURE 2: BURLINGTON QUARRY TRUCKING ACTIVITY (2004 - 2008)



ATTACHMENT 1: NELSON AGGREGATE CO. BURLINGTON QUARRY TRUCK ACTIVITY RECORDS

2004	Total Trucks Served	Shipping Days	Avg Daily Truck Trips During Month
Jan	1,402	20	70.1
Feb	2,121	20	106.1
Mar	3,219	23	140.0
Apr	6,003	21	285.9
May	9,602	21	457.2
Jun	10,853	26	417.4
Jul	8,373	23	364.0
Aug	10,826	24	451.1
Sep	8,595	24	358.1
Oct	9,727	24	405.3
Nov	8,461	26	325.4
Dec	4,696	19	247.2
Annual Summary 2004	83,878	271	309.5
2005			
Jan	2,163	21	103.0
Feb	3,025	20	151.3
Mar	3,556	23	154.6
Apr	7,871	20	393.6
May	10,364	21	493.5
Jun	10,701	26	411.6
Jul	8,914	24	371.4
Aug	9,408	26	361.8
Sep	9,805	24	408.5
Oct	8,864	24	369.3
Nov	10,655	26	409.8
Dec	6,925	19	364.5
Annual Summary 2005	92,251	274	336.7
Note: Includes all tickets printed at Burlington (including outgoing Aggregate and Asphalt sales, and incoming Fill, Recycle materials, and Aggregate for resale)			

Continued on next page.

			Avg Daily Truck
2006	Total Trucks Served	Shipping Days	Trips During Month
Jan	5,246	21	249.8
Feb	3,925	20	196.3
Mar	7,458	23	324.3
Apr	8,305	19	437.1
May	8,869	22	403.1
Jun	9,074	25	363.0
Jul	7,599	24	316.6
Aug	8,104	25	324.2
Sep	7,382	24	307.6
Oct	8,742	25	349.7
Nov	9,817	26	377.6
Dec	7,504	19	394.9
Annual Summary 2006	92,025	273	337.1
2007			
Jan	3,628	23	157.7
Feb	2,132	20	106.6
Mar	5,089	21	242.3
Apr	7,151	21	340.5
May	9,178	22	417.2
Jun	10,150	26	390.4
Jul	8,978	22	408.1
Aug	9,445	25	377.8
Sep	8,237	23	358.1
Oct	9,965	25	398.6
Nov	9,822	26	377.8
Dec	4,112	18	228.4
Annual Summary 2007	87,887	272	323.1
2008			
Jan	3,776	22	171.6
Feb	1,849	21	88.0
Mar	3,182	20	159.1
Apr	11,120	22	505.5
May	11,014	23	478.9
Jun	9,666	24	402.8
Jul	8,925	26	343.3
Aug	9,679	20	484.0
Sep	8,217	21	391.3
Oct	9,003	22	409.2
Nov	5,303	20	265.2
Dec	2,868	18	159.3
Annual Summary 2008	84,602	259	326.6
Note: Includes all tickets printed at Burlington (including outgoing Aggregate and Asphalt sales, and incoming Fill, Recycle materials, and Aggregate for resale)			