

# READ, VOORHEES & ASSOCIATES LIMITED

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June 2, 2005

Mr. Ralph Scheunemann  
City of Barrie  
Engineering Department  
70 Collier Street  
P.O. Box 400  
Barrie, Ontario  
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## Re: Bryne Drive Class EA Study

Dear Sir:

Further to your request, I enclose the estimated future traffic volumes for the ten year forecasts for the four Alternatives (Figures 3 to 6) and some comments on the traffic impact of the proposed alternative cross sections for the missing links of Bryne Drive and Commerce Park Drive.

### Study Area

The study area (Figure 1) includes Bryne Drive (south of Essa Road), Bryne Drive (north and south of Molson Park Drive) and the missing part in between. It also includes the existing short piece of Commerce Park Drive at the south end of Bryne Drive and the proposed extension of Commerce Park Drive westerly to Veteran's Drive. The combined roadway is approximately five kilometres in length.

### Existing Road Cross Section

Bryne Drive has a five lane cross section adjacent to Zehr's south of Essa Road. It tapers to a two lane cross section with an eleven metre pavement width north of Leon's. Bryne Drive is two lanes with an eleven metre pavement adjacent to Home Depot and adjacent to Commerce Park Drive. There are five lanes from north of Caplan Avenue to south of Molson Park Drive.

### Existing Traffic

The existing daily traffic in the study area and on some of the surrounding roads is shown on Figure 2. These traffic counts were undertaken by the City of Barrie in November 2004.

## **Alternatives**

Four alternatives are being considered in the study. These include:

Alternative 1 - Do Nothing

Alternative 2 - 3 lanes (two travel lanes and a turning lane)

Alternative 3 - 4 lanes (four travel lanes)

Alternative 4 - 5 lanes (four travel lanes and a turning lane)

## **Future Traffic**

The estimated future traffic volumes for the ten year forecast for the four Alternatives are shown in Figures 3 to 6. Under all of the alternatives the Molson Park Drive /Highway 400 interchange area is expected to approach capacity. Much of the future east-west traffic is carried on the new Harvie Road-Big Bay Point Road crossing of Highway 400.

Under Alternative 1 the missing link of Bryne Drive is not built. Compared with the other alternatives, additional north-south traffic is carried on the parallel routes, particularly Essa Road (28,000 vpd), Veteran's Drive (29,000vpd), Fairview Drive (24,000 vpd) and Bayview Drive (27,000 vpd).

Under Alternative 2 the missing link of Bryne Drive is built to a relatively narrow width. It will operate at capacity with about 15,000 vpd. Compared with the alternatives in which Bryne Drive has a wider cross section, additional north-south traffic is carried on the parallel routes, particularly Essa Road (23,000 vpd), Veteran's Drive (25,000vpd), Fairview Drive (17,000 vpd) and Bayview Drive (26,000 vpd).

Under Alternative 3 the missing link of Bryne Drive is built to a wider (4 lane) width. It will operate at a good level of service with about 17,000 vpd. This is more volume than Alternative 2 but less than alternative 4. Compared with Alternative 4 in which Bryne Drive has a five lane cross section, additional north-south traffic is carried on the parallel routes, particularly Essa Road (24,000 vpd), Veteran's Drive (24,000vpd), Fairview Drive (17,000 vpd) and Bayview Drive (25,000 vpd).

Under Alternative 4 the missing link of Bryne Drive is built to a wider (5 lane) width. It will operate at a good level of service with about 21,000 vpd. This is more volume than the other alternatives. It therefore provides the best level of service on the alternative parallel routes. Compared with the other alternatives in which Bryne Drive has a narrower width, less north-south traffic is carried on the parallel routes, particularly Essa Road (23,000 vpd), Veteran's Drive (23,000vpd), Fairview Drive (14,000 vpd) and Bayview Drive (25,000 vpd).

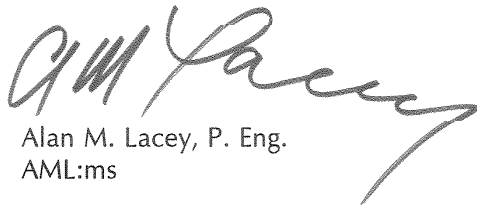
Traffic volumes for all of the alternatives are fairly similar south of Molson Park Drive. Volumes are primarily a function of the anticipated land use: with higher volumes adjacent to the Highway 400 interchange serving the higher density commercial development and low volumes adjacent to Veteran's Drive at the City limit where low density industrial use is anticipated in the City and no development outside of the City limit in the next ten years. In the longer term these volumes will increase as development proceeds southerly.

## Conclusion

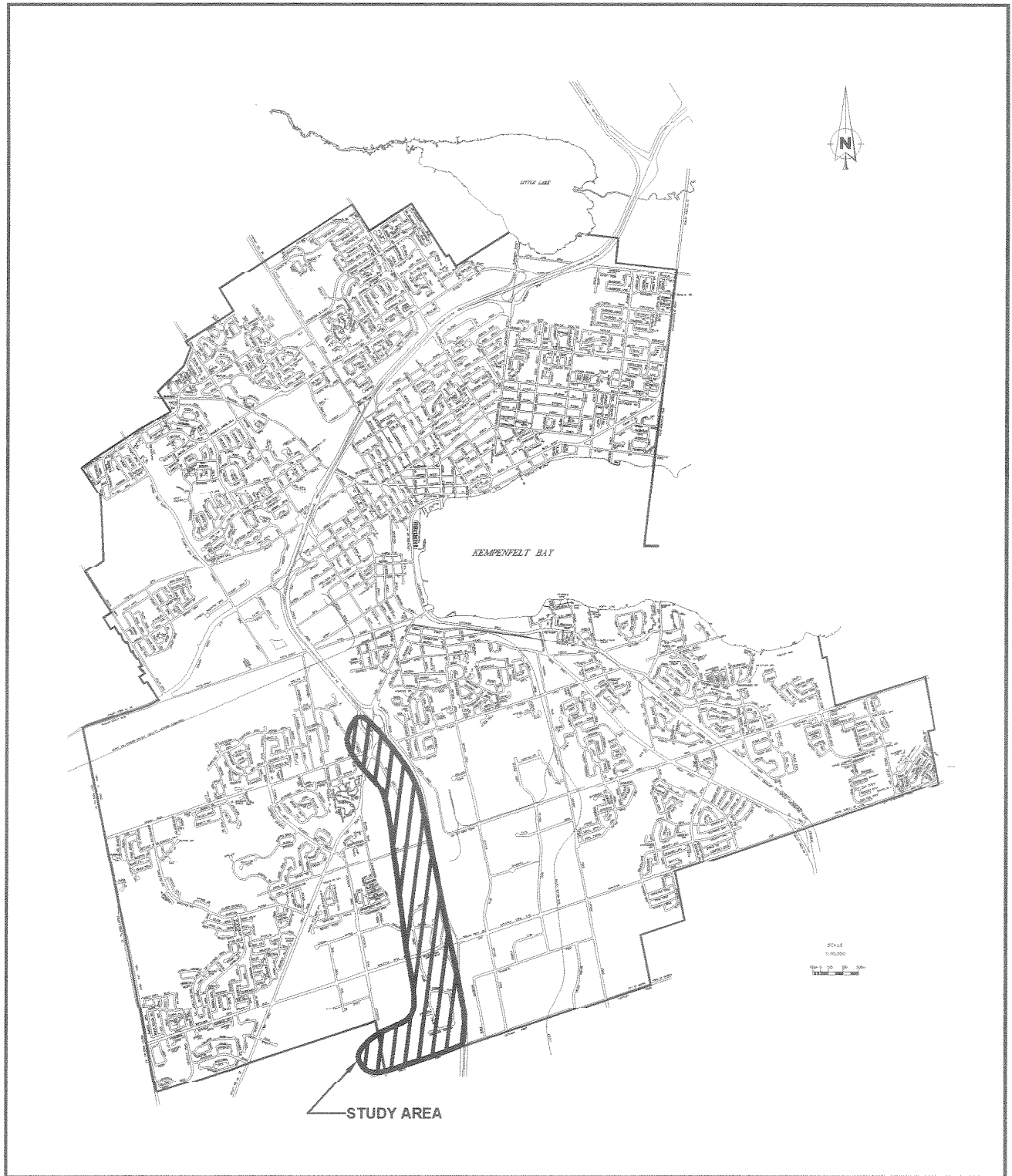
From a traffic point of view the preferred alternative is Alternative 4 with five lanes on Bryne Drive. This alternative makes good use of the existing road system and provides the best level of service. It minimizes out of the way travel. It has excess capacity and can provide for future development beyond the ten year time frame. It makes the best use of the existing five lane sections. A continuous five lane section will increase safety and reduce accident costs. Property impacts and construction costs for future widenings (if done on a piecemeal basis following an initial narrow road construction) will be reduced.

Yours very truly,

**READ, VOORHEES & ASSOCIATES**

A handwritten signature in black ink, appearing to read "A M Lacey". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Alan M. Lacey, P. Eng.  
AML:ms



REGIONAL LOCATION  
**BRYNE DRIVE CLASS EA STUDY**

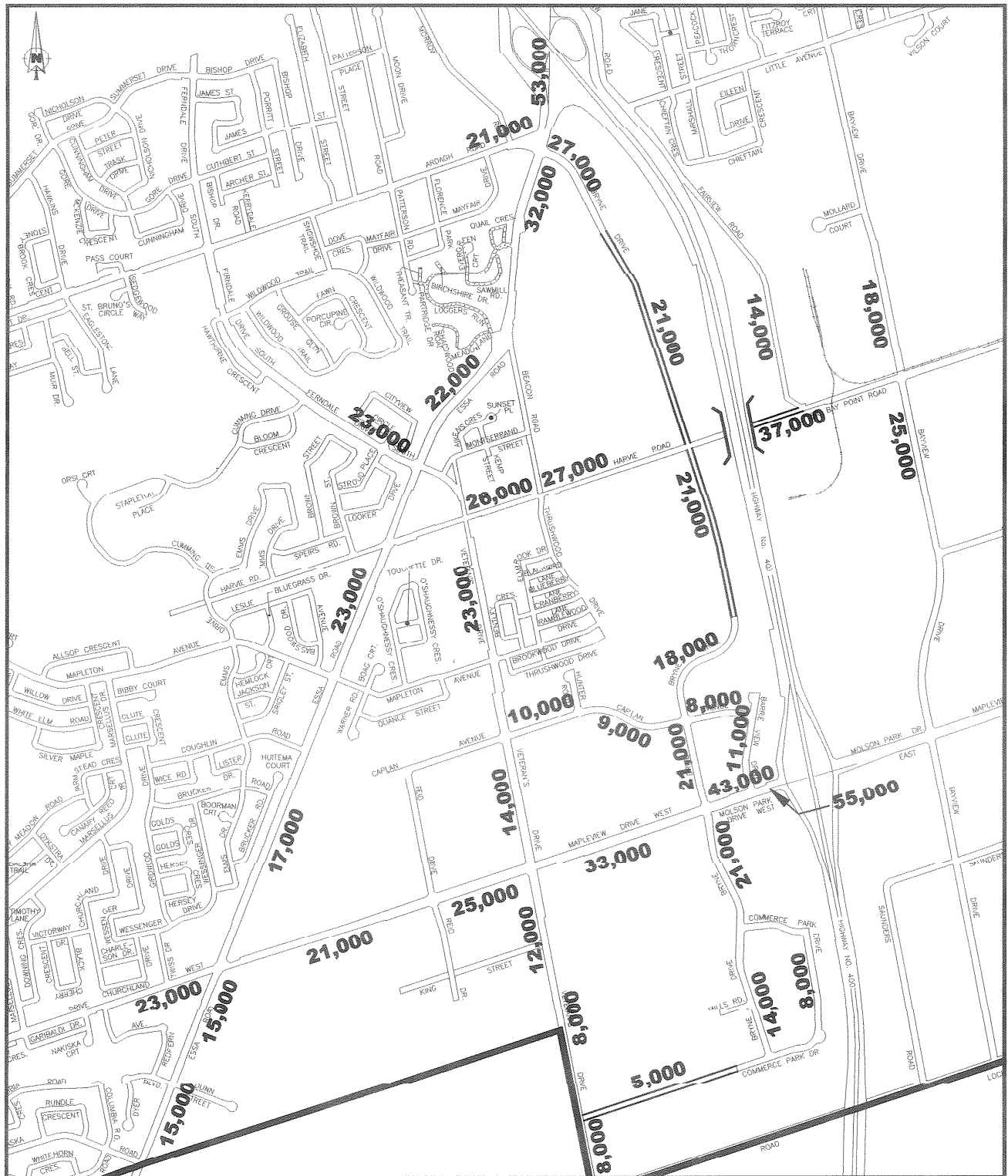
FIG. 1  
**RVA**











**FUTURE DAILY TRAFFIC VOLUMES  
ALTERNATIVE 4 (5 LANE BRYNE)  
BRYNE DRIVE CLASS EA STUDY**

**FIG. 6**

