

MEAFORD GOLF COURSE

TRAFFIC STUDY

Updated notes on traffic study done by Gamsby and Mannerow on June 2009

The position of both intersections remains the same with both having sightlines of over 120 m on Ridge Road.

The traffic flow has not measurably increased during those 8 years.

The number of units originally intended for the Driving Range was 50 town houses and 12 single family dwellings for a total of 62 units. The new proposal has 38 units (approx. 40% less).

For Hilton Head Heights, the original proposal was for 26 single family units. The new proposal is for 31 units (approx. 19% increase).

An additional point, our membership has declined over the past 8 years by quite a large percentage (40%) partially due to the age of our members who are no longer able to play.

MEAFORD GOLF COURSE

TRAFFIC IMPACT STUDY

AND

SERVICING OF CONDOMINIUM UNITS

SEWER AND WATER

06/12/09 09:38 FAX 5193788977

GAMSBY MANNEROW

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**TRAFFIC IMPACT ASSESSMENT
PROPOSED CONDOMINIUM DEVELOPMENT
ON THE
MEAFORD GOLF COURSE
MUNICIPALITY OF MEAFORD**

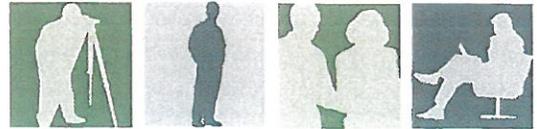
**GAMSBY AND MANNEROW LIMITED
CONSULTING PROFESSIONAL ENGINEERS
GUELPH - KITCHENER - LISTOWEL - OWEN SOUND**

June 2009
Our File: C-6546





Gamsby and Mannerow
ENGINEERS



September 7, 2007
Our File: C-6546

Municipality of Meaford
21 Trowbridge Street West
MEAFORD, Ontario
N4L 1A1

Attn: Gerry Murphy
Director of Development Services

Re: Proposed Subdivision – Meaford Golf Course
Intersection with Ridge Road

Dear Sir,

As requested, I have reviewed the location of the intersection of a proposed subdivision street with Ridge Road in the Municipality of Meaford.

The proposed intersection would be approximately 120m from the existing entrance to the Meaford Golf Course from Ridge Road and at the bottom of a 3% to 4% downgrade (average over the distance). A 60m section with a grade of approximately 6% is found within the 120m length.

Ridge Road has a posted speed of 50 kph. A design speed of 70 kph is used to assess the stopping sight distance requirements as follows:

Design Speed:	70 kph
Minimum stopping site distance required:	110m
Adjustment for downgrade (wet conditions at 6%):	10m
Adjusted minimum stopping sight distance:	120m

From this review, it is in our opinion that the adequate stopping sight distance would be available for a new street intersection at the proposed location.

GAMSBY AND MANNEROW LIMITED

Per:

K. A. Cameron

K. A. Cameron, P.Eng.

KAC/ah

cc: Ivan Alderdice
File No. C-6546

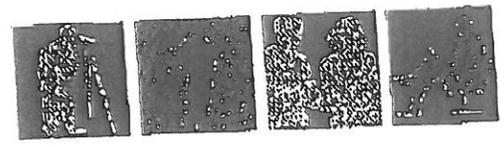
people engineering environments

Gamsby and Mannerow Limited • Guelph, Kitchener, Listowel, Owen Sound

1260 Second Avenue E., Unit 1, Owen Sound, ON N4K 2J3 519-376-1805 fax 519-376-8977 www.gamsby.com



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1.0 PROPOSED DEVELOPMENT

It is proposed to develop 12 single family residences and 50 townhouse condominium units adjacent to the northerly limit of the Meaford Golf Course property. All dwellings would be located along a single street with access to Ridge Road.

The Municipality of Meaford has requested a "transportation/traffic review" of the proposal. This report has been prepared to respond to this request.

2.0 SITE GENERATED TRAFFIC

Based on the trip generation rates (TGF) for single family and townhouse/condominium found in the 7th Edition of the Trip Generation Manual, the estimated site generated traffic is as follows:

TABLE 1 - Site Generated Trips - Single Family Residential

Period	TGF	% Enter	%Exit	Total Trips	Trips Enter	Trips Exit
Weekday, AM Peak Hour (7-9 a.m.)	0.75	25%	75%	19	2	7
Weekday, PM Peak Hour (4-6 p.m.)	1.01	63%	37%	12	8	4
Saturday, Peak Hour	0.94	54%	46%	11	6	5
Sunday, Peak Hour	0.86	53%	47%	10	5	5

TABLE 2 - Site Generated Trips - Townhouse / Condominium Units

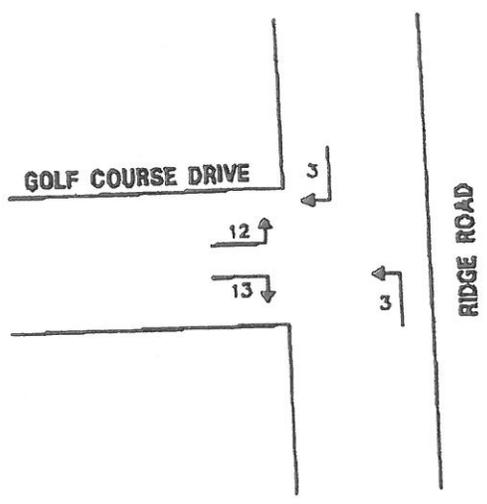
Period	TGF	% Enter	%Exit	Total Trips	Trips Enter	Trips Exit
Weekday, AM Peak Hour (7-9 a.m.)	0.44	17%	83%	22	4	18
Weekday, PM Peak Hour (4-6 p.m.)	0.52	67%	33%	26	17	9
Saturday, Peak Hour	0.47	54%	46%	24	13	11
Sunday, Peak Hour	0.45	49%	51%	23	12	11

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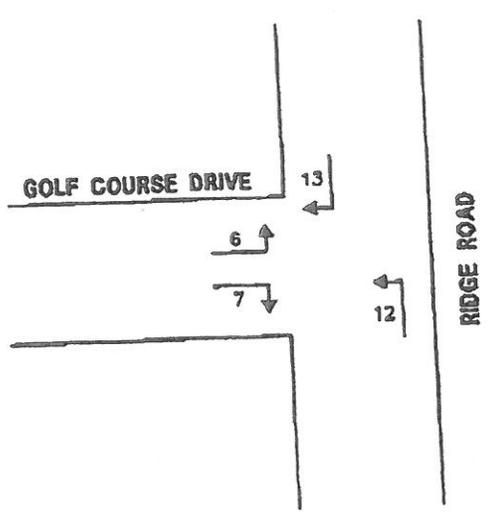
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C-6546 Meaford Golf Course Traffic Impact Assessment Municipality of Meaford



**FIGURE No. 1 : AM. PEAK HOUR - SITE
GENERATED TRIPS TURNING MOVEMENTS**



**FIGURE No. 2 : P.M. PEAK HOUR - SITE
GENERATED TRIPS TURNING MOVEMENTS**

Not To Scale
June 2009

TRIP DISTRIBUTION

Figure No. 1



**Gamsby and Mannerow
ENGINEERS**

The minimum size of sanitary sewer in the collection system is 200 mm Ø (other than individual services to dwellings or other establishments). The minimum grade on a 200 mm Ø sewer is 0.40% (MOE). The desired minimum grade in Meaford is 0.5%.

A 200 mm Ø sanitary sewer at 0.4% will accommodate 20.75 litres/second. A 200 mm Ø sanitary sewer at 0.5% will accommodate 23.2 litres/second. So there are no capacity issues within our collection system. The combination flow from Phase 1, 3 and 4 will flow easterly via a 200 mm Ø sewer that has been placed in the last few years. At maximum flow and minimum grade you would be utilizing less than half of the capacity of that sewer. From the topography in that area, I believe that sewer has greater fall than minimum thereby providing greater capacity.

The flows from Phase 2 and Phase 5 may enter the Rogers Subdivision at different locations. However, the flow from Phase 5 is so low, it is almost irrelevant. I will consider only the combined flows. The combined flow from Phase 2 and Phase 5 will utilize only the most easterly section of sanitary sewer in the Rogers Subdivision which is 200 mm Ø PVC at 0.5% grade with a capacity of 23.2 L/S.

The design flow through this section of sewer when the subdivision is fully designed is 4.08 litres/second. The addition of 3.93 L/S will only increase the flow to about 35% of capacity.

Without more information on the Town sewer system, I cannot address the capacity of the downstream system.

Domestic water consumption closely mirrors sewage flows. It is usually fire flows that are the concern. A water system is usually a grid with fire flows affecting several sections of watermain. The only realistic way to determine the adequacy when expanding the grid is to model the system and then add your proposed expansion. I believe that the Town Engineers have the system modelled. We could provide them with your proposal and see what the results are. If there are problems, sometimes it can be solved by increasing your main size even if it results in a larger size than you are connecting to.

I have requested Town plans of the sanitary sewer system and the water system from Phil Taylor but, when I get them it would be far too time consuming and costly for us to develop or update the water system model when the Ainley Group already have it done.

Please advise if you want us to provide the required information to them. There will likely be a charge for running the model.

Yours truly,
GAMSBY AND MANNEROW LIMITED



J. V. Dowdall, C.E.T.
JVD/kd
cc: File C-6546

