

RE: MARINE WAY/10TH AVENUE CONNECTOR  
APPROVAL OF ALIGNMENT

ITEM 11  
MANAGER'S REPORT NO. 54  
COUNCIL MEETING 1983 09 06

MUNICIPAL MANAGER'S RECOMMENDATION:

1. THAT the recommendation of the Director Planning & Building Inspection be adopted.

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TO: MUNICIPAL MANAGER 1983 SEPT. 01  
FROM: DIRECTOR PLANNING & BUILDING INSPECTION Our File: 08.640  
SUBJECT: MARINE WAY/10TH CONNECTOR - APPROVAL OF ALIGNMENT

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RECOMMENDATION:

1. THAT Council approve in principle the Marine Way/10th Connector alignment via Byrne as shown on Figure 1.

SUMMARY:

This report has been prepared to seek Council approval for the Marine Way/10th alignment as depicted in Figure 1. Although the timing of implementation of the project is not certain there is the opportunity to now purchase two of the properties required for the development of the proposed alignment from willing vendors. This report outlines the background to the Marine Way/10th Connector, discusses the alternative alignments that have been considered and establishes the rationale for recommending the proposed alignment.

R E P O R T

1.0 BACKGROUND

1.1 Burnaby Transportation Study to 1985

The "Burnaby Transportation Study to 1985" as first published in 1974 March showed a Marine Way/10th Connector linking to Marine Way at Marshland. A similar road link was considered as part of one of the early Annacis system alternatives in a study completed by CBA Engineering in 1975. Subsequently in 1975 November the Marshland/10th

link was deleted from the Municipality's road network when Council adopted a new primary arterial route extending from Marine Way at Byrne through to the Stormont/Newcombe/McBride Connector via Edmonds. The southernmost portion of this arterial link became known as the Gilley Alternate.

#### 1.2 Gilley Alternate

The Gilley Alternate route was so named because it provided an alternate truck route to Gilley. It consisted of a new arterial connection between Byrne at Marine Drive and Edmonds at 19th Street. In 1977 the Engineering Department engaged McElhanney Surveying and Engineering Limited to design and supervise construction of the Gilley Avenue Alternate. McElhanney commenced this work with a preliminary design exercise which identified the limited alignment alternatives that were available. These alternatives centered on the extension of Byrne Road northwards to cross Marine Drive and are further discussed below in Section 2.2. McElhanney was directed to conclude its work at the preliminary design stage when it became clear that the Gilley Alternate proposal was not going to be recommended as part of the Conceptual Road Network by the Transportation Committee.

#### 1.3 Transportation Committee

The Transportation Committee was established by Council at its meeting of 1978 February 13 to review Municipal transportation plans. After considerable deliberation, public participation, and the establishment of Transportation Policies for the Municipality the Committee defined a draft Conceptual Transportation Plan which was the subject of further public hearings early in 1979. This draft plan included the Gilley Alternate route as part of a peripheral route concept. As a result of this final public scrutiny the Transportation Committee further refined and amended the draft Conceptual Transportation Plan.

A major amendment was the realignment of the peripheral route from Edmonds to 10th Avenue. The Conceptual Transportation Plan as adopted by Council reflects this change and indicates a connection between Marine Way and 10th Avenue via Byrne. In other words both the Gilley Alternate and the Marine Way/10th Connector proposals 'share' a common alignment from Marine Way to a point immediately north of Marine Drive.

#### 1.4 Recent Development

Subsequent to the adoption of the Transportation Plan the Transportation Committee requested staff to review Marine Way/10th Connection relative to its alignment and jurisdictional responsibility. Although the alignment review is substantially complete staff have deferred bringing it before the Transportation Committee because the issue of jurisdiction has not been satisfactorily resolved.

We have contended in correspondence and discussion with the Ministry of Transportation and Highways that the construction of the Marine Way/10th Connector is the Ministry's responsibility. In particular it is staff's belief that this project fulfills functions which are the primary responsibility of the Province. These are:

1. It provides direct connection between Provincial Highways (viz Marine Way and Routes 1A/99A)
2. As a route peripheral to the Municipality it would be expected to carry a high proportion of inter-municipal through traffic and a much less significant proportion of intra-municipal flow. The former demand is the acknowledged responsibility of the Province and the latter that of the Municipality.

Although the above points reflect matters of principle, we also consider that the Province should assume the initiative for the construction of this route because of its more specific relation to the proposed use of the Queensborough Bridge as part of the Annacis System. The Marine Way/10th Connector will relieve potential congestion at the Queensborough Bridgehead by removing a component of east-west through traffic.

The Province has remained firm in its stance that this project should be a Municipal responsibility but would be eligible for revenue sharing.

It would be premature to close debate on the matter of jurisdiction because the northward connection from the Queensborough Bridgehead has not been resolved. One of the alternatives that is still under active consideration is the development by the Ministry of a new road link along the B.C. Hydro railway from the Queensborough to the Marine Way/10th Connector. If this proposal is adopted then it would be clear that at least that portion of the Marine Way/10th Connector which traverses the A.L.R.T. yard site would be part of the Ministry's responsibility as a component of the 'railway route'.

Notwithstanding our conviction that the Ministry of Transportation and Highways has the ultimate responsibility for the Marine Way/10th Connector, the Municipality has gone to some length to ensure that the development of this road is not prejudiced. For example the road construction will be expedited by the development of the A.L.R.T. system and yard site. In this connection staff have attended to the following matters:

1. The A.L.R.T. yard site boundaries reflect the road right-of-way requirement.
2. The filling and treatment of the A.L.R.T. pit area has been effected by B.C. Transit to provide an appropriately graded and consolidated road profile.
3. The retaining walls adjacent to the roadway are to be provided as required by B.C. Transit in connection with the development of the yard site.
4. The A.L.R.T. crossing of the Marine Way/10th Connector is to be prebridged by B.C. Transit.

As in the case of the Stormont/Newcombe/McBride Connector staff have also recommended purchase of properties required for the preferred road alignment as they have become available.

## 2.0 Alignment Alternatives

Although the alignment of the Marine Way/10th Connector through the former gravel pit has been fixed in order to allow for the development of the A.L.R.T. yard site and revenue track this does not impose any constraints on the possible alternative connections to Marine Way. The two basic alternatives are a connection to Marine Way at Marshland, and a connection to Marine Way via Byrne Road as currently proposed in the Conceptual Transportation Plan. For each of these basic alternatives a number of alignment options and variants have been explored by Municipal staff and previous design consultants.

A comparison of least cost alternatives (shown on Figure 2) indicates that there is no significant cost difference (given the level of estimate detail) between the connection to Marshland and the Transportation Plan's link to Byrne. Exclusive of the costs of upgrading Byrne Road the direct costs (Property Acquisition and Construction) are estimated to be \$9 million and \$10 million for the Byrne and Marshland options respectively. The Marshland Connector offers greater scope for later cost recovery from Residual Land Sales and Subdivision potential (estimated at up to \$2 million total) but would be subject to major cost escalation if the design grade were improved to a more acceptable standard. This is further discussed below.

### 2.1 Marshland Connector

Although the cost estimates based on preliminary design do not conclusively favour or rule out the connection of the Marine Way/10th link to Marshland this route is judged to be the inferior. This conclusion is based on the following reasons.

1. The Marshland Connector requires a sustained 10% grade (versus 6.4% for the Byrne/10th option) which would render it difficult if not wholly unsuitable for commercial traffic. The grade could be reduced to 8.3% but only if Marine Drive were overpassed. The added cost of structure is estimated to be \$4 million or greater.
2. The Connector via Marshland would traverse the agricultural area between Marine Drive and Marine Way resulting in a substantial loss of arable land. It would sever the semi-rural Big Bend Agricultural area which is a unique area in Burnaby with a strong community spirit. Apart from the severance as such there would be major dislocation to this community because of the extensive property acquisition program that would be required. There would be lands residual to road requirements but these would have to be consolidated with adjoining parcel remnants to create viable new parcels.

### 2.2 Connection via Byrne

As stated previously the southernmost portion of the Marine Way/10th Connector as shown in the adopted Transportation Plan is the same as that of the defunct Gilley Alternate proposal. During the course of the Gilley Alternate Study Engineering Design consultants considered five alternatives for extending Byrne Road northward beyond Marine Drive. These are shown on Figure 3. All of the alignments

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identified have a bridging requirement. The two westernmost alignments that meet Marine Drive at grade would have the bridge over the ravine north of Marine Drive whilst the three easterly alignments require an overpassing of Marine Drive. The total cost for each of the alternatives (including land acquisition, bridge construction and road construction) is also shown on Figure 3 in 1978 dollars.

Although these costs are out of date we would expect that the cost ratios between alternatives would be similar today. Accordingly staff have incorporated the least cost Gilley Alternate crossing of Marine Drive (Alternate A) into the proposed alignment for the Marine Way/10th Connector via Byrne.

The alignment between the Byrne Creek ravine north of Marine Drive and the A.L.R.T. yard site is subject to further design review relative to design standard and adjacent landuse development options. For example, the alignment shown dashed on Figure 1 has been pushed as far north as possible in order to maximize the residential development potential of the lands lying between the new road link and Marine Drive. It is anticipated that lands north of the road link (apart from those designated for Ravine Park) will ultimately be developed as industrial.

### 3.0 Conclusions

After considerable study and debate staff of both Planning & Building Inspection and Engineering Departments are unanimous in their conclusion that the alignment for the Marine Way/10th Connector shown on Figure 1 is the best of the possible alternatives.

  
for A.L. Parr  
DIRECTOR PLANNING &  
BUILDING INSPECTION

PL/mcb

cc: Director Engineering



# MARINE WAY - 10TH CONNECTOR VIA BYRNE & VIA MARSHLAND

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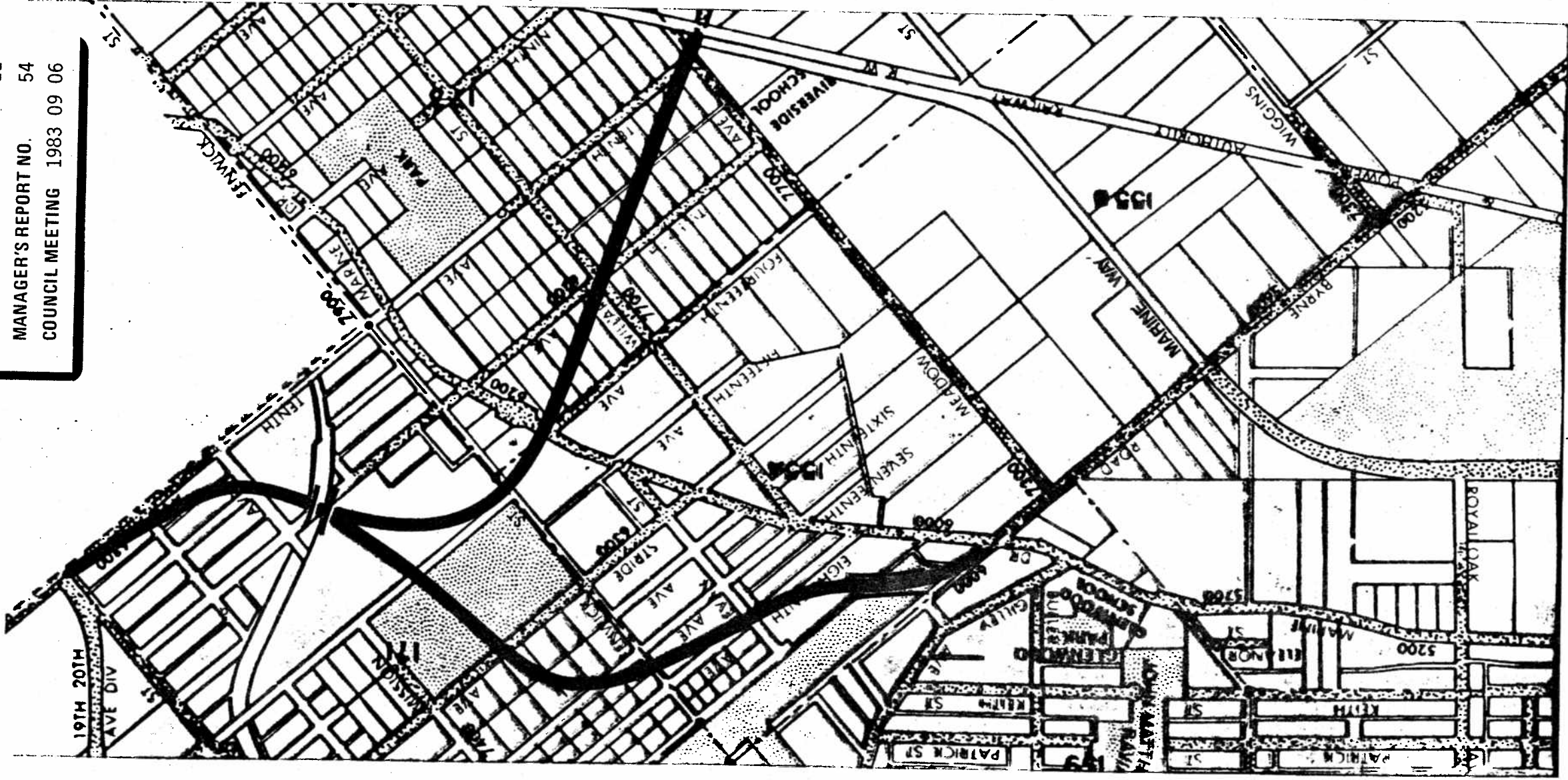


Figure 2

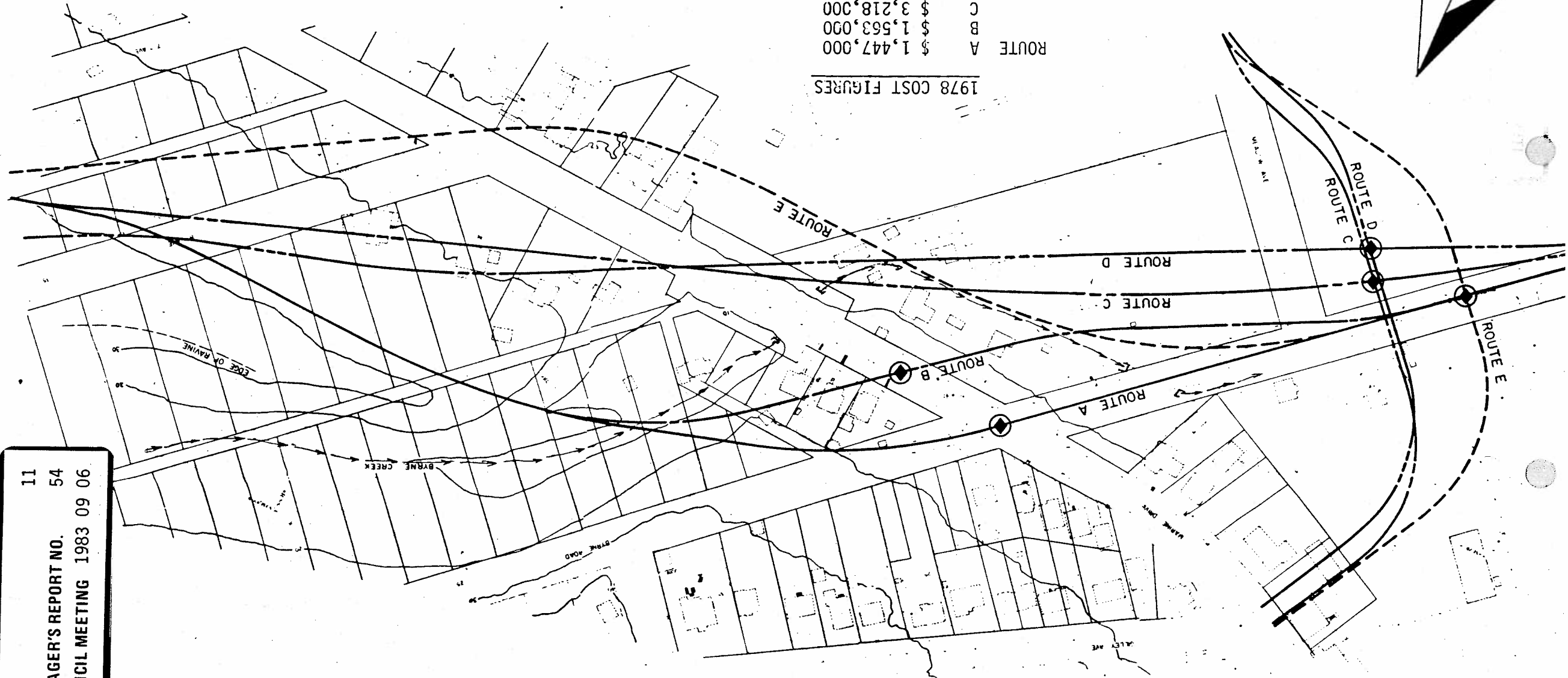
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Dwg No. 34029-S-00  
 Scale: 1:2000

GILLEY AVE. ALTERNATE ROUTE CENTRE LINES



1978 COST FIGURES

ROUTE A	\$ 1,447,000
B	\$ 1,563,000
C	\$ 3,218,000
D	\$ 3,020,000
E	\$ 3,065,000

◆ AT-GRADE CONTROLLED INTERSECTION



Figure 3

JANUARY 1979

SOURCE: GILLEY AVENUE ALTERNATE REPORT - McELHANNAY SURVEYING & ENGINEERING LTD.