

REPORT  
Regular Council Meeting  
1990 May 14

THE CORPORATION OF THE DISTRICT OF BURNABY

TRAFFIC AND TRANSPORTATION COMMITTEE  
(TRANSPORTATION DIVISION)

HIS WORSHIP, THE MAYOR  
AND ALDERMEN

SUBJECT: Community Transportation Plan  
for the Community Plan Two Area

RECOMMENDATIONS:

1. THAT Council approve in principle the Community Transportation Plan Road Improvement Measures identified in Schedule A attached.
2. THAT Council direct staff to undertake a traffic evaluation of the proposals.
3. THAT Council direct staff to inform the residents of the Community Plan Two Area of the road improvements proposed in the Community Transportation Plan.

R E P O R T

The Traffic and Transportation Committee, at its meeting held 1990 May 09, received a report from staff outlining a transportation plan for the Community Plan Two Area in Metrotown.

With Council's approval, it is the Committee's intention to identify the property management companies and Strata Councils of those complexes in the immediate area of concern in the Community Plan Two Area (see Figure 2 attached) for the purpose of selecting a representative group to meet and discuss proposed road improvements, prior to seeking input from the residents.

In compliance with the Committee's direction, this report is being forwarded to Council for endorsement of the proposed process.

Respectfully submitted,

Alderman J. Young,  
Chairman

Alderman R.G. Begin,  
Member

Alderman L.A. Rankin,  
Member

INTERNAL DISTRIBUTION:

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TO: CHAIRMAN AND MEMBERS  
TRAFFIC & TRANSPORTATION COMMITTEE

1990 May 04

FROM: DIRECTOR PLANNING &  
BUILDING INSPECTION

Our File: 08.116.3

SUBJECT: COMMUNITY TRANSPORTATION PLAN FOR  
THE COMMUNITY PLAN TWO AREA

PURPOSE: To outline for the consideration of the Committee, a transportation plan for the Community Plan Two Area in Metrotown.

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RECOMMENDATION:

1. THAT the Traffic and Transportation Committee approve in principle the Community Transportation Plan Road Improvement Measures identified in Schedule A attached.
2. THAT the Traffic and Transportation Committee direct staff to undertake a traffic evaluation of the proposals and report back to the Committee at its next meeting.
3. THAT the Traffic and Transportation Committee direct staff to inform the residents of the Community Plan Two Area of the road improvements proposed in the Community Transportation Plan.

R E P O R T

1.0 BACKGROUND

On 1989 November 07, Mr. Bruce Carlson, President of Post 83 Co-operative Housing Association, appeared before the Traffic Safety Committee (now the Traffic Division of the Traffic and Transportation Committee) as a delegation on behalf of several neighbouring housing complexes regarding traffic concerns in the Community Plan Two Area including the potential removal of the cul-de-sac on Maywood Street at Patterson Avenue.

The then Traffic Safety Committee subsequently discussed the comments of Mr. Carlson and directed staff to determine the impact on the neighbourhood if the Maywood Street cul-de-sac at Patterson Avenue were to be removed.

Subsequently on 1990 February 06, the Committee considered a report from the Director Planning & Building Inspection which proposed a review of the arterial and collector street network in the Metrotown area and defined the implementation priority of area street improvements to address the issue of traffic on Maywood and Mayberry Streets.

Arising from the Committee's consideration of this matter it was agreed that the blockade on Maywood Street should be removed in order to accommodate the free flow of traffic in the area. Subsequently, the recommendation to remove the barricade to coincide with the implementation of the light at Maywood and Willingdon was submitted for Council's consideration.

Council considered the report of the Committee at its regular meeting of 1990 February 19 but referred this matter back to the Traffic and Transportation Committee for review.

The following report is written in response to this direction of Council.

## 2.0 TRANSPORTATION ISSUES

### 2.1 Current Traffic Conditions

Figure 1 attached shows some generalized westbound travel patterns for neighbourhood and area traffic currently using Mayberry Street between Willingdon and Patterson Avenues.

Traffic originating from Areas 1 to 4 passes through the Community Plan Two Area of Metrotown in a general south to north or southeast to northwest orientation. The network of arterial streets including Imperial, Kingsway, Willingdon, Central Boulevard and Boundary Road is intended to serve these travel movements without impact on the local residential streets in the area.

Current traffic conditions in the Community Plan Two Area reflect the inadequacy of the arterial street networks in accommodating these travel movements on Imperial, Boundary, Patterson and Central Boulevard.

At Imperial/Boundary "A", long westbound queues and delay are experienced daily on Imperial Street east of Boundary Road due to traffic capacity limitations on Imperial especially for the left and right turn movements at the intersection.

At Boundary/Kingsway "B", an intersection of two major arterial roadways, some left turn storage is provided but turns are limited by the heavy volume of through traffic movement.

At Willingdon/Kingsway "C", there is no left turn signal phase for northbound Willingdon to westbound Kingsway turning traffic.

To avoid traffic queues at these intersections, traffic has found a bypass route using local residential streets as shown in Figure 2 including McKay and Silver to Maywood, Willingdon, Mayberry and Patterson to Kingsway. Maywood Street between Willingdon and Patterson, a cul-de-sac at the Patterson end however is unaffected by through traffic.

As the traffic concerns on Maywood and Mayberry Streets result from through traffic considerations external to the Community Plan Two Area, resolution of the problem requires a comprehensive and integrated approach. This approach recognizes the need to develop a community transportation plan for the Community Plan Two Area.

### 3.0 COMMUNITY TRANSPORTATION PLAN PRINCIPLES

The Burnaby Conceptual Transportation Plan defines two principles to guide the development of a Community Transportation Plan for the Community Plan Two Area. First, the Burnaby Plan recognizes the need to establish and support a functional street hierarchy and second, the Plan establishes the principle that through traffic should be accommodated on the arterial street system rather than local residential streets. Third, access for the residents to Central Park across Patterson Avenue must be developed. Applying these principles to the Community Plan Two Area the following objectives with respect to required transportation improvements are defined:

3.1 Establish and maintain the adopted street hierarchy in the  
Community Plan Two Area

The Burnaby Conceptual Transportation Plan shows the adopted street hierarchy of arterial collector and local streets (Figure 3 attached). Applied to Burnaby, Figure 4 shows the network of arterial and major collector streets with Kingsway, Imperial and Boundary defined as arterial streets and Willingdon and Central Boulevard defined as major collectors. Figure 5 shows the complete network proposed for the smaller Community Plan Two Area including collector and local streets not identified in the Burnaby conceptual Transportation network. The objectives which are consistent with the principle of a street hierarchy include the following:

- (i) Support Mayberry Street as a local residential street
- Mayberry Street is currently intended to function as a local residential street and its lack of east-west continuity beyond Patterson and Willingdon supports retention of this role in the future. To support the function of Mayberry Street for local access only against the demands of through traffic will require its closure.
- (ii) Maintain the function of Maywood Street east of Willingdon as a collector street
- Maywood Street east of Willingdon is the only continuous east-west collector street serving the medium density apartment area located directly south of Metro-town. It is intended to collect traffic from the apartment area and distribute it to the nearest major collector and arterial streets, specifically Willingdon and Imperial and should therefore be maintained in its present form.
- (iii) Confirm Maywood Street between Willingdon and Patterson as a local residential street

Through the installation of a cul-de-sac at the Patterson end of Maywood Street, Council has recognized the function of Maywood west of Willingdon as a local residential street serving the residential area between Willingdon and Patterson. As previously noted however, Maywood on the east side of Willingdon however, serves more of a collector function.

In supporting the original closure of Maywood Street, Council recognized the local residential function of the street and the need to maintain this function against through traffic movements.

This local function was confirmed in a report to Council from the Director Planning & Building Inspection on 1989 June 06. In examining the need to relocate the cul-de-sac on Maywood from the Patterson end to the Willingdon end of the street, this report noted that:

"It is essential that the closure location be examined in the context of an adopted street hierarchy in the Comprehensive Transportation Plan for Burnaby. Maywood Street is a local residential street and should have connection to another residential street or a street that functions as a residential collector."

Council supported the recommendation of this report that Maywood Street access be provided from Patterson Avenue rather than Willingdon Avenue. As current circumstances further support Council's decision, relocation of the turnaround should be implemented expeditiously.

(iv) **Recognize Patterson Avenue as the collector street for access to and from Mayberry and Maywood Streets.**

On the report of 1989 June 06, Patterson Avenue was identified as the appropriate collector for access by residents of Maywood west of Willingdon.

Use of Patterson Avenue as a collector for residents of the Community Plan Two Area accomplishes the following objectives:

(i) by restricting local traffic to Patterson Avenue, it allows Willingdon to function as an arterial route as designated in the Burnaby Transportation Plan

(ii) it provides a safer access for residents than Willingdon Avenue.

In its consideration of the report, Council concurred with the staff recommendation that the cul-de-sac be relocated to the Willingdon end to provide access for residents to Patterson rather than Willingdon. A design for a hammerhead turnaround facility is shown in Figure 6.

Consistent with the principle of directing local access to Patterson Avenue, the closure of Mayberry Street should be implemented similarly with a hammerhead turnaround located at the Willingdon end.

3.2 Upgrade the arterial street network to orient east-west commuter movements away from the Community Plan Two residential area

The policies in the Burnaby Transportation Plan provide a clear direction regarding the accommodation of commuter traffic and the protection of residential neighbourhoods. The strategy emphasizes the need to ensure a clearly defined and improved arterial street network to discourage traffic infiltration into the residential areas (Figure 7).

To address the issue of traffic infiltration into the Community Plan Two Area the following sections outline the improvements required to the arterial street system.

(i) **Short Term Improvements**

Reducing the amount of traffic which passes through the Community Plan Two Area can be accomplished in the short term through measures to close Maywood and Mayberry Streets at Willingdon Avenue but also improvements which will reduce delays at congested intersections. The traffic improvements required at each of these intersections will vary from optimizing signal timing which better reflects and caters to traffic demand at the intersection to widening the roadway at the intersection to provide needed turning and/or travel lanes which increase the traffic capacity of the intersection.

Improving traffic flow along arterial and major collector routes on the approaches to these key intersections will encourage the driver to continue along the routes specifically designated to carry higher traffic volumes. Both the Burnaby Conceptual Transportation Plan and the Metrotown Plan have clearly identified these routes in the Metrotown area as Kingsway, Willingdon, Imperial, Grange, Nelson, Central Boulevard and Boundary Road.

The following lists the short term improvements in a suggested order of priority:

Maywood and Mayberry Streets

Relocate the closure of Maywood Street to the Willingdon end and close Mayberry Street at Willingdon Avenue.

Imperial/Boundary Intersection (Location A on Figure 1)

Widen Imperial Street at Boundary Road to provide two travel lanes in each direction and a left turn lane. Allowance should now be made for a future westbound right turn lane onto Boundary Road northbound. Also review the signal phasing to provide for left turn demand.

Boundary/Kingsway Intersection (Location B on Figure 1)

Signal phasing should be reviewed to make provision for left turn phases prior to the proposed upgrading of Kingsway to three travel lanes eastbound. provision for a northbound right turn lane to eastbound Kingsway should be made along with the intersection widening.

Willingdon/Kingsway Intersection (Location C on Figure 1)

The most significant improvements at this intersection will be implemented with redevelopment of the S.E. quadrant which is currently in the planning stage. The improvements involve widening of Kingsway and Willingdon to provide additional travel lanes and channelization.

A more immediate improvement involves the addition of left turn signal phasing to allow Willingdon traffic northbound to turn westbound onto Kingsway.

Imperial Street

Council on 1990 April 09 recognized the need for improved traffic flows on designated arterial streets by approving the implementation of 9:00 a.m. to 6:00 p.m. parking restrictions on the north side of Imperial Street from Patterson Avenue to Boundary Road. This action will assist westbound traffic flows, however, this arterial will not function adequately until proposed intersection improvements on Imperial at Boundary Road are undertaken.

Traffic from further east which now would use residential streets and Mayberry Street, could be encouraged to remain on Imperial Street to Boundary Road if further parking restrictions were implemented east of Patterson Avenue on Imperial Street. The Comprehensive Transportation Plan for Burnaby designates Imperial as a major arterial street to function as a traffic carrier.

(ii) Longer Term Improvements

Some improvements proposed in the Metrotown road network to address the traffic problems of Community Plan Two Area are seen to be longer term projects because property acquisition is generally involved before construction can take place.

The proposed extension of Central Boulevard from Willingdon westward to Patterson Avenue would offer a more continuous direct routing for traffic originating from east of Community Plan Two Area. In addition, completion and upgrading of South Beresford Street between Dow and Willingdon Avenues in the SkyTrain travel corridor, would also reduce the dependency on Mayberry Street of neighbourhood traffic from the apartment area east of Willingdon between Central Boulevard and Imperial. In addition, to accommodate access between the residential development on South Beresford between Willingdon and Patterson and the Metrotown area, consideration should be given to signalization of the intersection of South Beresford and Willingdon.

3.2 Develop a pedestrian route to Central Park

A major concern of the Community Plan Two Area and the apartment area east of Willingdon is pedestrian access to Central Park. To accommodate pedestrians, it is proposed that Maywood Street be developed as a pedestrian route from Willingdon Avenue to Patterson Avenue including a signalized crossing of Willingdon Avenue at Maywood. As Maywood will be closed to vehicular traffic at Willingdon, full signalization of this intersection to accommodate both pedestrians and vehicles, is not required. It is therefore proposed to implement a pedestrian actuated signal at Maywood and Willingdon.

4.0 ENGINEERING COMMENTS

The Director Engineering received the proposals in this report on short notice and his initial comments are as follows:

"In an area such as the Community Plan Two area of Metrotown with such high densities of trip ends, virtually every street functions as a local collector when compared to travel demand generated in a single family residential area. In this context, there are few, if any, "local residential" streets. With such trip end densities, care must be taken to ensure that accessibility is not impaired through understatement of street hierarchy requirements. Thus Mayberry Street for example, now functions as a local collector street and its closure to through traffic may well overstress other local network streets."

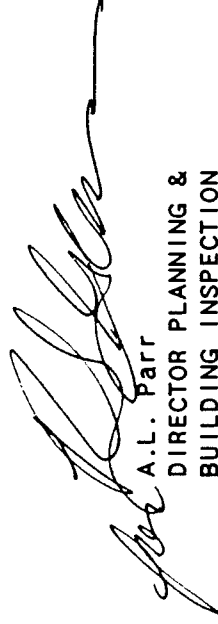
Community Plan objectives must be balanced against traffic management objectives. While most of the improvements listed in Schedule A are committed or programmed the two new measures, the closure of Maywood at Willingdon (rather than Patterson) and the closure of Mayberry at Willingdon may pose serious operational problems. These initial proposals should be subject to a technical evaluation that will quantify the effects of new travel patterns to determine the operational impact. When that assessment is complete there should be a further report back to the Committee. Any subsequent recommendation to amend the Community Plan must be subject to public consultation."

#### 5.0 CONCLUSION

The Community Transportation Plan for Community Plan Two Area provides a comprehensive set of measures to address the traffic problems in the area. These measures are directed to maintain the integrity of the neighbourhoods on Maywood and Mayberry Streets against the pressures of through traffic from other areas. This objective recognizes that Maywood and Mayberry Streets are local residential streets that are not intended to function as major collectors or arterials for through traffic, and further, that through traffic should be accommodated on existing and proposed arterial and major collector streets in Metrotown.

The rationale for a Community Transportation Plan is outlined in the Implementation Actions for the Burnaby Conceptual Transportation Plan. As adopted by Council, these actions direct staff "...to investigate and identify those residential neighbourhoods that are being adversely impacted by commuter traffic movements and further to recommend appropriate measures designed to overcome or minimize the problems identified." The measures proposed in this Community Transportation Plan are fully consistent with this direction.

It is therefore recommended that the Traffic and Transportation Committee approve in principle the Community Transportation Plan for the Community Plan Two Area and direct staff to inform residents of the area of the road improvements proposed in the Plan.

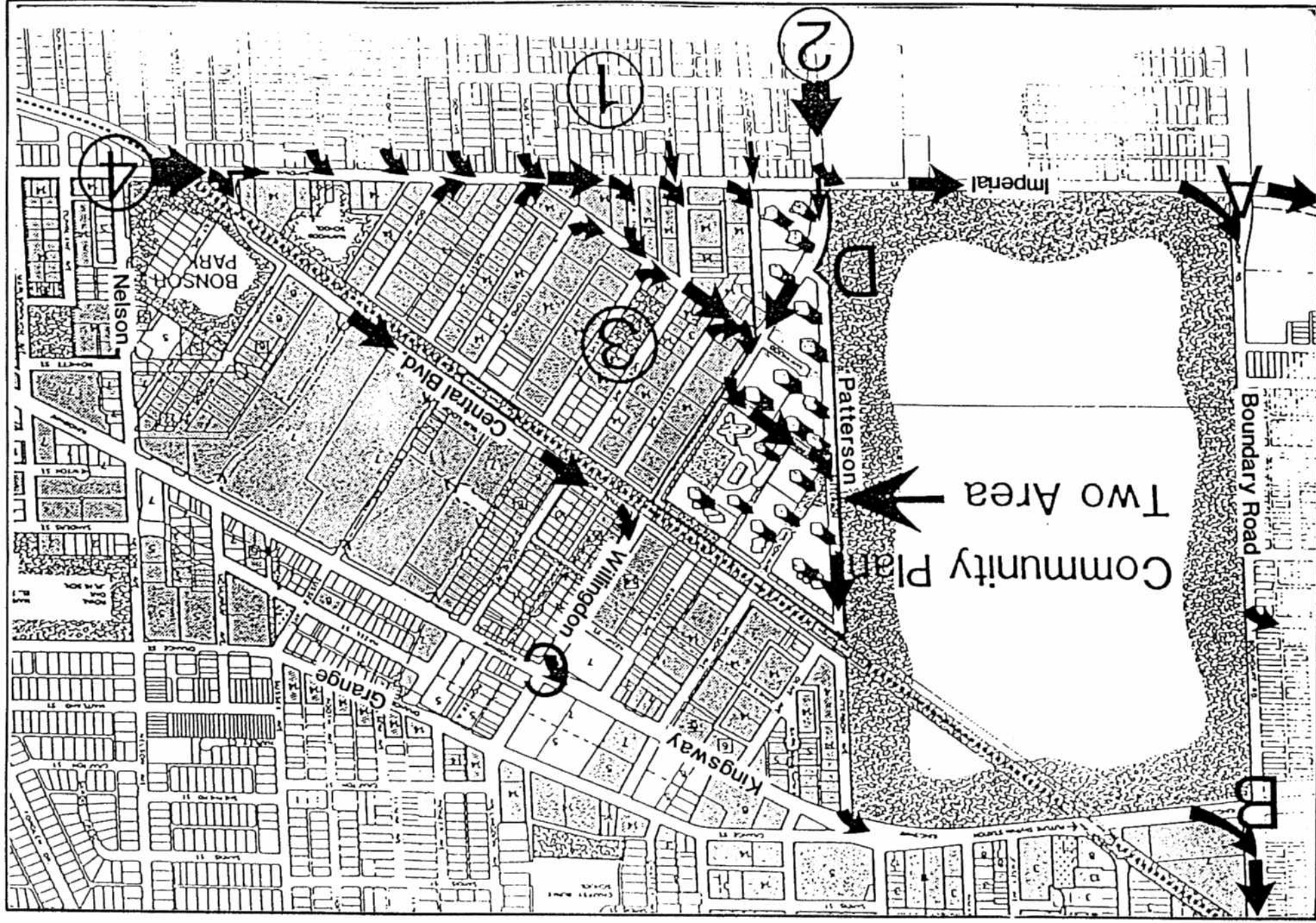


A.L. Parr  
DIRECTOR PLANNING &  
BUILDING INSPECTION

RG/mcb

cc: Director Engineering





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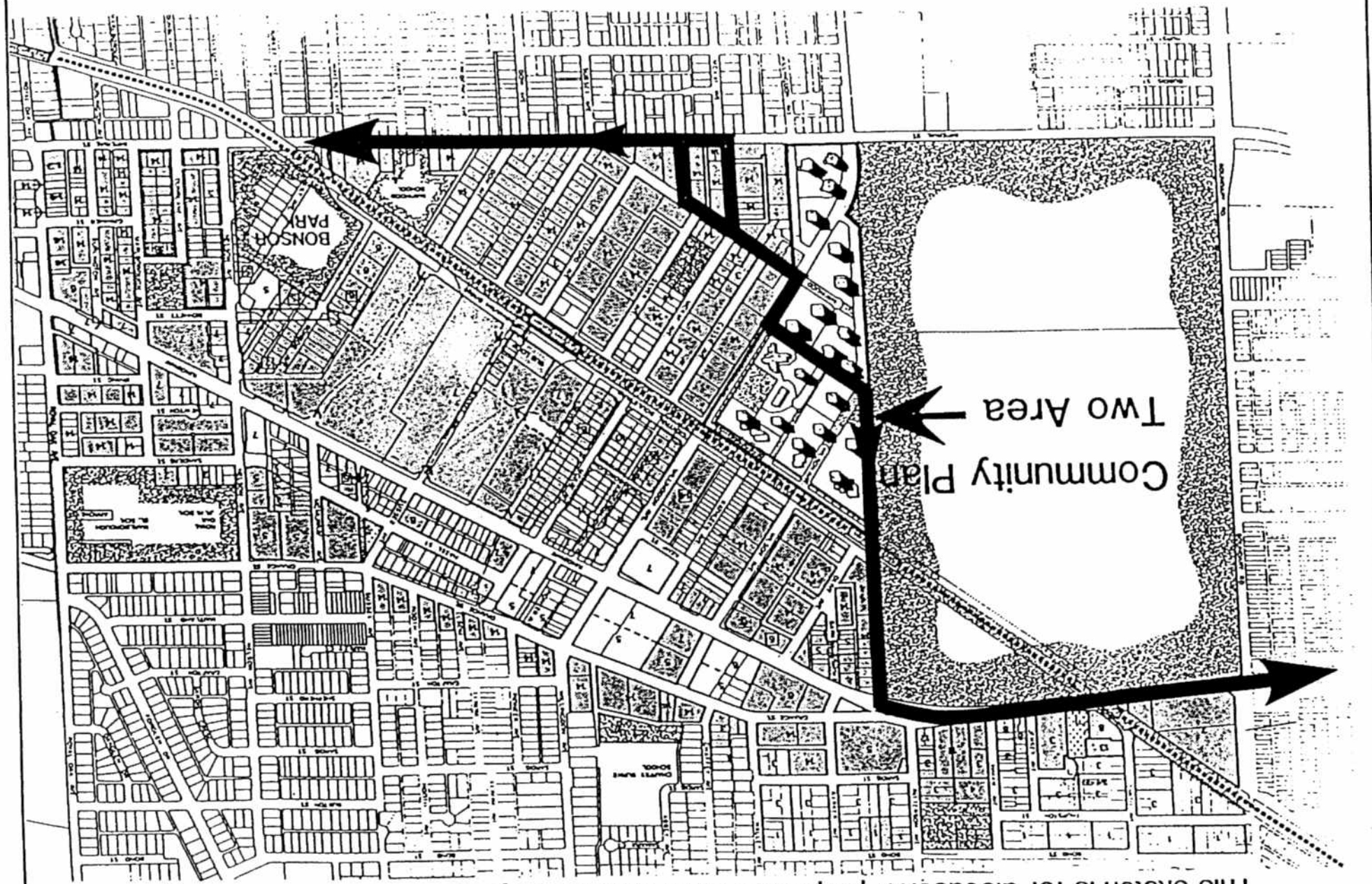
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FIGURE 1

TRAFFIC FLOWS  
IN THE COMMUNITY  
PLAN TWO AREA



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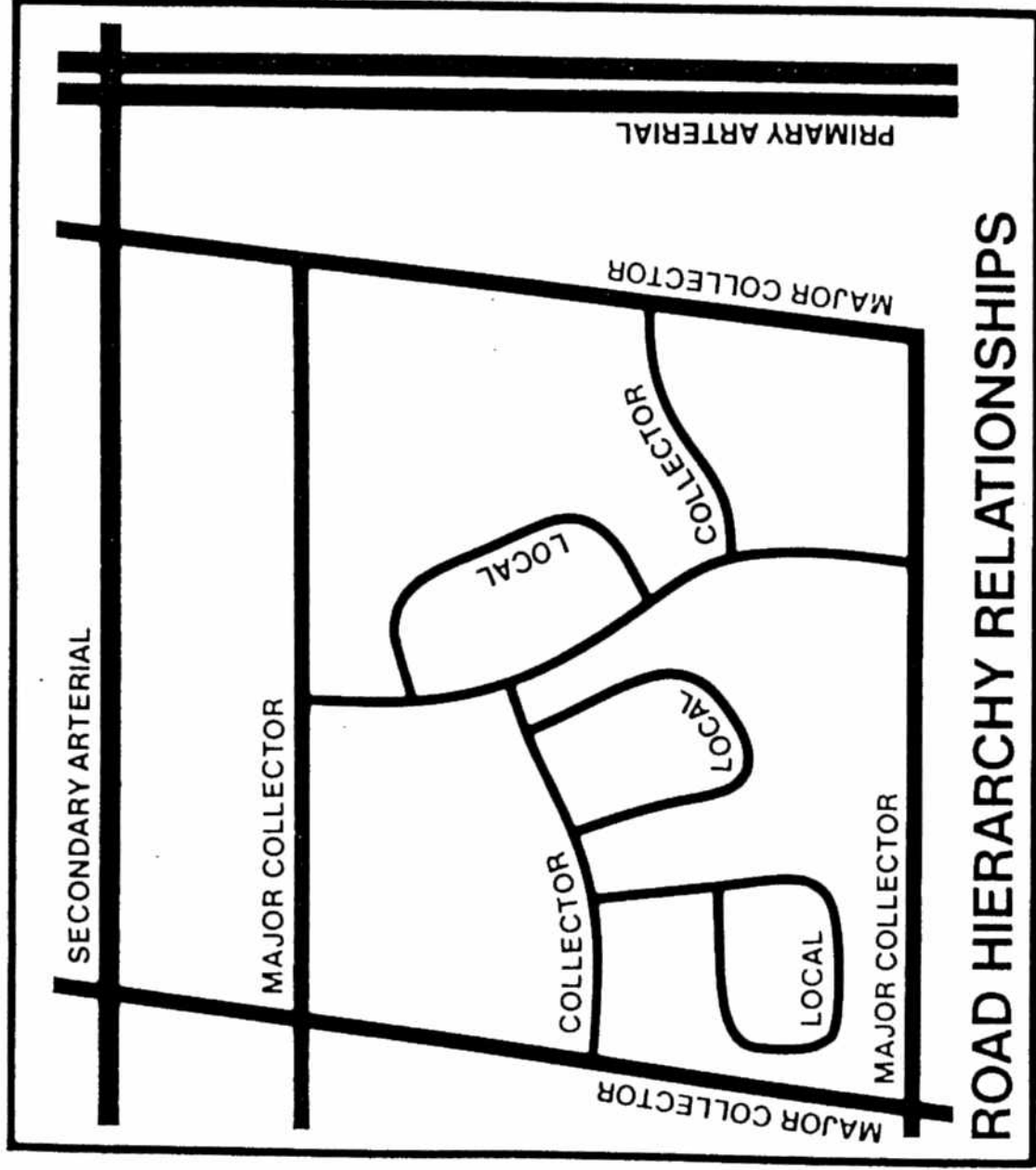


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FIGURE 2  
TRAFFIC INFILTRATION  
ROUTE



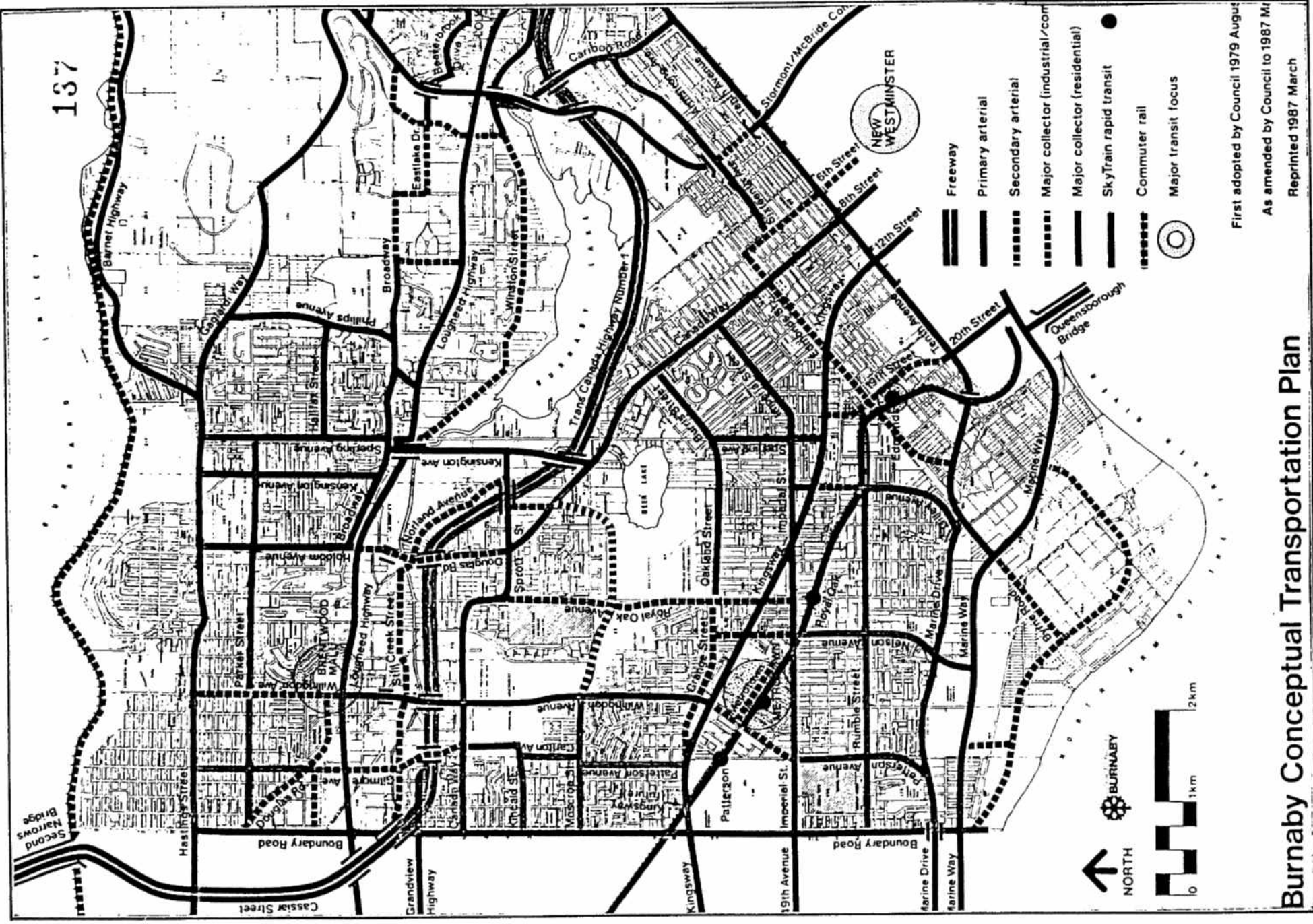
**ROAD HIERARCHY RELATIONSHIPS**



THE CORPORATION OF  
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**FIGURE 3**  
 BURNABY CONCEPTUAL  
 TRANSPORTATION PLAN 135  
 ADOPTED STREET HIERARCHY

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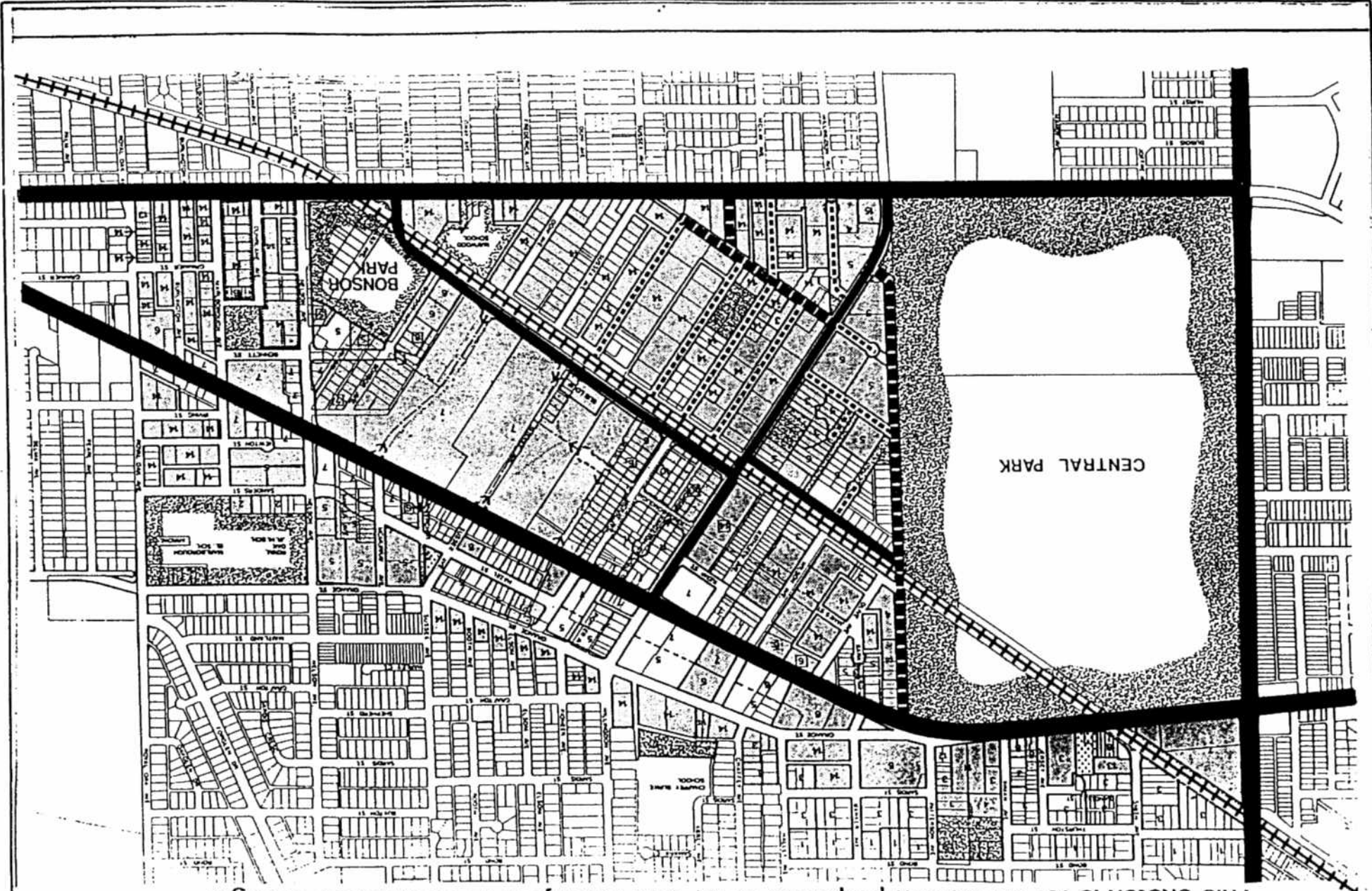
**Burnaby Conceptual Transportation Plan**

First adopted by Council 1979 August  
 As amended by Council to 1987 Mar  
 Reprinted 1987 March



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**FIGURE 4**  
*BURNABY CONCEPTUAL  
 TRANSPORTATION PLAN  
 STREET HIERARCHY*



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FIGURE 5  
METROTOWN  
ROAD HIERARCHY



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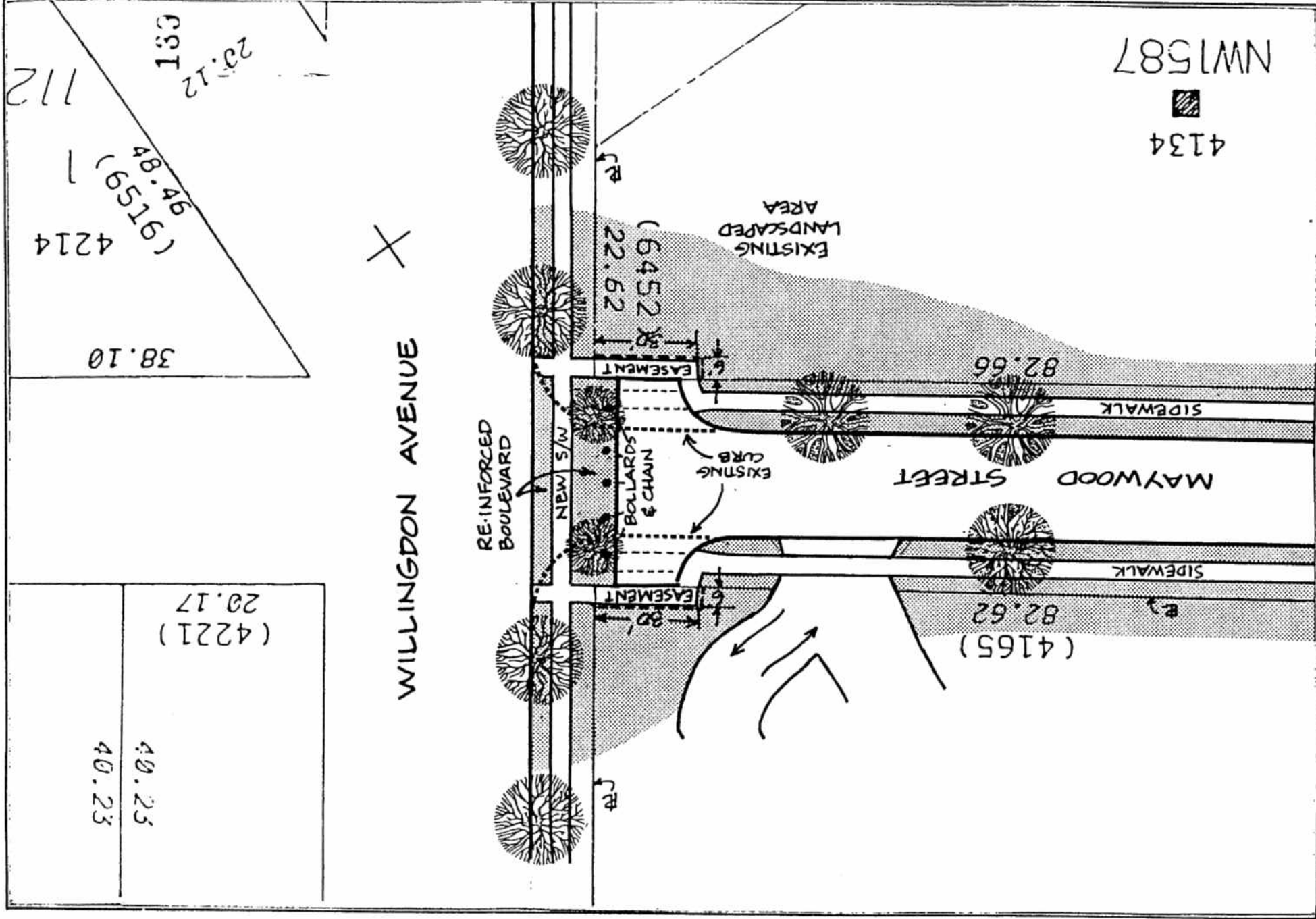
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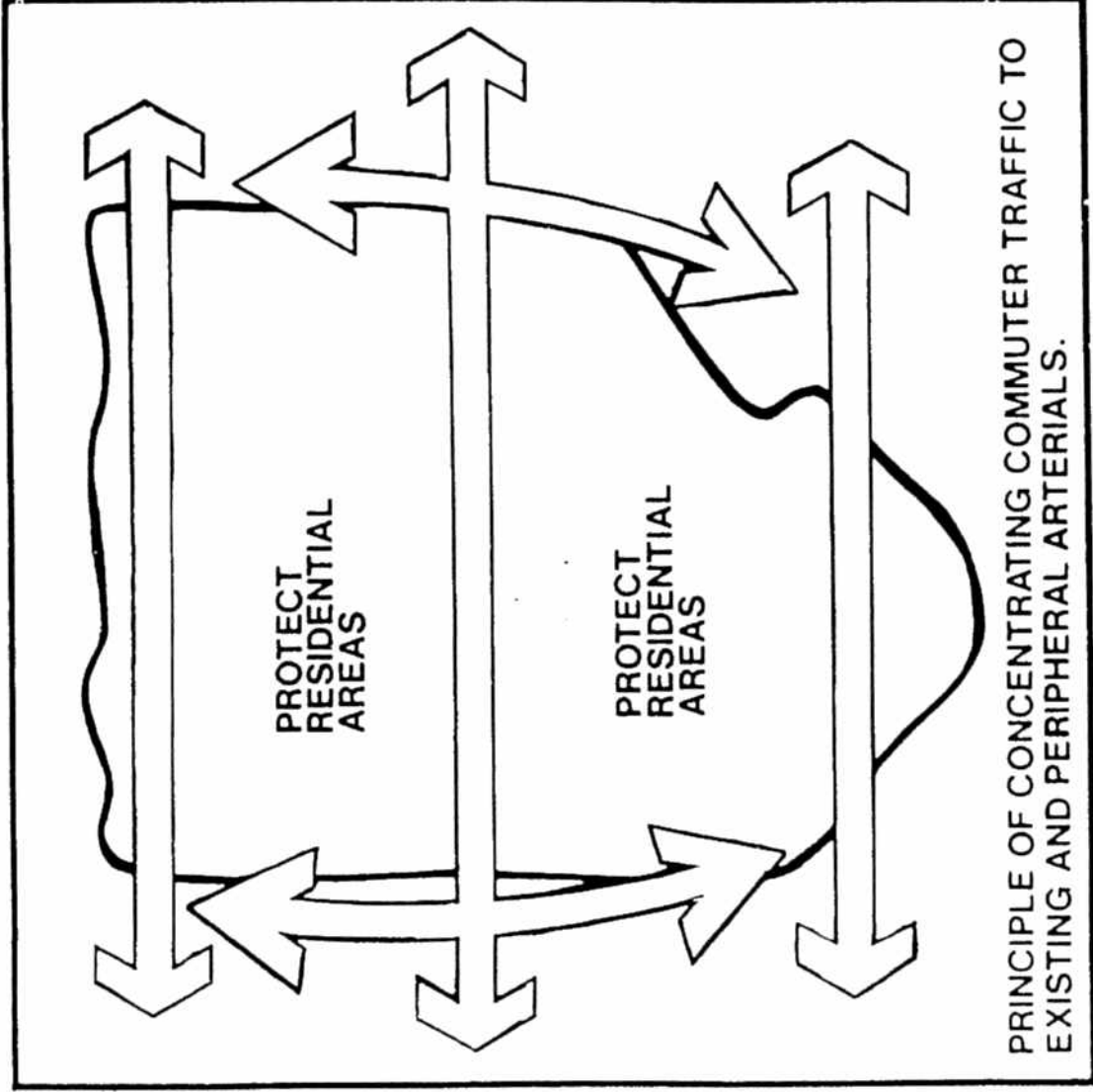
FIGURE 6.

MAYWOOD STREET  
 HAMMERHEAD TURNAROUND  
 AND  
 PEDESTRIAN ROUTE CONCEPT

Date: 1990 MAY

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FIGURE 7

BURNABY CONCEPTUAL  
TRANSPORTATION PLAN 140

NEIGHBOURHOOD PROTECTION CONCEPT

## SCHEDULE 'A'

COMMUNITY TRANSPORTATION PLAN  
ROAD IMPROVEMENT MEASURES

1. IMMEDIATE IMPROVEMENTS
  - (i) Mayberry Street
    - construct turnaround facility at Willingdon Avenue.
  - (ii) Maywood Street
    - construct turnaround facility at Willingdon and pedestrian walkway.
  - (iii) Maywood/Willingdon Intersection
    - introduce pedestrian/vehicle activated signal.
  - (iv) Imperial Street
    - introduce parking restrictions on Imperial Street east of Patterson
    - reconstruct intersection with Boundary Road to provide right-turn channelization
  - (v) Willingdon/Kingsway Intersection
    - provide separate left-turn phase from Willingdon to Kingsway.
2. MID-TERM IMPROVEMENTS
  - (i) Willingdon/Kingsway Intersection
    - reconstruct intersection with full channelization.
  - (ii) Boundary/Kingsway Intersection
    - reconstruct intersection with full channelization.
3. LONGER TERM IMPROVEMENTS
  - (i) Central Boulevard
    - widen Central Boulevard from Willingdon to Patterson.
  - (ii) South Beresford Street
    - upgrade between Dow and Willingdon Avenues.