152 DC3
Construction de l'axe McConnell-Laramée
entre l'autoroute 50
et le chemin de la Montagne
Hull- 6211-06-0a1

King Edward Avenue
Community Improvement Plan

Existing Conditions Report

10 February 1993

UMA Engineering Ltd.
Barry Padolsky Architects Ltd.
Essiambre · Phillips Associates Ltd.
Corush Sunderland Wright Limited
Brethour Research Associates Ltd.

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Executive Summary

The following report presents the results of analyses of existing conditions relevant to the preparation of a Community Improvement Plan for King Edward Avenue between Sussex Drive and Besserer Street.

Highlights of these analyses, by discipline follow:

Land Use

King Edward Avenue has served as a boundary for planning policies, by separating the Central Area from the adjacent communities. It has been the boundary between Lowertown East and Lowertown West. It is also an important link between major highways and the most easterly bridge crossing in the Ottawa-Carleton region. These functions have influenced the form of King Edward Avenue and the adjacent development.

There are planning policies of the federal government, the provincial government, the RMOC and the City of Ottawa affecting the proposed Community Improvement Plan for King Edward Avenue. Changes to various parts of King Edward Avenue will require the cooperation and concurrence of these levels of governments. The City and Regional Official Plans designate King Edward Avenue as a major road. It is also part of the interprovincial truck route into Ottawa. These designations are expected to remain until the transportation network is revised, for example by construction of an additional bridge crossing the Ottawa River and changes to the truck routes. Until this is done, planning for King Edward Avenue must recognize and accommodate these factors. The existing and new Ottawa Official Plan policies permit progressively higher buildings and densities toward Rideau Street, on the west side of King Edward Avenue. This is significantly different from the scale of existing development. The new Ottawa Official Plan (1991) designates King Edward Avenue as a Gateway, with Nodes at St. Patrick Street and at Rideau Street. These policies form the conceptual basis for the land use planning policies.

There are also five Council approved sets of planning policies, in the form of area studies, within the Study Area for this project. Some of the policies of these studies need to be updated, while others have been effective in protecting the neighbourhoods.

The existing land uses on King Edward Avenue are predominantly medium density residential between Boteler Street and Clarence Street and predominantly commercial to the south. The Federal government controls much of the large open areas north of Boteler Street. There are several community facilities in the general area. The Shepherds of Good Hope has a significant presence with the operation of various

facilities on and near King Edward Avenue.

The variable character of the communities and the areas adjacent to King Edward Avenue will influence the treatment of the street in any improvement schemes. There is a significant amount of re-development potential in the area, based on the existing uses and the zoning. In spite of this recent development activity has not yielded any large scale projects. The areas of potential modifications to the current zoning regulations lie primarily to the south of Clarence Street. These could take the form of adjustments to building heights on the west side and the rationalization of the mixed uses on the east side of King Edward Avenue, between Rideau Street and York Street.

Transportation

King Edward Avenue is a six-lane divided urban roadway under the jurisdiction of the RMOC. It is a major inter-provincial truck and transit route, providing the primary, and only all-season route for heavy trucks to travel from Québec to Highways 16, 17 and 417 in Ontario. Heavy trucks make up 8% of all vehicular traffic on the Avenue.

Traffic volumes are significantly higher north of St. Patrick Street due to the large number of commuters travelling from Québec to the Vanier Parkway. This creates a high volume of southbound left turning movements east onto St. Patrick Street at AM peak hours, and similar volumes of westbound right turning movements north onto King Edward Avenue in PM peak hours.

The most significant transportation constraints for improving King Edward Avenue are the intersections of King Edward Avenue at St. Patrick Street, Murray Street, and Rideau Street. All of these intersections have substantially wider cross-section than the regular six-lane cross-section as a result of the provision of several auxiliary turning lanes. The Levels of Service at these intersections are below "D" during the PM peak hour, and also in the AM peak hour for King Edward Avenue at Rideau Street and Murray Street. In addition, these three intersections all have significantly higher accident frequencies than the others in the Study Area. A further constraining factor is the capacity of the ramps connecting to the MacDonald-Cartier Bridge. These ramps are currently at or near their capacity.

Both the function and operation of King Edward Avenue as a transportation route for vehicles makes it an inhospitable place for pedestrians. Heavy volumes of traffic, with little or no separation from sidewalks, mean that pedestrians must cope with noise, dust, fumes, vibration, and general feelings of insecurity. The absence of pedestrian crossings, particularly at the north end of the study area, interferes with natural "desire lines" of pedestrians. Pedestrians must either walk a considerable distance out of their way, or take their lives into their hands crossing King Edward Avenue.

Channelized right-turn lanes with high volumes of free-flowing traffic, such as that at westbound St. Patrick Street turning right onto King Edward Avenue, provide little opportunity for pedestrians to cross the street. Also, the sheer size of the intersections of King Edward Avenue and St. Patrick Street, Murray Street and Rideau Street make it difficult for pedestrians to cross in the time allotted by traffic signals.

While there are signed bicycle routes in the vicinity of King Edward Avenue, these routes are not as direct as that of the Avenue itself. However, study participants indicated that the current state of King Edward Avenue almost certainly discourages many cyclists from using it, as it does with pedestrians.

Municipal Servicing

There do not appear to be any major constraints or problems posed by municipal servicing within the Study Area. A more in-depth analysis will be undertaken with respect to specific proposals made in the Community Improvement Plan.

Environment

As discussed already, King Edward Avenue does not currently provide a pleasant environment for pedestrians, due to the externalities and nuisance caused by heavy traffic volumes. In addition, King Edward Avenue has a barren appearance, with few aesthetic qualities.

King Edward Avenue suffers from a lack of trees and vegetation. A site inventory revealed that the majority of the Study Area lacked a significant quality or quantity of tree cover. The most significant trees in the area are located at the north end, in King Edward Park, and on the External Affairs site, and are maintained by the NCC. Other trees in the area are typical of those in an urban setting.

The transportation function of King Edward Avenue has clearly caused the street to deteriorate from its once grand status as a primarily residential street lined with large Elm trees. It is difficult for any significant amount of vegetation to survive under the current circumstances. Both the sidewalks and median of King Edward Avenue are relatively narrow, providing little room for trees or plants to grow, and they are subject to noise, dust, fumes, vibration and salt-spray in the winter. In addition, utilities below the surface of the roadway pose considerable constraints for planting.

The Study Area is also the location of a few former industrial sites, where known or potential contamination may be a consideration for future redevelopment. Most notably, the site at the southwest corner of King Edward Avenue and York Street (currently occupied by Supply and Services Canada as an office building) was the location of a

major coal gas plant. Coal tar, disposed of on-site, has been encountered during the course of excavation and construction within the last decade. The Department of Public Works, which owns the site, has taken measures to prevent coal tar residue from migrating, and entering the stormwater system.

Demography

Residents living in the Study Area are dominated by young singles and couples, usually without children, in rented dwellings. In general, residents are less well-educated and lower paid compared to the average in the City of Ottawa as a whole. Of just over 6,500 residents in the study area, approximately equal proportions had a mother tongues of French and English, with 20 % other languages.

The majority of dwellings in the area are multi-family, rental units, with a mix of ages and conditions. The Study Area has benefitted from some gentrification, due to its strategic inner-city location near the Market. There is some non-profit housing in the Study Area.

Urban Design and Heritage

In terms of urban design and streetscaping, King Edward Avenue has a very poorly defined street edge. It is currently characterized by a relatively barren expanse of pavement, with a variable central median that does not serve much of a purpose. There is little of interest on the street edges, and no separation of pedestrians from the roadway.

The north end of the King Edward Avenue has a residential flavour, interspersed by parkland, but much of this green space is compromised by the ramps on and off of the MacDonald-Cartier Bridge. This inter-provincial connection dominates the "City Street" connection to Sussex Drive. Indeed, the north part of King Edward Avenue, beyond the Minto Bridges, is separated in such a way that it is almost completely dissociated from the remainder of the street.

The highway-like character of King Edward Avenue divides the communities on either side of it, and detracts from the transition of residential uses in the north, towards more commercial uses and higher densities at the south end. Heritage buildings are effectively lost by the lack of definition on street edges. Potential entrances to the Market, such as the intersection of King Edward Avenue and York Street are undistinguished.

Public Consultation

Consultation with the community in the Study Area, as well as with other users of King Edward Avenue confirmed problems identified in the review of physical conditions, and the policy environment. The transportation function of King Edward Avenue, and the deterioration of its environment, has caused it to become a major rift between two communities, and an uncomfortable place to be avoided by pedestrians and cyclists.

Implications for Improvements

In the long-term, there is a strong desire to remove through truck traffic not destined for the Central Area from King Edward Avenue, and to provide alternate routes to the Queensway for trucks and commuters. This is articulated in the City of Ottawa's new Official Plan. This change in the function of King Edward Avenue would provide considerable opportunity for major changes.

In the short-term there are a variety of physical and operational shortcomings that may be addressed to improve King Edward Avenue. Of great importance are the aspirations of the community. Public consultation not only revealed problems with the current situation, but both implicitly and explicitly, goals, objectives, and guiding principles for an improved King Edward Avenue.

Community Residents would like to see King Edward Avenue as a civic boulevard, knitting together the communities of Lowertown East and West, rather than dividing them. It should be a pedestrian-oriented environment, with a human scale to facilitate vitality, activity and commerce along the street, particularly at the south end. The function of King Edward Avenue as a thoroughfare for vehicular traffic should be de-emphasized as much as possible.

Street edges should be well-defined to emphasize heritage buildings, gateways, and to provide interest on the edges of the street. Streetscaping should be considered on an almost block-by-block basis, allowing for sensitivity to local character. In this way the transition from the commercial node at King Edward Avenue and Rideau Street, to the residential/parkland area at the north end may be emphasized.

The Community Improvement Plan addresses how these aspirations may be reconciled with physical and operational changes to King Edward Avenue as it exists today.

1. Introduction

This report provides a description and analysis of existing conditions in support of a ***Community Improvement Plan*** for King Edward Avenue between Sussex Drive and Besserer Street. This portion of King Edward Avenue has been designated by the City of Ottawa as a priority for community improvement. This report documents existing problems with King Edward Avenue based on three main sources of information: an examination of existing physical conditions, the policy environment and community consultation. The implications of these existing conditions for King Edward Avenue community residents are discussed in detail, and provide a foundation for recommended improvements.

Following this introduction, in Chapters 2 - 8, the existing conditions are presented in seven categories:

- Land Use;
- Transportation;
- Municipal Services;
- Environment;
- Demography;
- Urban Design; and
- Heritage.

Each category includes a description and analysis of existing conditions, followed by a discussion of their implications for King Edward Avenue.

Chapter 9 discusses the public consultation program undertaken for this project, and its contribution to our understanding of existing conditions. Finally, Chapter 10 summarizes the conclusions and implications for all aspects of King Edward Avenue.

Land Use

Contents

2.1 Introduction

This chapter discusses the proposed King Edward Avenue Community Improvement Area from a land use planning perspective. It examines the overall context, major influences, planning policies, existing land uses, general character, current zoning regulations, and development activity in the area. The implications of the land use planning context are discussed with respect to potential community improvements.

2.2 Location, Context and Major Influences

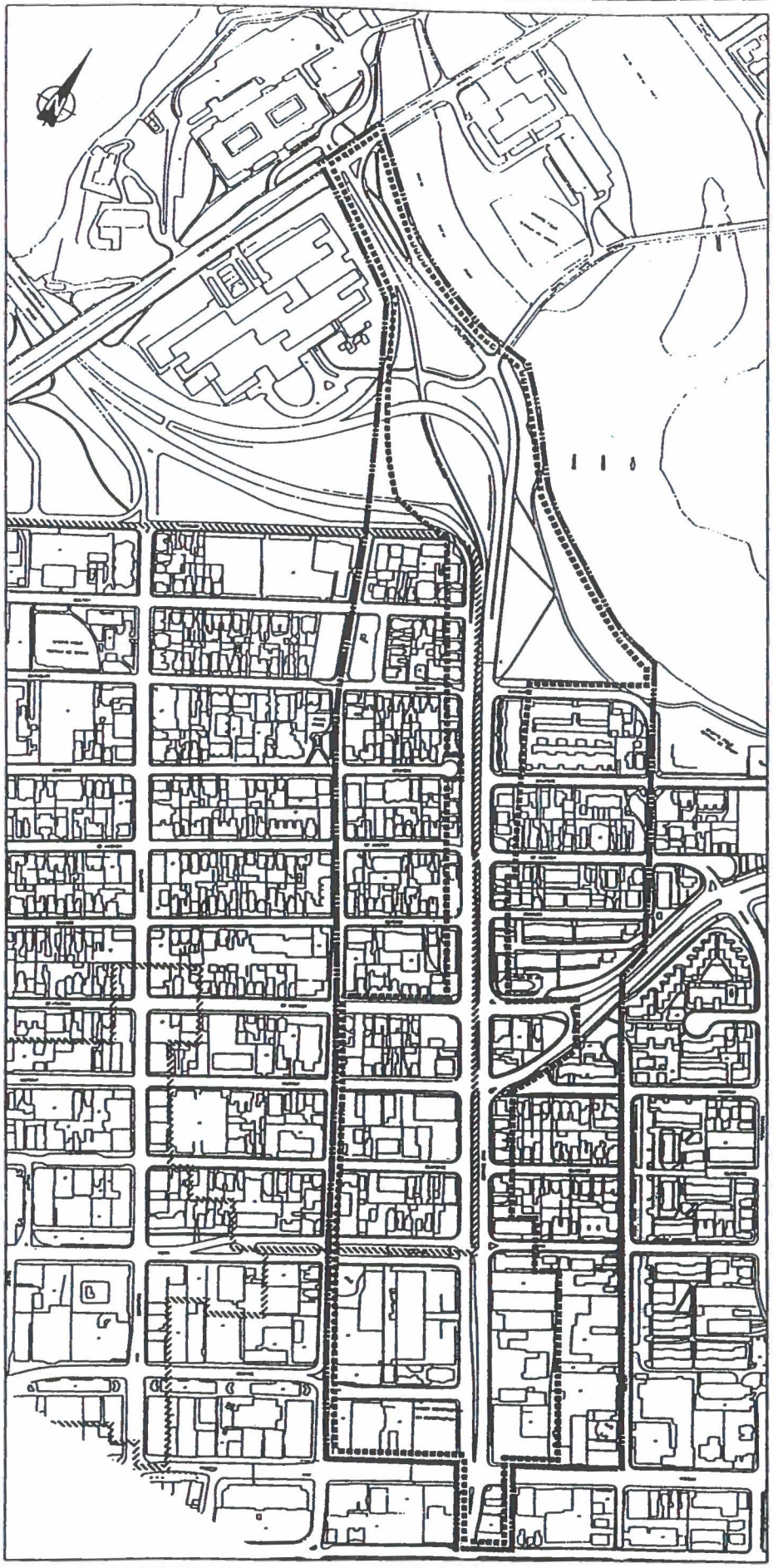
The Study Area is an irregularly shaped corridor on both sides of King Edward Avenue, extending from Sussex Drive at the north end to Besserer Street at the south end, with a distance of 1.53 km (.95 mi). The study area as shown on the *Plan 1 - Study Area*, covers approximately 22.8 ha (56.2 ac), while the Study Context, which flanks the Study Area, covers approximately 36.3 ha (89.7 ac), including the Study Area itself.

The Study Area and Study Context are both located at the eastern edge of Ottawa's Central Area, which includes the main office and retail areas, as well as the Parliament Buildings. King Edward Avenue, between St. Patrick Street and Rideau Street, has been, and continues to be the boundary between the Central Area and the two inner city communities of Lowertown East and West. In this regard, King Edward Avenue is a major barrier which separates these two communities. It is also an important link between a concentration of major public buildings including Ottawa City Hall, the L.B. Pearson Building (External Affairs) and the National Research Council at 100 Sussex Drive, and the Central Business District on Rideau Street.

In the past, this function was expressed in the form of a pleasant tree-lined boulevard and a pedestrian walkway in the centre of King Edward Avenue, which suggested a form of ceremonial route and emphasized the symbolic importance of the linkage function.

However, as King Edward Avenue became further integrated into the broader major road system, its character and function changed. King Edward Avenue is now the main route to the most easterly bridge crossing to Quebec in the National Capital Region, connecting to autoroute 5, which is the principal north-south freeway through the Outaouais. King Edward Avenue now provides the linkage to two alternate routes to the Queensway: via St. Patrick and the Vanier Parkway (primarily for commuters), and via Rideau Street and Nicholas Street (primarily for heavy trucks).

This shift in function has significantly influenced King Edward Avenue into the form of a six lane major arterial road, which now has a highway-like character in terms of the number of lanes, ramps, directional signs and lighting. It's expanded function and its linkages mean that it carries heavy volumes of trucks and private commuter vehicles on a daily basis.



AVENUE
KING EDWARD
AVENUE

:Ottawa

COMMUNITY IMPROVEMENT PLAN/ PLAN D'AMELIORATIONS COMMUNAUTAIRES

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LEGEND / LEGENDE

STUDY AREA / SECTEUR D'ETUDE

STUDY CONTEXT / CONTEXTE DE L'ETUDE

PLAN TITLE / TITRE DU PLAN :

Study Area

SCALE / ECHELLE :

0 20 50 100

PLAN NO / PLAN N° :

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This character and function have significantly influenced the adjacent communities, which have tended to use existing structures on King Edward Avenue as a wall against the heavy traffic environment. This has also resulted in the closing off or restriction of access from King Edward Avenue into these communities. Newer residential developments, such as Cathcart Mews and the de La Salle Co-op, have used brick walls and substantial landscape berms, respectively, to shield residents from the noise and effects of the traffic.

A potential future influence on transportation conditions in this area is the proposed extension of the Vanier Parkway, north from Beechwood Avenue, which will cross the Rideau River to link to the MacDonald-Cartier Bridge and create an interchange with King Edward Avenue. This proposed link is included in the Regional Municipality of Ottawa-Carleton (RMOC) Official Plan and is subject to further evaluation, including an environmental assessment, and approval processes. While the inclusion of this linkage will likely ease the level of commuter traffic using the King Edward Avenue - St. Patrick Street route, it may not remove the truck traffic, because of restrictions on the Vanier Parkway.

The variability of the outcome of this issue will therefore influence the approach to be taken on land use planning within the Study Area.

2.3 Planning Policy Review

The Study Area is affected by the planning policies of three levels of government (Federal, regional and local) and at the local level, by parts of five individual community plans. The following is a brief discussion of the key policies and the status of each one.

2.3.1 Federal Land Use Plan

The Federal Land Use Plan (FLUP), prepared by the National Capital Commission (NCC) in 1988 is intended to provide "direction for the use of federal lands in the National Capital Region... and clarifies the interests of the NCC as the planner of federal lands in the area. **There are no specific designations or policies in the FLUP which directly apply to King Edward Avenue; however, there are certain policies on the adjacent lands, particularly in the northerly portion, which are relevant.**

The area immediately west of King Edward Avenue, north of Boteler Street is designated as an area for Diplomatic Missions and International Organizations. **Since the land is currently controlled by the federal government, any changes proposed to the current physical construction of King Edward Avenue in this area will require consultation and cooperation among the local, regional and federal governments.** A similar situation applies to the west side of the Rideau River, between Sussex Drive and

Cathcart Street, east of King Edward Avenue. These lands, owned by the NCC, would be affected by any physical change to King Edward Avenue. This area is designated as Shoreline, Parkway and Recreational Pathway.

The FLUP indicates an important view point looking east from the Portage Bridge, toward the Parliament Buildings. **This is highly significant because development permitted under the current height restrictions in the vicinity of King Edward Avenue, and Rideau Street, could affect the background of this view.**

Sussex Drive is indicated as a ceremonial route, referred to as Confederation Boulevard, as well as part of the Recreational Pathway System. **This has implications on the distribution of traffic and the limitations on the types of traffic, especially trucks and commuter traffic.**

2.3.2 Regional Municipality of Ottawa-Carleton

The Official Plan of the RMOC, designates the lands on the west side of King Edward Avenue, between St. Patrick Street and Rideau Street, as "Central Area", with the remainder as "General Urban". The "Central Area" according to the Regional Official Plan (ROP), "should remain the major focal point in Ottawa-Carleton for shopping, government and business offices, entertainment and cultural pursuits. To maintain this role, increasing emphasis is needed on meeting the needs of pedestrians and improving the attractiveness of the Central Area. Increased residential development is also desirable"[1]. The ROP further provides for "...a transportation system which, given reasonable assumptions on transit share and implementation of road improvements to remove through traffic, can provide adequate service to the amount of development permitted in the zoning by-law existing on the date of adoption of this Plan"[2].

The two key policies of the ROP, regarding the Central Area, are:

- "The Region will develop, jointly with the City of Ottawa and the federal government, an approach to planning that will guide the future development of the Central Area;

- When considering amendments to the local official plan or zoning by-laws, Council shall require that it be demonstrated that potential employment levels in the Central Area will not exceed the capacity of the planned transportation system

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1 P. 3 - 2, Section 3.1.31RMOC Official Plan, office consolidation, June 1991

2 Ibid

and other regional services."[3]

The policies for General Urban Areas in built-up areas are summarized as follows:

- General Urban Areas are to be used primarily for residential purposes.
- Discrete clusters of non-residential uses i.e. employment with a potential of up to 2,000 jobs are permitted.
- Discrete clusters of non-residential uses i.e. employment, with a potential of between 2,000 to 5,000 jobs are permitted if designated as Secondary Employment Centres in local official plans.
- As an objective in built-up areas, local official plans and other policies and approval processes shall ensure the proper arrangement of streets and land uses to permit convenient access by a variety of transportation modes.

The ROP further designates King Edward Avenue, St. Patrick Street, Murray Street and Rideau Street as Regional Roads, with George Street, Besserer Street and the proposed Vanier Parkway extension as proposed Regional Roads. The rights-of-way to be protected vary with the road as follows:

Road	Between	Right-of-way
King Edward Ave.	Rideau St. and Sussex Dr.	40 m
King Edward Ave.	Rideau St. to Laurier Ave.	23 m
St. Patrick St.	King Edward Ave. and Sussex Dr.	37 m
Murray St.	King Edward Ave. and Sussex Dr.	20 m + easement
St. Patrick St., Murray St.	east of King Edward Ave. split	20 m
Rideau St.	west of King Edward Ave. 30 m.	26 m
Rideau St.	east of King Edward Ave.	34 m
Vanier Parkway Extension	King Edward Ave. to Beechwood Ave.	34 m

Lastly, the ROP designates King Edward Avenue, between Sussex Drive and Rideau Street, as well as Rideau Street, east of King Edward Avenue, as a "Scenic Route". The three aspects considered are:

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[3] Ibid

- the relative directness of the route to the capital for visitors
- the proximity of the routes to the rivers
- the scenic qualities of the routes

The significance of the planning policies of the ROP is that they determine and guide the planning policies of the local municipality, in this case, the City of Ottawa.

The implications of the Central Area designation on part of the Study Area are that the ROP allows for a high concentration of development and employment within the designated area, within the limits of the zoning, and the transportation and servicing capacity existing in July 1988, when the ROP was adopted. Increases beyond these limits, will therefore have to be justified and approved. The General Urban Area designation, applicable to the remainder of the Study Area, implies a predominance of residential uses interspersed with clusters of non-residential uses and employment centres, which should be organized to achieve efficient and safe movement of people and vehicles. It is anticipated that the King Edward Avenue Community Improvement Plan will not lead to amendments to the land use designations of the ROP. **King Edward Avenue is a major road with a proposed right-of-way of 40 m., which is the widest and highest order of regional road. Any proposals to alter or reduce this will require an amendment to the ROP.**

The Study Area is also affected by the other existing and proposed regional roads that intersect with King Edward Avenue. Their rights-of-way requirements vary significantly, partly as a result of their function and partly as a result of existing development. Any proposals to alter these requirements will also cause the need to amend the ROP.

The Scenic Drive designation and its related policies can serve as a starting point for a Community Improvement Plan for this portion of King Edward Avenue. While aspects regarding directness for the route and the proximity of the route to rivers can generally be met, King Edward Avenue, in this location, does not currently address the scenic quality aspect.

Therefore, there will need to be a reconciliation between the Scenic Drive and its quality aspect policies, and the major road width and function requirements of the ROP.

In addition, the implementation of the Vanier Parkway Extension, while provided for in the ROP, as approved by the Ontario Municipal Board, is subject to further discussion and approvals. It is also of great concern to residents of the New Edinburgh community. It has been suggested by some people that a remedy to this issue is the provision of another bridge crossing to Quebec. The ROP, in Section 11.3, "Ottawa River Bridges", indicates that the RMOC will participate with other levels of government in a joint study of additional bridge crossings. **Although this study is currently underway, an additional bridge crossing should be regarded as a very long term potential solution.**

2.3.3 Existing City of Ottawa Official Plan

The current City of Ottawa Official Plan was adopted in 1953 and subsequently has been amended many times. It is in the process of being replaced by a new Official Plan, which was adopted by City Council in May 1991.

The key policies of the existing Official Plan are those that designate the part of the Study Area on the west side of King Edward Avenue, south of St. Patrick Street, as "Central Area". The remaining area is designated as "Residential Area".

The policies of the Central Area designation date back to 1971 and, to a certain extent, have determined subsequent development patterns and planning policies. The specific land use designations are Central Business Area, for the area between George Street and Besserer Street with Secondary Business Area designated for the remaining area.

The Central Business Area designation permits high density retail and office development with a maximum floor space index of 8.0. The Secondary Business Area permits a mix of high density residential and commercial uses at lower densities.

The current Official Plan also sets out specific height limits by individual blocks, and their height and locations relative to the top of the Peace Tower. These heights are expressed as elevations above sea level (ASL), and within the study area, apply only to the blocks on both sides of Rideau Street, west of King Edward Avenue. The block between George Street and Rideau Street indicates a height of 153 m ASL, which, based on the approximate street elevation of 59 m would permit a building of 94 m. The height limit of the block between Rideau Street and Besserer Street is also 153 m. ASL, which would permit a building of similar height. The greater part of the remainder of the Study Area is affected by a Residential Area designation, which permits primarily residential uses, with non-residential uses (e.g. public, commercial, institutional, and light industrial) being permitted provided that adequate buffering and separation are provided.

A small portion of the Study Area, located at the southeast corner of Rideau Street and King Edward Avenue is affected by the Secondary Official Plan for the Sandy Hill Area. The applicable designation is Major Commercial, which permits medium profile to high profile commercial development.

These policies have been carried over to some extent into the new Official Plan which will be discussed below. **The most conspicuous effect is the concentration of building height and density planned for the north side of Rideau Street at King Edward Avenue, with a gradual westward and northward decrease in building height and density.**

In addition, Amendment 123 has inserted Community Improvement Plan policies into the current Official Plan. These policies must be followed in the preparation of such documents.

2.3.4 New City of Ottawa Official Plan

The new City of Ottawa Official Plan was adopted by City Council in May 1991 and it is currently under consideration for approval by the RMOC. The various key land use and development designations and policy requirements are illustrated on *Plan 2 - New City of Ottawa Official Plan Map A*. The new Official Plan also provides policies concerning the profile, scale and massing of development and design control areas. These are illustrated on the companion plan, *Map B* on *Plan 3.*

It should be noted that there are three primary sets of land use policies affecting various parts of the Study Area. The Central Area policies affect the area south of St. Patrick Street and west of King Edward Avenue. The general Residential Area policies apply to Lowertown East and the key principles of the Lowertown West Development Plan apply to that community. The southeast corner of the King Edward Avenue and Rideau Street is designated as District Linear Commercial Area, subject to the key principles of the Sandy Hill Secondary Official Plan, which were essentially carried over from the current Official Plan.

The vision statement in the new Official Plan proposed that the Central Area "will remain as the thriving business and employment centre for the Region while serving as the symbolic, political and ceremonial heart of the Nation" [4]. This anticipates a multi-functional role that combines business, employment, national capital functions, arts, culture, entertainment, heritage elements and housing. To ensure that the Central Area is a people oriented place, the livability and pedestrian accessibility of the adjacent inner city neighbourhoods will be encouraged.

This vision statement sets out the role and function of the parts of the Central Area within the Study Area and its relationship to the adjacent communities of Lowertown East and Lowertown West.

The two key land use policy areas are the Central Business District, which applies to both sides of Rideau Street, and the Lowertown Character Area, located immediately to the north of Rideau Street, up to St. Patrick Street.

The Central Business District designation focuses on Rideau Street which is indicated as a Theme Street, and where pedestrian oriented retailing at street level is emphasized. This designation permits employment, retail, government, cultural and residential uses.

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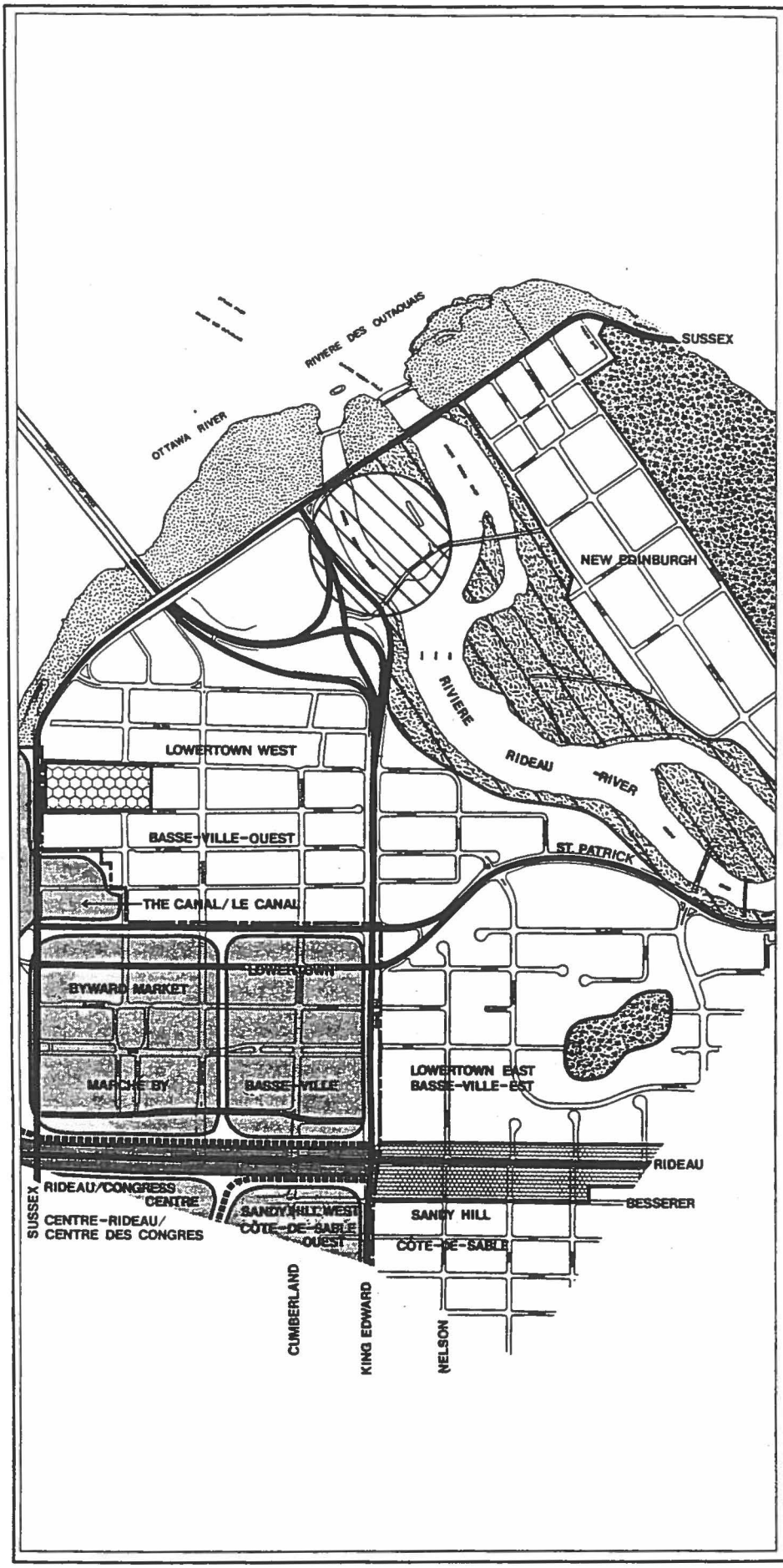
[4] P. 1 Chapter 5, Section 5.2 Central Area Vision, vol 1 City of Ottawa Official Plan, May 1991



AVENUE KING EDWARD AVENUE

City of Ottawa

COMMUNITY IMPROVEMENT PLAN/ PLAN D'AMELIORATIONS COMMUNAUTAIRES

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LEGEND / LEGENDE :

Context Area Boundary
Character Area
Theme Street
Central Business District
Residential Area
Secondary Employment Centre
Major Institutional Area
Neighbourhood Linear Commercial Area
Waterway Corridor
Environmentally Sensitive Area
Major Leisure Area
Existing Regional Arterial Road
Proposed Regional Arterial Road

PLAN TITLE / TITRE DU PLAN :
PROPOSED CITY OF OTTAWA OFFICIAL PLAN
MAY 1991 (SHEET A)
PLAN DIRECTEUR D'OTTAWA PROPOSÉ
(FEUILLE A) MAI 1991

SCALE / ÉCHELLE :
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PLAN NO / PLAN N° :
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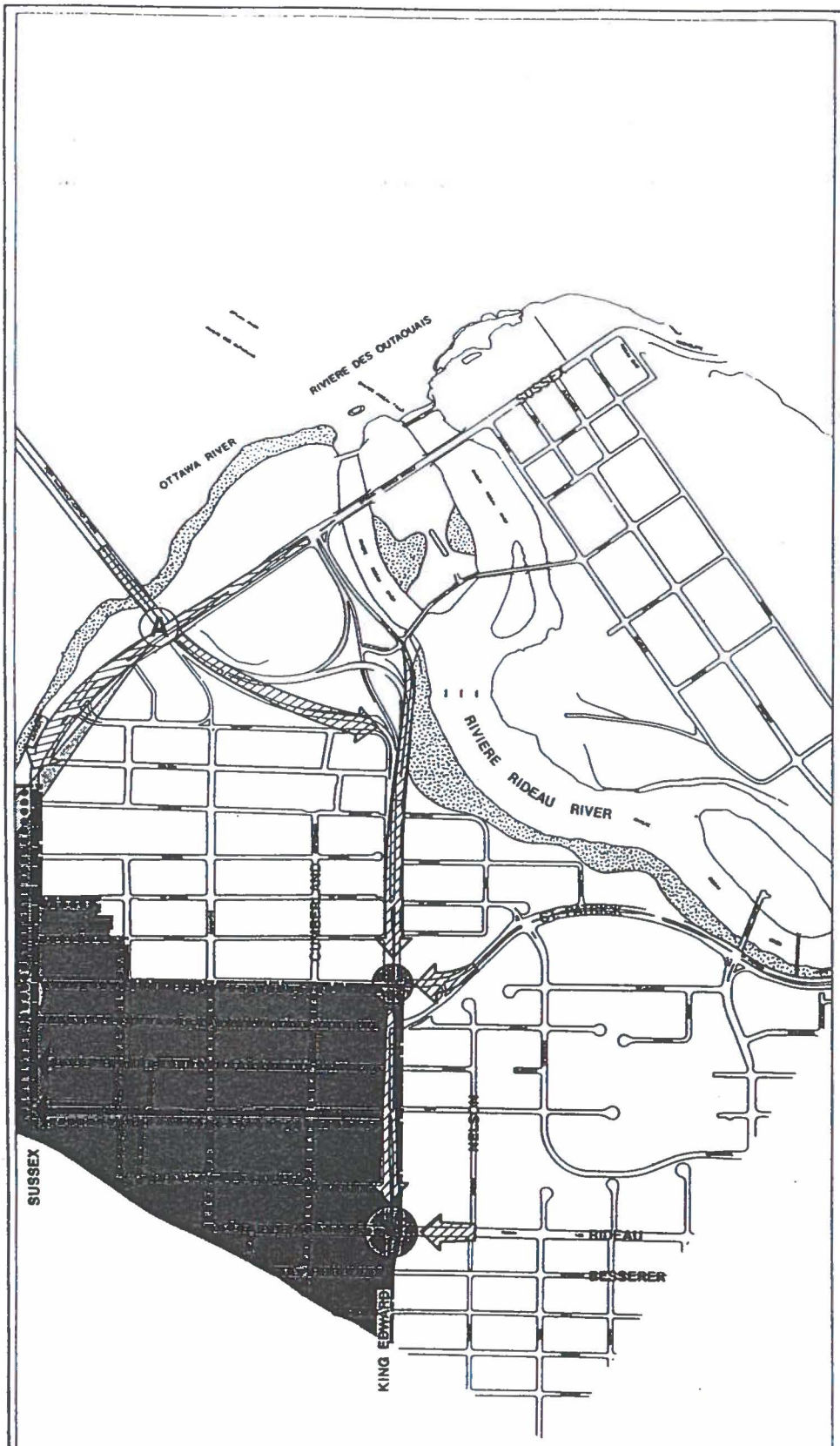

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LEGEND / LEGENDE

Gateways — Grandes avenues

Nodes — Noyaux

Distinctive Streets — Rues distinctives

Major Focal Viewpoint — Point de vue important

Views of Centre Block from Public Right of Way — Perspectives du bloc central à partir de l'emprise publique

Area of Background Height Control — Secteur de réglementation des hauteurs d'arrière-plan

Area of Foreground Height Control — Secteur de réglementation des hauteurs d'avant-plan

Former Industrial Site — Ancien emplacement industriel

1 in 100 year flood limit — Crue maximale de cent ans

Design Control Highway — Routes soumises aux normes de l'esthétique

Control Area Boundary & Design Control Area — Limites de l'aire centrale et secteur soumis aux normes de l'esthétique

PLAN TITLE / TITRE DU PLAN :

PROSPOSED CITY OF OTTAWA OFFICIAL PLAN MAY 1991 (SHEET B)
PLAN DIRECTEUR D'OTTAWA PROPOSÉ (FEUILLE B) MAI 1991

SCALE / ECHELLE

0 30 100 200

PLAN NO / PLAN N°

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The planning policies of the Lowertown area are intended to emphasize residential development at predominantly medium profiles (as defined in the Official Plan), the livability of residential areas and the conservation of heritage buildings and areas. This southernmost part of the neighbourhood, along George and York Streets, has a special role as a transition area for the Byward Market area to the west and the concentration of retail development on Rideau Street. In this regard, the planning policies for this area require among other matters, that the overall profile of building heights should make a transition from a high profile node at King Edward Avenue and Rideau Street to the low profile heritage area of the Byward Market to the west. In addition, the upper floors of medium to high profile residential buildings should be set back to contribute to a human scale of built form.

The Plan further emphasizes (section 1.3.8(c)) the importance of a transition of scale in the discussion of infill development in the southern and eastern portions of Lowertown. The Plan allows predominately low profile development in the northern part of the area, and for medium and limited high profile development "to create an edge along King Edward Avenue" which will complement the high profile node planned for King Edward Avenue and Sussex Drive. In conjunction with this, the Residential Area policies under section 3.6 anticipates the possibility of residential and mixed use developments along major arterial roads and other locations, subject to various criteria.

The Official Plan also designates the area at King Edward Avenue and Sussex Drive as a Secondary Employment Area. In recognition of the concentration of a significant municipal government centre (Ottawa City Hall) and important federal government facilities (L. B. Pearson building and the National Research Council).

The Central Area has some significant general growth management policies which, in essence, limit commercial densities in the Central Business District to the aggregate of the zoning existing on the date of the adoption of the Plan, in order not to exceed the capacity of the transportation system. Further, these policies limit building heights to protect views of the Parliament Buildings. **The implications on the Study Area are that permitted commercial densities will not be increased and that the protection of the views of the Parliament Buildings, and other national symbols, in addition to other building profile principles in the new Official Plan, will determine the overall building profile westward from King Edward Avenue.**

The policies that most directly affect King Edward Avenue are those relating to Gateways and Nodes. King Edward Avenue, for its entire length in the Study Area is designated as a Gateway, with Nodes indicated at the intersections with St. Patrick Street and Rideau Street. **In this regard, King Edward Avenue has first priority among other gateways for improvement.**

The key criteria for Gateways and Nodes are:

" • protection and enhancement of significant views along public rights-of-way

and protection and enhancement of heritage elements,

- enhancement of the streetscape through the provision of appropriate integrated soft and hard landscape elements, including tree planting corridors, vegetation, street furniture, lighting and the burying of overhead wires...,

- provision of safe, convenient and enjoyable pedestrian crossing,

- respect for the scale and character of existing and future development, and

- the creation or the enhancement of a visual focus of each node through the provision of suitable art forms, sculptural features and/or other appropriate elements, such as unique building design or a higher intensity of uses."[5]

The criteria are significant in that they state basic principles for urban design within the Study Area.

The Transportation policies for the Central Area propose a number of policies relevant to the Study Area. One of these policies states in essence, that City Council, with other levels of government, will strive to remove through truck traffic routes from passing through the Central Area and to support future interprovincial bridge crossings to reduce interprovincial traffic through the Central Area. **This policy is significant because King Edward Avenue is a major through truck route and a major interprovincial route.** Other relevant transportation policies call for the burying of overhead wiring and investigation of the use of traffic calming measures to enhance the livability of Lowertown, such as at the intersection of Clarence Street and King Edward Avenue.

Section 13.18 of the new Official Plan sets out the policies regarding Community Improvement Plans. The criteria for delineating project areas deal with areas which, respectively, are predominantly residential, commercial, industrial and institutional uses. The Study Area is predominantly residential, north of St. Patrick Street, whereas the remainder to the south, in Lowertown, is predominately residential with a mixture of limited commercial uses. The criteria should therefore apply within the Study Area on this basis.

The new City Official Plan also sets out comprehensive policies concerning heritage matters and urban design considerations.

The heritage policies, among other things, are intended to identify, recognize and protect heritage resources. This includes the creation of Heritage Conservation Districts, such as the proposed Lowertown West Heritage Conservation Area, which affects the northwest

---

[5] Policy 5.6.2(q) Urban Design Policies for the Central Area, City of Ottawa Official Plan May 1991.

section. The protection and conservation of heritage resources in the Central Area is also noted. **The heritage policies are relevant because of the number and significance of heritage buildings within and adjacent to the study area.**

The Urban Design policies are intended to guide the relationship between buildings and open spaces, to help to define Ottawa's image and to give structure and form to the City. These policies are comprehensive and will affect all development in Ottawa.

The policies contemplate the eventual preparation of an Urban Design plan for the Central Area, and parts of both areas are located within the west side of the Study Area. As part of the approval process an Image Analysis, prepared in accordance with the policies, will be required for developments in the Central Area, on Design Control Highways (including King Edward Avenue), and for medium and high profile development. This latter category is relevant in the southwest portion of the Study Area, between Rideau Street and Clarence Street. The policies cover design for buildings and spaces related to human use and scale and the relationships of buildings and open spaces to each other, in terms of height, massing, and setbacks. As well, the policies recommend tree planting and landscaping adjacent to major roads. The importance of pedestrian safety and the pedestrian environment is emphasized, as is the significance of lighting design. Views and vistas are important, not only at the city wide scale, but also for local and neighbourhood features.

In the context of the King Edward Avenue Community Improvement Plan, these policies will be highly influential in site planning and architectural design considerations. This is especially relevant because of the role of King Edward Avenue as a Gateway Street, as a location for important Nodes and its function as a corridor of entrances to the adjacent communities.

2.3.5 Community Planning Policies

The Study Area is affected by five individual planning studies that relate to various parts of the communities within the Study Area. The boundaries and the general land use classifications are shown on *Plan 4* entitled *Community Planning Policies.* These studies represent Council approved community planning policies and they have served as the rationale for various zoning amendments which have been enacted over the years. However, these studies do not have any specific status under the Planning Act.

The community planning studies are:

- Lowertown East Redevelopment Plan
- Lowertown West Redevelopment Plan
- Lowertown Character Area and Byward Market Character Area Secondary Policy Plans
- St. Patrick-King Edward Cumberland Zoning Study
- Lowertown (Byward Village) Heritage Zoning Study

The boundaries of these studies indicate that King Edward Avenue has been consistently used as a major planning boundary. The only exception to this is the 1988 zoning study, which included the "island" formed by the projections of St. Patrick Street and Murray Street, on the east side of King Edward Avenue.

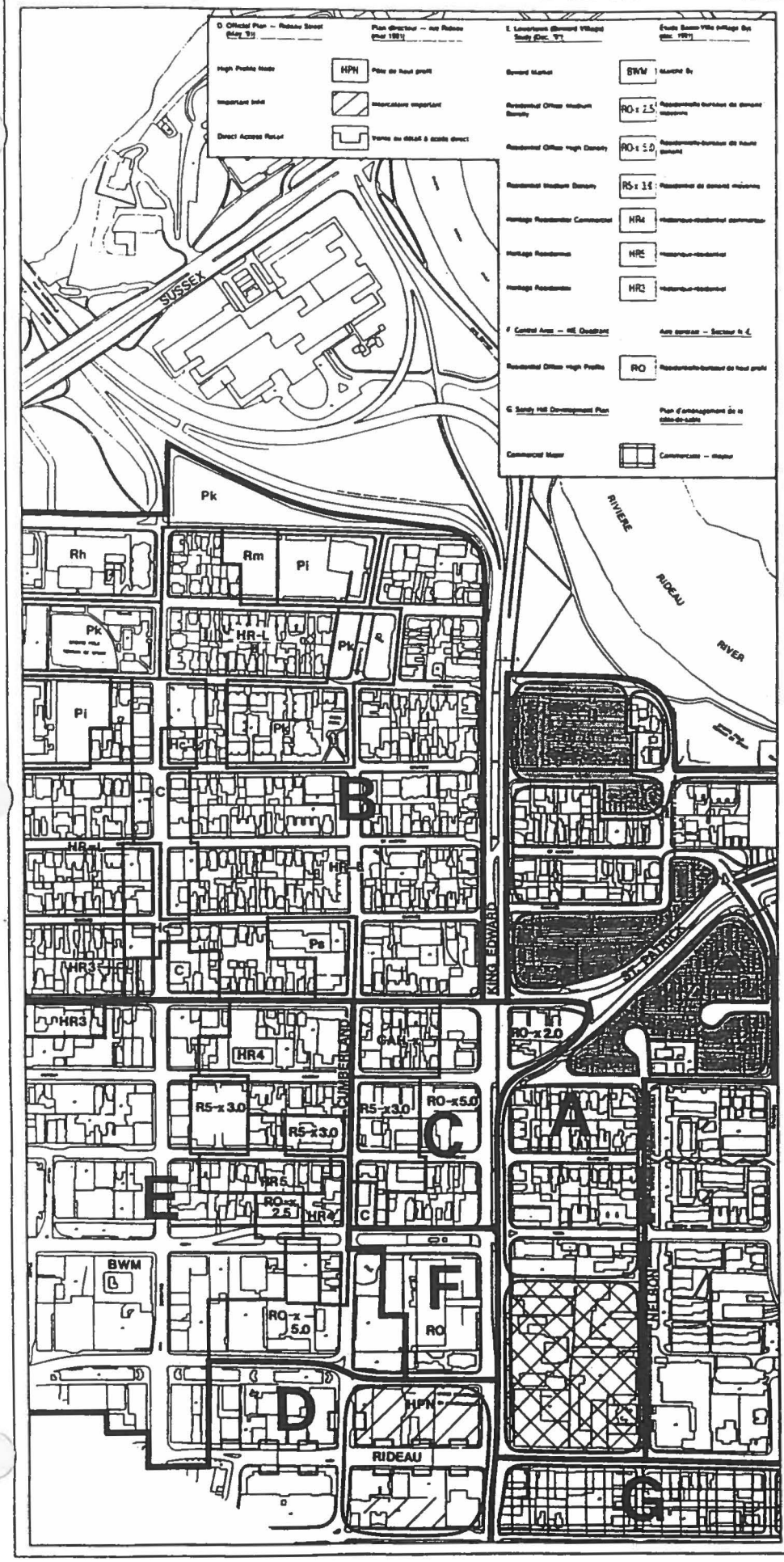
This approach has generally reinforced the division between Lowertown East and Lowertown West.

Some of the policies of the older plans continue to be relevant and appropriate, as in the case of the Lowertown West Plan, which was re-iterated in the Key Principles of the new Official Plan. Another example, to a certain extent, is the redevelopment designation for the commercial industrial designation for the area east of King Edward Avenue, south of York Street, in the Lowertown East Plan. However, the northern portions of the Lowertown East Plan indicate a policy designation of residential redevelopment, which is now obsolete, because much of the area was redeveloped in the early 1980's. Other planning policies such as those found in the new Official Plan will have to apply to this area.

The Lowertown Area has a particularly complex set of planning policies which indicates it's sensitivity to development and it's importance in the potential impact of new development on existing development within the Study Area and the adjacent communities. This has resulted in ongoing adjustments and amendments, as in the case of the Taylor Bros. parking lot, located on the east side of Cumberland Street, between George Street and York Street. The zoning of this site is included in the implementation of the recent Lowertown zoning and heritage study, and not included, for zoning amendment purposes, in the King Edward Avenue Community Improvement Plan. However, the site remains within the Study Area for this project with respect to other matters such as transportation and urban design.

The most recent planning study that was specifically intended to deal with urban design matters on King Edward Avenue was "King Edward Avenue - An Urban Design Study and Streetscape Improvement Options", January 1988, prepared by the City of Ottawa planning staff. This study and the proposed King Edward Avenue Area Plan were deferred by Council in April 1988, pending the decision of the Ontario Municipal Board regarding the Vanier Parkway extension in the RMOC Official Plan.

The Community Improvement Plan for King Edward Avenue, together with the new City of Ottawa Official Plan policies will provide direction for the replacement of outmoded planning policies, as required. Other ongoing and future planning studies in this area that may affect planning policies in the Study Area are the National Capital Commission and the City of Ottawa study on Central Area Views and Density Transfers and the Lowertown West Heritage Conservation Study. **The former Study may result in modifications to the permitted maximum building heights of properties near or on Rideau Street, within the Study Area.**



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LEGEND / LEGENDE

A. Lowertown East / Basse-Ville-Est

- Relocation and Redevelopment / Déplacement et réaménagement
- Conservation, Rehabilitation "GRM" (Residential) / Conservation, réhabilitation - résidentiel
- Conservation, Rehabilitation "GRM" (Light Industrial and Commercial) / Conservation, réhabilitation - industriel léger et commercial
- Existing Pedestrian Way / Promenade piétonnière existante
- Proposed Pedestrian Way / Promenade piétonnière proposée

B. Lowertown West / Basse-Ville-Ouest

- Park and Open Space — Pk — Parcs et aires libres
- Public and Institutional — Pi — Public et institutionnel
- School — Ps — Ecole
- Heritage Residential — HR-L — Historique-résidentiel
- Residential Medium Profile — Rm — Résidentiel de profil moyen
- Residential High Profile — Rh — Résidentiel de haut profil
- Heritage Residential — HR3 — Historique-résidentiel
- Heritage Commercial — Hc — Historique-commercial
- Commercial — C — Commercial

C. King Edward, St. Patrick, Murray Zoning Study (Feb. '79) / Étude du zonage King Edward, St. Patrick, Murray (fév. 1979)

- Central Area Heritage — CAH-x — Aire centrale-historique
- Residential Medium Density — R5-x 3.0 — Résidentiel de densité moyenne
- Residential Office Medium Density — RO-x 2.0 — Résidentiel-bureaux de densité moyenne
- Residential Office High Density — RO-x 5.0 — Résidentiel-bureaux de haute densité
- Commercial — C — Commercial

PLAN TITLE / TITRE DU PLAN :

COMMUNITY PLANNING POLICIES
POLITIQUES DE PLANIFICATION COMMUNAUTAIRE

SCALE / ECHELLE : 0 50 90 100

PLAN NO / PLAN N° : 4

2.4 Land Use and General Characteristics

2.4.1 Existing Land Uses

The existing land uses within the Study Area and the Study Area Context are predominantly residential in the area north of St. Patrick Street, while the area to the south is a mixture of residential, commercial, institutional, industrial and government uses. These land uses are shown on *Plan 5* entitled *Existing Land Uses.*

The areas of the land uses, the number of dwelling units and the gross floor area of certain uses are summarized below on Table One.

Table 1

Existing Land Uses

	Land Area (HA)	
Residential		**Dwelling Units**
• Low Density	0.88	57
• Medium Density	1.86	132
• High Density	1.36	283
(sub total)	(4.10)	
Public & Institutional		
• Park	2.8	
• Place of Worship	0.16	
• Community Facility	0.41	
(sub total)	(3.37)	
Commercial		**Gross Floor Area (m^2)**
• Office	5.60	37 916
• Retail	0.28	6 168
• Parking	0.95	-
• Other	0.51	1 897
(sub total)	(7.34)	
Light Industrial	0.13	**Gross Floor Area (m^2)** 1 021
Utilities	0.38	
Vacant	0.68	
(Total)	(16.0)	

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LEGEND / LEGENDE

Residential		Résidentiel
Low Density	L	Faible densité
Medium Density	M	Densité moyenne
High Density	H	Densité élevée
Public & Institutional		Publique et institutionnelle
Community Facility	F	Installation communautaire
School	S	Ecole
Place of Worship	W	Lieu de culte
Park	P	Parc
Commercial		Commerciale
Office	O	Bureaux
Retail	R	Vente de détail
Parking	Pk	Stationnement
Other	C	Autre
Light Industrial	I	Industrie légère
Government Lands	G	Terrains gouvernementaux
Utilities	U	Services
Vacant	V	Terrain vacant

PLAN TITLE / TITRE DU PLAN :

EXISTING LAND USE
UTILISATION DU SOL ACTUELLE

SCALE / ECHELLE

0 20 50 100

PLAN NO / PLAN N° :

5

2.4.2 Existing Social and Recreation Facilities

As part of the review of Existing Conditions in the Study Area, the Study Area Context, and the adjacent area existing social and recreational facilities have been identified. These facilities are:

Table 2
Existing Social and Recreational Facilities

Facility	Type
Armand Pagé Centre 241 Bruyère Street	City of Ottawa Community Centre
Shepards of Good Hope (SGH) 233 Murray Street 78 Nelson Street 234 King Edward Avenue 275 King Edward Avenue 277 King Edward Avenue 143 Murray Street 380 St. Patrick Street 265 St. Patrick Street 232 Cumberland Street	Main Centre Hope Centre Clothing Program Hope Community Hope Community Hope Recovery Hope Outreach Hope School Hope Discovery
Champagne Bath	City of Ottawa Public Swimming Pool
Congregation Adath Jeshurun	Funeral Synagogue
Eglise Evangélique Baptiste D'Ottawa	Church
Andrew Fleck Child Centre	Private Day Care Centre
300 Bruyère Street Park	City of Ottawa Park
Cathcart Square Park 219 Cathcart Street	City of Ottawa Park
National Capital Commission King Edward Avenue	Parkland, adjacent to Rideau River
Les Religieuses de Notre Dame de Charité du bon Pasteur 251 Bolton Street (IMW)	Convent with the residents
Les Filles de la Sagesse d'Ontario 204 Boteler Street	Hostel, 24 beds

Generally, these facilities have operated for many years and some, such as the Champagne Bath, have been extensively renovated. The Shepherds of Good Hope, which operates several facilities in the area, provides a unique set of services primarily for the destitute and the homeless. **The concentration of these facilities in this area has occasionally resulted in social problems with other residents and this indicates a need to recognize the special requirements of the people served by the Shepherds.**

The Jewish Funeral Synagogue at 375 King Edward Avenue holds approximately 80 funerals annually and these services often result in parking queues along much of the east side of King Edward Avenue between Rideau Street and York Street, as well as processions. **This indicates a need for special parking and curbside facilities in this section of King Edward Avenue.**

The heavy traffic on King Edward Avenue itself creates difficulties for area residents to use the various social and recreational facilities within the Study Area. **Opportunities for pedestrians to cross the street are few and are widely separated.**

There are a number of non-profit housing developments in the Study Area, which are listed below:

Name	Number of Units
Cooperative d'habitation de la Salle	84
Centretown Citizens Cooperative	69
Beau Sejour *(City Living)*	136
#303 King Edward Avenue (*City Living*)	46

It should be noted that all of these developments are on the east side of King Edward Avenue and that accessability to the Byward Market and other areas to the west are constrained by King Edward Avenue.

2.4.3 General Character

With respect to the general character within the Study Area and the Study Area Context, there are a number of factors that create sub-areas, and these in turn define the appropriate land use planning controls.

The most northerly portion of the study area, located between Sussex Drive and Boteler Street, is characterized by a freeway-like network of ramps and overpasses which provides routes to King Edward Avenue and to the MacDonald-Cartier Bridge. The main orientation of the road system is directed toward the bridge with a secondary orientation to King Edward Avenue. The setting for this is defined by major public buildings (L. B. Pearson Building and Ottawa City Hall), in a park-like environment on

the Rideau River. Pedestrian movement in this area is subordinate to vehicle movement and pedestrians are often faced with hazardous crossings.

The opportunity exists in this location to create a formal ceremonial route and a safer, more hospitable pedestrian route from Sussex Drive to the northern end of King Edward Avenue, and to create a comparable gateway and/or entrance feature where the bridge approach route merges with King Edward Avenue. The current partial interchange configuration impedes this concept. In addition, the outcome of the Vanier Parkway extension and its design will influence this area.

The Lowertown West community, west of King Edward Avenue and north of St. Patrick Street is a stable and predominantly residential community. The Study Area and Context, in this segment, form part of the larger Lowertown West Community. **Therefore, the two and three storey development interspersed with heritage structures facing King Edward is comparable to and compatible with the rest of the community.**

The portion of Lowertown East, north of St. Patrick Street, has a higher proportion of new development than Lowertown West. This new development is predominantly two and three storey medium density residential on relatively large land assemblies, as compared to the older residential properties, which are generally two stories, low density, on narrow individual lots. This area is also somewhat isolated from the rest of the community by King Edward Avenue and St. Patrick Street. **This is an asset because it creates a secluded enclave which has considerable exposure and access to the Rideau River. It is also a constraint because of the difficulties for pedestrians to cross King Edward Avenue at St. Patrick Street, and the absence of other crossings to the north.**

The area to the west of King Edward Avenue and south of St. Patrick Street to York Street is a mixed use area with a predominance of medium density residential development. The area is split by the St. Patrick-Murray one-way couplet, which results in major one way regional roads in opposite directions flanking an area of several heritage buildings. Further to the south, the area on Clarence Street is in a transition stage from older development to redevelopment, with a large vacant lot, owned by the City of Ottawa located at the northwest corner of Clarence Street and King Edward Avenue.

The counterpart area east of King Edward Avenue, between St. Patrick Street and York Street is primarily two and three storey low to medium density residential. Most of the development is on relatively narrow lots with individual entrances, with the exceptions of the social housing project on Murray Street, which is on a larger, assembled block.

The area south of York Street and west of King Edward Avenue is characterized by mostly large properties and non-residential development. The Public Works Canada building, at 350 King Edward Avenue, is approximately four stories in height, with a large open setback from King Edward Avenue. It is atypical of other developments in this area and it's scale and siting on the property resembles projects usually found in

suburban business parks. The areas to the west over to Cumberland Street are used as parking lots. The Andrew Fleck Child Care Centre is a three storey building dating from the 1930's and it is one of the remnants of the previous character of King Edward Avenue. To the south, the block facing Rideau Street contains the Taylor IGA, which is one of the few remaining downtown supermarkets, and the adjacent development site, which has been surrounded by hoarding for several years. **Overall, this area indicates imminent and long term major redevelopment.**

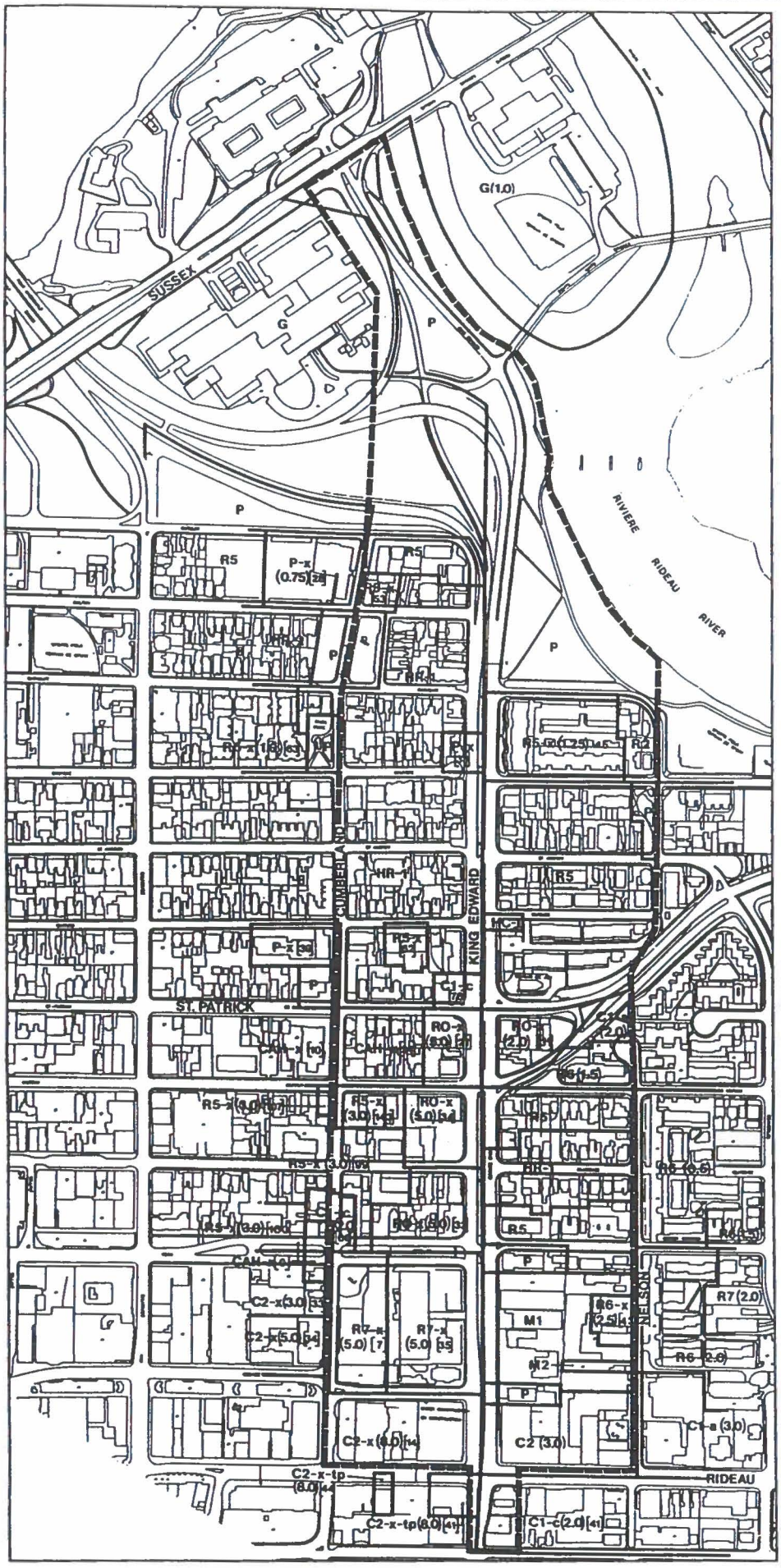
The area east of King Edward Avenue to Nelson Street, between York Street and Rideau Street, is highly mixed in its land uses and building scale. On the same block facing King Edward Avenue, there is a public swimming pool, a dance studio, an auto repair garage, two hydro buildings, a funeral synagogue and a massive, fourteen storey office building.

Although the potential for land use conflicts is apparent, these uses have co-existed and coped with each other for many years. This mixed use situation also exists in the area to the east, where a recent social housing project adjoins a renovated commercial-industrial building with multiple occupancies. There is also a small pocket of older low density two and three storey development on the south side of York Street, west of Nelson Street. To the south, facing Rideau Street, are the Bourque office building, an older motor hotel and other older commercial developments.

The southerly end of the Study Area is characterized by the high profile (fourteen storey) hotel at the south west corner of King Edward Avenue and Rideau Street and the Ottawa Little Theatre, which is equivalent to four stories. On the opposite corner, there is a Petro Canada gas bar, with abutting low and medium profile office and retail development. The intersection of Rideau Street and King Edward Avenue is heavily travelled and is the major route for trucks turning to and from Rideau Street west of King Edward Avenue. There is a significant change in elevation of King Edward Avenue south of Rideau Street up to Daly Street, which is the top of the hill. This point provides a commanding view of all of King Edward Avenue to the north.

2.5 Existing Zoning

The zoning in much of the Study Area, especially the area west of King Edward Avenue and south of St. Patrick Street to Rideau Street, has been amended many times. The existing zoning, as approved by the Ontario Municipal Board, is shown on *Plan 6* entitled *Existing Zoning*. The basis and rationale for virtually all of the existing zoning regulations are found in the various community planning policies, as discussed above. **Since many of these studies are relatively recent, and incorporate many of the policies**



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LEGEND / LEGENDE

R06/02/92

PLAN TITLE / TITRE DU PLAN :

EXISTING ZONING
ZONAGE ACTUEL

SCALE / ECHELLE :

0 20 50 100

PLAN NO / PLAN N° :

6

intended by the new Official Plan it is unlikely and unnecessary to revise them significantly.

The principal zoning controls relate to permitted uses and height restrictions. The height restrictions are shown on *Plan 7* entitled *Building Height Limits*. **Most of the Study Area north of St. Patrick Street has residential zones or heritage zones, which restrict heights generally to three stories or the existing building heights.** To the south of St. Patrick Street and west of King Edward Avenue, mixed uses, such as residential apartments and offices are permitted, with a complex system of height limits which set back the upper floors, and gradually increase in scale towards the south.

The areas on the east side of King Edward Avenue, south of York Street, have the fewest controls and they are zoned mostly light industrial and general commercial. For example, the C2 (3.0) zone, located on Rideau Street, has no specific height limit and building mass and location are established by density and setbacks.

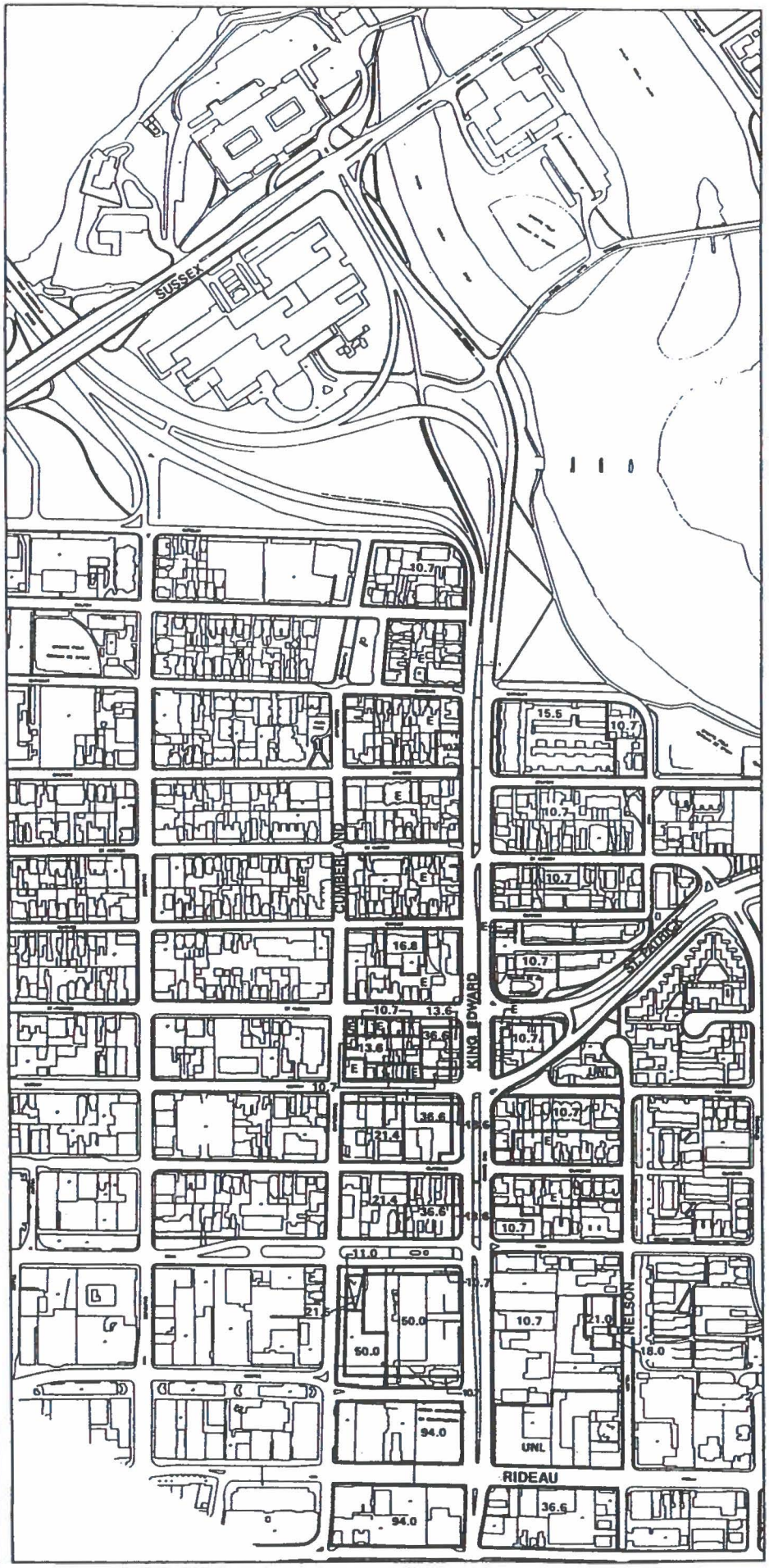
The areas west of King Edward Avenue between York Street and Rideau Street have high profile height restrictions ranging from 50 m on the 350 King Edward Avenue property up to 94 m on the C2-x (8.0) zone on the block between George Street and Rideau Street.

Areas on King Edward Avenue between York Street and Rideau Street should be the focus of the review of zoning regulations in the Study Area, having regard to other ongoing studies, and City Council commitments.

2.6 Development Potential and Development Activity

The zoning regulations in the Study Area represent a considerable amount of potential redevelopment. Parts of the Study Area, south of St. Patrick Street to Rideau Street and west of King Edward Avenue were reviewed as part of the Central Area Development Capacity Analysis, which was undertaken by the City of Ottawa in May, 1990. These sites and others with a high probability of redevelopment (as identified by this Study) are indicated by site numbers on *Plan 8* entitled *Development Activity*. Table 3 sets out the development applications within the Study Area.

A number of these applications are significant because they are properties located in Nodes and they are adjacent to important potential redevelopment sites. The application at 165 -169 King Edward Avenue indicates the smallness of scale of development projects north of St. Patrick Street, compared with those to the south, especially near Rideau Street. **This is a reflection of the success of the previous planning policies to reinforce and protect the scale and character of these residential neighbourhoods.**



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LEGEND / LEGENDE :

Existing Height	E	Hauteur actuelle
Unlimited Height	UNL	Hauteur illimité
Height Limit	13.6	Hauteur maximale

PLAN TITLE / TITRE DU PLAN :

BUILDING HEIGHT LIMITS
HAUTEUR MAXIMALE DES IMMEUBLES

SCALE / ECHELLE :

0 20 50 100

PLAN NO / PLAN N° :

7

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LEGEND / LEGENDE

Development Applications — L2 Demandes d'aménagement

Potential Development — B Possibilités d'aménagement

PLAN TITLE / TITRE DU PLAN

DEVELOPMENT ACTIVITY
ACTIVITÉ D'AMÉNAGEMENT

SCALE / ECHELLE

0 25 50 m

PLAN NO / PLAN N° 8

Table 3

Significant Development Applications within Study Area *

Site	Address	Proposed Use	GFA M^2
1	380 King Edward Avenue (since cancelled)	25 storey building 18 storey apartment 3 storey offices 3 storey parking 1 storey commercial/ lobby	35 573
2	389 Cumberland Street (under consideration by owner)	mixed use including parking garage, supermarket, apartments and townhouses	20 920.7
3	227 - 237 King Edward Avenue	6 storey office building with commercial use on ground floor. Not feasible in view of existing height restriction of 10.7 m	4 094.4
4	165 - 169 King Edward Avenue	3 storey apartment building, 8 units	587.74
5	193 - 195 King Edward Avenue	change ground floor to commercial, add one residential unit	53.5
6	231 - 249 Clarence Street (not pursued)	to permit temporary parking	n/a

* (As of March 1992)

The portion of the Study Area south of St. Patrick Street also contains several potential redevelopment sites, which are listed below on Table 4 and shown by letter symbols on *Plan 8* entitled *Development Activity*. **The combined potential yield of these sites, under the current zoning is 118,372.2 m^2.** The most significant sites, in terms of their impact on the Study Area with respect to scale and density are those located at 380 King Edward Avenue and 350 King Edward Avenue. Other sites, such as the smaller properties on the east side of King Edward Avenue, between the Champagne Bath and the Bourque office building at the northeast corner of King Edward Avenue and Rideau Street are unlikely to be assembled because of their multiple ownership and because one of the properties is an existing utility facility.

Table 4

Significant Potential Redevelopment Sites Within the Study Area

Site	Address	Zoning	Land Area M^2	Maximum Potential Yield M^2
A	380 King Edward Avenue	C2-x (8.)[14]	4 663.9	37 311.6
B	350 King Edward Avenue	R7-x (5.0)[35]	9 105.6	45 528.1
C	251-265 King Edward Avenue	M1	3 768.6	3 768.6
D	327-339 King Edward Avenue	M1	4 013.9	4 013.9
E	211 - 213 York Street	RO-x (5.0)[32]	817.9	4 089.8
F	260-264 King Edward Avenue	RO-x (5.0)[32]	983.9	4 919.5
G	256 King Edward Avenue	RO-x (5.0)[32]	1 534.8	7 674.2
H	360 St. Patrick Street	RO-x (5.0)[21]	1 293.1	6 465.8
I	355 St. Patrick Street	CI-c [78]	924.8	924.8
J	333 - 335 Cumberland Street	R5-x (3.0)[99]	808.3	2 424.9
K	287 Cumberland Street	C1-c (2.0)[60]	625.4	1 250.8
			TOTAL	118 372.0

2.7 Conclusions and Implications

The most significant influence upon land use and planning within the Study Area is the function of King Edward Avenue, which is a heavily travelled and multi-lane arterial road, connected to a freeway and forming a part of an essential interprovincial route. This leads to large numbers of cars, buses and trucks using the street, which has been treated as a boundary between the communities of Lowertown East and Lowertown West.

In human terms, it means an inhospitable residential and pedestrian environment.

The Study Area also has a complex and multi-layered collection of planning policies, most of which reinforce the division of the community. Most of the current policies are aimed at transforming the character and function of King Edward Avenue into a Gateway, with important Nodes at St. Patrick Street and Rideau Street. With respect to land use patterns, there is a node of major public buildings at the north end, a low scale residential area in the centre to St. Patrick Street, and mixed uses and redevelopment on a progressively larger scale toward Rideau Street in the south.

In effect, planning units have been created by these policies, other major influences, and the nature of existing development and the potential for redevelopment. **These planning units influence the approach and scale of streetscaping and reconstruction to be taken for various sections of King Edward Avenue. They also suggest direction for any planning policy and zoning changes.**

In terms of zoning regulations, the main area that requires rationalization is the M1 zone, on the east side of King Edward Avenue, south of York Street. The zoning should be revised to reflect the scale and type of existing uses and to ensure that redevelopment is compatible with existing development. The zoning of the property at 350 King Edward Avenue should be amended to ensure compatibility with the profile of the Taylor property to the west, and with respect to a transition with the Andrew Fleck Centre.

The redevelopment of properties at the St. Patrick Street - King Edward Avenue intersection should be carried out with a careful adherence to the Urban Design and Heritage policies of the new Official Plan. The existing zoning controls are generally adequate but a high standard of sensitive and thoughtful design is needed for this strategic intersection.

In terms of its future role, and its expression of the vision and the policies of the City of Ottawa and other government levels, King Edward Avenue should, as a long term goal, take on the role of a civic boulevard, that will bind the Lowertown community together. The achievement of this will depend heavily upon the outcome of long term solutions to truck routes and interprovincial bridge crossings.

Transportation

Contents

3.1 Introduction

The chapter on land use concludes that the most significant influence on the Study Area is the function of King Edward Avenue as a heavily travelled interprovincial truck and commuter route. Given this major finding, an analysis of transportation and traffic is fundamental to the development of a good understanding of the Study Area, and making recommendations for improvements.

This chapter analyses existing transportation conditions within the study area, including roadway, transit, pedestrian and bicycle networks. In addition, it identifies a variety of issues that affect the operation of King Edward Avenue. The findings of several previous transportation studies concerning King Edward Avenue were considered as part of this analyses. A list of relevant studies are presented in Annex A.

3.2 Existing Conditions

3.2.1 Study Area and Transportation Network

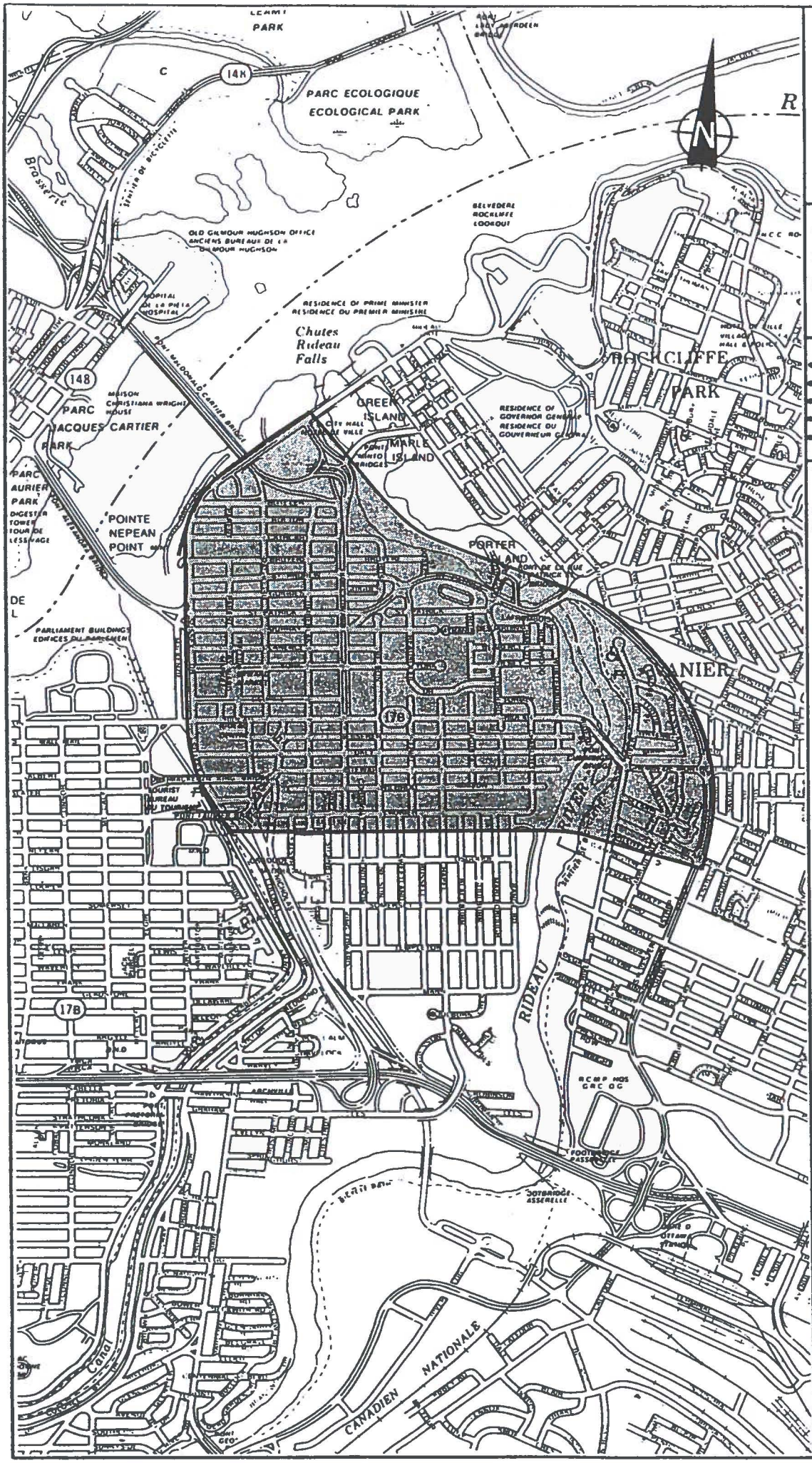
The study section of King Edward Avenue extends between Sussex Drive and Rideau Street. However, a larger study area was considered for analyses as influencing the operation of King Edward Avenue.

The study area as illustrated in *Plan 9*, is bounded by Sussex Drive to the north and the west, Laurier Avenue to the south, and the Vanier Parkway to the east.

King Edward Avenue is currently under the jurisdiction of the Regional Municipality of Ottawa-Carleton (RMOC) and is characterized as a six lane divided urban roadway. Other main RMOC roadways within the study area include Sussex Drive, St. Patrick Street, Murray Street, Rideau Street, Montreal Road, the Vanier Parkway, Laurier Avenue, Waller Street, Nicholas Street, and the MacKenzie King Bridge. Virtually all other roadways within the study area are under the jurisdiction of the City of Ottawa and the City of Vanier.

The main transit routes in the study area are located on King Edward Avenue, Dalhousie Street and Sussex Drive for north-south routes, and St. Patrick Street, Murray Street, and Rideau Street for the main east-west routes. The majority of study area transit traffic occurs on Rideau Street and over the MacKenzie King Bridge.

The MacDonald-Cartier Bridge is the primary bridge for interprovincial use by heavy truck traffic. The Interprovincial Goods Movement Study, prepared for TRANS (a joint technical committee on transportation systems planning), indicates that the MacDonald-Cartier Bridge is the only bridge open to heavy vehicles throughout the year, as the Chaudière Bridge has seasonal load restrictions and the Alexandra Bridge is



AVENUE KING EDWARD AVENUE

COMMUNITY IMPROVEMENT PLAN/ PLAN D'AMELIORATION COMMUNAUTAIRE

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LEGEND / LEGENDE:

STUDY AREA / SECTEUR COUVERT PAR L'ETUDE

PLAN TITLE / TITRE DU PLAN:

STUDY AREA / SECTEUR COUVERT PAR L'ETUDE

SCALE / ECHELLE:	PLAN NO / PLAN N°:
N.T.S.	9

constrained by its proximity to the Byward Market. As a result, King Edward Avenue is signed as a truck route from Rideau Street to the MacDonald-Cartier Bridge access ramps, as no other direct link exists between the bridge and major highways such as Highways 16, 417 and 17.

Within the study area there are signed bicycle routes on Cumberland Street, Rideau Street, York Street and St. Andrew Street. Pedestrian crossings are available at all signalized intersections along King Edward Avenue.

3.2.2 Transportation Volumes

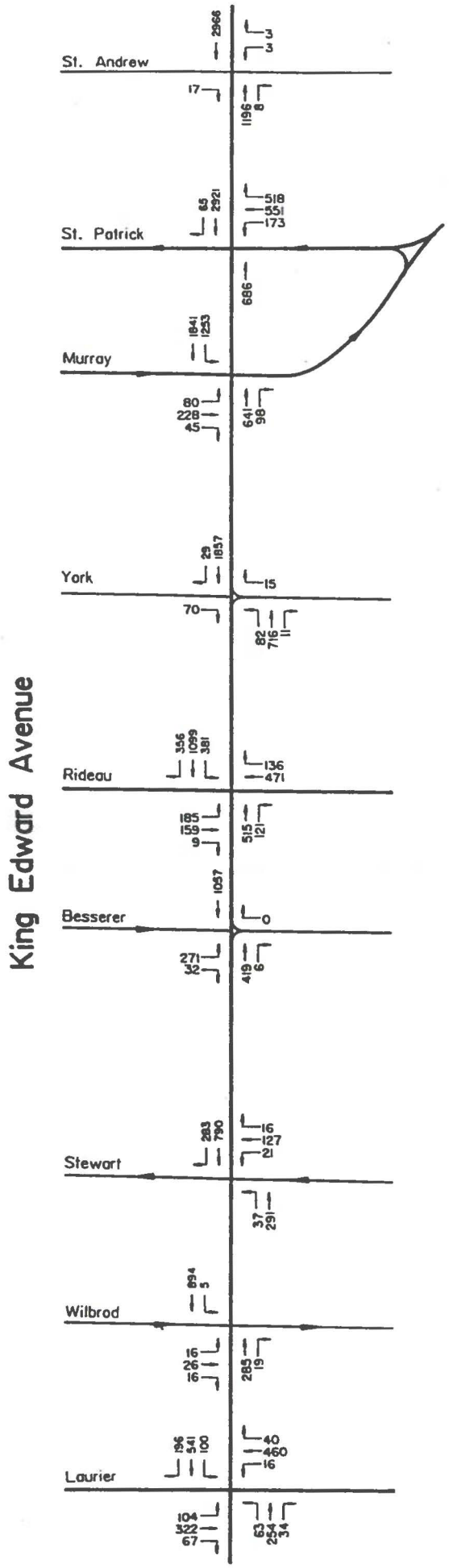
A review of the traffic data from the RMOC Transportation Department indicates that 1991 volumes were unusually low, likely as a result of the reconstruction of King Edward Avenue between Mann Avenue and Laurier Avenue. Therefore, 1990 data was used as the base year for analysis.

As intersection counts were performed on different days, it was necessary to balance link volumes by comparing vehicle volumes exiting each intersection with those entering the adjacent intersections. The adjusted AM and PM peak hour traffic volumes are illustrated in *Plan 10 and 11*, respectively. It is noted that traffic volumes may not balance exactly due to the presence of intervening driveways. Also, a review of the existing traffic data reveals that heavy trucks represent approximately 8% of all vehicular traffic along King Edward Avenue.

Pedestrian and bicycle volumes were also summarized for this study, and information concerning pedestrian use and cycling was acquired through the public consultation process. Intersections identified as creating problems for pedestrians include King Edward Avenue at Rideau Street, King Edward Avenue at St. Patrick Street (westbound approach), and King Edward Avenue near Cathcart Street where high vehicle volumes impede pedestrian movements. Also, the limited number of pedestrian crossing locations along King Edward Avenue is a concern. Bicycle concerns primarily relate to the existing traffic volume, speed and mix, which contribute to a safety hazard for cyclists using King Edward Avenue. A lesser concern reflects the absence of protected locations for east-west cycle traffic to cross King Edward Traffic. Pedestrian and cycling needs will figure prominently in recommendations for improvements to King Edward Avenue.

3.2.3 Traffic Accidents

A review of the three most recent complete years of accident data leading to the study base year of 1990 was completed at mid block and intersection locations along King Edward Avenue. This information, acquired from the RMOC Traffic Operational Studies Branch, is summarized in Table 5.



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LEGEND / LEGENDE:

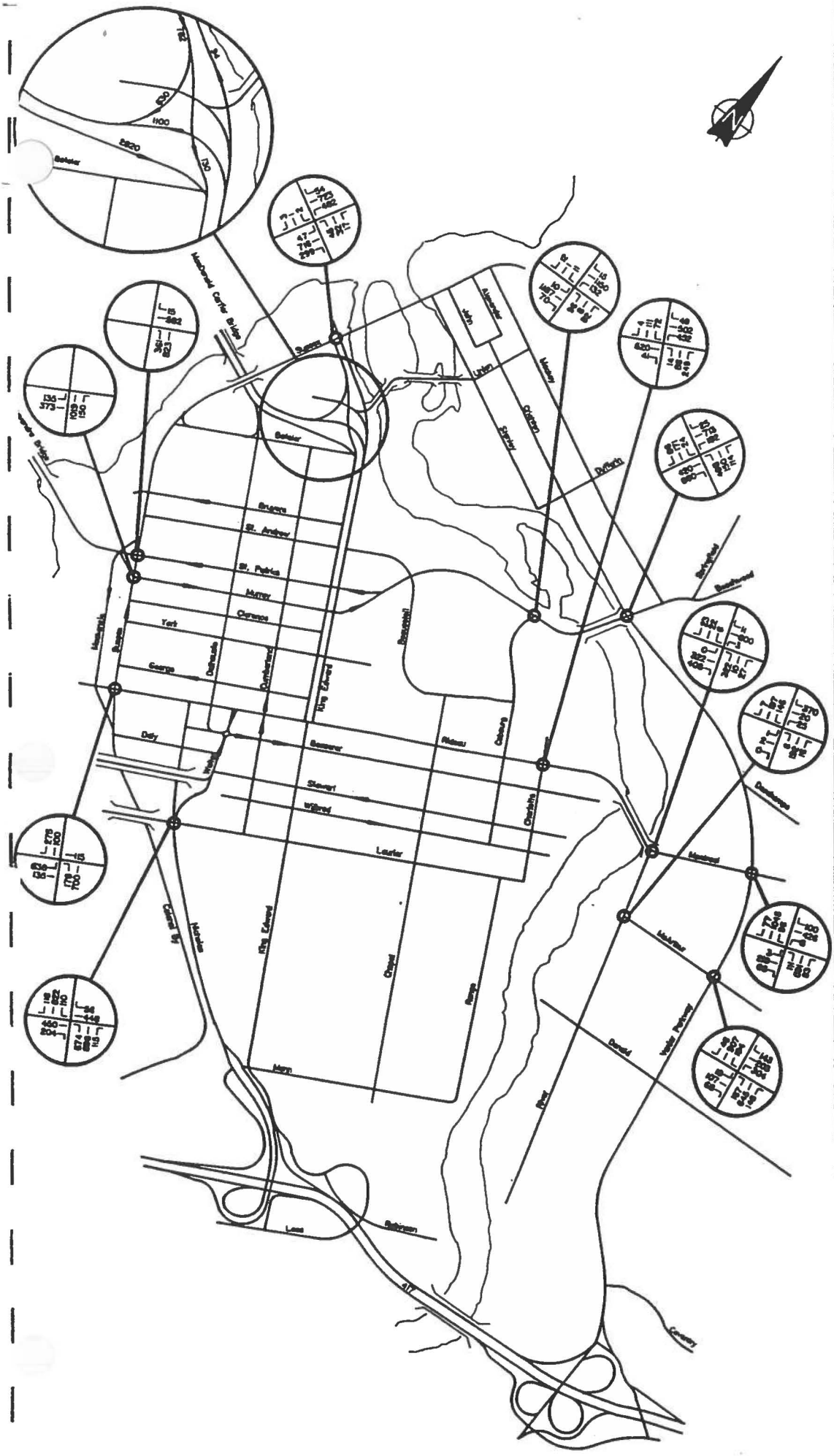
—— RMOC ROADS / CHEMINS RELEVANT DE LA MROC

—— CITY OF OTTAWA / RUES DE LA VILLE D'OTTAWA

PLAN TITLE / TITRE DU PLAN:

AM PEAK HOUR REPRESENTATIVE 1990 TRAFFIC VOLUMES / HEURE DE POINTE DU MATIN VOLUMES DE TRAFIC REPRESENTATIFS EN 1990

SCALE / ECHELLE:	PLAN NO / PLAN N°:
N.T.S.	10



AVENUE KING EDWARD AVENUE

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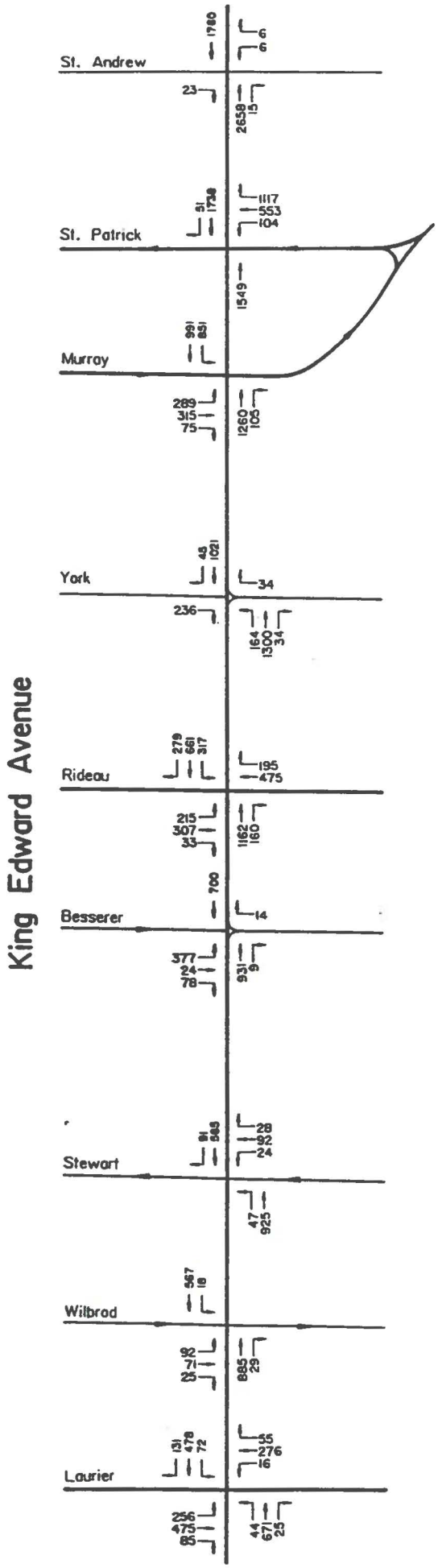
LEGEND / LEGENDE:

PLAN TITLE / TITRE DU PLAN:

AM PEAK HOUR REPRESENTATIVE 1990 TRAFFIC VOLUMES - CONTINUED
HEURE DE POINTE DU MATIN VOLUMES DE TRAFIC REPRESENTATIFS EN 1990 - SUITE

SCALE / ECHELLE:	PLAN NO / PLAN N°:
N.T.S.	10



AVENUE KING EDWARD AVENUE

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LEGEND / LEGENDE:

—— RMOC ROADS / CHEMINS RELEVANT DE LA MROC

—— CITY OF OTTAWA / RUES DE LA VILLE D'OTTAWA

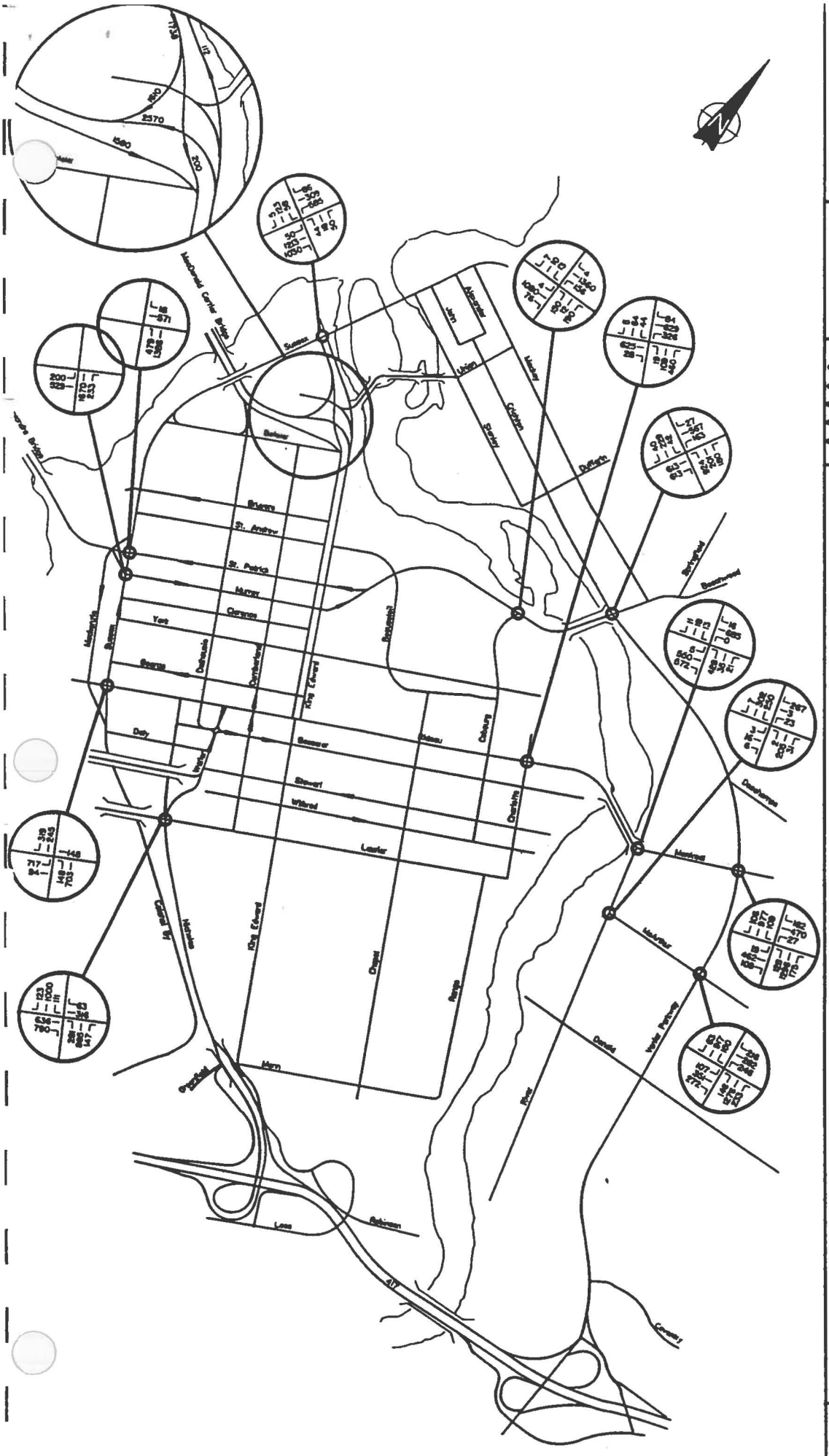
PLAN TITLE / TITRE DU PLAN:

PM PEAK HOUR REPRESENTATIVE 1990 TRAFFIC VOLUMES / HEURE DE POINTE DE L'APRES-M VOLUMES DE TRAFIC REPRESENTATIFS EN 1990

SCALE / ECHELLE:

PLAN NO / PLAN N°:

11



AVENUE KING EDWARD AVENUE

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LEGEND / LEGENDE:

PLAN TITLE / TITRE DU PLAN:

PM PEAK HOUR REPRESENTATIVE 1990 TRAFFIC VOLUMES - CONTINUED
HEURE DE POINTE DE L'APRES-MIDI VOLUMES DE TRAFIC REPRESENTATIFS EN 1990 - SUITE

SCALE / ECHELLE:

PLAN NO / PLAN N°:

11

Table 5

ACCIDENT SUMMARY
/RESUME DES ACCIDENTS DE LA CIRCULATION

	YEAR / ANNEE			
	1988	1989	1990	TOTAL
INTERSECTION				
King Edward and / et Laurier	21	16	18	55
King Edward and / et Wilbrod	1	1	6	8
King Edward and / et Stewart	11	7	7	25
King Edward and / et Daly	5	2	4	11
King Edward and / et Besserer	2	3	8	13
King Edward and / et Rideau	19	26	27	72
King Edward and / et George	1	1	2	4
King Edward and / et York	11	4	3	18
King Edward and / et Clarence	1	1	0	2
King Edward and / et Murray	14	14	17	45
King Edward and / et St. Patrick	23	37	18	78
King Edward and / et Guigues	0	0	2	2
King Edward and / et St.Andrew	2	3	6	11
King Edward and / et Bruyere	1	0	0	1
King Edward and / et Cathcart	1	0	0	1
King Edward and / et Minto	1	2	1	4
King Edward and / et Sussex	8	6	5	19
			TOTAL	369
MIDBLOCK / MI-QUADRILATERE				
King Edward – Laurier to / à Wilbrod	1	2	4	7
King Edward – Stewart to / à Daly	0	0	1	1
King Edward – Besserer to / à Rideau	0	2	0	2
King Edward – Rideau to / à George	4	0	3	7
King Edward – George to / à York	4	3	3	10
King Edward – York to / à Clarence	2	0	3	5
King Edward – Clarence to / à Murray	0	1	1	2
King Edward – Murray to / à St. Patrick	2	2	2	6
King Edward – St.Patrick to / à Guigues	1	3	5	9
King Edward – Guigues to / à St.Andrew	1	1	0	2
King Edward – St.Andrew to / à Bruyere	0	1	0	1
King Edward – Bruyere to / à Cathcart	3	0	0	3
King Edward – Cathcart to / à Bolton	5	2	2	9
King Edward – Bolton to / à Boteler	1	1	1	3
			TOTAL	67

A review of accident details indicates that there are three intersections with significantly high accident frequencies along the study section between Sussex Drive and Rideau Street. These intersections, in decreasing order of accident frequency, include:

- King Edward Avenue and St. Patrick Street;
- King Edward Avenue and Rideau Street; and,
- King Edward Avenue and Murray Street.

King Edward Avenue and Rideau Street is currently being examined by the RMOC Operations Department for accident occurrence. The main factors contributing to accidents at this location include high vehicle volumes and geometric considerations.

3.2.4 Lane Arrangement and Intersection Control

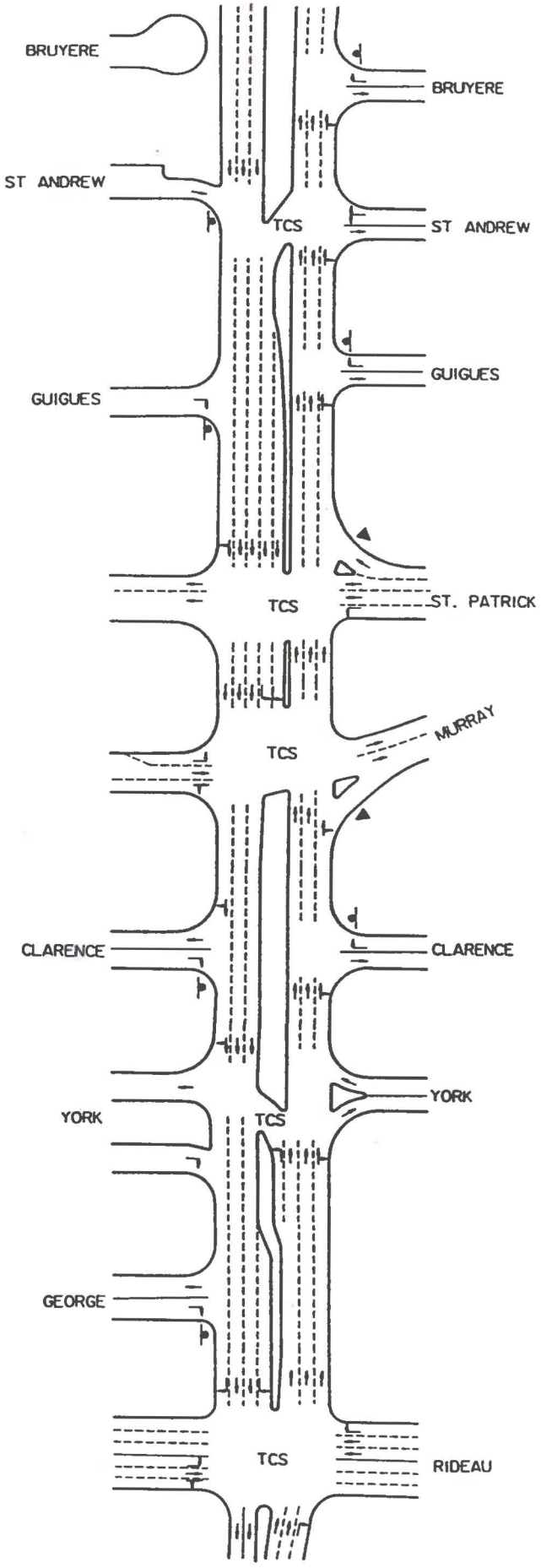
Plan 12 illustrates the existing intersection geometry and traffic control at each intersection along the study section, from Rideau Street to Sussex Drive. The cross section of King Edward Avenue provides three lanes in either direction, for a total of six lanes, plus auxiliary turning lanes and a central median throughout the study section.

A number of existing geometric considerations are significant to the operation of King Edward Avenue. A southbound double left-turn lane at King Edward Avenue and Murray Street creates a five-lane southbound cross section at this location. At the north end of the study area, ramps leading to the McDonald-Cartier Bridge are comprised of two lanes in either direction. Several of the King Edward Avenue intersections along the study section involve one-way streets. St. Patrick Street (westbound) and Murray Street (eastbound) are two significant one-way streets forming an arterial pair carrying a large volume of east-west traffic through the area.

3.2.5 Traffic and Parking Regulations

Plan 13 illustrates existing traffic and parking regulations along King Edward Avenue between Sussex Drive and Rideau Street. Parking and stopping along King Edward Avenue is generally prohibited during peak hours, with one hour parking allowed at various locations during off-peak hours(9:00 AM and 3:30 PM). Parking is prohibited at all times north of Cathcart Street, except for permit holders along the northbound ramp to Sussex Drive.

Several bus standing locations exist along King Edward Avenue as illustrated on *Plan 13*. Specifically, the section from Murray Street to York Street along the west side of King Edward Avenue accommodates several bus time points. These locations are used by buses temporarily not in service.



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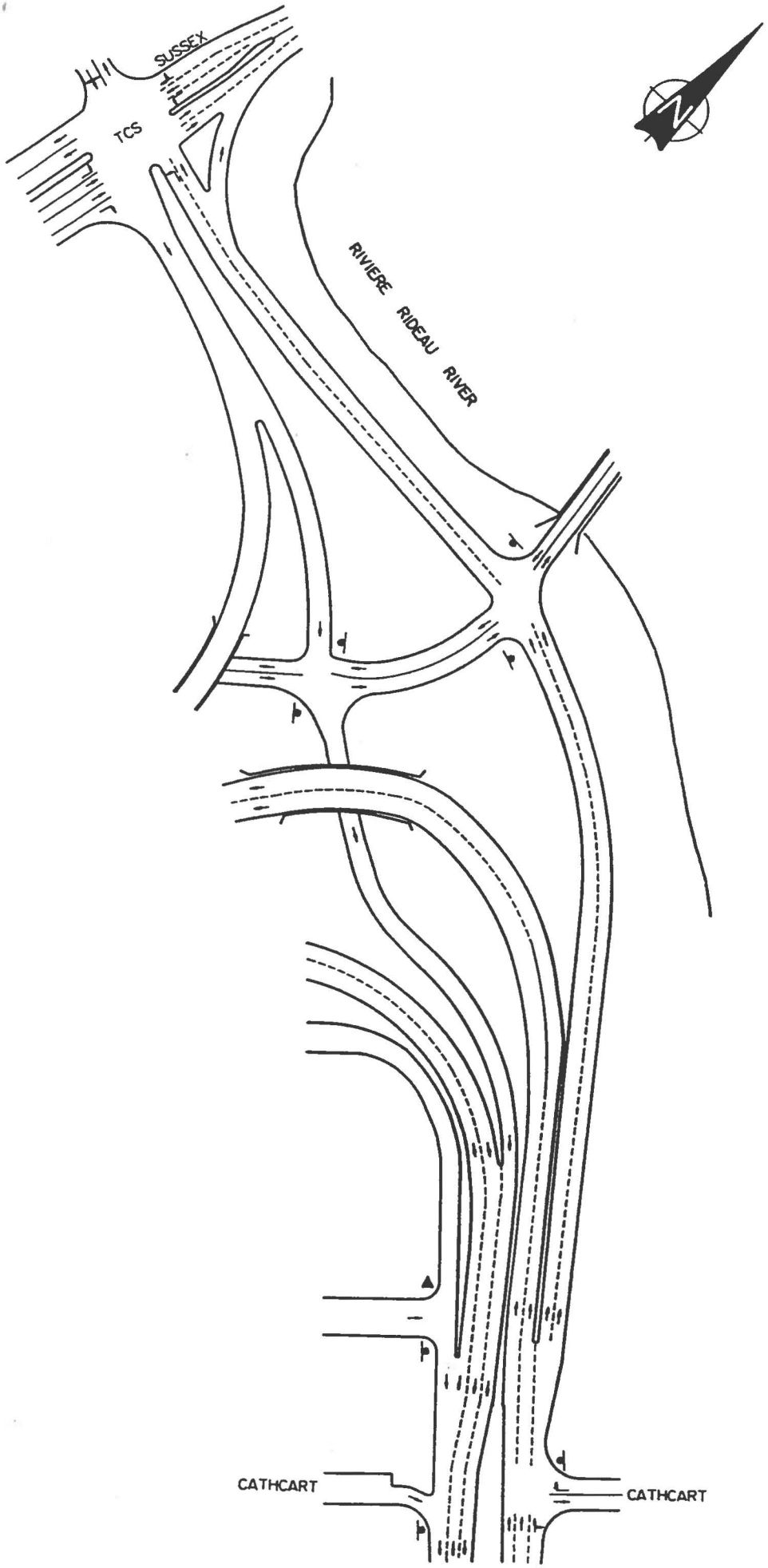
LEGEND / LEGENDE:

TCS TRAFFIC CONTROL SIGNALS / FEU DE CIRCULATION
STOP SIGN / PANNEAU D'ARRET OBLIGATOIRE
YIELD SIGN / PANNEAU D'OBLIGATION DE CEDER LE PASSAGE

PLAN TITLE / TITRE DU PLAN:
EXISTING INTERSECTION GEOMETRY AND TRAFFIC CONTROL / CARACTERISTIQUES GEOMETRIQUES DE L'INTERSECTION ET CONTROLE DE LA CIRCULATION A CETTE INTERSECTION

SCALE / ECHELLE: N.T.S.

PLAN NO / PLAN N°: 12



AVENUE
KING EDWARD
AVENUE

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- BRETHOUR RESEARCH ASSOCIATES LIMITED

LEGEND / LEGENDE:

TCS TRAFFIC CONTROL SIGNALS / FEU DE CIRCULATION

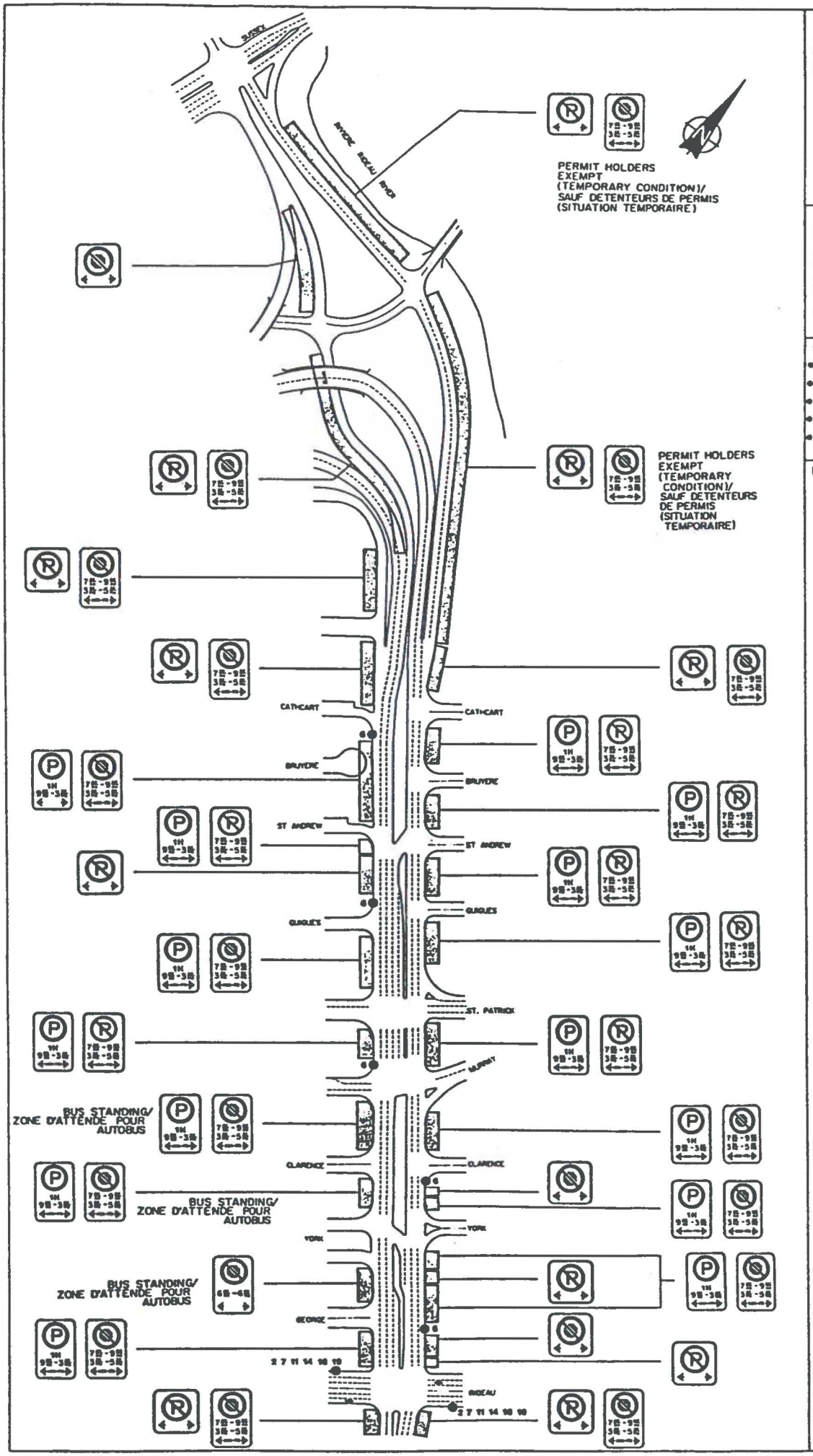
STOP SIGN / PANNEAU D'ARRET OBLIGATOIRE

YIELD SIGN / PANNEAU D'OBLIGATION DE CEDER LE PASSAGE

PLAN TITLE / TITRE DU PLAN:
EXISTING INTERSECTION GEOMETRY AND TRAFFIC CONTROL-CONTINUED / CARACTERISTIQUES GEOMETRIQUES DE L'INTERSECTION ET CONTROLE DE CIRCULATION A CETTE INTERSECTION-SUITE

SCALE / ECHELLE: N.T.S.

PLAN NO / PLAN N°: 12



AVENUE KING EDWARD AVENUE

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- ESSIAMBRE PHILLIPS ASSOCIATES LTD.
- BRETHOUR RESEARCH ASSOCIATES LIMITED

LEGEND / LEGENDE:

● Bus stop and route
D'arrêt d'autobus et circuit

PLAN TITLE / TITRE DU PLAN:

EXISTING TRAFFIC AND PARKING REGULATIONS / REGLEMENTATION ACTUELLE SUR LA CIRCULATION ET LE STATIONNEMENT

SCALE / ECHELLE:	PLAN NO / PLAN N°:
N.T.S.	13

3.2.6 Intersection Levels of Service

Existing levels of service at all main intersections in the study area were calculated using representative 1990 peak hour traffic volume data. The method used is based on a critical volume analysis and is consistent with RMOC practice.

The existing levels of service at each of the study intersections along King Edward Avenue are presented in Table 6. A 100 second cycle length for signalized locations was used in the calculations. This is considered to be the maximum practical cycle time for intersections without causing significant delays in traffic flow.

All of the study intersections are presently operating at an acceptable level of service with the exception of the following five locations (shaded in Table 5):

- King Edward Avenue and Rideau Street - AM and PM peak hours
- King Edward Avenue and Murray Street - AM and PM peak hours
- King Edward Avenue and St. Patrick Street - PM peak hour
- King Edward Avenue and Sussex Drive - PM peak hour
- McArthur Avenue and Vanier Parkway - AM and PM peak hours

The above intersections all operate below level of service "D",which is the minimum index required for the acceptable operation of an intersection as defined in the RMOC Official Plan. It is possible, however, for intersections to operate at lower levels of service based on factors such as two intersections being within close proximity. The operation of Besserer Street and King Edward Avenue intersection, for example, is highly dependent on traffic conditions at the King Edward Avenue and Rideau Street intersection. Refer to Annex B for further explanation of Level of Service.

3.2.7 Operational Issues and Opportunities

A number of operational problems exist along King Edward Avenue with the current intersection geometries and control. A summary of these problems and related issues, as identified from the analysis and through the public consultation process, follows:

Table 6

INTERSECTION LEVEL OF SERVICE
/NIVEAU DE SERVICE

INTERSECTION	AM PEAK HOUR /HEURE DE POINTE DU MATIN	PM PEAK HOUR /HEURE DE POINTE DE L'APRES-MIDI
King Edward and / et Laurier	B	C
King Edward and / et Wilbrod	A	A
King Edward and / et Stewart	A	A
King Edward and / et Besserer	A	A
King Edward and / et Rideau	F	F
King Edward and / et York	B	A
King Edward and / et Murray	E	C
King Edward and / et St. Patrick	B	F
King Edward and / et St.Andrew	B	A
King Edward and / et Sussex	B	E
Rideau and / et Cumberland	A	A
Rideau and / et Nelson	A	A
Charlotte and / et Rideau	D	D
McArthur and / et Vanier	F	F
McArthur and / et River	A	A
Beechwood and / et Vanier	B	D
Montreal and / et Vanier	A	B
Rideau and / et Sussex	B	C
Montreal and / et River	A	B
St. Patrick and / et Sussex	A	B
Murray and / et Sussex	A	B
Laurier and / et Nicholas	D	D

A) Intersection Operational Issues

i) King Edward Avenue and Rideau Street

- Traffic delay during peak periods.
- Pedestrian safety and the provision of adequate pedestrian crossing times.
- High accident rate, and in particular, the following conflicts:
  - southbound right turning movement with the north-south pedestrian movement.
  - southbound left turning movement with the northbound through movement.
- Southbound right turning movements.
- Illegal southbound double left turning movements

ii) King Edward Avenue and Murray Street

- Long pedestrian crossing times across King Edward Avenue due to the number of lanes at this location.
- Accommodation of the high volume of southbound left turning traffic in the AM peak period affecting level of service.
- Use of eastbound through lane to perform double left turn movements.

iii) King Edward Avenue and St.Patrick Street

- Ability to accommodate the high volume of westbound right turn traffic.
- Illegal double westbound right turning movements.
- Difficulty for pedestrians crossing the westbound approach because of continuous right turn traffic, particularly during the PM peak hour.

iv) King Edward Avenue and Sussex Drive:

- Long pedestrian crossing times across Sussex Drive.
- Accommodation of the high PM peak hour westbound left turning traffic volumes.

v) King Edward Avenue and Boteler Street

- absence of pedestrian crossing protection
- vehicular accident frequency
- intersection geometrics

B) Buses and Bus Time Points

King Edward Avenue is a main route for inter-provincial public transit because of the availability of the bus time points located along King Edward Avenue. Public concerns regarding the use of transit in the area include noise, fumes, vibration, and the resulting disturbance to the surrounding neighbourhood, as well as the documented violation of bus time point locations and time limits.

C) Heavy Vehicle Issues

Existing truck route signing for King Edward Avenue north of Rideau Street reflects the fact that this corridor is a main route to and from the province of Québec. The volume of truck traffic has a measurable effect on the level of service since it comprises 8% of all traffic in the peak hours. Additional operational concerns include difficulty in performing specific turning movements due to limited intersection geometry, such as the southbound right turn at the intersection of King Edward Avenue and Rideau Street.

Public concerns with regard to truck use on King Edward Avenue are similar to those noted for transit. These include noise, pollution, vibration, as well as safety.

D) MacDonald-Cartier Bridge Ramp Capacity

The analysis revealed that the ramps between the MacDonald-Cartier Bridge and King Edward Avenue have limited residual capacity available to accommodate additional traffic in either the AM or PM peak hour. Traffic volumes in the PM peak hour on the northbound access ramp exceed 2 500 vehicles over two lanes and 2 800 vehicles southbound in the AM peak hour over two lanes. The analysis also revealed that the capacity of the existing ramps was actually lower than the capacity of the bridge itself. Therefore, to utilize any residual capacity on this link, the roadway network providing access to this facility would require modifications.

The foregoing analysis revealed that there are several constraints on the existing King Edward Avenue corridor that would limit any future growth in traffic volumes. The following areas, in particular, have been identified as constraining components of this corridor:

1) King Edward Avenue and Rideau Street intersection;
2) King Edward Avenue and Murray Street intersection;
3) King Edward Avenue and St. Patrick Street intersection; and,
4) MacDonald-Cartier Bridge/King Edward Avenue access ramps.

Limited opportunities exist to improve specific operational characteristics of the above intersections through the implementation of geometric modifications and the optimization of signal timing in conjunction with these modifications.

However, no opportunities exist to significantly improve the capacity through these three intersections. The present 6 lane cross section with ancillary lanes is the maximum feasible arrangement because of existing development which constrains any widening from occurring at the three key intersections. Analysis of current traffic volumes also reveals that it may be feasible to reduce the existing 6 lane arrangement to a 4 lane cross section at specific locations along King Edward Avenue between these key intersections without significantly affecting the overall level of service. The feasibility and desirability of these lane reductions will be explored in the Community Improvement Plan.

3.3 Conclusions and Implications

The analyses of existing transportation conditions indicates that traffic volumes on King Edward Avenue are close to the current roadway capacity at a number of key locations. Such locations include the intersections of King Edward Avenue with Rideau Street, St. Patrick Street, Murray Street and the ramps connecting King Edward Avenue to the MacDonald-Cartier Bridge.

Further, improvement of intersection capacities at the location is constrained by existing development, heritage considerations and other factors. Future traffic growth on this road is therefore likely to be minimal.

Analyses indicate that the existing lane geometrics at the key locations cannot be reduced, but that operations may be improved through certain minor modifications, such as those to improve pedestrian conditions. Also at many locations between these key intersections, roadway narrowing may be feasible, in effect reducing the capacity at these locations to match the capacity of the critical intersections.

Observations of operations on King Edward Avenue, and the results of extensive public consultation also suggests that many of the concerns related to transportation conditions north of St. Patrick Street are due to the implicit function of this roadway as an extension of the interprovincial highway connection.

Relief from these conditions must address the urban street grid in this area and the role of King Edward Avenue in this community.

These implications are summarized as follows:

i) the characteristics and function of King Edward Avenue north and south of St. Patrick Street - Murray Street are different

ii) existing transportation conditions at several key intersections both limit the potential for future traffic growth, and limit the ability to effect roadway lane reductions.

iii) several locations between these key intersections can be modified to reduce capacity consistent with capacity elsewhere on King Edward Avenue.

iv) the role of King Edward Avenue and its intersection with the MacDonald-Cartier Bridge access ramps must be resolved.

Municipal Services

Contents

4.0 Municipal Services

The primary study area includes the section of King Edward Avenue from Besserer Street to the MacDonald-Cartier Bridge. This section of King Edward Avenue under study is 1.53 kilometres in length and includes lands on both the east and west sides of the street. The street is a major infrastructure corridor, including storm and sanitary sewer facilities, Bell Canada facilities and an Ontario Hydro substation. This chapter outlines the condition and capacities of existing municipal infrastructure and utilities. Affected agencies were asked to provide capacity information and to outline their program of planned upgrades.

4.1 Regional Municipality of Ottawa-Carleton Facilities

The Regional Municipality of Ottawa-Carleton (RMOC) has jurisdiction over all watermains in the Region. Local and trunk watermains, ranging in size from 203 to 508 mm in the RMOC 1W pressure district, serve King Edward Avenue and the adjacent area. Correspondence received from RMOC Environmental Services Department suggests that there is adequate water supply and pressure to service the existing King Edward Avenue area. The redevelopment/densification in the surrounding area may require a more in-depth analysis.

4.2 City of Ottawa Facilities

4.2.1 Sanitary Sewers

The City of Ottawa has an ongoing sewer separation program in areas where combined sewage flows into the King Edward Avenue trunk sewers. Storm drainage flows originating west of King Edward Avenue are being intercepted in new sewers on Cumberland Street. Sanitary drainage from contributing areas to the west are also being intercepted by new trunk sanitary sewer constructed along Cumberland Street. The separation program has reduced combined inflows into the systems along King Edward Avenue. In the near future, localized sewer construction is planning to separate house service connections on King Edward Avenue.

When completed, the sewer separation program should provide additional storm and sanitary sewage capacity. The analysis included in the Community Improvement Plan will determine whether the increased capacity can support the proposed level of land use.

The City of Ottawa Operations Division of the Department of Engineering and Works has conducted a review of the condition of the storm and sanitary sewers along King Edward Avenue and have established that these sewers are in reasonable condition and have not been the cause for any recent complaints.

4.3 Utilities

4.3.1 Ontario Hydro

Ontario Hydro has sufficient capacity to meet the demand for services in the near future. They are proposing an increase to the capacity of the transformer station on King Edward Avenue after 1996, requiring any works on the street initiated by the City to be coordinated with Ottawa Hydro.

4.3.2 Ottawa Hydro

Ottawa Hydro facilities consist of a substation and transformer station on King Edward Avenue. The distribution system consists of both underground and overhead plant. Hydro officials confirm that the current plant can meet the requirements for electricity at this time.

Ottawa Hydro has an ongoing conversion of overhead lines to underground. They have not established a timetable for converting from overhead to underground on King Edward Avenue and their funding is fully committed until 1996 or 1997.

The long term needs for electrical supply calls for Ottawa Hydro to expand their underground duct system in conjunction with the Ontario Hydro expansion of the transformer station and building towards the street in the 1996 plus time frame. The expansion would involve road crossings and longitudinal duct runs north and south on King Edward Avenue.

4.3.3 Bell Canada

Bell Canada has recently reinforced its infrastructure along King Edward Avenue from Rideau Street to the MacDonald-Cartier Bridge to provide service for the next 15 to 20 years. To accommodate new development minor lateral extensions of the Bell lines may be required.

Bell Canada has suggested that in order to avoid the relocation of infrastructure, that no large trees be planted immediately adjacent to their structure.

4.3.4 Consumers Gas

Consumers Gas has indicated that the existing natural gas system has sufficient capacity for the existing zoning, and any upgrading of zoning within the area of King Edward Avenue.

4.4 Conclusions and Implications

In general, municipal services and utilities will not likely present major constraints to any improvements proposed for King Edward Avenue. Indeed, the City of Ottawa's sewer separation program will serve to increase sanitary sewer and storm sewer capacities. However, underground utilities will present limitations on the location of trees and other plantings and may restrict the type of paving or surfacing materials. The circulation of a detailed proposal will be required in order to conduct an in-depth analysis of the impact on servicing in this area, and determine upgrade costs and required timings.

Environment

Contents

5.1 Introduction

A study of existing environmental conditions included two main components, a tree and shrub inventory, and a review of potentially contaminated sites. In addition to this empirical data, other conclusions may be drawn on the basis of general observations and the issues that were raised through public consultation.

5.2 Site Inventory

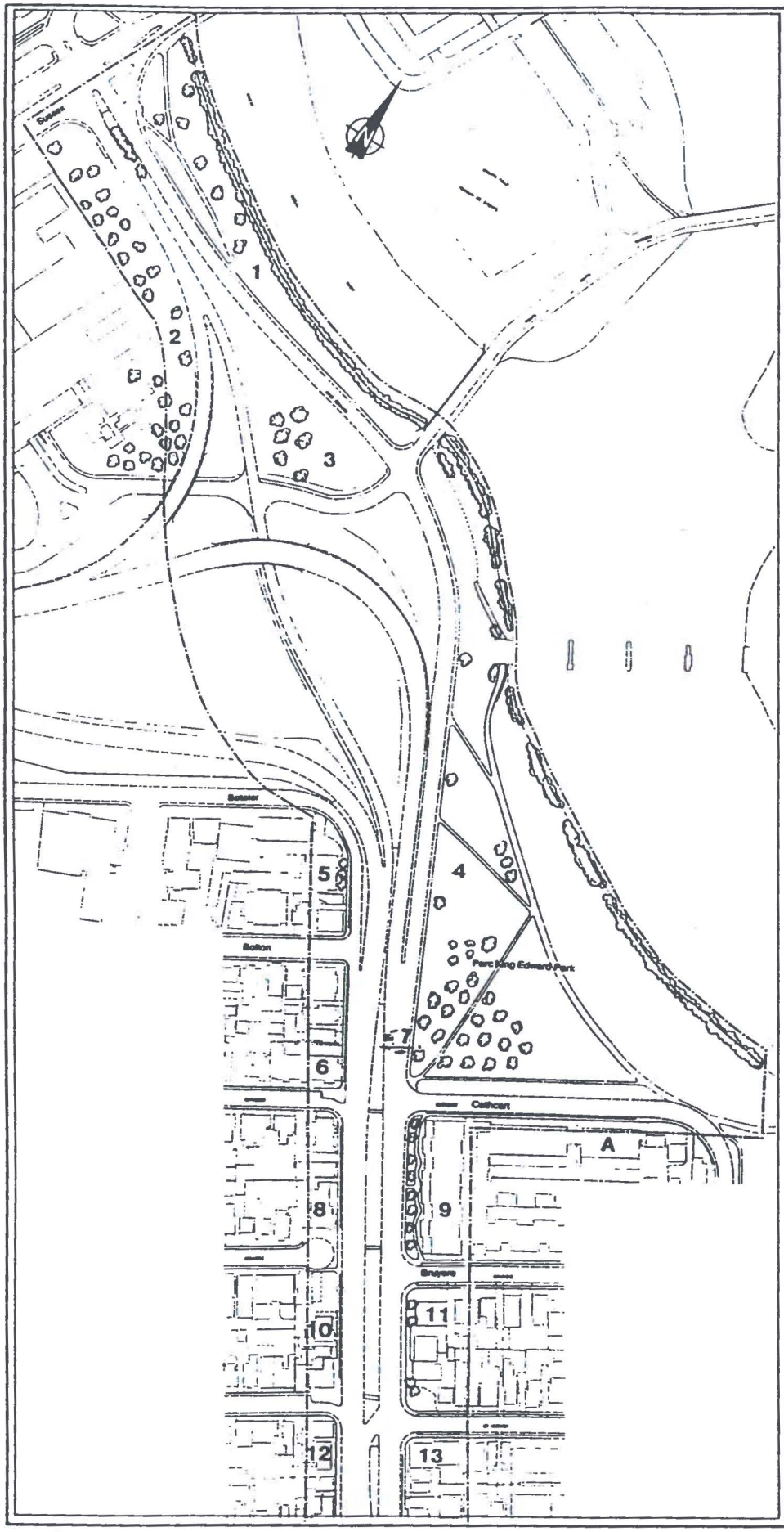
The tree inventory was conducted on February 6, 1992, identifying tree and shrub species and their general health and condition. The study area included the east and west sides of King Edward Avenue from Rideau Street to Sussex Drive including King Edward Park. The side streets from Rideau Street to St. Patrick Street between King Edward Avenue and Cumberland Street were also inventoried *(Plan 14)*.

To facilitate the tree inventory, the study area was delineated into smaller subunits based primarily on physical structures such as roads, bridges and overpasses. A total of twenty-four subunits along both sides of King Edward Avenue were delineated and the tree/shrub species within each were recorded. In addition to these subunits, the side streets between King Edward Avenue and Cumberland Street were surveyed. These included George Street, York Street, Clarence Street, Murray Street and St. Patrick Street.

Other environmental features such as groundcover flora, wildlife and wildlife habitats were not surveyed due to the snow cover.

As part of the tree and shrub inventory a review of available background information on the natural environs in the study area was conducted. Information was also solicited from the National Capital Commission (NCC) and the Ontario Ministry of Natural Resources (OMNR) - Carleton Place District (Haley 1992, Hamill 1992, McLeod 1992).

Table 7 summarizes the treed resources within each subunit of the study area. Annex C contains a more detailed list of the locations of the trees within each subunit, as well as tag numbers, species name and trunk diameters of the trees found on NCC lands.



AVENUE KING EDWARD AVENUE

:Ottawa

COMMUNITY IMPROVEMENT PLAN/ PLAN D'AMELIORATIONS COMMUNAUTAIRES

PREPARED BY / PREPARE PAR :

- UMA ENGINEERING LTD.
- BARRY PADOLSKY ARCHITECT LTD.
- CORUSH SUNDERLAND WRIGHT LIMITED
- ESSIAMBRE PHILLIPS ASSOCIATES LTD.
- BRETHOUR RESEARCH ASSOCIATES LIMITED

LEGEND / LEGENDE

STUDY AREA / SECTEUR D'ETUDE

Contaminated Sites/Emplacement contaminé (former use/usage antérieur)

- A Francis McCullough (tanner/tanneur)
- B Beauregard Press
- C Former Landfill Site/Ancienne décharge
- D Bytown Gasworks

Tree and Shrub Inventory/Inventaire des arbres et arbustes

- * 1 (vegetation subunit/sous-unité de végétation)

* (see accompanying chart for details)
* (voir les détails dans le tableau ci-joint)

PLAN TITLE / TITRE DU PLAN :

Environmental Concerns/
Préoccupations liées à l'environnement

SCALE / ECHELLE

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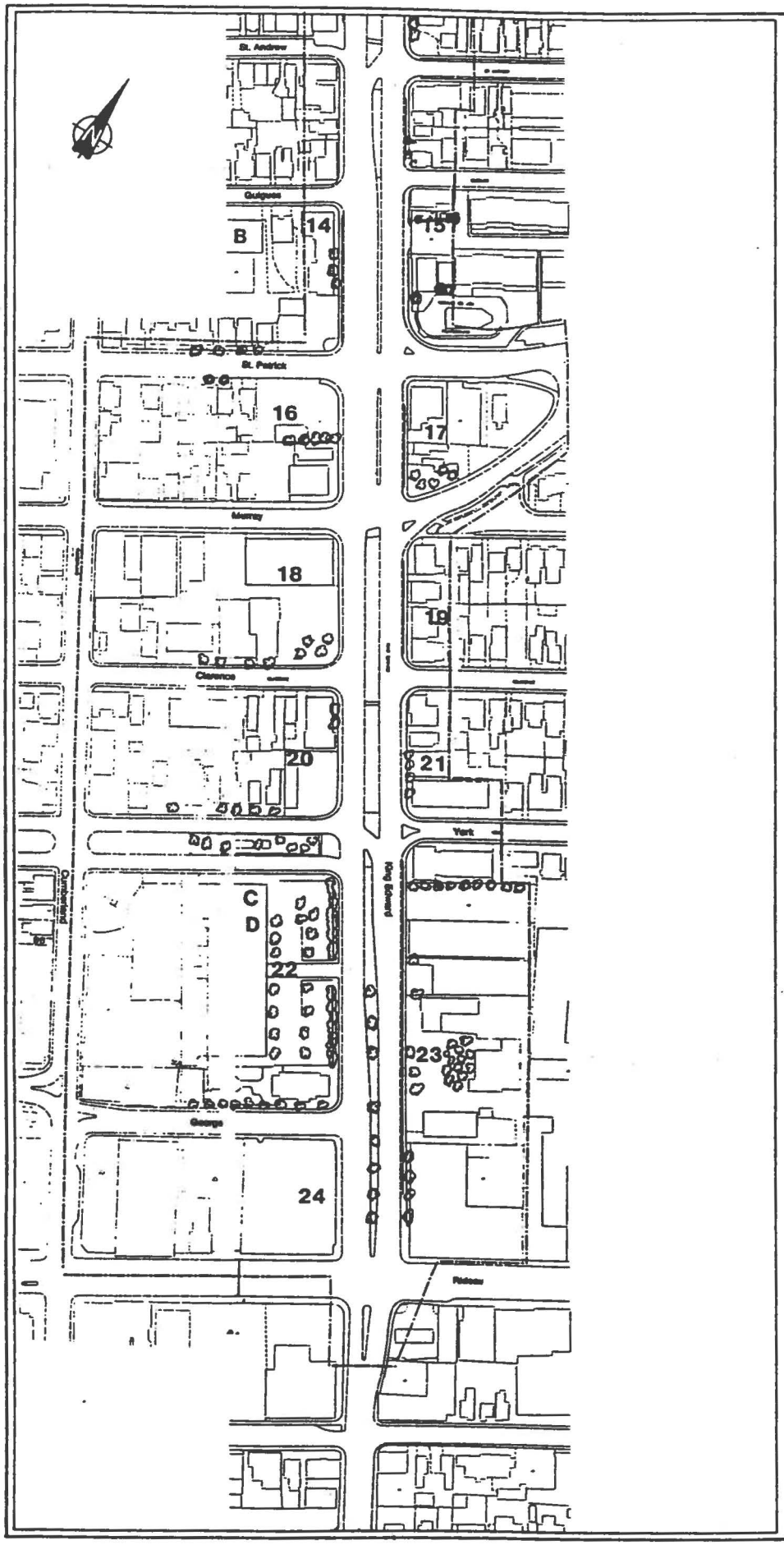
PLAN NO / PLAN N°

14



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PLAN TITLE / TITRE DU PLAN

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0 10 30 50

PLAN NO / PLAN N°

14

Subunit	Tree and Shrub Species	Comments
1	*Trees:* Manitoba maple , sugar maple, largetooth aspen, white elm, basswood, crack willow, Norway spruce and a Scot's pine *Shrubs:* tartarian honeysuckles, common buckthorn, nannyberry	- all trees are in good condition and have been tagged by the NCC - tree resources in this area are restricted primarily to the banks of the Rideau River
2	*Trees:* Austrian pine, sugar maple, bur oak, Norway maple, basswood and crab apple	- all trees in this subunit have been planted and tagged by the NCC
3	*Trees:* 1 oak, 1 white elm and 4 Colorado blue spruce (planted and tagged) *Shrubs:* tartarian honeysuckles and lilacs	
4	*Trees:* largetooth aspen, Manitoba maple, white elm *Shrubs:* tartarian honeysuckles	
King Edward Park	*Trees:* sugar maple, weeping willow, silver maple and red ash	- all of the mature specimens are in good condition and have been tagged by the NCC
THE REMAINING SUBUNITS LACKED ANY SIGNIFICANT TREE RESOURCES IN TERMS OF QUALITY AND QUANTITY		
5	*Trees:* 3 immature largetooth aspens	
6	* no tree or shrub species	
7	* nothing along King Edward Avenue, except those in King Edward Park	- includes median
8	* no tree or shrub species	
9	*Trees:* ~ 10 immature Manitoba maple, ash and willow trees *Shrubs:* ornamental shrubs	- includes median
10	* no tree or shrub species	
11	*Trees:* a few immature red ash, ornamental maples *Shrubs:* barberry bushes	- includes median
12	* no tree or shrub species	
13	*Trees:* 1 immature eastern white cedar *Shrubs:* ornamental shrubs	- trees and shrubs are in poor condition - includes median
14	*Trees:* eastern white cedar *Shrubs:* juniper shrubs	
15	* no tree or shrub species	- includes median
16	*Trees:* ~ 6 immature Manitoba maples	
17	*Trees:* 1 mature Manitoba maple, 5 planted Austrian pine	- trees in poor condition; includes median
18	*Trees:* 4 immature Manitoba maples	- one tree has a 4-stemmed trunk
19	* no tree or shrub species	- includes median
20	*Shrubs:* 2 cedar shrubs	
21	*Trees:* 5 immature eastern white cedar	- includes median
22	*Trees:* ~ 24 immature planted maples *Shrubs:* ornamental shrubs	
23	*Trees:* ~ 10 immature Manitoba maples, 2 semi-mature Manitoba maples, 3 planted red ash, 9 Austrian pine, 4 largetooth aspen, 4 planted immature maples, planted ornamental trees	- includes median
24	* no tree or shrub species	

Location	Tree and Shrub Species		Comments
* St. Patrick Street (west of King Edward Avenue)	*Trees:*	4 planted red cedars	
	Shrubs:	2 cedar bushes	
* Murray Street (west of King Edward Avenue)		* no tree or shrub species	
* Clarence Street (west of King Edward Avenue)	*Trees:*	3 mature silver maples, 4 ornamental trees	
	Shrubs:	2 cedar bushes	
* York Street (west of King Edward Avenue)	*Trees:*	maples, ~ 6 cedars, 1 mature basswood	- all trees and shrubs are in good condition
	Shrubs:	ornamental shrubs, ornamental juniper bushes	
* George Street (west of King Edward Avenue)	*Trees:*	2 mature basswoods, 1 immature sugar maple, 1 immature oak, 2 immature white elms, 3 semi-mature Manitoba maples	- all tree species on north side of street
	Shrubs:	2 landscape cedar bushes	

*** The sidestreets lacked any significant tree resources in terms of quality and quantity ***

The most significant tree resources in the study area were:

1) King Edward Park, located between Cathcart St. and Sussex Dr. on the east side of King Edward Ave.; and,

2) the Pearson building property – External Affairs, on the west side of King Edward Ave. north of the MacDonald–Cartier overpass.

5.3 Analysis of Inventory Findings

Based on an analysis of the inventory it was determined that the majority of the study area lacked any quality or quantity of tree cover. Most of the treed vegetation resources from Rideau Street north to Cathcart Street consisted of immature softwoods (Manitoba maple), planted ornamentals (red ash, Norway maples) and landscape shrubs (barberry, juniper).

Only two areas with quality tree species were found; 1) in King Edward Park (subunits 1 and 4); and 2) the Pearson building property - External Affairs (subunit 2).

King Edward Park contained natural mature sugar maple, silver maple, crack willow, weeping willow and planted Scot's pine, Norway spruce and sugar maple. All of these specimens were in good condition and restricted primarily to the manicured grassed sections of the park. The west bank of the Rideau River was naturally treed with common immature to mature white elm, white ash, sugar maple, basswood and largetooth aspen.

The Pearson building property - External Affairs (subunit 2) contained mostly immature to semi-mature planted Austrian pine, Norway maple, crab apple and basswood on manicured grassed lawn. All of these specimens were in good condition and well maintained.

Parts of George Street and Clarence Street had a few mature silver maple and basswood trees all in good condition.

5.4 Former Industrial Sites

Former industrial sites within the Study Area were identified from a report prepared for the City of Ottawa (Mapping and Assessment of Former Industrial Sites; *City of Ottawa*). These sites are noted because of their potential for contamination due to previous industrial uses. The main significance of these sites for the purposes of the Community Improvement Plan is for redevelopment. If these sites are to be redeveloped, or if they were to be the subject of improvements requiring construction or excavation, remediation may be required. These sites are listed in the following chart.

Site No.	Site Name	Address	Current Use	Period of Operation	Industry Hazard Rating
140	Bytown Gasworks	Southwest corner King Edward Ave. & York St.	Government of Canada	1854-1915	high [1]
160	Benjamin Applebaum sheet metal products	302 Murray St.	Office Building	1930-1970	high
162	Beauregard Press	222 Guigues Ave.	Multiplex Residential	1935-1970	medium to low
164	Francis McCullough, tanner	324 Cathcart St.	Single-family residential	1895-1905	high
L-34	Landfill	West bank of Rideau River, Cathcart to St. Patrick			
L-37	Landfill	Southwest corner of King Edward and York			

1 This was one of the largest city gasworks in Ontario, producing ammonium sulphate, coal gas, tar, and other. A 1986 site investigation found coal tar wastes on the site and possible migration of these wastes off of the site. Environmental Impact Assessment of the Interra investigation suggests potential off-site migration of coal tar and contaminated groundwater and potential exposure of workers to tar in basement sump.

The most significant of these sites is the Bytown Gasworks, which was located at the southwest corner of King Edward Avenue and York Street. Public Works Canada purchased this site from the Bank of Canada in the early 1980's. When Public Works began construction to expand the building, they discovered coal tar (from disposal in 'tar pits') during the course of excavation.

Currently, Public Works Canada treats all of the water pumped out of the basement sump pump to ensure that coal tar residue does not enter the sewer system.

Descriptions relating to other industrial sites identified are as follows.

Refined Petroleum and Coal Products Industries

Site 140 (Bytown Gasworks)

Refined petroleum and coal products industries have a high industry waste hazard rating. They all involve the production or use of coal tar, and in some cases there may be bulk storage of these products, either in above ground tanks or subterranean wells.

Bytown Gasworks was a very large operation, in fact one of the largest city gasworks in Ontario, producing ammonium sulphate, coal gas, tar and other products.

Fabricated Metal Products Industries

Site 160 (Benjamin Applebaum, sheet metal products)

Fabricated metal products industries have a high industrial waste hazard level with waterborne wastes being the major concern. The most significant pollution problem is drag-out, the clinging film of plating chemicals, and the resultant contaminated rinse water.

Printing, Publishing and Allied Industries

Site 162 (Beauregard Press)

This type of industry has a medium to low industrial waste hazard level. Currently, the site is occupied by a multi-family residential building.

Leather and Allied Products Industries

Site 164 (Francis McCullough, tanner)

Francis McCullough ran a small operation prior to 1920's. Leather and allied products industries generally have a high industrial waste hazard level and tanners are historically among the largest producers of industrial organic wastes. Practically all tanneries discharged their waste into streams, lakes or sewer systems without treatment. At present, Single Family homes are located on this site.

5.5 Conclusions and Implications

The environmental quality for residents adjacent to King Edward Avenue suffers due to its transportation function, and lacks a significant number of trees. A tree and shrub inventory revealed that the majority of the study area lacks significant quality or quantity tree cover. The trees in the study area were typical for an urban setting. The most common species were ornamentals such as junipers, red ash and non-ornamentals, such as Manitoba maple, sugar maple and eastern white cedar. The most significant tree resources in the study area were in King Edward Park located between Cathcart Street and Sussex Drive on the east side of King Edward Avenue, and at External Affairs on the west side of King Edward Avenue north of the MacDonald-Cartier overpass.

The study area also includes four former industrial sties, where the potential for contamination has been identified. The most notable of these is the site of a former coal gas plant at the southwest corner of King Edward Avenue and York Street. This is mainly a concern if these sites are to be redeveloped.

The environmental analysis of the study area reveals a strong association between environmental quality, and the function of King Edward Avenue as a major interprovincial commuter and truck route. This function provides the greatest constraint to improving the environment. The transportation function of King Edward Avenue creates negative externalities that degrade the environment in the form of noise, fumes and vibration. In addition, the traffic operational requirements for King Edward Avenue, and underground utilities limit the opportunities to provide positive environmental amenities, such as trees and other landscaping features.

No specific quantitative analyses of the environmental impacts of transportation activities on King Edward Avenue have been undertaken, however, on the basis of subjective observations and past studies, the following comments are provided:

- air quality adjacent to King Edward Avenue is anticipated to be within Provincial guidelines due to the presence of significant areas of open space, and primarily residential development of the adjacent areas.

- noise levels are anticipated to be somewhat higher than other urban Regional Roads in view of the traffic volumes, percentages of heavy trucks and operating speeds. However, landscaping features and moderated traffic speeds may mitigate this to some extent.

Demography

Contents

6.1 Socio-Economic Profile

6.1.1 Methodology

The basis of this socio-economic profile is the 1986 Census of Canada. Although the 1991 Census of Canada has been carried out, this data is not available to this study. More recent municipal assessment data from the City of Ottawa is available for the year 1990; however, this data is available only by census tract, and is therefore not geographically specific to this study and has not been referenced.

A demographic profile of the specific Study Context area of the King Edward Avenue Community Improvement Plan has been generated by *Compusearch Market and Social Research Limited*. In addition, a "Lifestyles" cross-tabulation report has been produced which summarizes the make-up of the study area population by recognizable socio-economic categories. The Study Context area has been profiled using the entire City of Ottawa as a benchmark. The detailed profile is included in Annex D to this report. Hereafter, the Study Context area will be referred to as simply, "the area".

6.1.2 Population by Age and Sex

The area was home to 6,548 residents in 1986, which constitutes 2.2% of the entire City of Ottawa population of 300,763. The population of the area grew by 14.8% from the period of 1981 to 1986 which represents a moderately high rate of growth. This growth rate exceeded the overall City of Ottawa rate of 10.7%.

The male-female ratio is 52:48 indicating that there is a slightly greater proportion of males. This is contrary to the Ottawa and provincial sex split, where females normally predominate.

Over 40% of the area population is compressed into the age cohort of 20 - 34 years. By comparison, only 26% of the City of Ottawa population is aged 20 - 34. At the other end of the age spectrum, the study area is composed of only 9.3% of seniors aged 65+, compared to 14.1% for the entire City.

It is clear that the area is dominated by young adults, and that there are proportionately fewer children and senior citizens.

6.1.3 Household Structure

The 6,548 residents are composed of 2,956 households. Of these, the majority (40.3%) are one-person households. The average household size in the area is 2.2 persons which is smaller than that of the City of Ottawa.

Of the 2,956 households, 1,255 (42.5%) were family households as defined by Statistics Canada. This is a significantly smaller percentage than for the City of Ottawa (56.8%). Of the family households, the most significant indicator is the occurrence of lone parent families. There are 340 single parent families which constitutes over one-quarter of all families in the area. Of the non-family households, 75.6% were people living alone.

To conclude, this area is composed of predominantly smaller, non-family households.

6.1.4 Ethnicity and Education

Of the residents in the study area, 41.6% have French as their Mother Tongue, as opposed to 38.9% with English. The remaining 19.5% cite a range of languages, with Vietnamese being the one significant single Mother Tongue (2.7%). The area is obviously more francophone than the City of Ottawa per capita, yet there is a fairly equal distribution of French and English residents.

There is an above average percentage (16.9%) of study area residents with education limited to less than Grade nine, compared to 9.5% for the City of Ottawa. Otherwise, the percentage of residents with at least some university education (31.9%) is relatively consistent with the city-wide average (30.3%), as is the overall education profile.

6.1.5 Employment and Income

At 11.9%, the unemployment rate is higher than Ottawa (6.6%) and regional rates. However, this rate is consistent with other older inner city areas and there is no evidence of a locally significant unemployment issue.

The predominant occupation of study area residents is in the Service industries. This is followed by Clerical and/or Related jobs. These sectors employ 41.3% of the study area population. There is also an above average frequency of blue collar occupations including Construction, Transportation, Production and Repair, and Machining. Consequently, the average annual per capita income of the study area was only $11,834 in 1986, which is close to 30% less than the overall City of Ottawa average income level for that year.

The area residents are generally less educated, lower paid, and employed in more non-professional occupations when compared to the City of Ottawa as a whole.

6.1.6 Lifestyles Profile

There were 2,916 households included in the Lifestyles analysis in Annex D. The following table summarizes the households in the Study area by "Lifestyle Group", as determined by Compusearch:

Lifestyle Group	% of Total Households
Working (Lower Middle) Class	13.9
Lower Income	5.2
Young Singles	38.1
Young Couples	20.6
Empty Nesters	7.5
Old and Retired	7.7
Ethnic	6.9
Total	100.0

Source: COMPUSEARCH

The Young Singles group is clearly the dominant group. Within this group, 727 households are described as "young, white collar, very well educated mobile singles and couples in older, rented multiple dwellings". The next most common sub-group consists of 404 households described as "young, low income couples in rented low-rise and townhouse multiple dwellings; some french".

This lifestyles analysis confirms that this area is dominated by young singles and young couples usually without children, in rented dwellings. These young residents are a mix of well-educated white collar workers and less educated blue collar workers, all with below average income.

6.2 Housing Analysis

6.2.1 By Type and Tenure

There are 2,855 dwellings in the area as reported in the 1986 Census of Canada. Of these, only 75 dwellings were single detached, with the remainder being apartment buildings five stories and up (1,105 units), and other multiple dwellings including row housing (1,695 units).

86.7% of all dwellings are rental housing. This is a much higher percentage than found in the City of Ottawa as a whole (60.7%). Of the ownership housing, 45 units were single detached, 25 were condominium apartments, and 305 were other multiples.

6.2.2 Age and Condition

A walking survey of the area concludes that dwellings in this area are a mix of ages and conditions. It is apparent that this area originally contained more single family homes than exist today, and that in many blocks there has been residential redevelopment and intensification over time.

At some locations, such as between Cathcart Street and Bruyère Street east of King Edward Avenue, entire city blocks have been redeveloped from low density to medium density housing. On other streets, such as on Guigues Street and Boteler Street, high density high-rise apartment buildings have been introduced.

The remaining original homes on side streets are generally two storey singles, clad in red-brick or various types of siding. There are also some original two storey red-brick row dwellings which front onto King Edward Avenue, north of St. Patrick Street.

The Census of Canada records indicate that in the general area surrounding King Edward Avenue (Census Tracts 53,56), dwellings have the following age structure:

Period of Construction	% of Total Private Dwellings
< 1946	22.0
1946 - 1960	10.8
1961 - 1970	22.2
1971 - 1980	37.3
1981 - 1986	7.6
Total	100 %

Source: Census of Canada, 1986

This information indicates that the majority of dwelling units were constructed in the 1960's and 1970's. It is likely that many of the 1,105 high rise apartment units were constructed during this period. Otherwise, one-third of all dwellings were constructed prior to 1960, and two-thirds of these prior to 1946.

Dwellings in the area appear to be in various states of repair and upkeep. Some streets are becoming "gentrified" as owners are moving into the area and investing money in their homes. The area benefits from a strategic inner city location, close to the popular Byward Market, and close to employment opportunities.

The land values of individual lots are expected to increase and the likelihood of land assemblies and large scale redevelopment will thus diminish. In addition, it is expected that there will be continued investment in the entire neighbourhood and in homes which have been allowed to fall into disrepair.

6.2.3 Non-Profit Housing

There are a total of 335 non-profit housing units within or abutting the study context area. The majority of these dwellings are in municipal non-profit projects provided by the City of Ottawa through *City Living*. *City Living* operates two housing projects in the study context area totalling 182 units, as well as three other properties in the immediate vicinity. The following is a summary of sites within the study context area:

#303 King Edward Avenue

- This is a 46 unit apartment building which was built in 1962 and purchased by the City of Ottawa in 1986. The tenure is mixed.

Beau Sejour I - V

- This property is located on Nelson Street at St. Patrick Street. The total number of units is 136. The original phases (123 units) were constructed in 1978, with later phases in 1981 (8 units) and 1985 (5 units). These are townhomes designed for families.

There are three other *City Living* properties which abut the study area, as follows:

#200 Cathcart Street

- This is a 35 unit townhouse project constructed by *City Living* in 1983. This housing is targeted at families.

#181 Bruyère Street

- This is a four storey apartment building constructed as a seniors project. It was constructed in 1983 in conjunction with the above property.

#312 Cumberland Street

- This site at the north-west corner of Cumberland and Clarence Streets was constructed by City Living in 1990/91. It consists of 84 apartments with one or two bedrooms.

In addition, there are two known housing co-operatives in the study context area:

Cooperative d'habitation de la Salle

- This project is located in the area between Guigues Avenue and St. Patrick Street on Michel Riel (Priv.), on the east side of King Edward Avenue. It consists of 84 townhouses targeted to families and singles with priority given to Lowertown residents.

Centretown Citizens Cooperative

- This property is located at 110 Nelson Street and was built in 1989. It is a multiple-family project which provides 69 dwellings targeted to families and singles.

6.3 Conclusions and Implications

Residents in the study area are primarily young renters in multi-family units. As a result, they do not make up an established cohesive community. In particular, King Edward Avenue has served to divide a community which already lacks political clout due to its diversity. Improvements to King Edward Avenue have the potential to reduce the physical barriers between Lowertown East and West, and thus promote a greater sense of unity among residents.

Urban Design

Contents

7.1 Existing Character

Today, King Edward Avenue is typified by a broad expanse of roadway suffering from poor spatial definition. While there is an established line of buildings, particularly on the east side of King Edward Avenue, the actual street edge is poorly articulated. The open central median does not serve to divide the road so much as to be a left-over "no-man's land" isolated by traffic.

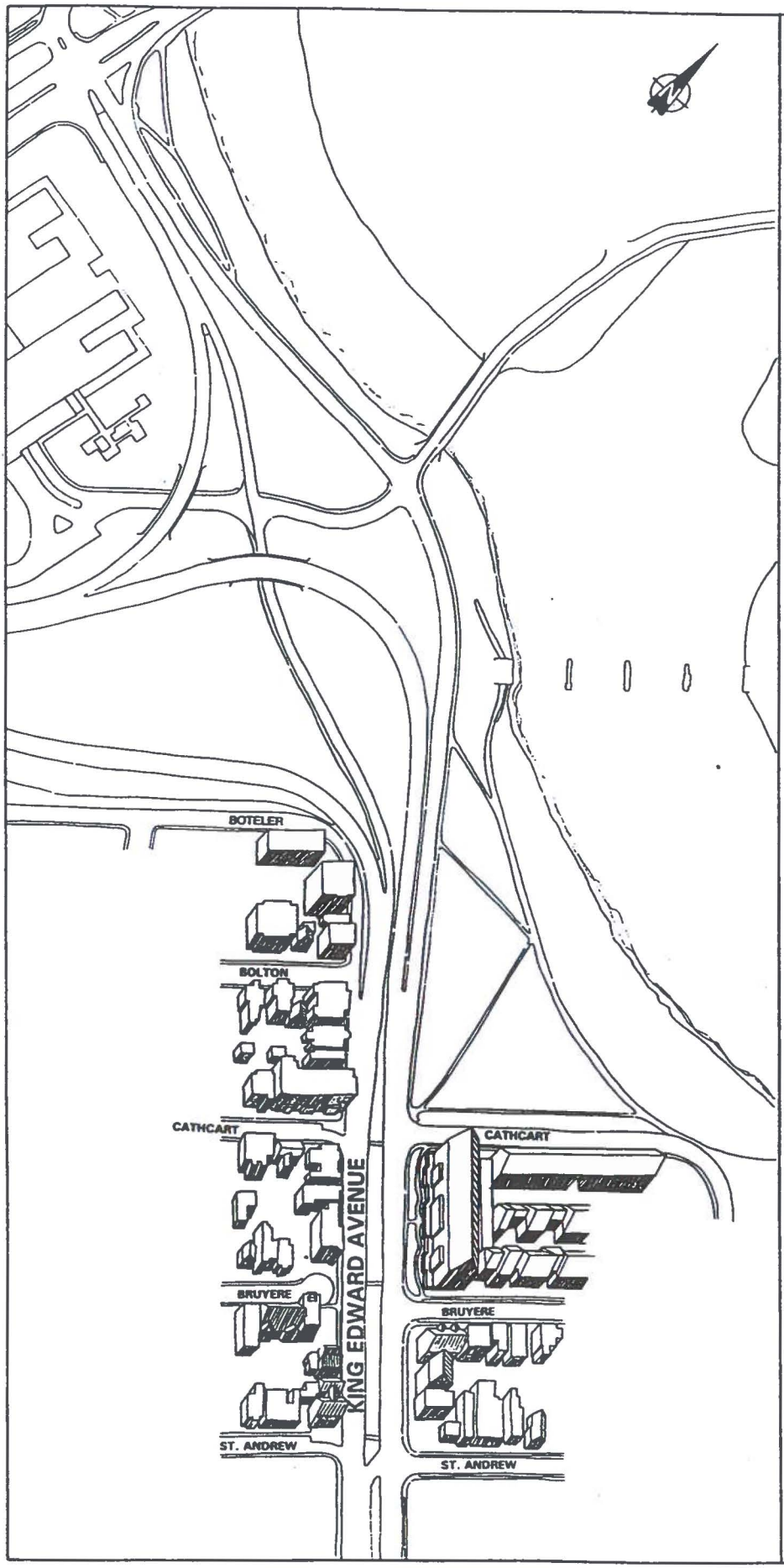
The south end of King Edward Avenue has a more urban sense, largely defined by the larger buildings at Rideau Street, with future reinforcement possible upon development of the northwest corner of the intersection. The north end is characterized by residential buildings and parkland; however, they are compromised by the highway ramp configuration and the dominance of the interprovincial connection over the sense of a city street. Once again, the green spaces seem left over and isolated between roadways. The small portion of north-bound roadway between the Minto bridges and Sussex Drive has a parkway character which distinguishes it so completely from the remainder of King Edward Avenue as to disassociate it entirely from the remainder of the street.

There exists today a transition from river edge park, through residential, to mid height mixed use to the urban scale buildings of the Rideau Street intersection (see *Plan 15*). The highway character and scale of King Edward Avenue seem to detract from this interesting transition and weaken the sense of connection with Sussex Drive and City Hall at the north end.

There are several notable heritage buildings along the street which are effectively lost between newer structures. The street edge does not acknowledge these, or the different uses at opposing ends of King Edward Avenue.

7.2 Pedestrian Movements

King Edward Avenue acts as a barrier between east and west movements. North-south movements are most interesting on the northern, residential portion of the street. The remainder of the street offers little interest along the edges, nor separation from the highway character of the road. For this reason pedestrians and cyclists tend to move north and south parallel to King Edward Avenue within the adjacent neighbourhoods, emerging only to cross the street.



AVENUE
KING EDWARD
AVENUE

Ottawa

COMMUNITY IMPROVEMENT PLAN/ PLAN D'AMELIORATIONS COMMUNAUTAIRES

PREPARED BY / PREPARE PAR:

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- CORUSH SUNDERLAND WRIGHT LIMITED
- ESSIAMBRE PHILLIPS ASSOCIATES LTD.
- BRETHOUR RESEARCH ASSOCIATES LIMITED

LEGEND / LEGENDE:

PLAN TITLE / TITRE DU PLAN:

EXISTING MASSING AXONOMETRIC

AXONOMETRIE DES VOLUMES EXISTANTS

SCALE / ECHELLE:

(1:1000 VERTICAL & HORIZONTAL)

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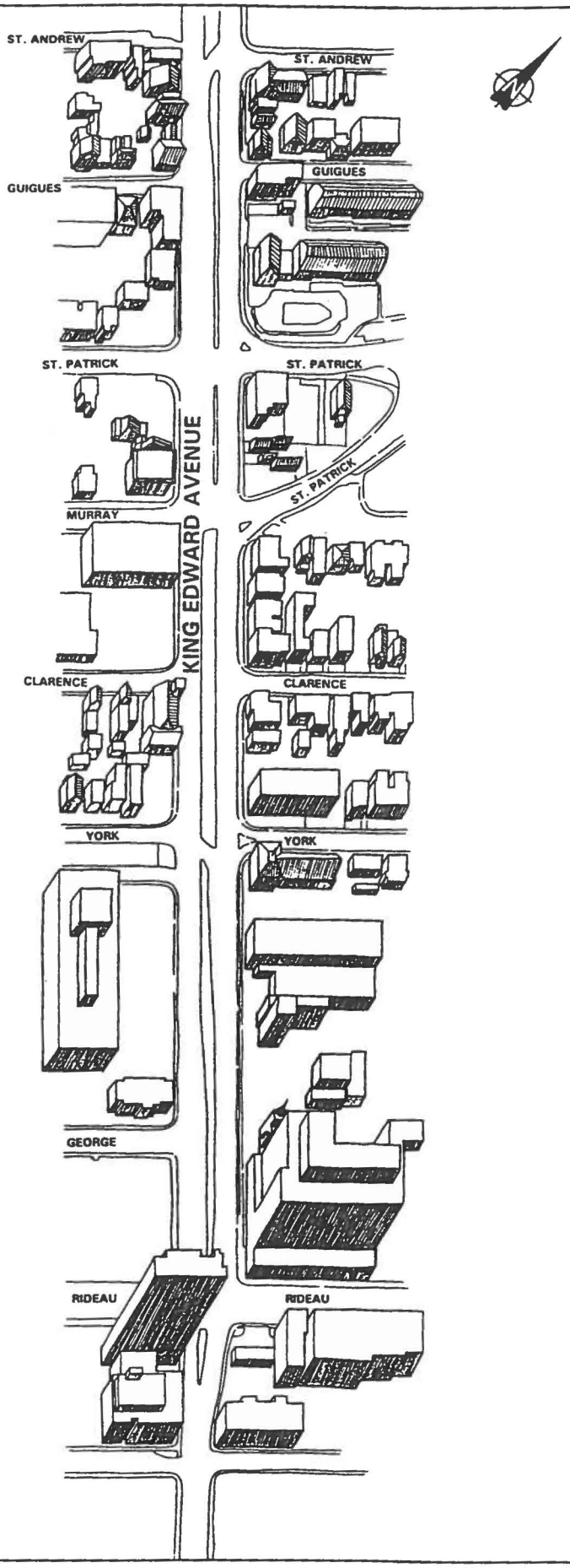
PLAN NO/. PLAN N°

15



AVENUE KING EDWARD AVENUE

Ottawa

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LEGEND / LEGENDE

PLAN TITLE / TITRE DU PLAN

EXISTING MASSING AXONOMETRIC

AXONOMETRIE DES VOLUMES EXISTANTS

SCALE / ECHELLE

1:1000 (VERTICAL & HORIZONTAL)

0 10 20 30 50

PLAN NO / PLAN N°

15

7.3 Undistinguished Arrivals and Connections

The most strongly defined point of arrival occurs when travelling north-bound and descending the hill in the vicinity of Daly and Besserer Streets. Views are limited by the existing tall buildings on the southwest and northeast corners of Rideau Street, and focus on City Hall as the north terminus of King Edward Avenue. Once on the level portion of the street, the open character and discontinuous building edge detract from the potential City Hall anchor at the north end, and gateway of buildings at Rideau Street.

York, Murray and St. Patrick Streets are potentially strong gateways west to the Market and Centretown districts. Today they are undistinguished largely because of the open, poorly defined nature of King Edward Avenue, which does not enunciate these nodes.

The sense of arrival and connection could be strengthened by clearly defining the east and west sides of the street, reinforcing the north-south connection between City Hall and Rideau Street. Breaking these strong edges at important intersections would emphasize gateways on the cross axis of York, Murray and St. Patrick Streets.

7.4 Conclusions and Implications

The current urban design features of King Edward Avenue leave much room for improvement. As noted, King Edward Avenue has considerable potential for interesting views, gateways, well-defined street edges, greater attention to heritage buildings and a stronger connection to City Hall. The existing streetscape along King Edward Avenue is bleak, and improvements would assist in achieving a better pedestrian environment, slower traffic speeds, greater buffering of pedestrians and housing from the street, and have opportunity for street-level commercial enterprises at the south end.

Specific urban design solutions will be proposed in the Community Improvement Plan.

Heritage

Contents

8.1 Existing Conditions

The King Edward Avenue Study Area contains approximately 90 buildings of which 43 (48%) are of varying heritage value.

The identification and classification of these buildings derive from these studies:

a) City of Ottawa staff study (1979-1985)

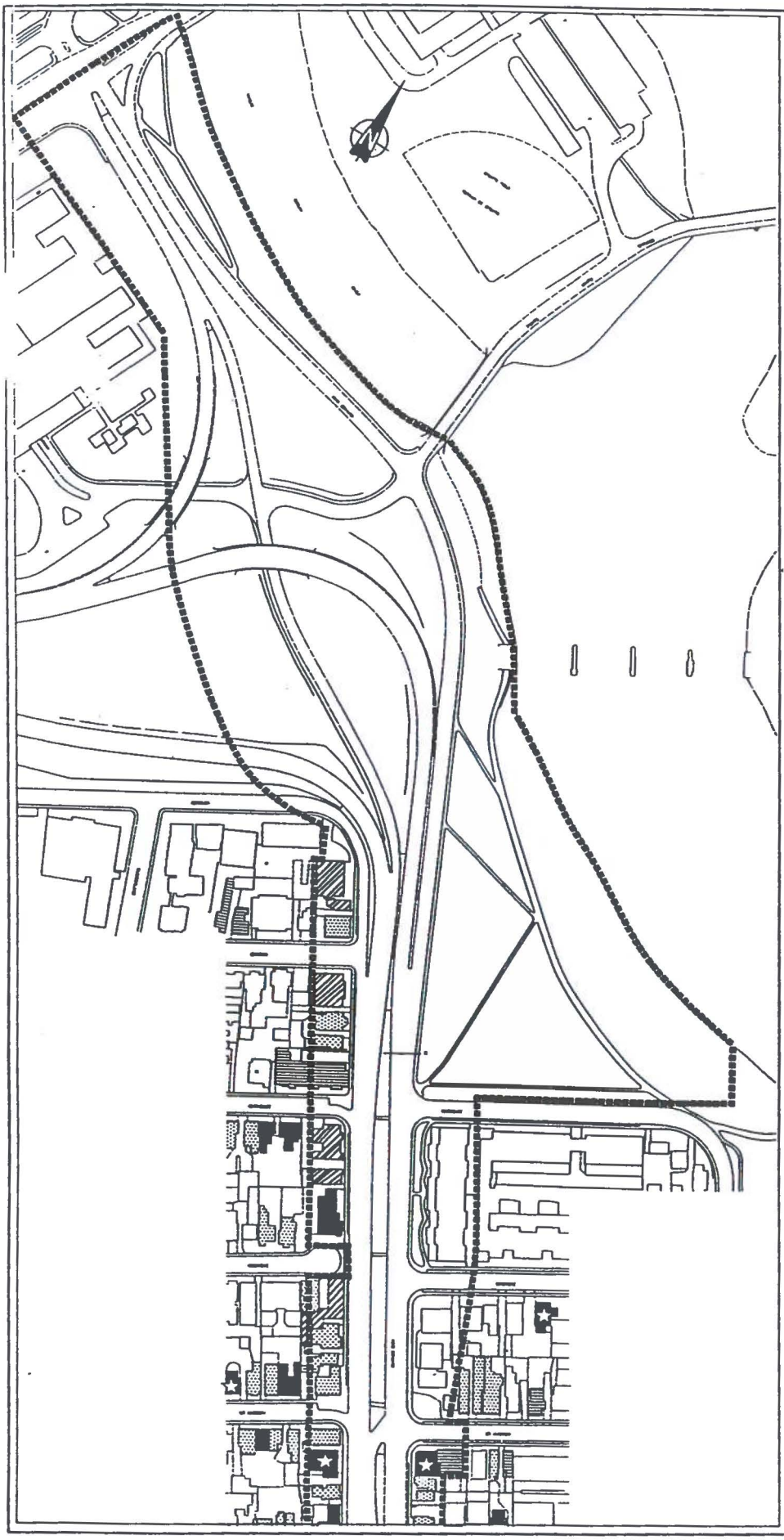
b) The Byward Market Heritage Conservation District Study by consultant Julian Smith (1990)

c) The Lowertown West Heritage Conservation District Study

Within the King Edward Avenue Study area the 43 buildings of heritage value are classified in accordance with the City of Ottawa evaluation system as follows:

Category 1	(designated under Part 4 of Ontario Heritage Act)	3
Category 1	(not designated, but highly significant heritage resource)	4
Category 2	(heritage interest, significant heritage resource)	13
Category 3	(compatible resources that contribute to heritage character of the area)	13
Category 4	(buildings of limited value within existing or proposed Heritage Conservation District)	10
Total		43

The location of these buildings within the King Edward Avenue Study area are indicated in plan 16.



AVENUE
KING EDWARD
AVENUE

Ottawa

COMMUNITY IMPROVEMENT PLAN/ PLAN D'AMELIORATIONS COMMUNAUTAIRES

PREPARED BY / PREPARE PAR :

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- CORUSH SUNDERLAND WRIGHT LIMITED
- ESSIAMBRE PHILLIPS ASSOCIATES LTD.
- BRETHOUR RESEARCH ASSOCIATES LIMITED

LEGEND / LEGENDE :

STUDY AREA / SECTEUR D'ETUDE

HERITAGE SURVEY AND EVALUATION
RELEVE DU PATRIMOINE ET EVALUATION

- Designated Buildings (Part IV)
- Bâtiments Désignés (Section IV)
- Category / Catégorie 1
- Category / Catégorie 2
- Category / Catégorie 3
- Category / Catégorie 4
- Not Categorized

PLAN TITLE / TITRE DU PLAN :

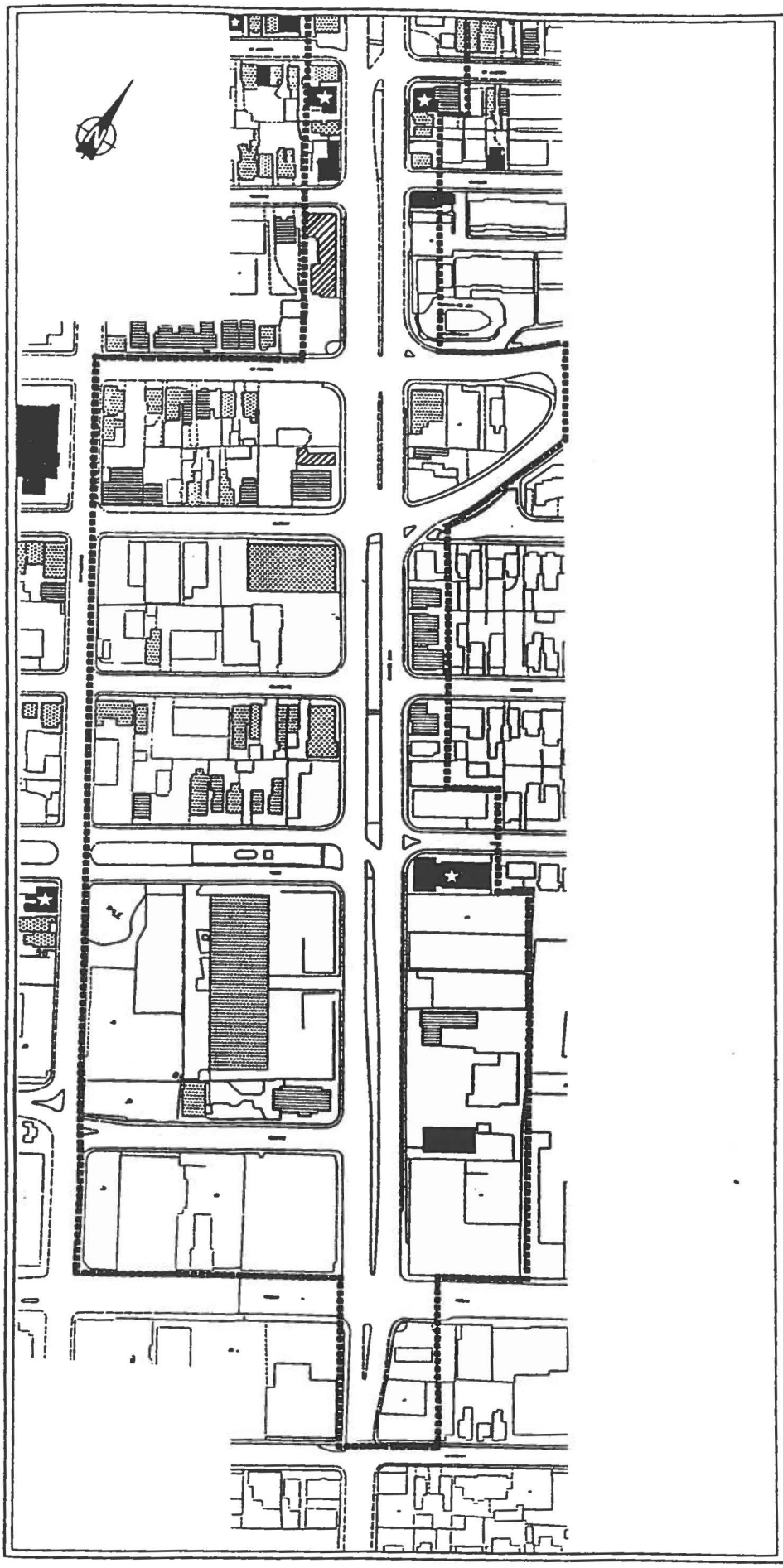
HERITAGE
PATRIMOINE

SCALE / ECHELLE :

0 10 30 50

PLAN NO / PLAN N° :

16



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LEGEND / LEGENDE

STUDY AREA / SECTEUR D'ETUDE

HERITAGE SURVEY AND EVALUATION
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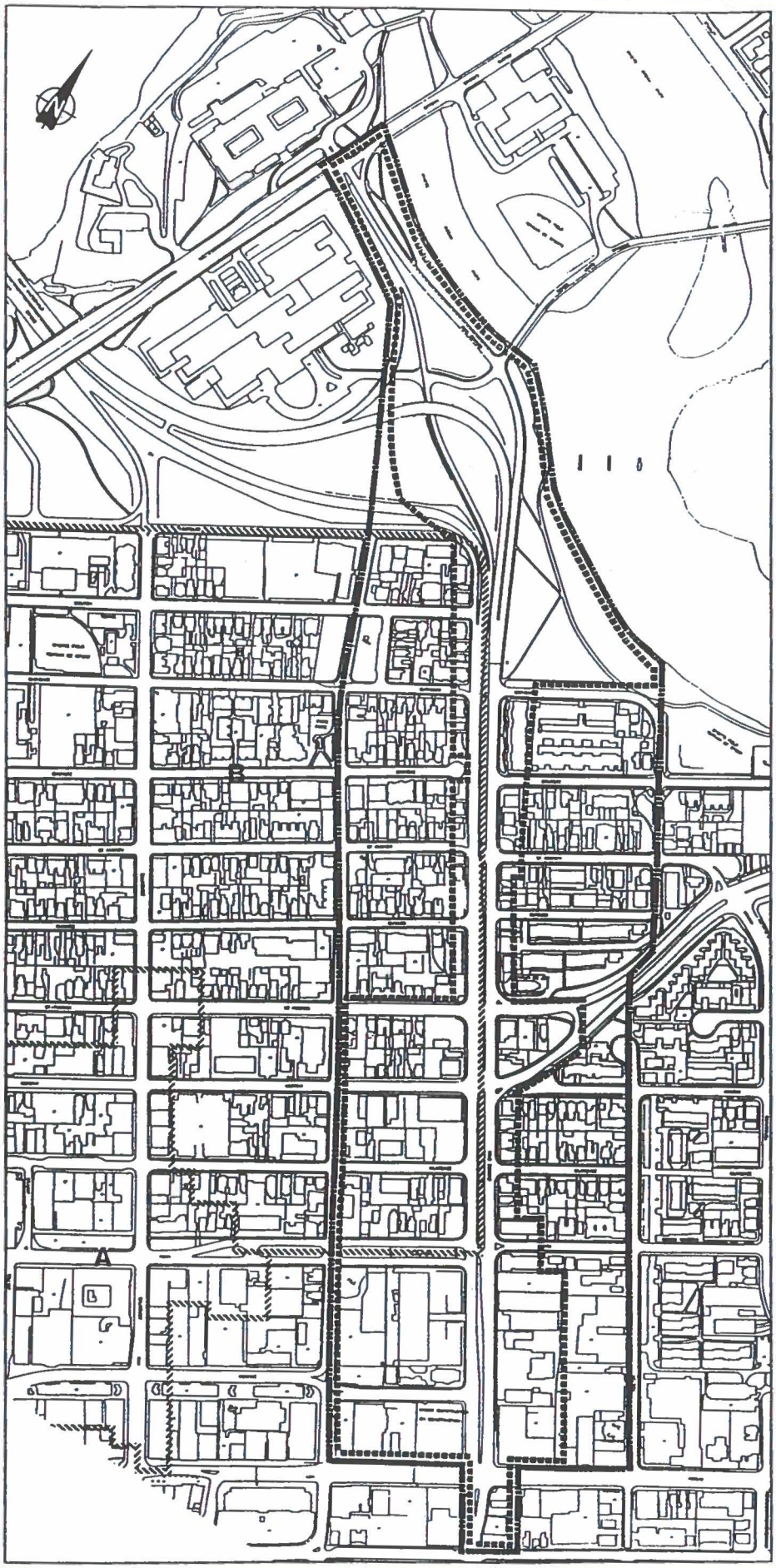
HERITAGE
PATRIMOINE

SCALE / ECHELLE

0 10 30 50

PLAN NO / PLAN N° :

16



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LEGEND / LEGENDE

STUDY AREA / SECTEUR D'ETUDE

STUDY CONTEXT / CONTEXTE DE L'ETUDE

DISTRICT A
BYWARD MARKET
HERITAGE CONSERVATION DISTRICT
MARCHE BY
DISTRICT DE CONSERVATION DU PATRIMOINE

DISTRICT B
LOWERTOWN WEST
HERITAGE DISTRICT STUDY AREA
BAS VILLE OUEST
SECTEUR D'ETUDE DU DISTRICT PATRIMONIAL

PLAN TITLE / TITRE DU PLAN :

Heritage Districts
Districts de conservation du patrimoine

SCALE / ECHELLE :

0 20 50 m

PLAN NO / PLAN N° :

17

The type of protection for the buildings of heritage value within the King Edward Avenue Study area varies. The following summarizes the existing conditions.

Type of Protection	**Buildings in Category 1, 2, 3**
Part 4 Ontario Heritage Act	3
HR-1 zone	10
HC zone	1
City Ownership (Armand Paget C.C.)	1
No Protection	28
Total	**43**

Part of the objectives of the King Edward Avenue Community Improvement Plan will be to introduce a series of specific recommendations for heritage resource management as envisaged by Chapter 11 of the City of Ottawa Official Plan adopted by City Council in May, 1991.

9. Public Consultation

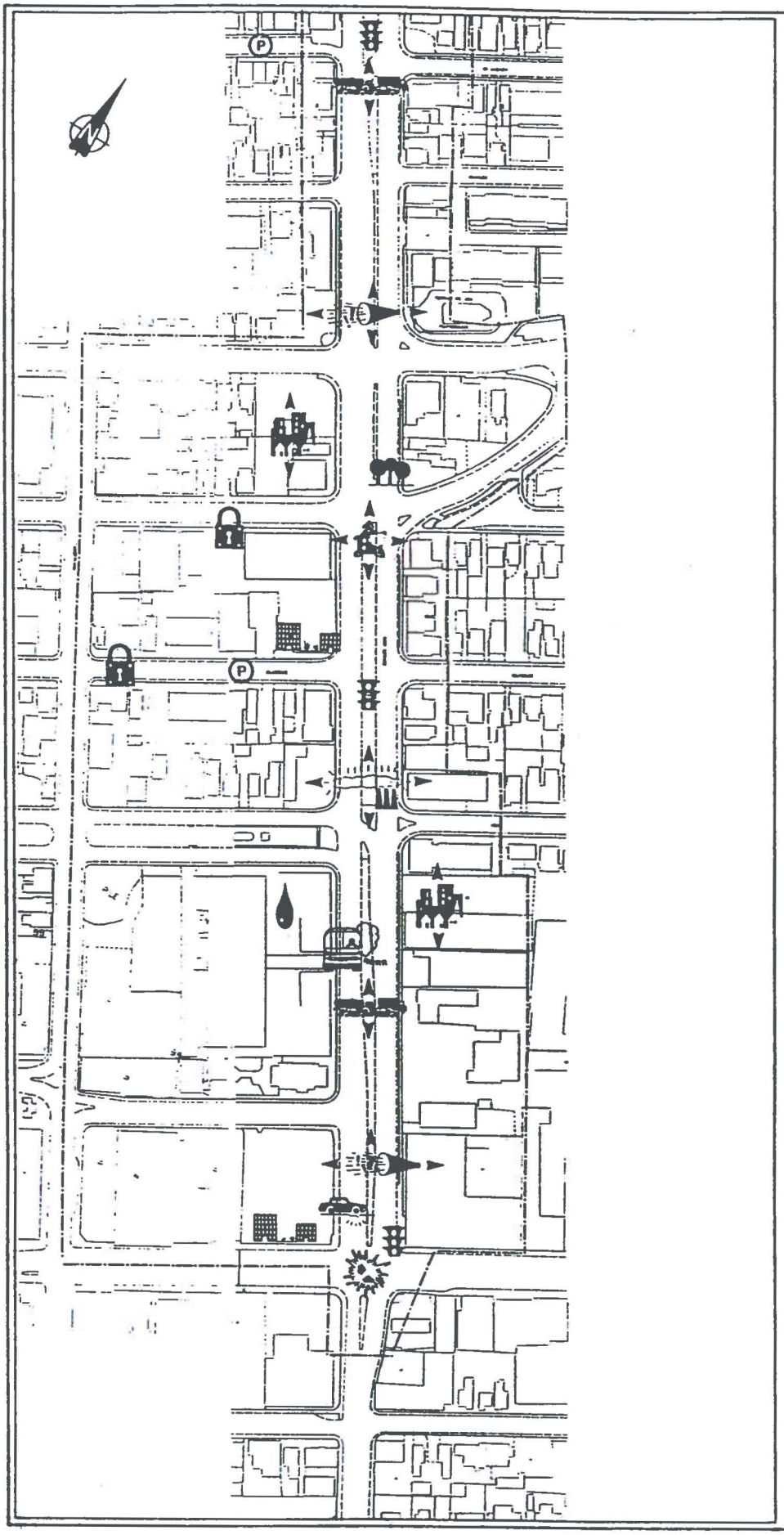
A public consultation process was undertaken in order to understand the implications of the existing conditions on King Edward Avenue for the community and other users. Public consultation was conducted through a Citizen's Committee and Open Houses.

In addition, community members were encouraged to contact City of Ottawa staff and consultants directly to express their concerns. All community residents were informed of the project, and opportunities to participate by mail. In addition, sandwich board signs were placed along the median of King Edward Avenue just before the first Open House to encourage commuters and other users of the Avenue to attend. The first Open House was held on 25 February 1992, and presented existing conditions in graphic form. Members of the public were encouraged to comment on existing conditions and how they affect them and their community. The exhibits at the Open House included a map, entitled *Public Concerns (Plan 18)*, indicating the location and type of community concerns expressed early on in the project. Comments at the Open House confirmed these as major concerns.

King Edward Avenue is a major interprovincial truck and commuter route. It forms a link between the MacDonald-Cartier Bridge and the Queensway for trucks, and to the Vanier Parkway for many commuters. Consultation with the community indicated that most concerns about King Edward Avenue relate to this function.

Major concerns include:

- high traffic volumes
- truck traffic, especially large, heavy trucks
- speeding
- the presence of STO buses at the time point between York Street and Rideau Street
- the lack of cross walks north of St. Patrick Street and for existing cross walks, signalization that favours vehicular traffic, and makes it difficult for pedestrians to cross
- parking along residential streets
- the lack of trees and planters
- noise, air pollution, fumes and vibration resulting from heavy traffic
- the lack of greenspace and visual appeal
- security
- the maintenance of residential housing and the mix of residential and commercial uses
- the urban design and architectural sensitivity of potential redevelopment, including building heights and setbacks



AVENUE KING EDWARD AVENUE

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LEGEND / LEGENDE

STUDY AREA / SECTEUR D'ETUDE

Noise	Bruit
Air pollution	Pollution atmosphérique
Vibration	Vibrations
Heavy traffic (trucks especially)	Véhicules lourds (camions en particulier)
Speeding	Excès de vitesse
Buses idling	Autobus tournant au ralenti
Coal tar spill	Déversement de goudron
Security	Sécurité
Parking	Stationnement
Intersection problems at King Edward-Rideau	Problèmes reliés à l'intersection King Edward - Rideau
Signalization	Signalisation
Aesthetics	Esthétisme
Road condition	Etat de la chaussée
Vacant lot	Terrain vague
Building heights and setbacks	Hauteur et alignement des immeubles

PLAN TITLE / TITRE DU PLAN

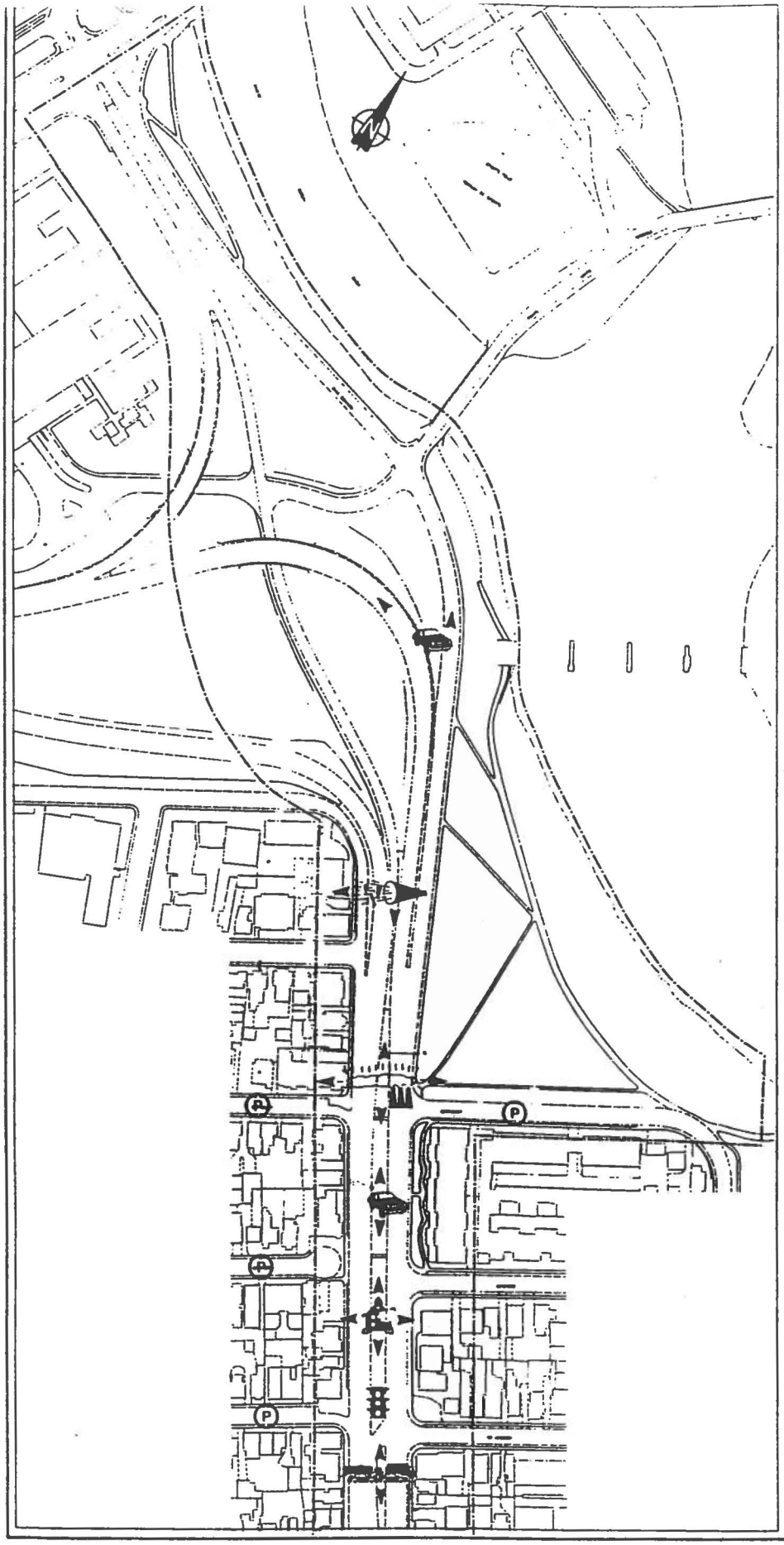
Public Concerns/
Préoccupations Publiques

SCALE / ECHELLE

0 10 30 50

PLAN NO / PLAN N°

18



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PLAN TITLE / TITRE DU PLAN

Public Concerns/
Préoccupations Publiques

SCALE / ECHELLE

0 10 30 50

PLAN NO / PLAN N°

18

Overall, the transportation function of King Edward Avenue make it a hostile environment for pedestrians. Current operations and signalization serve to exacerbate this situation. For example, community residents noted that it is very difficult to cross the east side of King Edward Avenue at St. Patrick Street due to the westbound channelized right turn lane. An almost constant flow of traffic makes this hazardous to pedestrians.

Community residents also indicated that it is almost impossible to cross King Edward Avenue at the north end where there are no signalized intersections beyond St. Andrew Street. There is a considerable demand for a safe pedestrian crossing in this area due to employment centres such as City Hall and External Affairs, and the proximity of the Market.

Another difficult place for pedestrians is at the intersection of King Edward Avenue and Rideau Street. In particular, the southbound truck traffic turning right onto Rideau Street is hazardous to both pedestrians and other vehicles due to the current geometry of the intersection. (The radius of this corner is too small to properly accommodate turning trucks.) In addition, people noted that the time allotted for pedestrians crossing King Edward Avenue at Rideau Street is too short to allow safe crossing for elderly people and children.

For pedestrians walking along King Edward Avenue, the close proximity of high volumes of cars and trucks at high speeds, (particularly at the north end) makes for an uncomfortable environment. Noise, fumes, dust, vibration, and feelings of insecurity were all reported by users of the street. Although a direct route for cyclists, King Edward Avenue is inhospitable for this purpose, as it is for pedestrians.

Residents living right on King Edward Avenue report being disturbed by the noise and vibration of traffic, particularly that of heavy trucks. Indeed, recent developments have been constructed with berming or walls to provide some insulation from the traffic.

In addition to the above problems caused by traffic, residents were also dismayed by the lack of aesthetic appeal on King Edward Avenue. It's function has led to the deterioration of the environment, making it difficult for trees and vegetation to survive. As a result, there is little in the way of vegetation and green space. King Edward Avenue residents were also concerned about the presence of coal tar at 350 King Edward Avenue, the former site of a major Coal Gas plant. Currently, water pumped out of a basement sump pump is treated to ensure that coal tar residue does not enter storm sewers. Previously, coal tar was encountered when the building on this site was expanded.

In general, community residents are concerned about the character of King Edward Avenue, and want to maintain and enhance its mix of residential and commercial uses. There is a desire to have community input into the development of guidelines for redevelopment, including height restrictions, building setbacks and architectural and heritage considerations.

In sum, King Edward Avenue residents would like the street to be an asset to the community, providing aesthetic appeal and vitality, with a pedestrian-friendly, market-like commercial focus that would unite the communities on both sides of the street. Currently, King Edward Avenue serves to divide the community, isolating Lowertown East and West from one another. King Edward Avenue is largely a noisy, dusty "no-man's" land of vehicular traffic and pavement that pedestrians avoid if at all possible.

10. Implications

The current transportation emphasis and physical environment of King Edward Avenue creates a hostile environment for pedestrians and cyclists, principally due to the volume and type of traffic which results in an uncomfortable amount and degree of noise, fumes, and vibration. In addition, operational features and lane arrangements at certain key intersections make it especially difficult for pedestrians.

The existing conditions of King Edward Avenue provide a significant challenge in both the short and long terms. In the long term the main challenge is to alter the transportation network outside the study area, by providing an alternative truck and commuter route. This would allow for a major decrease in traffic volumes, which would in turn provide an opportunity to make dramatic changes to the streetscape of King Edward Avenue. King Edward Avenue could be restored to its original function as a tree-lined civic boulevard, providing a scenic gateway to Ottawa.

Unfortunately, the developments elsewhere on the transportation network that will alleviate current traffic volumes are expected to take at least ten years to resolve. In the meantime, it is important to consider what improvements can be made in the short term, given current traffic volumes.

The examination of existing conditions reveals significant opportunities for operational and streetscaping changes to King Edward Avenue. While it is not currently possible to change traffic volumes, there is potential to change motorist behaviour through operational changes. In particular, there are a variety of mechanisms by which the pedestrian environment might be improved. Current traffic volumes do not necessarily warrant the existing number of lanes along the entire length of King Edward Avenue, so there is opportunity to reduce the space taken up by the road.

The Community Improvement Plan proposed specific changes to meet the challenge of improving King Edward Avenue in the short term.

ANNEX A

LIST OF PREVIOUS STUDIES

List of Previous Studies

J.P. Braaksma & Associates Ltd., A Feasibility Study of Alternative Truck Routes in the Rideau Centre Area, Alfred Friedman Realty, January 1988.

City of Ottawa, City of Ottawa Official Plan, 1991.

City of Ottawa, Central Areas Development Capacity Analysis, May 1990

Cumming Cockburn Limited, RMOC - Official Plan Review - Analysis Concerning the Need for and Justification of the Vanier Parkway Extension, RMOC, November 1990.

Delcan Corporation, National Capital Region Goods Movement Study, TRANS - A Joint Technical Committee on Transportation Planning, May 1991.

Delcan Corporation, New Ottawa City Hall Traffic Operations Review, City of Ottawa, Department of Engineering and Works, March 1990.

Delcan Corporation, Study of Interprovincial Bridges in the National Capital Region, RMOC, January 1989.

Ben Hoffman Concorde Inc., Central Area Forum, City of Ottawa, June 1990.

Proctor & Redfern Group, King Edward Avenue Traffic Study, City of Ottawa, June 1987.

Regional Municipality of Ottawa-Carleton (RMOC) - Operations Department, King Edward Avenue and the MacDonald-Cartier Bridge -Ramps A and B - Safety Improvement Programme Report, October 1986.

RMOC, RMOC Official Plan, 1990.

UMA Engineering Ltd., King Edward Avenue (Mann Avenue to Laurier Avenue) Traffic Operational and Functional Design Study, RMOC, August 1990.

UMA Engineering Ltd., Long Range Tour Bus Parking Strategic Planning Study, National Capital Commission, December 1991.

ANNEX B

DEFINITION OF LEVEL OF SERVICE

COMMONLY USED LEVEL OF SERVICE DEFINITIONS

Level of Service For Urban Aterial Road *		Level of Service For Traffic Signal Controlled Intersection
Free flowing traffic with average overall travel speed in the upper range.	A	Minimal delay experienced by motorists and no traffic signal phase is fully utilized. Very seldom does a motorist wait longer than the duration of one red signal interval. The approaches appear open, turning movements are easily made and drivers have freedom of operation. The (Poisson) probability is that 95% of the time all vehicles arriving on one complete cycle will clear during the next green interval.
Delay is not unreasonable. Average overall speeds drop due to intersection delay and intervehicular conflicts.	B	Traffic signal phases are occasionally fully utilized and delays experienced by motorists are not unreasonable. Many drivers begin to feel somewhat restricted within groups of vehicles approaching the intersection. The (Poisson) probability is that 90% of the time all vehicles arriving on one complete cycle will clear during the next green interval.
Traffic flow still stable with acceptable delays. Average overall travel speeds in the middle range.	C	Traffic signal phases are more frequently fully utilized, but delays are still acceptable. Drivers feel more restricted occasionally may have to wait more than the duration of one red signal interval and queues may develop behind turning vehicles. The (Poisson) probability is that 75% of the time all vehicles arriving on one complete cycle will clear during the next green interval.
Approaching unstable flow. Delays at intersections may become extensive. Average overall speeds in the lower range.	D	Drivers experience increasing restriction and instability of flow. There are substantial delays to approaching vehicles during short peaks within the peak period but there are enough traffic signal cycles with lower demand to permit the occasional clearance of developing queues and prevent excessive back-ups. The (Poisson) probability is that 60% of the time all vehicles arriving on one complete cycle will clear during the next green interval.
Unstable flow. Continuous backup on approaches to intersections. Average overall traffic speed variable but in the lower range.	E	Traffic flow demand equals the capacity. Continuous delays are experienced. There are long queues of vehicles waiting upstream of the intersection and delays to vehicles may extend to several traffic signal cycles. The (Poisson) probability is that 50% of the time all vehicles arriving on one complete cycle will clear during the next green interval.

* Source: Policy on Geometric Design of Highways and Streets (1984)-AASHTO

☐ RMOC Official Plan - Part 11.1 (4) Level Of Service Standard

ANNEX C

DETAILED TREE INFORMATION

Detailed Tree Information

Subunit 1

Subunit 1 is located on the west side of King Edward Avenue south of Sussex Drive and north of the Minto Bridges (Figure 2). This subunit is part of King Edward Park which is owned by the National Capital Commission (NCC). The tree resources in this section were restricted primarily to the banks of the Rideau River and consisted of Manitoba maple *(Acer negundo)*, sugar maple *(Acer saccharum)*, largetooth aspen *(Populus grandidentata)*, crack willow *(Salix fragilis)*, white elm *(Ulmus americana)* and basswood *(Tilia americana)*. Shrub species were tartarian honeysuckle *(Lonicera tatarica)*, common buckthorn *(Rhamnus cathartica)* and nannyberry *(Viburnum lentago)*.

The manicured grassed section of the park contained planted sugar maples, a Scot's pine *(Pinus sylvestris)* and a Norway spruce *(Picea abies)*. All of these trees were in good condition and have been tagged by the NCC (Appendix 1, Haley 1992).

Subunit 2

Subunit 2 was situated on the west side of King Edward Avenue north of the Minto Bridges and included a portion of the Pearson building property (External Affairs)(Figure 2).

All of the trees inventoried in this subunit have been planted and tagged by the NCC (Appendix 1). Some of the species included Austrian pine *(Pinus nigra)*, Norway maple *(Acer platanoides)*, sugar maple, basswood (little leaf linden), crab apple *(Pyrus coronaria)* and bur oak *(Quercus macrocarpa)*. All of the specimens were in good condition and well maintained.

Subunit 3

This subunit was a grassed median situated between the north and south lanes of King Edward Avenue north of the Minto Bridges (Plan 14). Tree species and shrub species included four planted and tagged Colorado blue spruce, one oak, one white elm, tartarian honeysuckles, and lilacs *(Syringa vulgaris)* (Appendix 1). Other medians in this section of the study area were devoid of tree cover and had manicured grassed lawn.

Subunit 4

This subunit was south of the Minto Bridges within part of King Edward Park (Figure 2). Tree and shrub species along the banks of the Rideau River were largetooth aspen, Manitoba maple, white elm and tartarian honeysuckles.

The park itself contained mainly mature specimens of sugar maple, weeping willow *(Salix alba var. vitanella)*, red ash *(Fraxinus pennsylvanica)* and silver maple *(Acer saccharinum)*. All of the mature specimens were in good condition and have been tagged by NCC (Appendix 1).

The remainder of the subunits and the sidestreets in the study area lacked any significant tree resources in terms of both quantity and quality (Figure 2). A brief summary for each of these subunits follows:

Subunit 5

Subunit 5 contains 3 immature largetooth aspens in front of the apartment building at the northeast corner of Boteler Street and King Edward Avenue.

Subunit 6

No tree or shrub species were found in this subunit.

Subunit 7

There are no tree or shrub species along this section of King Edward Avenue except for those in King Edward Park (subunit 4). There are no trees or shrubs on the median.

Subunit 8

No tree or shrub species were found in this subunit.

Subunit 9

This subunit contains approximately ten immature Manitoba maple, ash and willow trees along the back of the townhouses as well as some ornamental shrubs. There are no trees or shrubs on the median.

Subunit 10

There are no tree or shrub species in this subunit.

Subunit 11

This subunit contains a few immature red ash *(Fraxinus pennsylvanica)* and ornamental maples along with barberry bushes *(Barbarea sp.)*. There are no trees or shrubs on the median.

Subunit 12

This subunit contains no tree or shrub species.

Subunit 13

Subunit 13 contains a few ornamental shrubs and one immature eastern white cedar (2 m high, 7 cm DBH) in poor condition. There are no trees or shrubs on the median.

Subunit 14

This subunit contains a few eastern white cedar and juniper shrubs in front of residences at #204-206 King Edward Avenue.

Subunit 15

This subunit contains no tree or shrub species, nor are there any trees or shrubs on the median.

Subunit 16

There are approximately six immature Manitoba maples along driveway of residence at #234 King Edward Avenue.

Subunit 17

There is one mature Manitoba maple and five planted Austrian pine in poor condition in front of #237 King Edward Avenue. There are no trees or shrubs on the median.

Subunit 18

This subunit has an empty lot with four immature Manitoba maples, one has a four-stemmed trunk.

Subunit 19

This subunit contains no tree or shrub species, nor are there any trees or shrubs on the median.

Subunit 20

There are two cedar shrubs in front of church property.

Subunit 21

There are five immature eastern white cedar in front of properties at #285-303 King Edward Avenue. There are no trees or shrubs on the median.

Subunit 22

There are approximately two dozen immature, planted maples along with ornamental shrubs on premises of Government of Canada building at #350 King Edward Avenue.

Subunit 23

There are approximately ten immature Manitoba maples along edge of parking lot at Champagne Bath building on the southeast corner of York Street and King Edward Avenue, and two 6 m high semi-mature Manitoba maples along edges of parking lot at #339 King Edward Avenue. In addition, there are three planted red ash, nine Austrian pine and four largetooth aspen trees in good condition on Ontario Hydro property. There are four planted immature maples along edge of office building at northeast corner of Rideau Street and King Edward Avenue. There are planted ornamental trees on the median.

Subunit 24

This subunit contains no tree or shrub species.

St. Patrick Street (west of King Edward Avenue)

There are four planted red cedars along residences on north side of this subunit as well as two cedar bushes in front of #342 St. Patrick Street.

Murray Street (west of King Edward Avenue)

There are no tree or shrub species in this subunit.

Clarence Street (west of King Edward Avenue)

This subunit contains three mature silver maple trees (20 m high, 80 cm DBH) on south side of street, two cedar bushes for landscaping in front of #222 Clarence Street, and four ornamental trees on the north side.

York Street (west of King Edward Avenue)

There are ornamental shrubs and maples planted on the median in this subunit. In addition, there are approximately six cedars, a few ornamental juniper bushes and one mature basswood, all in good condition, on north side.

George Street (west of King Edward Avenue)

This subunit contains two landscape cedar bushes, two mature basswoods, one immature sugar maple (20 cm DBH), one immature oak, two immature Manitoba maples (4 m high), two immature white elms and three semi-mature Manitoba maples. All tree species are on the north side of the street.

ANNEX C (cont'd)

King Edward Community Improvement Plan

List of Tagged Trees on the NCC Lands

Tag No.	Species	Diameter
Subunit 1		
60165-3C	Norway spruce	28.6
51759-27A	sugar maple	48.7
60007-27A	sugar maple	46.5
60006-27A	sugar maple	57.5
60005-27A	sugar maple	61.6
60004-27A	sugar maple	16.5
60170-3B	Scot's pine	28.5
Subunit 2		
61519-27D	Manitoba maple	71.1
61431-38B	basswood (little leaf linden)	26.1
61430-38B	basswood (little leaf linden)	22.0
51433-38B	basswood (little leaf linden)	27.1
61434-38B	basswood (little leaf linden)	12.2
61435-38B	basswood (little leaf linden)	21.5
61437-38B	basswood (little leaf linden)	23.6
61436-38B	basswood (little leaf linden)	28.6
61439-38B	basswood (little leaf linden)	27.7
61440-38B	basswood (little leaf linden)	19.0
61442-38B	basswood (little leaf linden)	24.9
61445-38B	basswood (little leaf linden)	28.9
61342-30A	white elm	42.7
61448-38B	basswood (little leaf linden)	25.4
61447-38B	basswood (little leaf linden)	25.4
61450-38B	basswood (little leaf linden)	19.0
61454-38B	basswood (little leaf linden)	26.3
61453-38B	basswood (little leaf linden)	25.6
51778-30A	white elm	18.0

Tag No.	Species	Diameter
61287-36B	crab apple	18.5
61289-36B	crab apple	18.6
61117-27E	Norway maple	31.3
61116-27E	Norway maple	25.0
61291-36B	crab apple	16.7
61118-27E	Norway maple	30.9
61674-2E	Austrian pine	27.1
61668-2E	Austrian pine	20.3
61628-2E	Austrian pine	21.6
61667-2E	Austrian pine	22.4
61130-27E	Norway maple	24.3
61131-27E	Norway maple	32.0
61675-2E	Austrian pine	19.8
61673-2E	Austrian pine	23.6
61676-2E	Austrian pine	20.5
61678-2E	Austrian pine	17.8
60932-27A	sugar maple	37.1
60934-27A	sugar maple	30.5
60937-27A	sugar maple	20.7
60936-27A	sugar maple	22.7
60935-27A	sugar maple	22.0
61133-27E	Norway maple	46.5
61064-27C	silver maple	40.3
61132-27E	Norway maple	30.9
61137-27E	Norway maple	28.3
61136-27E	Norway maple	33.7
61135-27E	Norway maple	24.7
61134-27E	Norway maple	28.0
Subunit 3		
123-13	Colorado blue spruce	29.6
60169-3B	Colorado blue spruce	23.6
60168-3B	Colorado blue spruce	27.1
60167-3B	Colorado blue spruce	22.2
60166-3B	white elm	20.0
60164-30A		

Tag No.	Species	Diameter
Subunit 4		
60157-30A	white elm	85.9
60151-41B	red ash	58.0
60152-41B	red ash	22.2
60160-30A	white elm	20.1
60159-30A	white elm	18.0
60153-41B	red ash	29.0
60173-33B	weeping willow	87.9
60174-33B	weeping willow	84.0
60175-33B	weeping willow	62.1
60148-28C	bur oak	94.3
60162-30A	white elm	16.0
60009-27A	sugar maple	61.8
60010-27A	sugar maple	66.8
60011-27A	sugar maple	64.5
60161-30A	white elm	14.8
60013-27A	sugar maple	76.5
60014-27A	sugar maple	51.0
60015-27A	sugar maple	74.3
60023-27A	silver maple	71.1
60026-27C	silver maple	93.9
60022-27A	sugar maple	69.8
60021-27A	sugar maple	69.8
60020-27A	sugar maple	66.5
60019-27A	sugar maple	60.0
60018-27A	sugar maple	57.9
60024-27C	silver maple	93.7
60025-27A	sugar maple	69.5
60149-41B	red ash	77.2

ANNEX D

"LIFESTYLES" ANALYSIS

ANNEX D

COMPUSEARCH Market and Social Research Limited
1986 Demographics (#24)
Area OTTAWA IRREGULAR TRADAREA
  Polygon: 16 node(s)
Benchmark OTTAWA CSD
  Definition by CSD

CanadianProfile (TradArea)
02/21/92

	AREA TOTAL		BENCHMARK
TOTAL POPULATION (1986)			
Population 1986	6548		300763
% Change 1981-1986	14.8%		1.9%
Total Males	3395	51.8%	47.1%
Total Females	3145	48.0%	52.9%
< 5 Years	275	4.2%	5.1%
5-9 Years	235	3.6%	4.6%
10-14 Years	255	3.9%	4.8%
15-19 Years	420	6.4%	6.2%
20-24 Years	915	14.0%	10.9%
25-29 Years	1035	15.8%	10.9%
30-34 Years	705	10.8%	8.9%
35-39 Years	525	8.0%	7.9%
40-44 Years	365	5.6%	5.9%
45-49 Years	335	5.1%	4.9%
50-54 Years	300	4.6%	5.0%
55-59 Years	340	5.2%	5.3%
60-64 Years	260	4.0%	5.4%
65-69 Years	205	3.1%	4.7%
70-74 Years	205	3.1%	3.9%
75+ Years	205	3.1%	5.5%
MOTHER TONGUE (1986)			
English	2545	38.9%	66.6%
French	2725	41.6%	16.7%
German	40	0.6%	1.0%
Italian	45	0.7%	2.1%
Dutch	5	0.1%	0.3%
Polish	40	0.6%	0.7%
Ukrainian	20	0.3%	0.4%
Aboriginal (N. AM.)	0	0.0%	0.0%
Portuguese	0	0.0%	0.4%
Spanish	10	0.2%	0.5%
Yiddish	15	0.2%	0.1%
Russian	0	0.0%	0.1%
Finnish	5	0.1%	0.1%
Hungarian	5	0.1%	0.3%
Greek	5	0.1%	0.3%
Arabic	65	1.0%	1.1%
Punjabi	0	0.0%	0.0%
Chinese	65	1.0%	1.4%
Vietnamese	175	2.7%	0.4%
Other	140	2.1%	1.9%

SOURCE: THE CENSUS OF CANADA

	AREA TOTAL		BENCHMARK
MARITAL STATUS (1986)			
Single	3470	53.0%	43.0%
Married	1935	29.6%	43.1%
Widowed	375	5.7%	6.6%
Div/Sep	790	12.1%	7.3%
1985 AVERAGE INCOME			
Hhd. Income 1985	26215		38154
Per Capita Inc 1985	11834		16598
HOUSEHOLD SIZE (1986)			
1986 Total Hhds	2956		130883
% Change 1981-1986	11.4%		7.5%
1 Person hhds	1190	40.3%	33.7%
2 Persons hhds	945	32.0%	32.4%
3-4 Persons hhds	605	20.5%	25.8%
5-7 Persons hhds	125	4.2%	6.2%
8+ Persons hhds	25	0.8%	0.2%
Per. per Household		2.2	2.3
HOUSEHOLD MAINTAINERS (1986)			
< 25 Years	340	11.5%	7.8%
25-34 Years	900	30.4%	23.8%
35-44 Years	515	17.4%	18.5%
45-54 Years	360	12.2%	13.2%
55-64 Years	360	12.2%	14.6%
65+ Years	390	13.2%	20.3%
HOUSEHOLD STRUCTURE (1986)			
Family Hhds	1255	42.5%	56.8%
% Change 1981-1986	4.0%		2.5%
H/W Family W/Child	430	34.3%	41.8%
H/W Family No Child	445	35.5%	40.2%
Lone Parent Fam.	340	27.1%	15.5%
Multiple Fam. Hhds.	20	1.6%	1.1%
Non-Family Hhds.	1580	53.5%	41.5%
% Change 1981-1986	9.2%		10.4%
1 Person	1195	75.6%	81.2%
2+ Persons	400	25.3%	18.8%

SOURCE: THE CENSUS OF CANADA

	AREA TOTAL		BENCHMARK
FAMILY STRUCTURE (1986)			
1986 Families	1265		75130
% Change 1981-1986	2.8%		2.5%
No children	460	36.4%	41.0%
1 Child	430	34.0%	27.7%
2 Children	250	19.8%	21.5%
3-4 Children	110	8.7%	9.3%
5+ Children	10	0.8%	0.6%
Child. per Family		1.1	1.0
Lone Parent Fam.	355	28.1%	16.5%
Lone Parent - male	50	4.0%	2.6%
Lone Parent-female	320	25.3%	13.9%
TOTAL DWELLINGS (1986)			
Total Dwellings	2855		128615
% Change 1981-1986	7.5%		5.7%
Single Detached	75	2.6%	30.0%
Apts. 5+ Stories	1105	38.7%	34.8%
Other Mult. Dwgs.	1695	59.4%	35.2%
Movable Dwgs.	0	0.0%	0.0%
OWNED DWELLINGS (1986)			
Owned Dwellings	385	13.5%	39.3%
% Change 1981-1986	63.1%		6.3%
Single Detached	45	11.7%	67.5%
Apts. 5+ Stories	25	6.5%	9.9%
Other Mult. Dwgs.	305	79.2%	22.7%
Movable Dwgs.	0	0.0%	0.0%
RENTED DWELLINGS (1986)			
Rented Dwellings	2475	86.7%	60.7%
% Change 1981-1986	2.3%		5.4%
Single Detached	20	0.8%	5.7%
Apts. 5+ Stories	1065	43.0%	50.9%
Other Mult. Dwgs.	1375	55.6%	43.3%
Movable Dwgs.	0	0.0%	0.0%

SOURCE: THE CENSUS OF CANADA

	AREA TOTAL		BENCHMARK
EDUCATION (1986)			
Population 15+ Yrs	5740	87.7%	84.1%
Less than Grade 9	970	16.9%	9.9%
Grade 9-13	1945	33.9%	33.6%
Other Non-Univ.	975	17.0%	21.7%
Some University	765	13.3%	13.0%
University Degree	1065	18.6%	21.8%
LABOUR FORCE (1986)			
In Labour Force	3860	67.2%	68.2%
Employed	3390	87.8%	92.5%
Unemployed	455	11.8%	7.5%
Not in Labour Force	1875	32.7%	31.8%
OCCUPATION (1986)			
Managerial/Admin.	445	11.5%	16.2%
Teaching/Related	105	2.7%	4.2%
Medicine/Health	120	3.1%	4.9%
Technical	195	5.1%	7.0%
Social Science	170	4.4%	4.1%
Religious	5	0.1%	0.4%
Arts, Lit. & Recr.	160	4.1%	3.1%
Clerical/Related	760	19.7%	22.5%
Sales	250	6.5%	7.6%
Service	835	21.6%	14.3%
Farming	45	1.2%	0.8%
Fishing & Trapping	0	0.0%	0.0%
Forestry & Logging	0	0.0%	0.1%
Mining, Quarry, Oil	0	0.0%	0.0%
Processing	20	0.5%	0.7%
Machining	55	1.4%	0.6%
Construction	185	4.8%	3.8%
Transportation	100	2.6%	2.4%
Production & Repair	120	3.1%	2.9%
Material Handlers	45	1.2%	0.6%
Other/Not Applic.	120	3.1%	2.4%

SOURCE: THE CENSUS OF CANADA

Lifestyles (Household counts)	AREA #	AREA %	BENCH-MARK %	INDEX
01 (A1) Wealthiest, very well-educated, large families in very expensive houses, middle-aged	0	0.0	0.0	0
02 (A2) Wealthy, well-educated families in expensive houses, middle-aged and older	0	0.0	0.7	0
03 (A3) Older, wealthy, well-educated couples & widow(er)s in newer apartments and condominiums; white collar and managerial	0	0.0	0.0	0
04 (A4) Younger, very high income, well-educated, larger families with young teenagers in high value houses	0	0.0	1.9	0
TOTAL AFFLUENT	0	0.0	2.6	0
05 (U1) High income, older families with teenagers in higher value houses in stable neighbourhoods	0	0.0	6.5	0
06 (U2) High income, very well-educated, small & older white collar households in old expensive mixed housing types; some rental	0	0.0	7.2	0
07 (U3) Younger, above average income, professional families with young children in new or renovated houses; both spouses work	0	0.0	0.5	0
08 (U4) Above average income, middle-aged to older families with older children in modest, newer, owned houses	0	0.0	0.9	0
TOTAL UPSCALE	0	0.0	15.0	0
09 (M1) Middle-aged to older, upper middle class families with teenagers; residing in houses in stable neighbourhoods	0	0.0	1.1	0
10 (M2) Younger, upper middle class families with many young children in new housing	0	0.0	0.5	0

SOURCE: COMPUSEARCH

Lifestyles (Household counts)	AREA #	AREA %	BENCH-MARK %	INDEX
11 (M3) Older, upper middle class families, some with teenagers, in older houses in very stable neighbourhoods; some ethnic	0	0.0	1.7	0
12 (M4) Young, middle class, educated white collar families, some with younger children, in new dwellings	0	0.0	4.2	0
13 (M5) Young, middle class, families with many younger children, in new townhouses and other dwellings; some ethnic	0	0.0	0.3	0
14 (M6) Wide age range, middle class couples and smaller families in newer apartments and condominiums; some ethnic	0	0.0	0.0	0
15 (M7) Younger, middle class, traditional families with many young children in detached houses; largely French	0	0.0	0.0	0
TOTAL MIDDLE AND UPPER MIDDLE CLASS	0	0.0	7.7	0
16 (W1) Middle-aged to older, strongly blue collar, working class families with children in modest older, owned homes	0	0.0	0.0	0
17 (W2) Young, mixed occupation working class families with many young children in new multiple dwellings; mainly renters	0	0.0	1.5	0
18 (W3) Various age groups, blue collar, working class families with children in new multiple dwellings; some ethnic	0	0.0	1.1	0
19 (W4) Young, well-educated, singles & couples - some with children, & old retired people in older mainly rented, multiple dwgs	235	8.1	5.4	150
20 (W5) Younger, mainly blue collar, traditional working class families with younger children in newer multiple dwellings	170	5.8	2.1	271
21 (W6) Mostly older (and some young) working class families with moderate income in row housing; largely French	0	0.0	0.2	0

SOURCE: COMPUSEARCH

Lifestyles (Household counts)	AREA #	AREA %	BENCH-MARK %	INDEX
TOTAL WORKING (LOWER MIDDLE) CLASS	405	13.9	10.4	134
22 (L1) Young, mobile blue collar, low income families with young children in high rises; some ethnic	0	0.0	0.1	0
23 (L2) Young, low income, blue collar families, with some children in rented multiple dwellings	0	0.0	0.7	0
24 (L3) Young and older lower income households with some children in older, rented multiple dwellings; many ethnic	0	0.0	1.6	0
25 (L4) Older, with some young singles, in lower income areas, few children in old, low rent, multiple dwgs; mainly French	0	0.0	0.5	0
26 (L5) Very poor single mothers with younger children in subsidized high rises	152	5.2	0.6	832
TOTAL LOWER INCOME	152	5.2	3.5	149
27 (S1) Below average income, educated, mobile, white collar singles in high rises; some ethnic	384	13.2	5.5	241
28 (S2) Low income, white collar, very young singles, some elderly, in older rented multiple dwellings; some ethnic	0	0.0	0.9	0
29 (S3) Younger, professional, very well-educated singles and couples in high rises	0	0.0	4.1	0
30 (S4) Young, white collar, very well-educated mobile singles and couples in older, rented multiple dwellings	727	24.9	6.5	381
31 (S5) Very young, lower income singles, couples, and students in rented multiple dwellings; some blue collar	0	0.0	1.5	0

SOURCE: COMPUSEARCH

Lifestyles (Household counts)	AREA #	AREA %	BENCH-MARK %	INDEX
TOTAL YOUNG SINGLES	1,111	38.1	18.5	206
32 (C1) Younger, mobile, working class couples, along with some singles in high rises	0	0.0	4.0	0
33 (C2) Young, low income couples, in rented low-rise and townhouse multiple dwellings; some French	404	13.9	3.5	396
34 (C3) Very young, mobile, low income working couples and singles in new rental high rises; some students	198	6.8	5.2	130
TOTAL YOUNG COUPLES	602	20.6	12.7	163
35 (N1) Upper middle class empty nester couples in new high rises and condominiums; some older retired singles	0	0.0	2.4	0
36 (N2) Upper middle class, well-educated, empty nesters and widow(er)s in apartments	220	7.5	4.2	181
37 (N3) Upper middle class, white collar empty nester couples in older, owned houses in stable neighbourhoods	0	0.0	6.3	0
38 (N4) Middle class empty nester couples and some families with older children; in mixed housing types	0	0.0	6.4	0
39 (N5) Working class empty nester couples with some older singles and families with children in lower priced houses	0	0.0	0.0	0
TOTAL EMPTY NESTERS	220	7.5	19.2	39
40 (O1) Very old, very low income widow(er)s in subsidized apartments	0	0.0	2.8	0

SOURCE: COMPUSEARCH

Lifestyles (Household counts)	AREA #	AREA %	BENCH-MARK %	INDEX
41 (O2) Working class retired ethnic couples, some widow(er)s in high rise apartments	0	0.0	0.0	0
42 (O3) Older, retired, working class widow(er)s plus some educated couples in apartments	0	0.0	5.0	0
43 (O4) Low income, low education, retired widow(er)s, with some couples in rented dwellings	0	0.0	0.2	0
44 (O5) Low income, retired widow(er)s, with some couples and white collar singles in rented high rises	224	7.7	2.1	371
TOTAL OLD & RETIRED	224	7.7	10.1	76
45 (E1) Heavily ethnic, working class families with many children in older multiple dwellings in stable neighbourhoods	0	0.0	0.0	0
46 (E2) Higher status, above average income, middle-aged, blue collar, large ethnic families in owned houses	0	0.0	0.0	0
47 (E3) Old, very low income and education, ethnic, many widow(er)s, in older rental housing and apartments	0	0.0	0.0	0
48 (E4) Younger, low income, ethnic families with younger children in low rent apartments	202	6.9	0.4	1943
TOTAL ETHNIC	202	6.9	0.4	1943
49 (X1) High income, young and middle-aged professional families with children in expensive houses	0	0.0	0.0	0
50 (X2) Above average income, younger and some middle-aged professional families with some children in houses	0	0.0	0.0	0

SOURCE: COMPUSEARCH

Lifestyles (Household counts)	AREA #	AREA %	BENCH-MARK %	INDEX
51 (X3) Young, above average income, mobile families with many younger children in newer houses, many at home mothers	0	0.0	0.0	0
52 (X4) Young, above average income, white collar, traditional families with young children in rented multiples	0	0.0	0.0	0
53 (X5) Above average income families with older children in high value older housing; mixed occupations, some farmers	0	0.0	0.0	0
54 (X6) White collar older couples and single retirees, in owned and rented dwellings	0	0.0	0.0	0
55 (X7) Young, working class, singles and couples with children in newer rental apartments and multiple dwellings	0	0.0	0.0	0
56 (X8) Lower income, mixed occupations, smaller families and retirees in apartments, condos, and multiple dwellings; some French	0	0.0	0.0	0
TOTAL NON-URBAN UPSCALE AND MIDDLE CLASS	0	0.0	0.0	0
57 (Y1) Below average income households in older dwellings, wide age spread, average education, some children; some French	0	0.0	0.0	0
58 (Y2) Low income, younger, primarily blue collar families with children in newer dwellings; strongly French	0	0.0	0.0	0
59 (Y3) Lower income, older widow(er)s, some white collar couples and young singles, in older rented multiple dwellings	0	0.0	0.0	0
60 (Y4) Lower income blue and white collar empty nester couples and widow(er)s in owned and rented dwellings	0	0.0	0.0	0
61 (Y5) Older, lower income, blue collar, large families with some olderchildren in lower value owned houses; strongly French	0	0.0	0.0	0

SOURCE: COMPUSEARCH

Lifestyles (Household counts)	AREA #	AREA %	BENCH-MARK %	INDEX
62 (Y6) Older, low income, low education, small, blue and white collar families in older dwellings; both spouses work	0	0.0	0.0	0
63 (Y7) Low income, low education, younger and middle-aged blue collar families with many children, in houses	0	0.0	0.0	0
64 (Y8) Low income, low education older widow(er)s and middle-aged couples in mixed housing types; strongly ethnic	0	0.0	0.0	0
65 (Y9) Low income and education, strongly ethnic and native, large and extended families in lower value houses	0	0.0	0.0	0
TOTAL NON-URBAN WORKING AND LOWER INCOME	0	0.0	0.0	0
66 (Z1) High income, larger farming families of varying ages in above average value owned houses; some blue collar	0	0.0	0.0	0
67 (Z2) Average income, medium sized, middle-aged farming families in owned houses; wife usually working on farm	0	0.0	0.0	0
68 (Z3) Low income, older, ethnic farming families in owned houses	0	0.0	0.0	0
69 (Z4) Low income, middle-aged large farming families in owned housing	0	0.0	0.0	0
70 (Z5) Lower income, farming and blue collar families in older owned houses, many age groups; some French	0	0.0	0.0	0
TOTAL NON-URBAN FARMING	0	0.0	0.0	0

TOTAL HOUSEHOLDS 2,916

SOURCE: COMPUSEARCH

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