

PROPOSED EAST BURWOOD TRAMWAY EXTENSION

WARRIGAL ROAD - TOORAK ROAD INTERSECTION

PRELIMINARY APPRECIATION INTERSECTION AND
SHOPPING REDEVELOPMENT.

JANUARY, 1977.

John W. Knee,
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1. INTRODUCTION

At the instigation of the M. & M.T.B., the problem was raised of obtaining the most realistic redevelopment of the Warrigal Road Toorak Road intersection to provide for the extension of the East Burwood Tramway.

The report is submitted in order to present to the parties concerned, typical plans for discussion illustrating the magnitude of the problem involved in and around this type of intersection.

The following is a preliminary appreciation of the problem and is not intended as an in-depth study or detailed plan at this stage.

2. OBJECTIVE

In examining the problem, it was considered the three main factors to be observed were :-

- (a) an environmentally acceptable treatment of the shopping and residential area in both municipalities adjoining the intersection of Toorak and Warrigal Roads.
- (b) improved intersectional travel for the M. & M.T.B. vehicles preferably within a protected reservation and providing adequate passenger facilities and interchange with other transport.
- (c) improved vehicular and pedestrian capacity and movement through the area consistent with the redevelopment and with the restricted capacities of the two main arteries, Warrigal Road and Toorak Road.

3. EXISTING TRAFFIC CONDITIONS

An examination of current traffic counts made by the C.R.B. and inspections of the area showed the intersection on both major arteries to be severely congested during peak week day periods and on Saturday mornings, even with the existing single track Tramway Terminus. Parking in the area also caused considerable problem and it was apparent that when the tram tracks are duplicated through the intersection, enforcement of parking restrictions on the shopping frontages within the area would need to be severely enforced and in fact is already necessary under existing single track tram conditions.

4. EXISTING LAND USE

Within the shopping area many shops are relatively old, however, there are several buildings, particularly the Banks on the north side of Toorak Road, which are of good quality and some importance in the determination of a plan.

Residential areas near by are of good quality and the churches and Catholic school also provide important features to be considered in any proposal. The Australian Postal Commission has property on the south side of Toorak Road which may be advantageous in replanning.

The existence of State Government facilities and professional rooms in the nearby area also warrant consideration in any redevelopment of a wider nature.

The Camberwell City Council has been instrumental in organising quite extensive areas for off-street parking in the area. This space provides an excellent opportunity for minor redevelopment.

The Box Hill City Council has participated with the C.R.B. in some widening of Burwood Highway to the east of the intersection.

This small shopping area is a valuable asset to the local community and although it appears to have a limited potential its development is well worth fostering. It would be of prime importance in any redevelopment proposal that any displaced business or commercial operators be given the opportunity to re-establish in the area under more environmentally acceptable conditions, to offset the upheaval caused by the displacement.

5. CURRENT STUDIES

The C.R.B. and the Councils have carried out some preliminary planning towards a solution for the area. It is understood that no firm plans have been adopted and those that were drawn up were prepared prior to the adoption of the report on the Tramway extension.

The C.R.B., as part of its normal programme is proceeding with plans for improvements to Warrigal Road at its intersection.

6. TIME FACTOR

The M. & M.T.B. hopes for considerable progress in the construction of the East Burwood Tramway Extension during the next year. It would appear therefore, that any plans to improve the area would have to be in two parts :-

- (a) Long range plan completed in stages.
- (b) Short term plan, preferably phased into (a).

7. ALTERNATIVES

In examining the alternatives available for improved traffic flow and the planning already carried out by others, the proposals can be broadly divided into the following groups :-

- (a) Grade Separation.
- (b) At grade intersections with deviation of some or all traffic along alternative routes.
- (c) Improvement and widening of the existing main arteries Toorak and Warrigal Roads.
- (d) Traffic signalization involved in the above.

8. BRIEF EXAMINATION OF ALTERNATIVES

- (a) Grade separation. The grades of the approach roads to the intersection make such a proposal an attractive long range proposition and in the acquisition of any property this should be borne in mind.

The capacities of both Toorak Road and Warrigal Road however, are limited by their widths as arteries and the problems of high cost, delay and disruption to the area compared with the limited size of the shopping area makes detailed examination of the proposal at this stage of doubtful value.

- (b) At grade intersections with deviation of some or all traffic along alternative routes. In principle, this was the most attractive alternative to be examined and considerable effort was made to achieve such a plan which could provide maximum benefit to the M. & M.T.B. and create a pedestrian mall in Toorak Road. Preliminary

3. (b) Cont'd

plans had been made by officers of the Camberwell City Council, similar to the illustration in Fig. 10 P. 35 of the M. & M.T.B. East Burwood Tramway Extension Feasibility Study, see Appendix A, to indicate a type of redevelopment.

This proposal when examined in more detail, presented a number of problems in addition to the difficulties of cost and effect on private property common to all proposals :-

- i) The southern leg of the inbound traffic deviation passed through a major church property at the corner of Warrigal Road and Hyslop Street. Avoidance of the church would be difficult without introducing further alignment problems. It is understood the future use of this property is under review but the building could be of some considerable value to the public if no longer required for Church purposes.
- ii) The shopping area was severely broken up by three traffic routes through the area carrying either heavy traffic or Trams.
- iii) Those adjoining residential properties, which at present are relatively free from heavy traffic on Toorak Road, would become subject to this traffic close to their boundaries and with potentially noisier turning movements.
- iv) The intersectional problems at Warrigal Road with long signal clearance times and pedestrian difficulties, although not insurmountable, are unattractive.
- v) Devious vehicular movements with sharp turns have been shown in an attempt to minimize property acquisition.

As the principle of road deviation is the most attractive, Proposals Nos. 1, 2, 3 and 4 were drawn up in an endeavour to refine the preliminary plan prepared by the Camberwell City Council officers and illustrate further stages and alternatives.

In preparing these proposals it was considered desirable to incorporate where possible the following features :-

Streamline vehicular traffic flow to improve driving characteristics and reduce tyre and acceleration noise.

Minimize the number of major traffic arteries for pedestrians to cross from adjoining residential areas.

Provide the maximum amount of noise barriers such as trees and insulated public buildings between the major traffic and the residential areas.

Allow for future shopping expansion, if required, and or parking to take place in one direction away from and without crossing major traffic routes.

These features were best met by a single road deviation with two way traffic as illustrated by Proposals 2, 3 and 4.

- (c) Improvement and widening existing main arteries. After considering the high cost and affect on private property of the proposals outlined in 8(b) and taking into consideration the age and condition of shops in Toorak Road and the limited capacity as a main artery, it was considered that any proposal to widen the existing roads must be given serious examination although it would result in the least attractive proposal environmentally.

Such a proposal in principle had the following advantages :

- i) Maintained all traffic in as direct a route as possible.
- ii) Provided for expansion of the shopping area with minimum interference from heavy traffic.
- iii) Maintained some noise barrier of shops between the Toorak Road traffic and the Residential area, Churches and school.
- iv) Permitted the development of a shopping area which could "turn its back" on the heavy through traffic on Toorak Road and provide a relatively secluded shopping precinct with limited parking.
- v) Could, with some degree of flexibility, be phased into a short range plan of intersection improvement and a long range plan of possible grade separation.
- vi) Avoided disruption to residential properties and confined it to business and commercial buildings which could be catered for in an improved manner in any redevelopment.

During this stage Warrigal Road will have about half the peak hour traffic of Toorak Road and is free of Trams. Toorak Road could have trams at about 4 minutes headway during the peak in each direction. This headway is sufficient to cause problems but is not an excessive amount preventing special treatment.

9. COST

No attempt has been made to cost any proposal nor attempt to justify it on a cost-benefit basis at this stage. The simplest of proposals to its final stage will undoubtedly cost in excess of one million dollars with the more ambitious schemes costing several million if redevelopment of the area is included.

This makes it apparent that any proposal if adopted is likely to involve long term redevelopment in which private funds participate to achieve an environmentally improved traffic intersection and shopping complex. This could possibly incorporate some expansion or relocation of existing Australian and State Government buildings, professional rooms and limited residential accommodation for any displaced home owners interested in higher density dwellings.

10. SUMMARY

It is considered, in so far as this preliminary appreciation can be of value, that the proposals outlined range from the most environmentally attractive and far reaching Proposal No. 4, to the direct but least attractive Proposal No. 5, with widening on either the north or south side of Toorak Road and affecting mainly business premises.

The proposals warrant discussion with the various parties affected with the objective of adopting the most environmentally feasible plan capable of development in stages as a long term project.

The final adoption of any proposal must however, be preceded by a close evaluation of the various plans if the interested parties so desire and an attempt to involve private enterprise and both Governments in the redevelopment of the shopping complex and adjoining areas.

It would appear that at this stage the M. & M.T.B. has little option other than to proceed with its duplication of tracks in Toorak Road preferably of a "temporary" nature pending finalisation of a redevelopment proposal.

Some preliminary planning on this basis had been carried out as illustrated on page 34 Fig 9, of the M. & M.T.B. East Burwood Tramway Extension Feasibility Study, see Appendix B. This proposal provided for widening on the north side of Toorak Road between Melton Avenue and Warrigal Road to give the best vehicle and tram line alignment.

A preliminary examination of the buildings on the north side of Toorak Road compared with the south side shows that although the alignment would be inferior there may be some merit in widening on the south in so far as the redevelopment of the shopping area is concerned.

Proposal No. 5 illustrates the type of redevelopment envisaged and which, to a limited degree, by the use of "temporary" tram tracks, could be carried out in stages.

The details of such a plan would be required to provide :-

- i) Maximum improvement immediately to Warrigal Road to minimize signal green time required in this direction and allow maximum green time to be given to Toorak Road.
- ii) Progressive improvement to road widths in Toorak Road.
- iii) Signalization designed to ensure Trams are given reasonably clear favoured treatment in Toorak Road.
- iv) Preferably any road widening and abandonment of shops to be concentrated in the south-west sector adjoining the intersection with planned development and expansion of shops taking place to the north.
- (d) Traffic signalization involved in the above Proposals 1 - 5. In the final implementation of the plans signalization is quite feasible with reasonable capacity available in all directions. Some plans are more suitable to signalization than others but this should not be a major determining factor.

The short range plan presents difficulty for all proposals when in the early stages -

- i) limited widening only may have been completed in Warrigal Road.
- ii) duplication of the tram tracks in Toorak Road through the intersection, possibly as "temporary" tracks, will be in operation resulting in greatly restricted road width.
- iii) widening in Toorak Road is minimal initially or does not eventuate as part of a final plan.

Throughout this report reference has been made to Toorak Road not the Burwood Highway as the two will always be incompatible in capacity and vehicle speed.

In suburban arteries, as distinct from Freeways, the best traffic flow that can be hoped for is one which permits, with safety to all, reasonable average speeds over a route with a minimum of enforced delays at intersections.

The complex surrounding the intersection of Warrigal Road Toorak Road has therefore been considered as an extension of the suburban artery, Toorak Road, and it is considered any proposal that can provide smooth traffic flow at acceptable suburban speeds has filled the requirements as far as traffic movement is concerned.

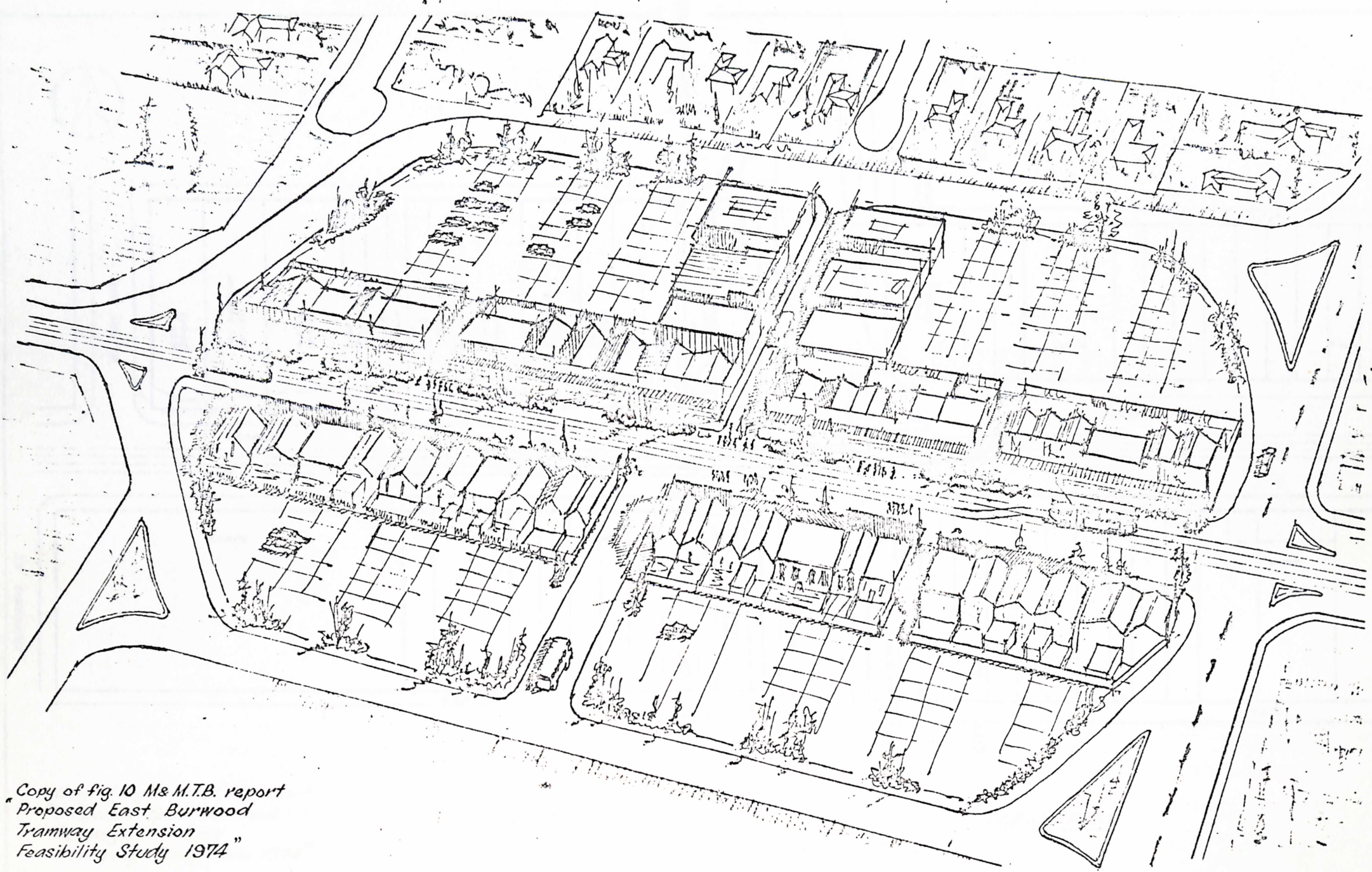
The second but more important part is to incorporate this into an environmentally acceptable surrounding complex.

The financing and design of such a complex should therefore, be an integrated public plan involving all interested parties if any progress is to be made on projects of this cost, involving a limited number of businesses in a small shopping area.

11. RECOMMENDATION

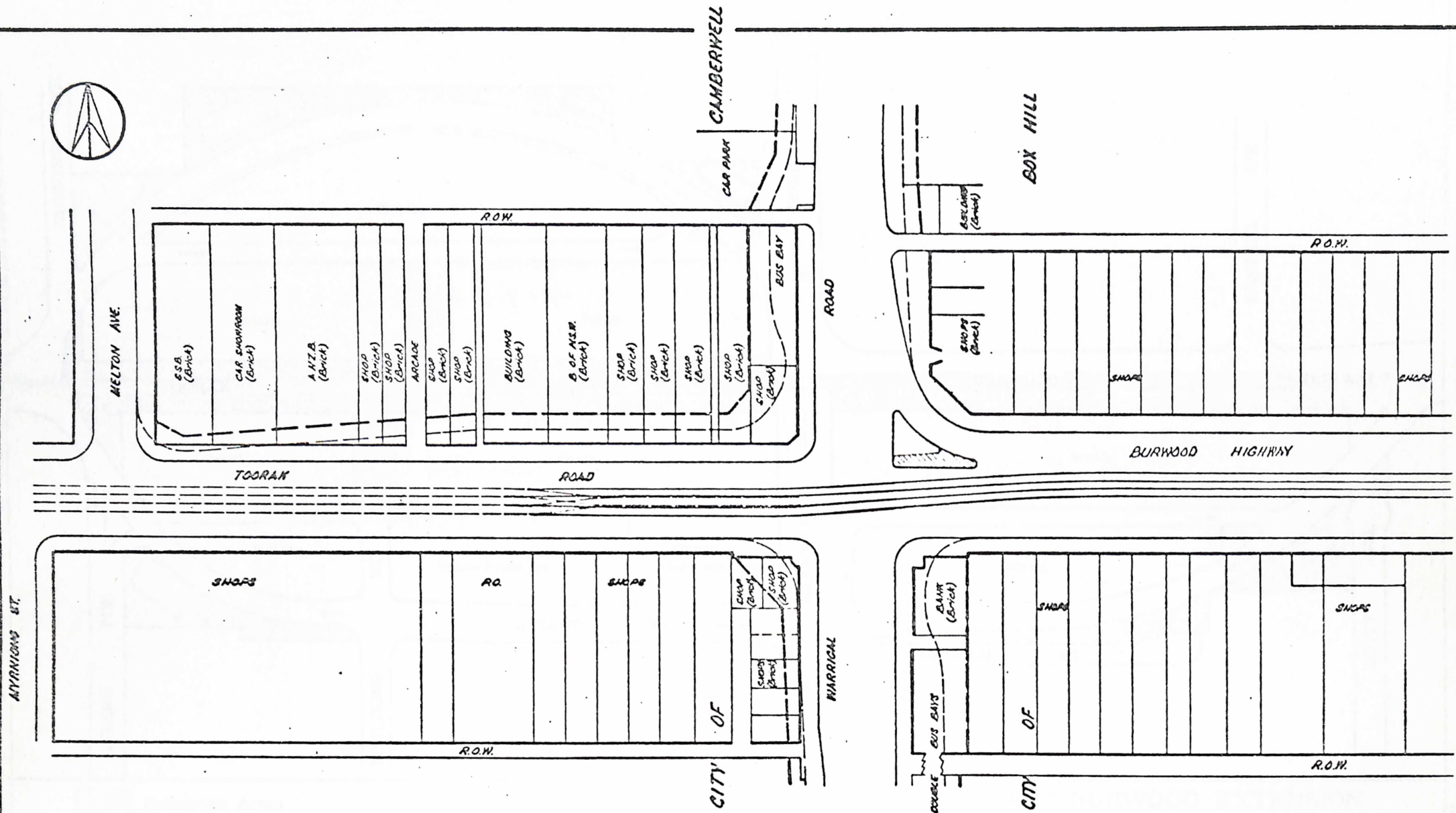
- (a) Refer this preliminary appreciation to the parties concerned for their consideration and discussion.
- (b) Give maximum expedition to the widening of Warrigal Road at Toorak Road intersection to improve the existing signal capacity.
- (c) Encourage the local Councils to guide shopping development and acquisition of land for parking in the area in a manner that will best fit the common features of the preferred proposals illustrated pending finalization of plans for the area.
- (d) In the interests of all types of traffic obtain the consent of all Authorities to develop a signal operation and tram stop location that will maintain the best possible through movement for the Board's trams even at the risk of delaying Warrigal Road traffic. Consideration be given to provision for the Board's drivers to call up limited green time as required during the vital initial years.

John W. Knee.



Copy of fig. 10 M&M.T.B. report
"Proposed East Burwood
Tramway Extension
Feasibility Study 1974"

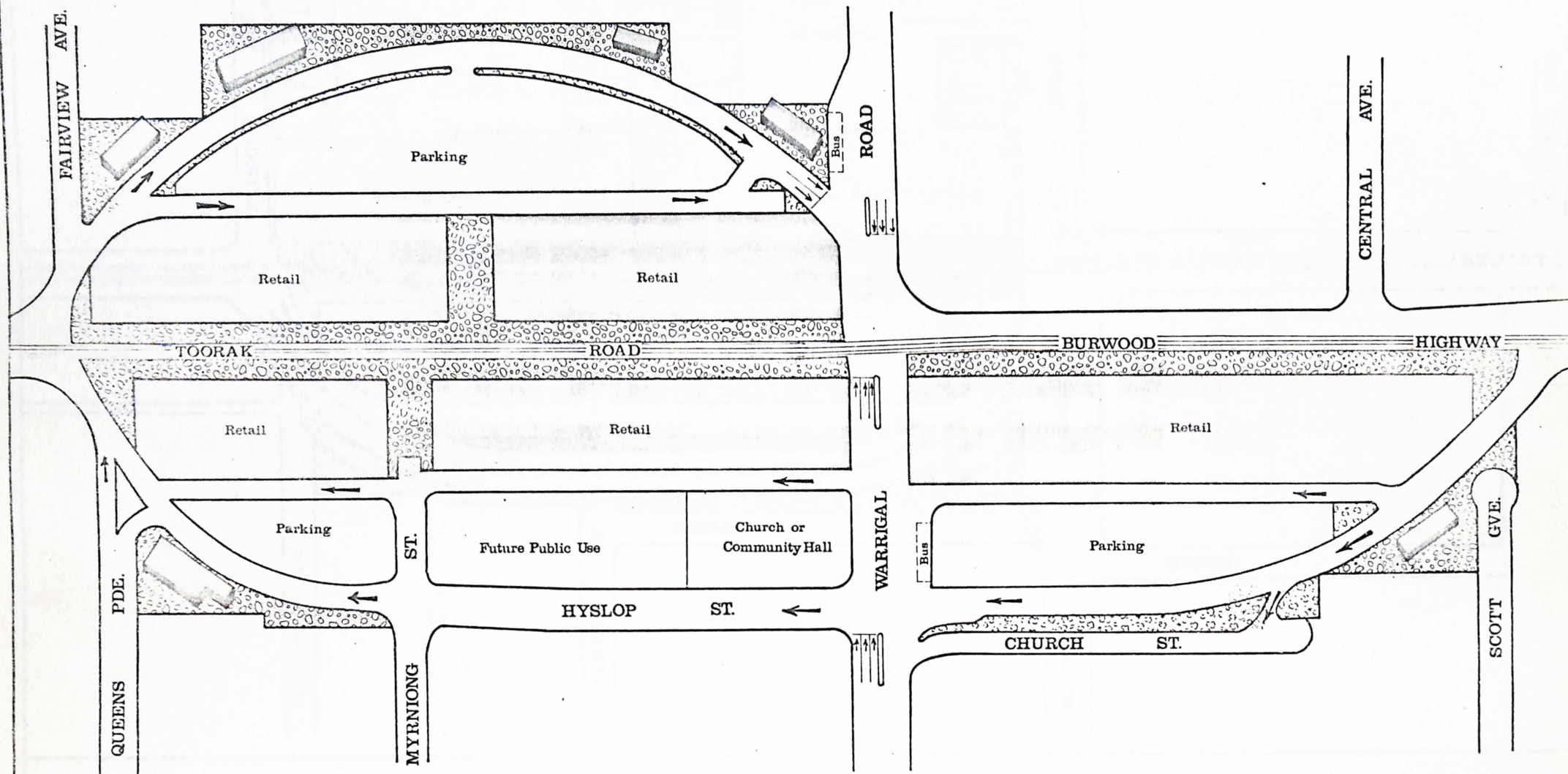
POSSIBLE PEDESTRIAN MALL. AT TOORAK RD. & WARRIGAL RD. JUNCTION







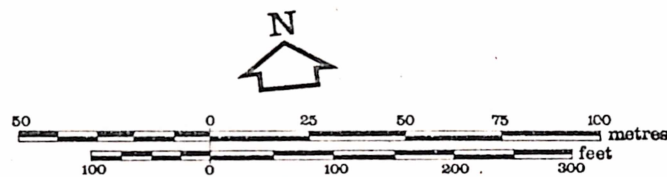
Copy of fig 9 M&M.T.B. report
"Proposed East Burwood
Tramway Extension
Feasibility Study June 1974"

BURWOOD HIGHWAY - WARRIGAL ROAD - TOORAK ROAD
INTERSECTION TREATMENT

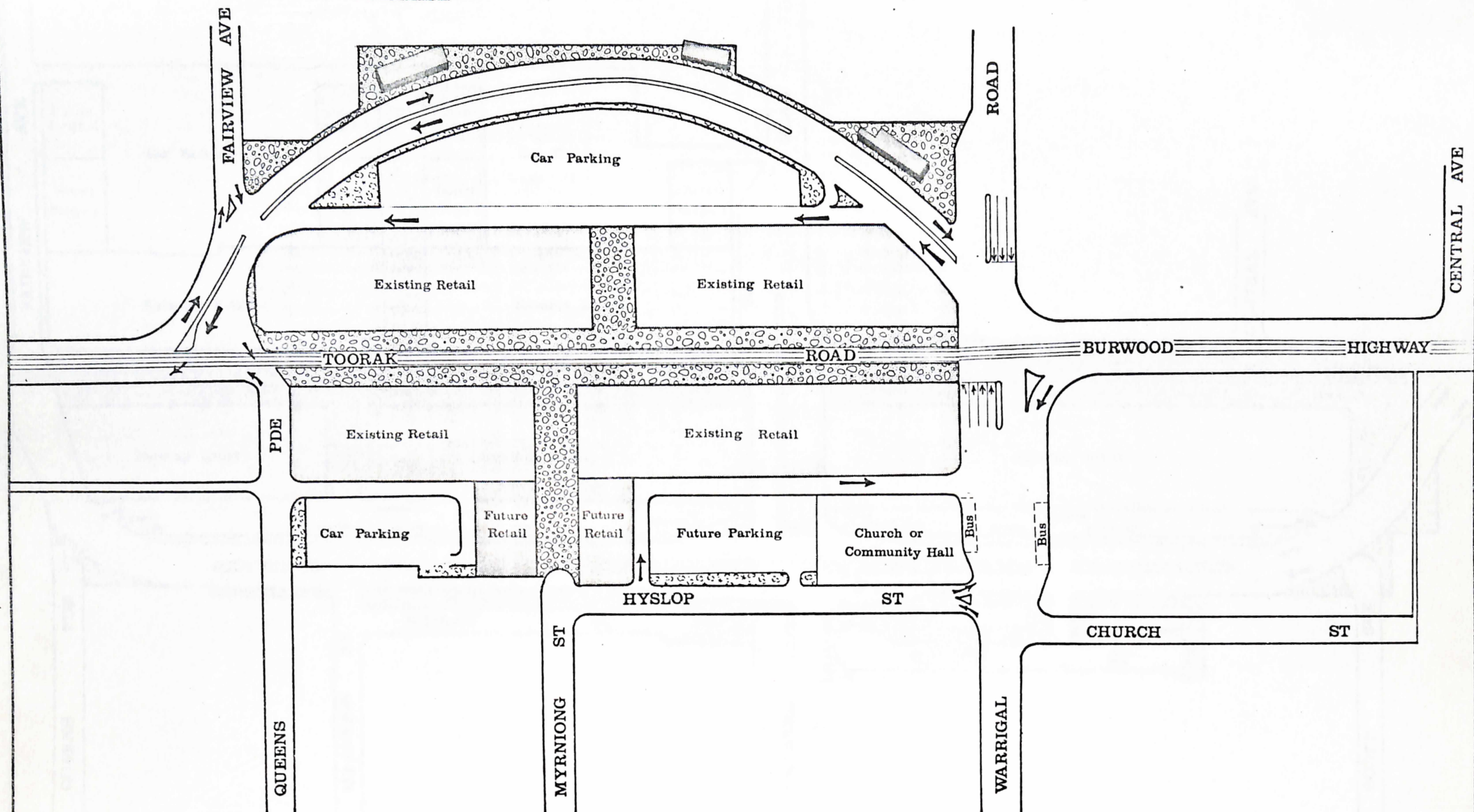
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





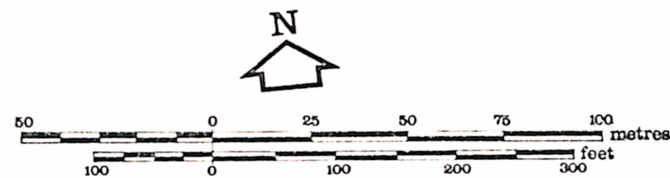
-  Pedestrian Areas
-  Parking Areas
-  Retail Areas - Existing
-  Retail Areas - Proposed



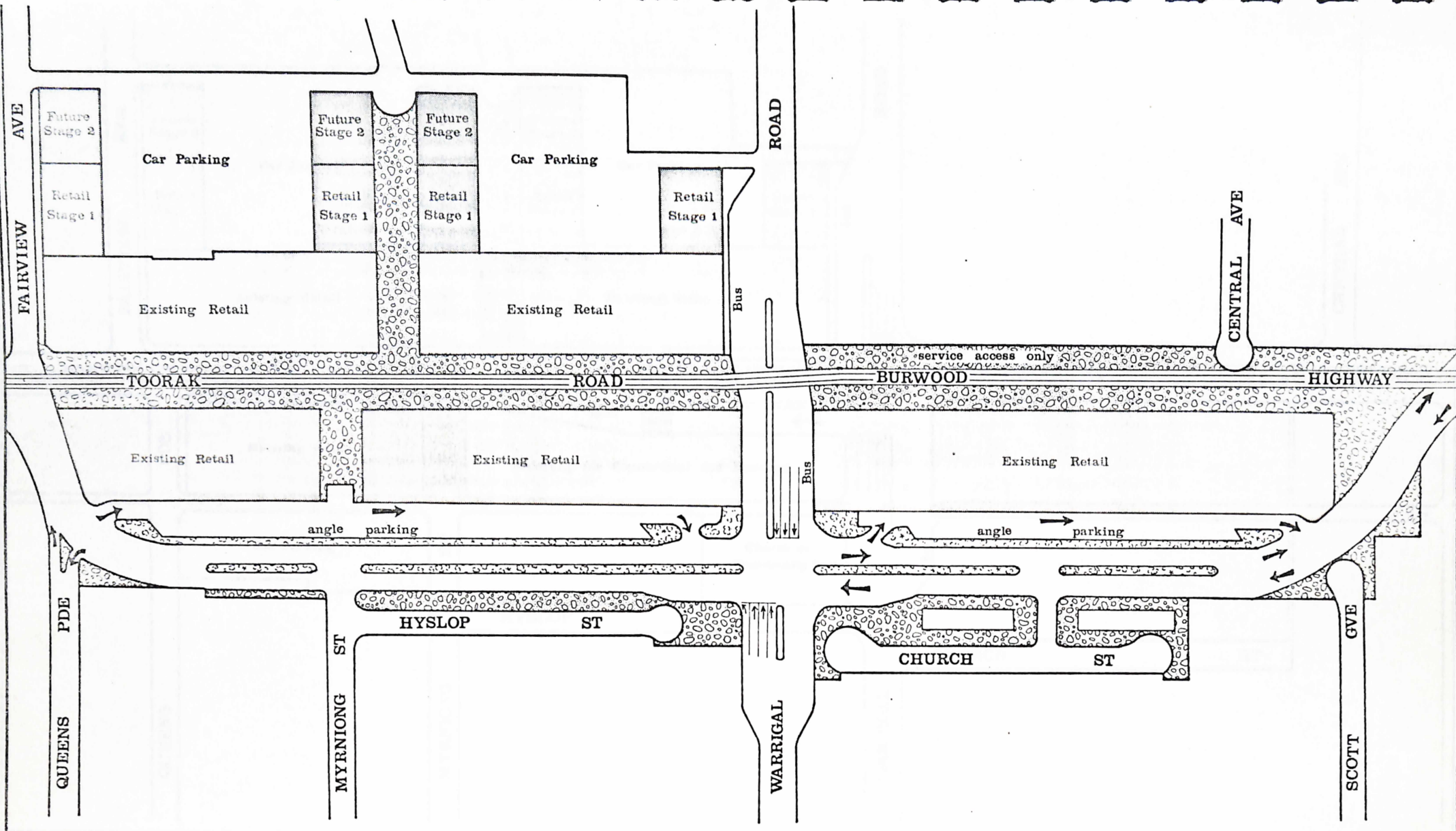
EAST BURWOOD EXTENSION Shopping Centre PROPOSAL 1







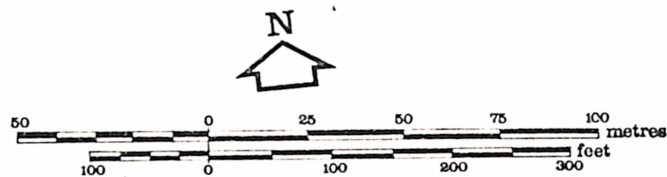
-  Parking Areas
-  Pedestrian Areas
-  Retail Areas - Existing
-  Retail Areas - Proposed



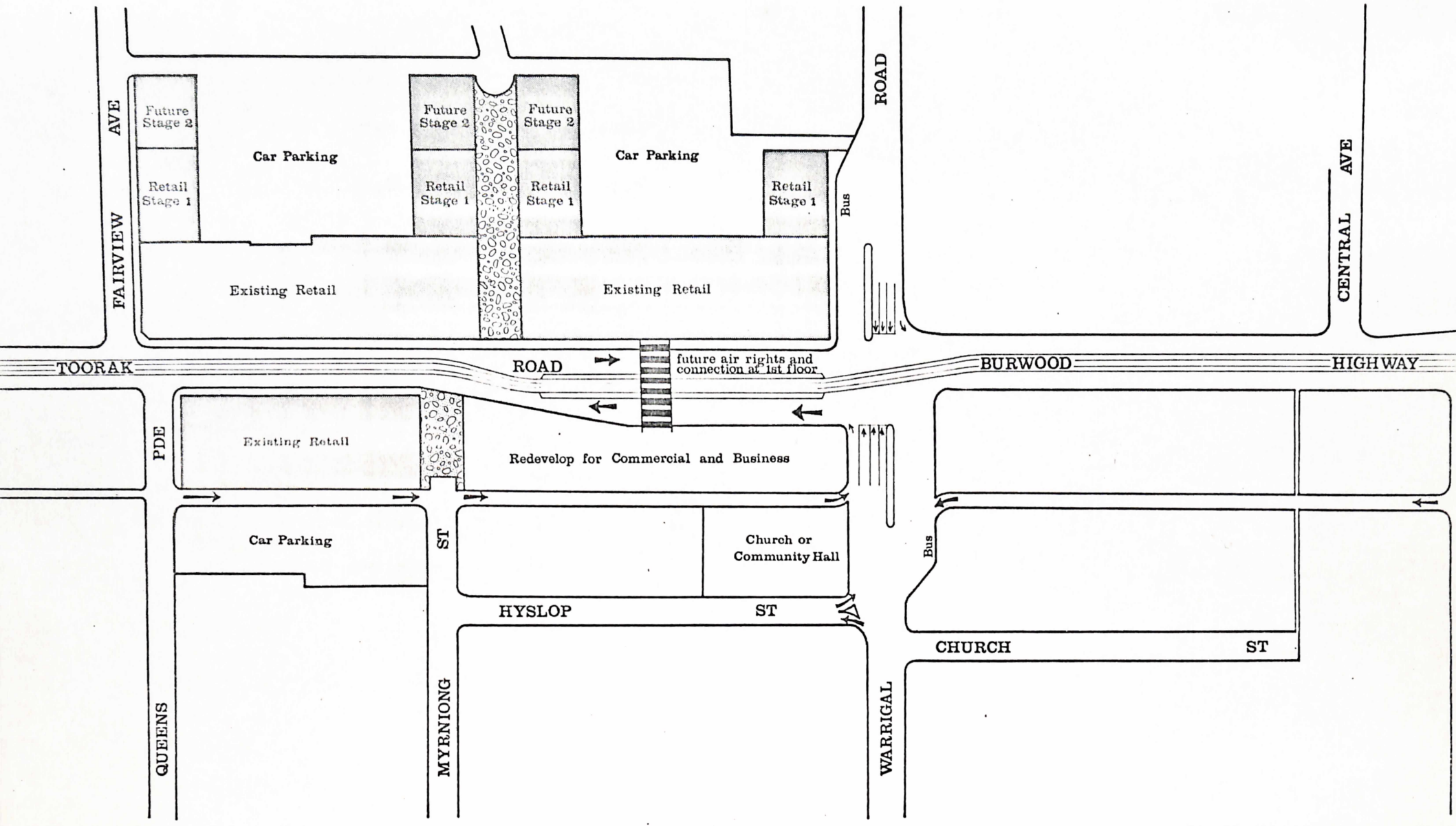
EAST BURWOOD EXTENSION Shopping Centre PROPOSAL 3







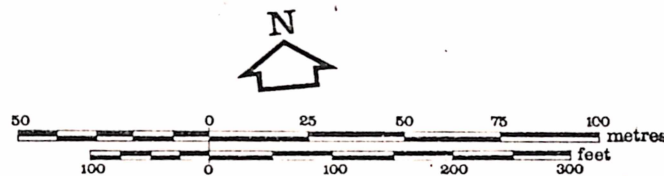
-  Pedestrian Areas
-  Parking Areas
-  Retail Areas - Existing
-  Retail Areas - Proposed



EAST BURWOOD EXTENSION Shopping Centre PROPOSAL 4



-  Pedestrian Areas
-  Parking Areas
-  Retail Areas - Existing
-  Retail Areas - Proposed



EAST BURWOOD EXTENSION Shopping Centre PROPOSAL 5

