

TRAFFIC AND TRANSPORTATION COMMITTEE
(TRAFFIC SAFETY DIVISION)

HIS WORSHIP, THE MAYOR
AND COUNCILLORS

RE: BARNET ROAD/DUTHIE AVENUE/RIDGE DRIVE INTERSECTION

RECOMMENDATION:

1. **THAT** Council authorize staff to pursue construction of an interim standard Roundabout at the Barnet-Duthie-Ridge intersection as part of the intersection rehabilitation, subject to funding.

R E P O R T

The Traffic and Transportation Committee (Traffic Safety Division), at its meeting held on 2002 February 05, received and adopted the attached report concerning construction of an interim standard Roundabout at the intersection of Barnet Road, Duthie Avenue and Ridge Drive in conjunction with forthcoming pavement resurfacing.

Respectfully submitted,

Councillor Doug Evans
Chair

Councillor Barbara Der
Vice Chair

Councillor Gary Begin
Member

: COPY - CITY MANAGER
- DIRECTOR ENGINEERING

City of Burnaby

INTER-OFFICE COMMUNICATION

TO: TRAFFIC SAFETY COMMITTEE **DATE:** 2002 01 23
FROM: ASST. DIRECTOR ENGINEERING,
TRAFFIC & ENGINEERING SYSTEMS **FILE:** 55-01-04
SUBJECT: BARNET ROAD-DUTHIE AVENUE-RIDGE DRIVE INTERSECTION
PURPOSE: To propose improvements to this intersection layout in conjunction with forthcoming pavement rehabilitation.

RECOMMENDATION:

1. **THAT** staff pursue construction of an interim standard Roundabout at the Barnet-Duthie-Ridge intersection as part of the intersection rehabilitation subject to funding.

R E P O R T

1.0 INTRODUCTION

At a previous meeting of the Traffic Safety Committee, the Committee received a report on safety at the Barnet-Duthie-Ridge intersection. This five legged intersection is unusual in its presentation to the driver. That report concluded that a long term solution was development dependent and under review by the Planning Department. Staff indicated that interim measures would be pursued to resolve the ambiguity. This report provides an update.

2.0 BACKGROUND

The intersection of Barnet Road - Duthie Avenue - Ridge Drive is a five legged intersection with a unique configuration and traffic pattern. All five approaches converge onto a wide expanse of asphalt. Two legs carry the main traffic flow, northbound Duthie to westbound Ridge for traffic destined for Barnet Highway, and to a lesser extent, eastbound Ridge to southbound Duthie. These two approaches have designated right-of-way. The other three

approaches serve the residential areas and are stop sign controlled. Due to the extent of the intersection the stop signs are set well back from the vehicular conflict points and the motorist is required to enter well into the intersection to judge traffic flow. This is especially the case with the Barnet Road approach. The *attached* Exhibit gives an indication of the intersection's road alignments and highlights the large area of pavement.

Despite the unusual aspects of this intersection traffic flows relatively well. The accident history is low, possibly due motorists exercising added care due to the unique nature of the intersection. Nonetheless there has been some concern raised over the years regarding the intersection layout which leaves first time motorists confused over right-of-way and appropriate direction of traffic flow.

3.0 ROUNDABOUT PROPOSAL

In our previous report, we noted that the Burnaby Planning Department is undertaking a review of this area including street layout and land use. While this review was underway the Engineering Department would continue considering interim measures that may provide clarity in traffic flow. We also noted that a multi legged intersection such as this, lent itself to roundabout control but that was a longer term option.

The current reconstruction of a watermain along Barnet Road, Duthie Avenue and Ridge Drive has prompted the need to resurface the majority of this intersection's surface. Accordingly, this work is to be included in the 2002 Pavement Rehabilitation Program.

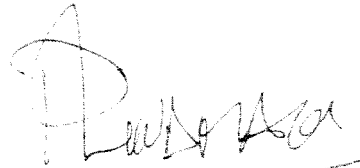
The need for rehabilitation creates the opportunity to redefine the intersection possibly without adding significantly to costs. Exhibit 2 illustrates the roundabout concept. While we believe the roundabout is appropriately sized, further consultation with the Transit operator and Fire Department would be required before a design was finalized.

4.0 DISCUSSION AND CONCLUSION

It should be noted that the roundabout proposed here differs from the traffic circles currently in use in the Lower Mainland. The roundabout design is intended to marshal traffic through an intersection in an orderly, efficient and safe manner while traffic circles are designed to impede vehicle flow as a traffic calming measure.

Although roundabouts are extensively used in Europe and elsewhere, they are just beginning to find application in North America. ICBC, among other agencies, is promoting the introduction of roundabouts because they are inherently safer than traditional multi way stop

controls. One drawback to roundabouts is that they consume a large amount of space and are not suitable for congested locations but these concerns are not at issue here. We believe that area drivers, once they become used to the roundabout, would find it a positive improvement. If successful, this interim roundabout could be incorporated into future plans as a permanent facility. At this stage, it is not clear whether the roundabout would add to the cost of the rehabilitation project. If there is a cost premium, staff would pursue additional funding support from ICBC which is interested in local roundabout demonstration projects. Therefore, we recommend that a roundabout be installed at the intersection of Barnet-Duthie-Ridge, in conjunction with the intersection resurfacing to take place in 2002 subject to funding.



P. Liivamagi, P. Eng.
ASST. DIRECTOR ENGINEERING,
TRAFFIC & ENG. SYSTEMS

AE
Attach.

cc: City Manager

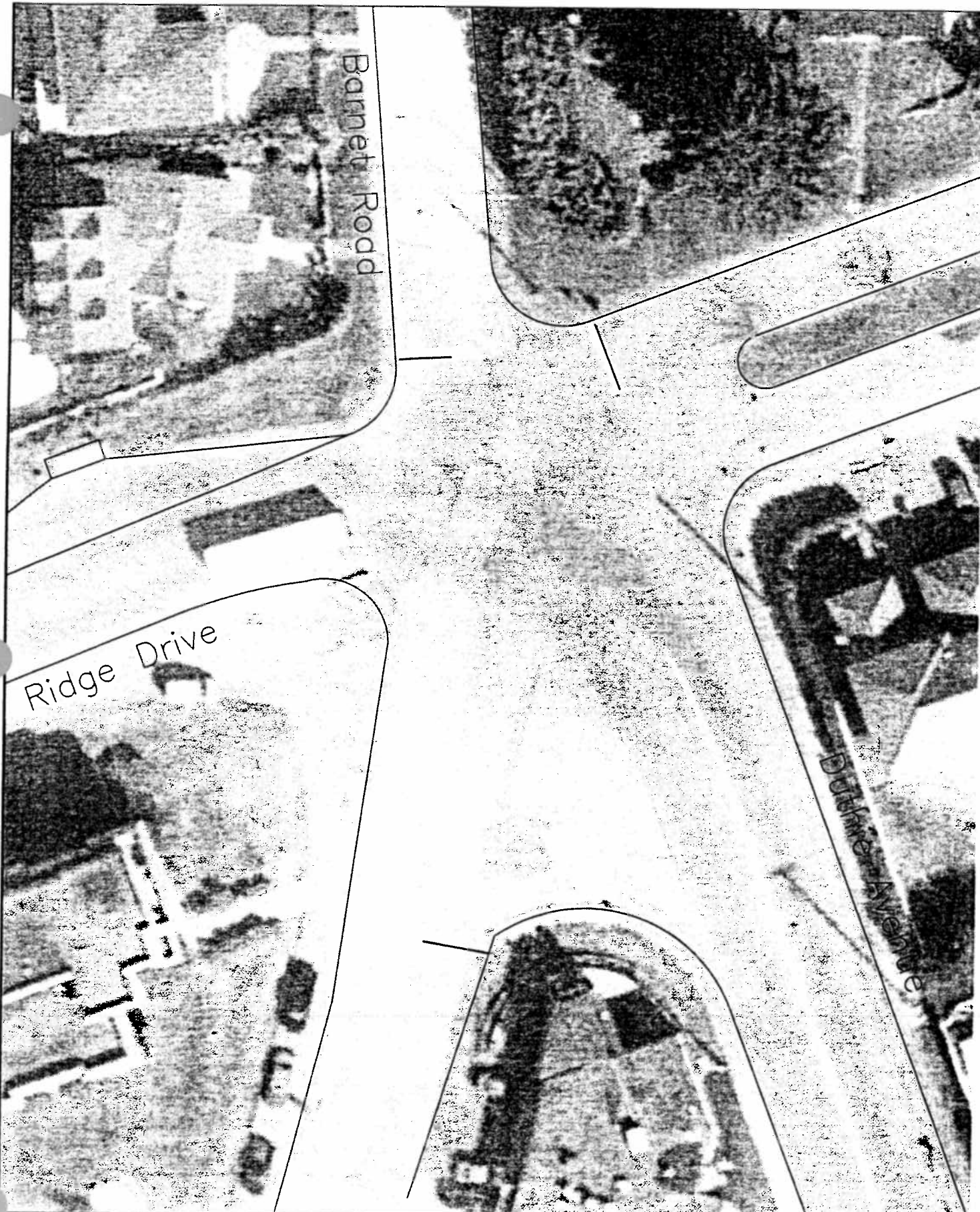


Diagram # 1

Existing Configuration of Barnet - Duthie - Ridge

DRAWN BY: A.K.E

SCALE: N.T.S.

APPROV'D BY: P.I

DATE: 01/11/07



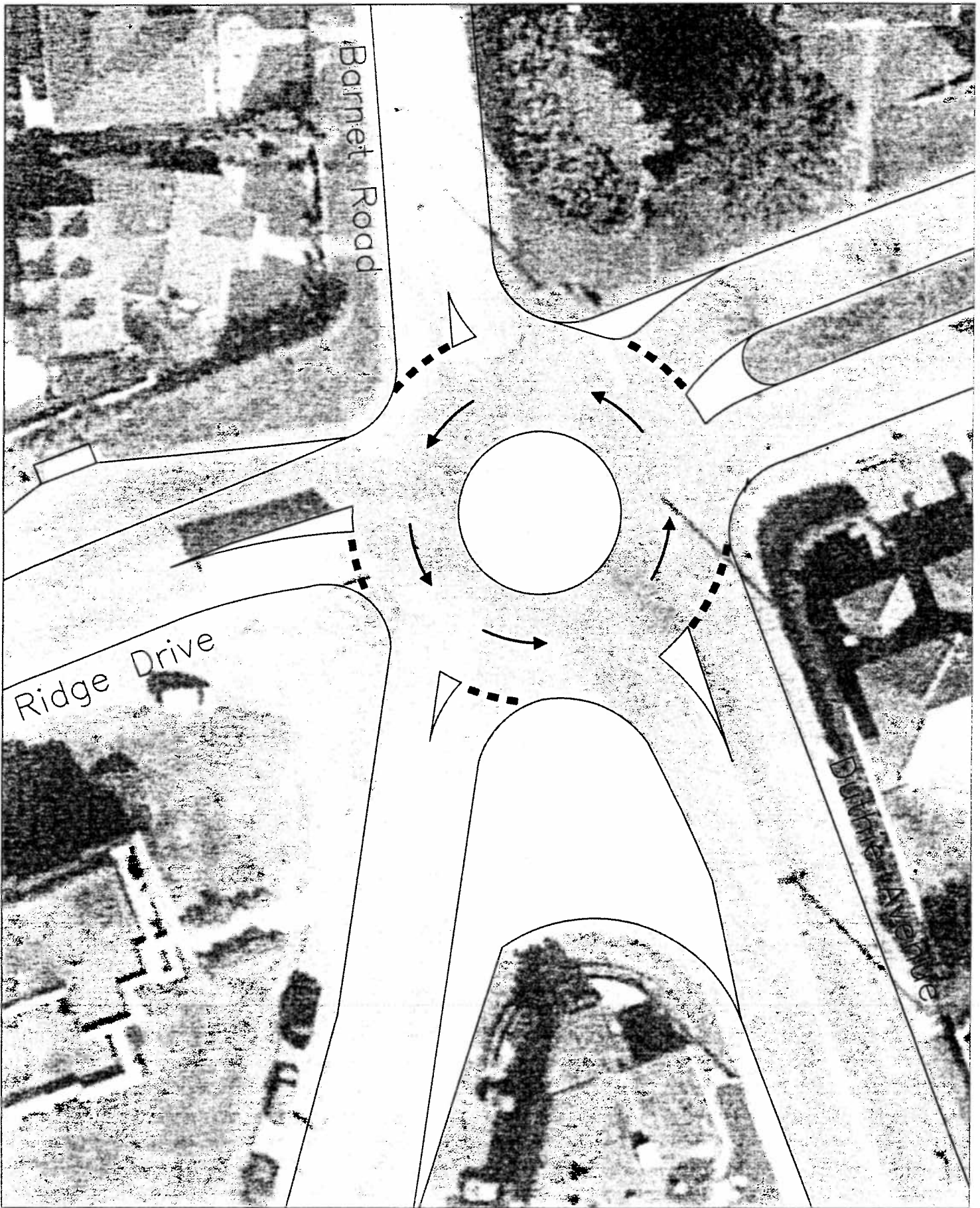


Diagram #2
 Roundabout Concept



DRAWN BY: A.K.E	SCALE: N.T.S.
APPROVED BY: P.L.	DATE: 01/11/07

