

F.R. Berry & Associates

TRANSPORTATION PLANNING CONSULTANTS

660 Inverness Avenue
London, Ontario N6H 5R4
Tel: (519) 474 2527 Fax: (519) 474 1728

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Our Ref. 1215

Mr. C. Linton, B.Sc., URPT
Land Development Project Manager
Norquay Developments Ltd.
100 Wellington Road
London ON
N6C 4M8

Dear Mr. Linton:

**RE: THAMES CREST FARMS, ST. MARY'S
TRAFFIC IMPACT ASSESSMENT**

At your request, I have assessed the potential traffic impact of your proposed residential development on the east side of Emily Street north of the Grand Trunk Trail in St. Mary's. I understand that this development is the first stage of a larger subdivision which will extend to the east as far as Wellington Street and ultimately James Street.

Emily Street is a two lane local street which provides access from the north-west area of the community to the downtown area via Water Street North. It has a posted speed limit of 50km/h and a sidewalk on one side. Immediately south of the proposed development, Emily Street passes under the former rail right of way now known as the Grand Trunk Trail. The underpass is approximately six metres wide. The sidewalk is discontinued through the underpass.

You undertook a traffic count at the underpass on February 28. Peak hour traffic volumes based on that count are shown in Figure 1.

Based on vehicle trip generation rates contained in the Institute of Transportation Engineers Trip Generation Manual, Eighth Edition, the proposed development will generate about 26 vehicle trips in the morning peak hour, 6 inbound and 20 outbound, and about 35 vehicle trips in the afternoon peak hour, 22 inbound and 13 outbound. It can be assumed that all of these trips would be oriented to and from the south on Emily Street.



Figure 2 shows projected peak hour traffic volumes at the underpass. The volumes shown in Figure 2 were obtained by increasing existing peak hour volumes by a factor of 1.16 (representing ten year's growth at 1.5 percent per year) and adding development traffic. These projections assume that no street connections would be available to Wellington Street before 2022.

In 2004, a report was prepared by Tranplan Associates which assessed the future traffic impact of the total residential development north of the Grand Trunk Trail. Traffic projections were made to 2011 and to 2021, the latter assuming full development of the area and street connections to Wellington Street and James Street. Projected peak hour volumes on Emily Street at the underpass taken from Exhibits 4.5 and 4.6 in that report are shown in Figure 3.

The 2004 report discussed the operational impact of the narrow pavement on Emily Street at the underpass (page 39) and concluded that "*the existing Emily Street subway should be capable of carrying forecast future traffic volumes to the 2021 planning horizon, even when it operates as a single lane facility...*". This conclusion was based on a comparison with a similar street restriction in Peterborough which accommodated over 300 vehicles in the peak hour.

The projections shown in Figure 2 are higher than those assumed for the analysis in the 2004 report, with a two-way afternoon peak hour volume of 128vph. However, they are still well below the comparable volumes used for that analysis.

Further comparisons can be made with two similar street restrictions in London. The Blackfriars Bridge, which has a pavement width of about six metres, carries an average daily traffic volume of 4 000 vehicles. The corresponding peak hour volume would be about 400 vehicles. The former Sarnia Road rail crossing, which operated as a single lane facility, carried an average daily traffic volume of over 6 000 vehicles, with a corresponding peak hour flow of about 600 vehicles.

Photographs of the Emily Street underpass are contained in Appendix A. These demonstrate that sight distance is not an issue. The distance between bridge abutments (6.1 metres) is such that two cars could pass through simultaneously. However, given the perception of a restricted pavement width and the short length of the underpass, it is reasonable to conclude that the facility operates as a single lane.



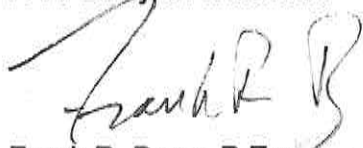
Ten of the proposed residential lots will be located on Emily Street between the existing residences and the underpass. Reference to the photographs in Appendix A and site observations confirm that sight distance between the proposed driveways and Emily Street south of the underpass, although restricted to some extent by the abutment, is not likely to be a problem.

During the traffic count on February 28, nine pedestrians (including six students) were recorded in the 7am to 9am peak period and ten pedestrians (five students) were recorded in the 3pm to 6pm peak period. Four school buses were recorded in each of the peak periods. As noted above, there is no sidewalk through the underpass, thus pedestrians are exposed to passing traffic. Given the small number of pedestrians, however, and the lower operating speed of traffic coupled with good sight distance, the hazard level can be considered to be relatively low. It is understood that the Town is considering a separate pedestrian tunnel under the Grand Trunk Trail.

A preliminary assessment of the impact of the proposed development on other streets and intersections in the study area indicated that the proposed development could be accommodated with no significant changes in traffic operations and safety.

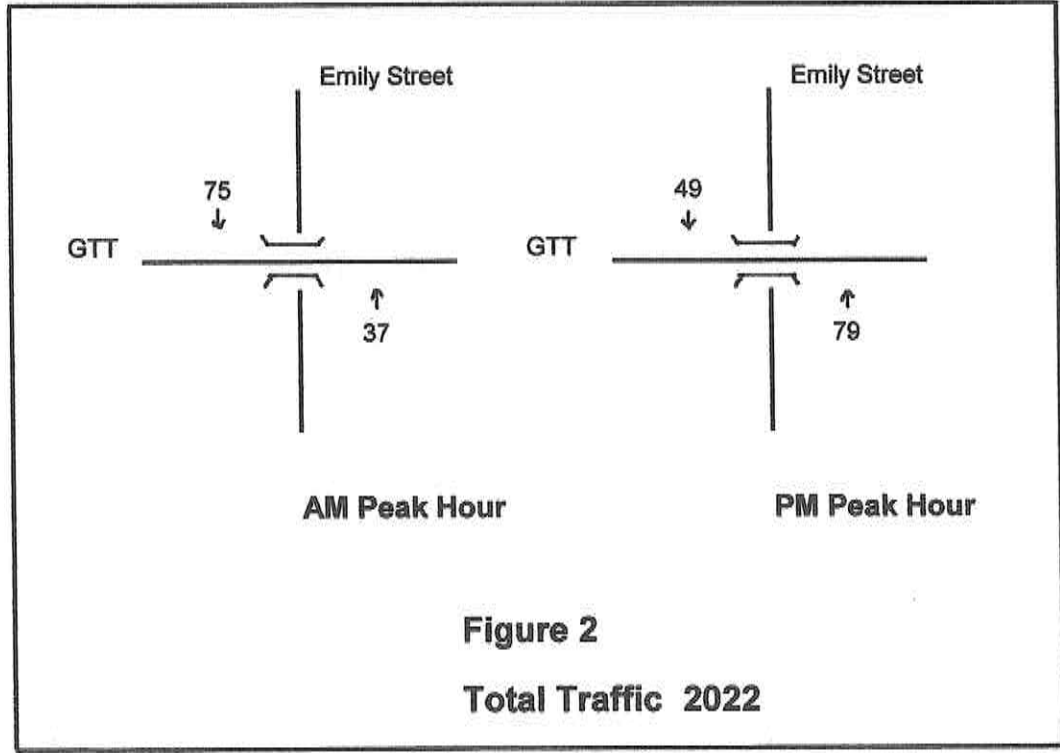
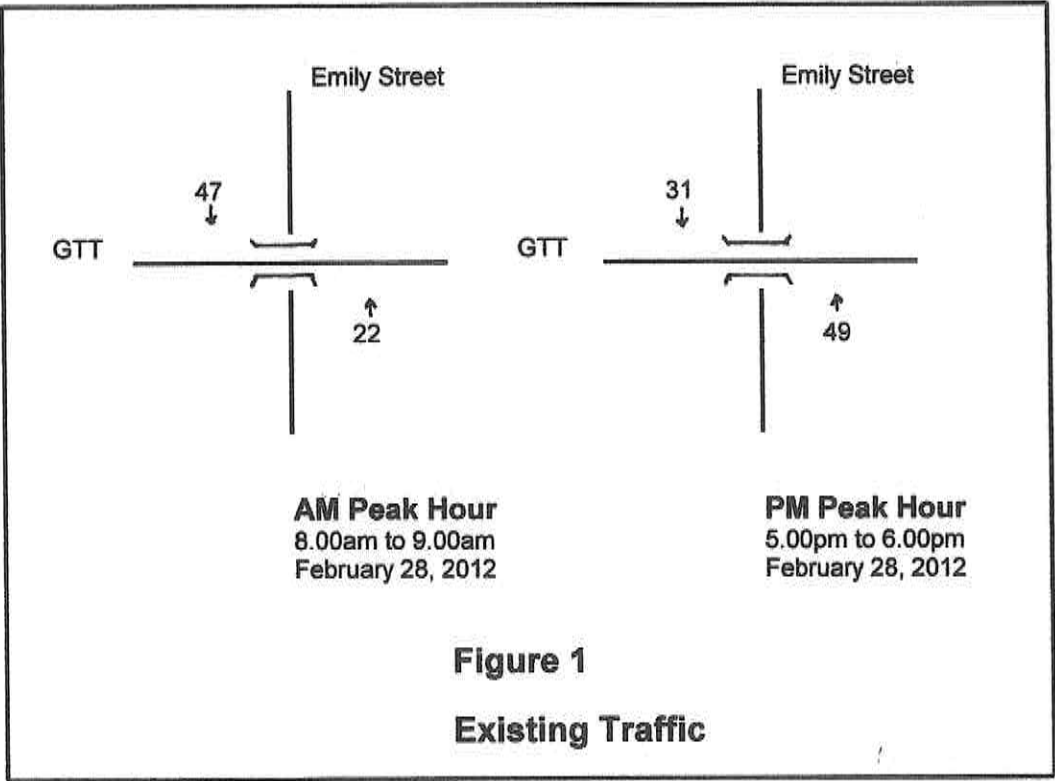
In conclusion, the proposed development can be accommodated with no significant impact on traffic operation and safety on streets in the area. There is sufficient vehicular capacity at the Grand Trunk Trail underpass on Emily Street to enable the underpass to operate as a single lane facility. Sight distance is not an issue.

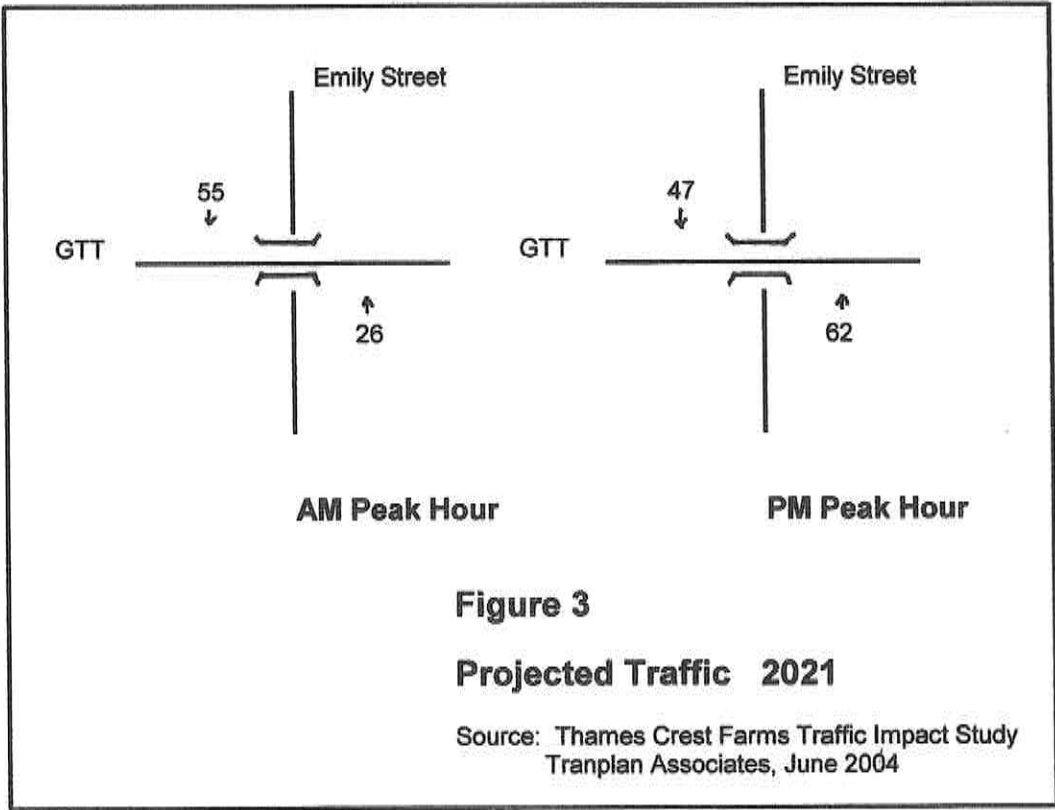
Very truly yours
F. R. Berry & Associates



Frank R. Berry, P.Eng.
Principal





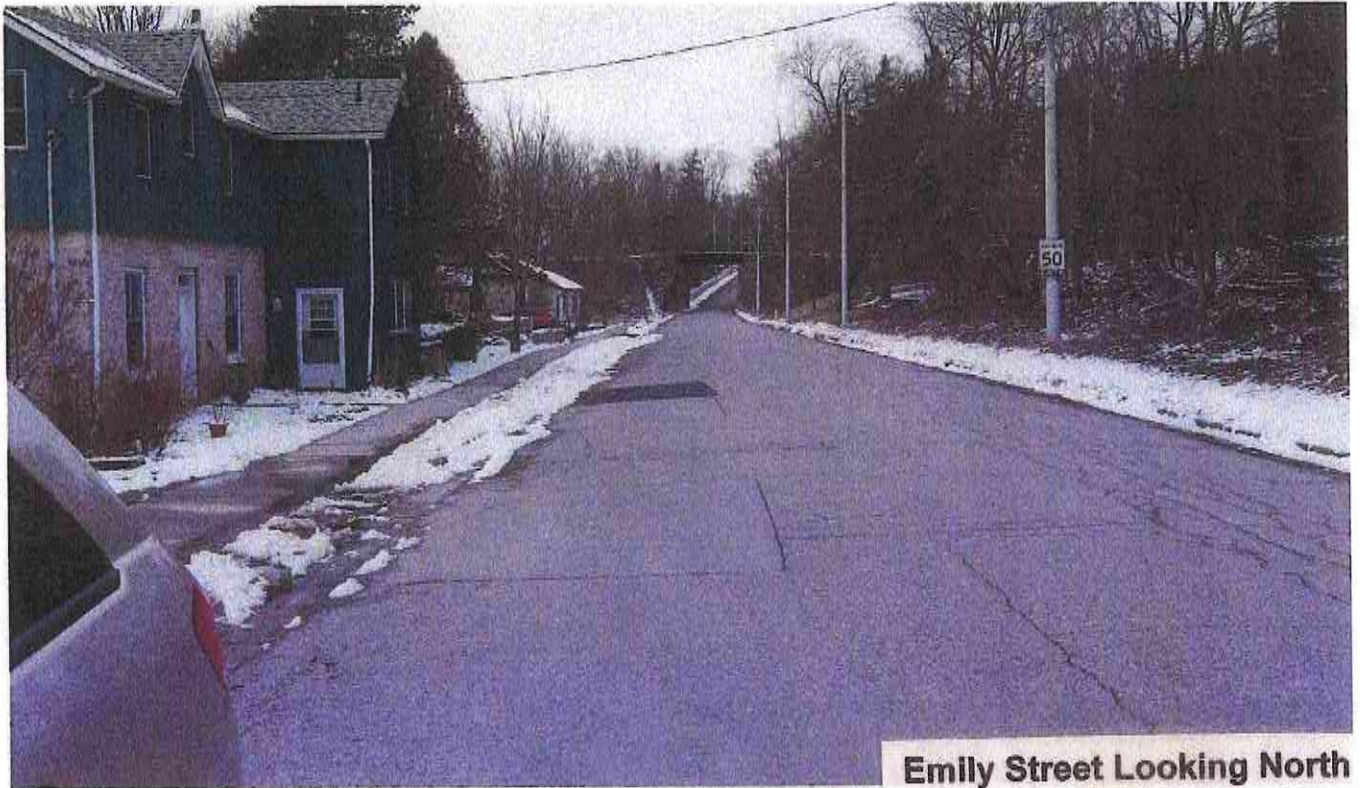


APPENDIX A
PHOTOGRAPHS

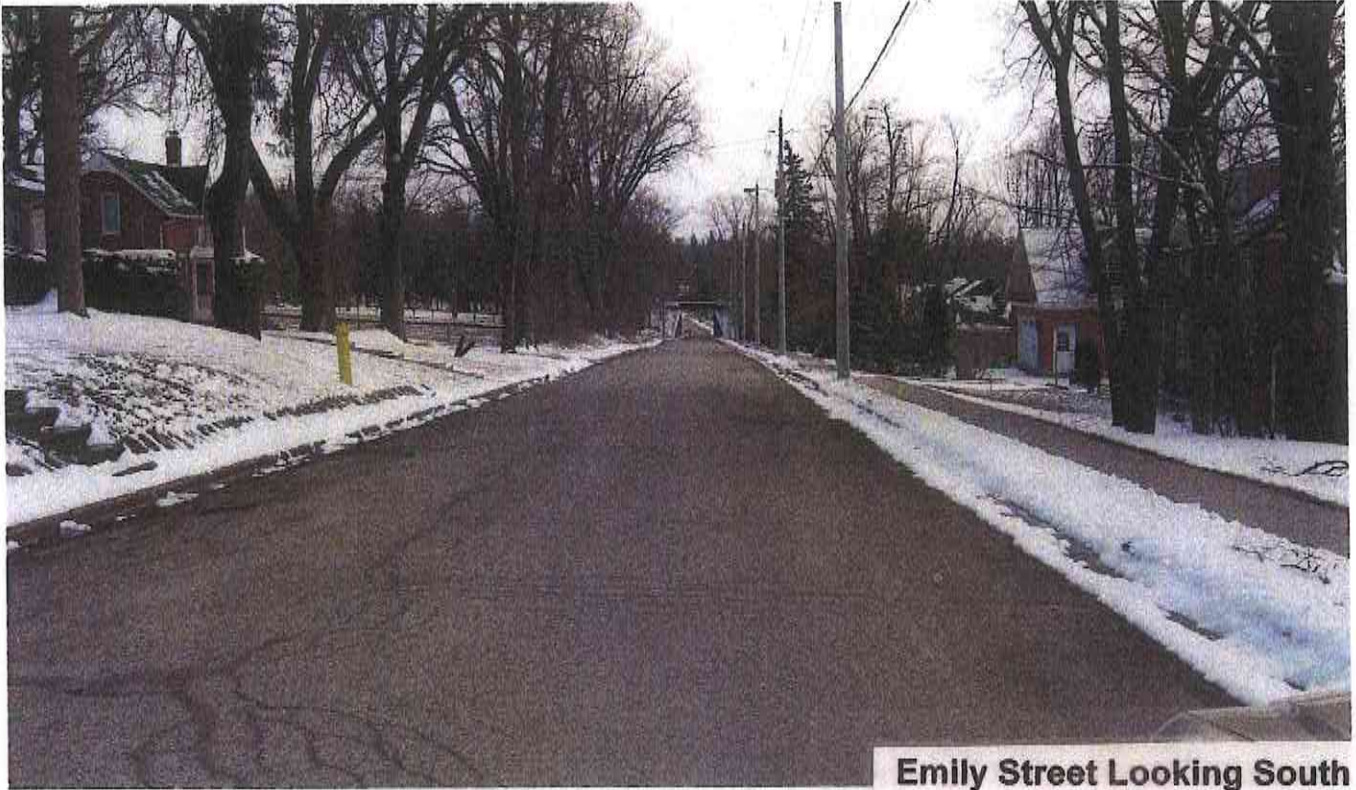




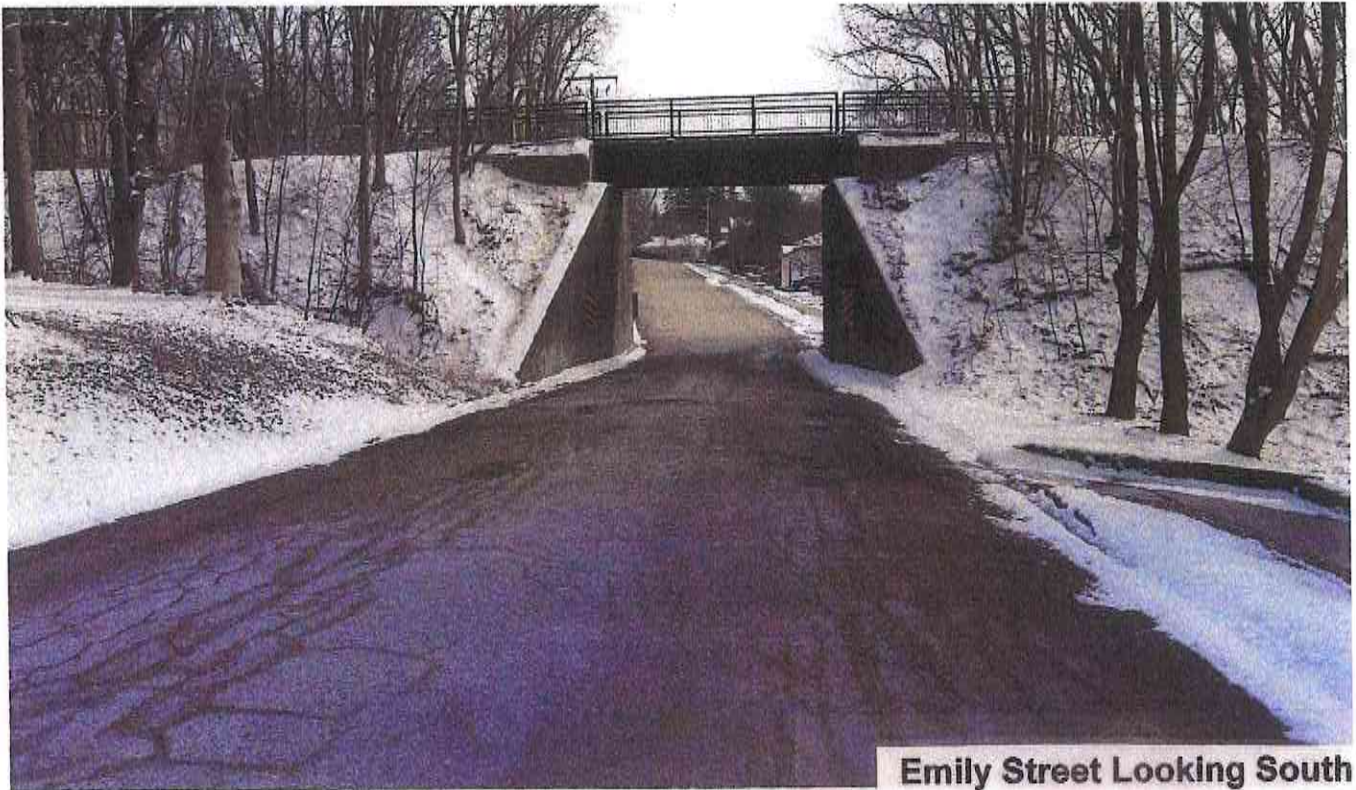
Emily Street Looking North



Emily Street Looking North



Emily Street Looking South



Emily Street Looking South