A PRELIMINARY STUDY

Land and Urban Development

PETER SPURR

The full text of the SPURR REPORT — CMHC'S unpublished study of suburban land development and the development industry.

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A preliminary study

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LAND AND URBAN DEVELOPMENT

P R E F A C E

This book is an investigation of broad trends in land markets, land development and the public land assembly activities in urban Canada. It brings together a large quantity of data from disparite sources in an attempt to provide a factual base for an accurate analysis in subject areas where data is seriously deficient. The text is my understanding of the data and my attempt to perform that analysis from a national perspective -- it has many shortcomings. I believe the merit in this publication lies in the use that you, the reader, can find for it. I hope you will extract and examine those parts of the data which concern your own city, and find them useful in developing your own, better understanding, of specific land problems.

This is not a study of <u>current</u> land problems in any city -- it is an examination of the broad trends in land markets which underlie current problems. The main issues it considers warrant emphasis:

- pp 25-30 There is considerable variation in the composition of, tenure in, and construction rates in, the housing stock among Canadian cities. Variations notwithstanding Canadian metropolitan areas at least doubled their residential stock during the 1950s and 1960s.

This rapid growth is continuing.

- pp 21-33 Residential lot prices are caused by house prices -- the reverse is not true. It is incorrect to expect that housing values will be reduced by any scheme directed to reduce lot prices.

- pp 71-75 A variety of factors contribute to causing house prices -- it is an incorrect simplification to attribute causation to shortage in the land supply. This misleading over-simplification is often stated, possibly because the experts who propound it are primarily concerned with assuring an adequate future supply of serviced land.

- pp 51-56 The value of undeveloped acreage zoned for residential use is a residual of the income anticipated from the sale of housing on that site, less the cost of producing that housing. This value may greatly exceed the value of the land in agricultural use. The difference between the agricultural and residual values can become a capital gain, in whole or in part, for any owner of the land between the time it is farmland and the time it is used as housing.

- pp 180-193 In most Canadian metropolitan areas the development of new land is becoming limited to relatively few locales. This is a logical outcome of urban planning at the regional level, as it allows greater efficiency in the spending,by all levels of government, of the immense sums entailed in providing the transportation, sewage, education, water and other public facilities which will be required by new residents. Similarly, it is beneficial to future residents and present tax payers, if the new communities are compact, and are integrated with commercial and industrial facilities.
- pp 240-244 Large specialist development firms have assembled vast tracts of land at these, and likely future growth locales. These have been purchased at prices below their residual values, and as the land becomes ready for development, its appreciation is providing a capital base on which the owner firms are growing rapidly.
- pp 244-361 Governments are also active urban land developers, with land holdings and development experience which parallels that of the large private firms. The largest part of

this book examines public land assembly programs, their goals, activities and the many issues which surround them. I hope that readers will consider this section most carefully, as it is the primary subject matter of the entire report.

The preparation of this book was a personal investigation, although it has entailed a close and complicated relationship with Central Mortgage and Housing Corporation. Parts of the research began when I was working, under contract, in CMHC's Policy Planning Group during 1972-73. I went on with the work on my own, trying to obtain an understanding in the face of the myriad conflicting issues that concern land policy in urban Canada of the 1970s. In August, 1974 I offered the completed study to CMHC, it purchased the report and hired me. Now, eighteen months later, it has returned the manuscript to me. The full responsibility for this study rests with me, it represents my views only, and should not be interpreted as the views of Central Mortgage and Housing Corporation.

I would like to acknowledge and thank the many people who have helped me at various times during this research. I received invaluable assistance from staff members throughout the CMHC organization, and particularly - Bob Adamson, Rolly Cooper, Dave Crenna, Norman Hallendy, Ian Maclennan, Ted Mitchell, Sam Niedzviecki, Richard Peddie, Walter Rudnicki,

Glen Silliphant, Art Smith and Mike Wright. Hundreds of people in bureaucracies, universities, land development and construction companies, real estate and consulting firms shared their knowledge, opinions, research and critical advice with me during the preparation of parts of this, and earlier drafts, especially - Allison Black, Louise Clark, Dr. Joseph Chung, Dr. Brock Fenton, Morley Greenberg, David Greenwood, Dr. Stanley Hamilton, Elizabeth Hay, Roman Herchak, Bruce Lawrence, Frank Lewinberg, Barry Lyon, Dr. Larry Martin, Elaine McCoy, Missi Powell, Peter Puxley, Ken Rovinelli, Bill Thoman and Bart Wassmansdorf. Very special thanks to the people who typed and retyped these pages and tedious tables and made my life happier in spite of their work - Mary Gregoire, Melba Moore, Clara Wong, and most of all, Dorothy Roy.

Any proceeds I receive from the sale of this book will be donated to the Multiple Sclerosis Society of Canada, to assist the research on this baffling disease.

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Ottawa
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1.0 THE LAND PROBLEMS' PROBLEM

In recent years, whenever Canadians discuss urban affairs or housing, a prominent issue which is always raised is "the land problem." Once identified, the "problem" which is then discussed is usually one of the following: high lot prices; shortage in the land supply; government land banking; activities of large development corporations; inadequate consideration for earth's eco-systems in urban design; complexity in standards for development and the development approval process; redevelopment of residential neighbourhoods; weak municipal finances; protection of farmland; taxation of capital gains received from land sales; or foreign ownership of land. Each of these topics certainly concerns land, and contains problems. Moreover, it is apparent that the various topics, and problems are inter-related and cannot be treated independently. Further, it is clear that different individuals and groups have different perceptions of what constitutes "the land problem" and seek varying types of remedies. Finally, any attempt to examine these topics, in detail, yields an understanding that precious little is known about them, singularly or in total, and few researchers are studying the subjects. Faced with this plethora of topics, interests and informational inadequacies, the urban policy-maker must "solve the land problem".

This report is an attempt to assist the policy-maker and the various interested people by presenting some data and

analysis which describes many of the component problems and provides a context in which solutions may emerge. Specifically, the purpose of this report is to present:

1) an assemblage of data concerning costs and prices of urban residential land;
2) an examination of processes and trends in a sample of urban land markets;
3) an examination of the urban land development industry, in both the private and public sectors;
4) an integration of the above analyses to identify the context and broad parameters of urban land policy, and to identify the general implications of alternative policies;
5) a summary of observations and recommendations concerning urban land policy and land research which emerges from the level of investigation undertaken in the report.

In general then, this is a data book intended to assist others in their analysis rather than propounding any particular conclusion or solution.

1.1 Methodology and Statistics Used.

This book was designed to present diverse statistical and historical information about urban land in Canada, in a form suitable for others to use. Its content

is multi-disciplinary, including material and techniques drawn from many technical and academic fields by a number of individuals of different professional backgrounds. In general, this content may be described as: a literature review; two large surveys, eleven case studies; an extensive compilation of statistics concerning land and housing markets in Canada's metropolitan areas; and a bibliography. While a statistical orientation is the main emphasis of the report, its numerous tables are accompanied by a descriptive analysis intended to communicate its basic findings to an unspecialized reader. Statistics are reported by at least city and year, with variances, weaknesses and sources noted, to facilitate more rigorous examination by other researchers. The analysis herein is usually of an aggregate nature, describing the dominant trends seen in most of the cities studied, then synthesizing these to obtain the most general implications. Data concerning urban land markets in Canada are notoriously unsatisfactory due to their bulk, complexity and the unsystematic manner in which most were generated -- this report is an attempt to recognize the limitations in the data as presented, sufficiently that the findings describe reality rather than arithmetical aberrations.

For the most part, the report focusses on the land markets of the twenty-two urban regions designated as Census Metropolitan Areas by Statistics Canada. This focus was

selected[1] because data could be obtained for these larger places, they are located throughout Canada[2], and they constitute a manageable number of sample areas. In 1971, the metropolitan areas contained 55% of Canada's population, 76% of the "urban" population, 58% of the total stock of dwelling units in Canada, and were the location of 65% of all new detached houses, 74% of semi-detached, duplex and row housing units, and 80% of all new apartment units. The boundaries of these metropolitan agglomerations are selected on the basis of continuous urbanization and include but are not necessarily representative of,rural townships, villages, towns and smaller cities. They tend to be the wealthiest places, where people and institutions are most able, financially, to cope with their problems, and thus the problems seen in these biggest cities tend to be exacerbated, while occurring at a lesser scale, in the smaller places. In general then, while the metropolitan areas this report studies do not represent all urban centres in Canada, they probably include most conditions, and certainly include the land activities of the majority of the Canadian population.

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1. The most likely alternative which also used census regions as the basic sample area, was the inclusion of the 18 Major Urban Areas, which are mostly cities in Ontario and Quebec. This was rejected because, while it would have increased the quantitative complexity of the study, it did not appear to offer substantial qualitative improvement.
2. Metropolitan areas are located in all provinces except Prince Edward Island, Yukon and the Northwest Territories.

Most of the report's data series are statistics gathered by Central Mortgage and Housing Corporation, and concern new dwellings financed under the National Housing Act. CMHC collects basic information about all new residential construction[1] and summarizes more detailed data concerning all dwellings which were approved for lending purposes under the NHA. The use of these later statistics concerning NHA approved dwellings has several general limitations and advantages to be noted here, while other qualifications are described in the text accompanying individual tables. About one-third of all new dwellings in Canada receive NHA financing, but this proportion varies with the type of dwelling, the region concerned, the location of the dwelling within that region, the availability of public and private capital for the particular projects, and time. Also, in general, NHA financing involves slightly lower rates but demands slightly higher standards and more complicated inspection than other construction. It is difficult, therefore, to determine any widespread biases entailed in the use of NHA series to sample all new construction. Internally, the NHA series should be reliable, as they are usually compilations of the uniform information which successful applicants for loans submitted expressly for the scrutiny of

1. This includes the date construction started, type of dwelling, number of units, number of storeys, amount and type of financing, and date of completion.

various expert analysts in private lending institutions and CMHC. Finally, the data have some merit by default, as they are Canada's only large-scale continuous series on residential construction.

Within this general NHA series, most of the statistics extracted concern new single-detached dwellings, and particularly the lots on which these dwellings were erected. Table A-1, in the Appendix, demonstrates the proportions of all new residences which were detached houses, in the twenty-two metropolitan areas, between 1961 and 1972, and shows the proportion of these houses which received NHA financing. Houses are known as the most desired form of residence, always constitute a significant proportion of new construction, and in many cities, still comprise the majority of new dwelling units built each year. Houses are closely related to land, as they use more of it than any other type of residential unit, and consume most of the new land being brought into urban use. Thus data on new house starts are indicative of the volumes of land coming into urban use. More detailed statistics are collected about NHA financed houses, which were historically, a large proportion of all new houses in most cities. There are some biases in these figures, as NHA house loans could not exceed $30,000[1] (which excludes more expensive houses from NHA reports), debt service and taxes cannot exceed 27% of a families gross income, and

1. This lending limit was raised several times after 1974 to various city-specific limits. In the larges cities few detached houses are now financed under the NHA.

the availability of loan funds varies across the country, fiscally, and is often restricted within a region (loans are usually denied at the unserviced fringes of cities, along airport flight paths, etc.). These regulations tend to limit NHA lending to moderately priced houses, so NHA data, as a sample of all new houses, are usually reflective of the current "average" prices in lower-cost housing. The NHA prices herein are usually arithmetic average house sales for the respective cities, and internally, these averages are generated from price distribution curves which are normally skewed to the left. In general, the statistical tables were prepared to examine trends, so the data used are longitudinal rather than cross-sectional. It focusses on change in housing markets over time, with structural details added in the case studies and in the text. As the development and sale of new houses is the primary method by which urban areas consume land, housing transactions are the dominant pricing mechanism in the land market.

The money data in the NHA series are price, rather than cost figures. As described above, they are average house and lot price estimates made by applicants seeking NHA loans, and therefore, reflect current market prices for the product rather than production costs. While the division of the total housing price into lot, and house price

components may have been arbitrary when performed by the seller, this division was accepted by the purchaser and lending institution and can, therefore, be considered representative of the property's market price. The report also contains cost figures obtained from various sample sources as indicated in accompanying footnotes.

This brief introduction has disclosed that the reports statistics are sufficiently aggregated and "impure" that they can only serve as "indicators" of the behavior in land markets. They do describe the volume of activity in various sectors of the residential market and do describe trends in production and prices, in the largest urban regions across Canada. As such, they are demonstrative of the general extent and type of activity, and the broad dimensions of change in land markets. This level of aggregation provides a basic understanding of individual markets, national trends and variances, and within these factual parameters analysts can undertake the detailed study necessary to determine particular local circumstances and appropriate policy alternatives.

1.2 The Land Problem - Personal Biases

The land we live on and the houses we live in are vitally important subjects about which most Canadians have strong opinions. It is, therefore, desirable that a report concerning these subjects state, as clearly as possible, the

attitudes of their authors, as these attitudes are often reputed to bias the form and contents of a researcher's study.

I believe the relationship between Canadians and urban land is essentially exploitative. Land is space on the surface of this planet - Canadian urban land is that space where the majority of Canadians now live out their brief lives. In these cities, millions of people exist in totally interdependent situations, yet most people forget that the interdependence exists. Similarly, space has become "owned" and the technique of "owning" part of the surface of the planet has become a useful method for obtaining relative financial gains -- people are concerned about the artificial, financial aspect of "land ownership" and forget that, ultimately, land is space. Living in this abstration where space is "owned", people try to secure the greatest financial benefit available from its ownership, while using it on a more fundamental level as space to live on. When owners fundamental needs for space, or houses, change, the homes go up for sale and buyers and sellers vie to secure the best financial "deal" in trading ownership. "Wins" and "losses" are relative but it is apparent that most sellers "win" as housing prices have risen more quickly than prices in general for at least two decades. While this trading is a superficial manifestation of mutual exploitation the

essentially exploitive nature of our relationship with space is apparent in the physical aspect of contemporary urban Canada. The sizes of, densities in, and forms of construction in these cities require that they consume enormous and increasing volumes of finite types of energy and other resources in building, maintaining and rebuilding. Each decade, as urbanites continue to move to the larger centres, over one-third of the residential space in these places is newly-created, yet this tremendous effort is expended to maintain essentially the same excessive machine. Our activity, which is common in the western world, must be recognized to be a horrendous, deliberate, short-term exploitation of this planet. This "high-grading" is not common to mankind - the majority of humans live on other continents where they manage their lives without such wanton destruction of other things on this planet. Canadians must reject the "go west" mentality that leaves its problems behind it, and accept that we're here, we're going to stay here, and we should create the best qualitative environment our magnificent technological understanding can create.

Regretfully, I do not know of any broad-based, generic, or professional, ideological, political or special interest group whose substantive acts generally reflect similar biases.

The land problem, then, is the gap in understanding between the numerous individuals who see the problem

primarily as prices and ownership, and the need for urban society to redirect its energy into a more instinctive, less exploitative relationship with this earth. As long as most people require that the problem's solution include a large-scale, short-term reduction in land prices we are structurally separated from addressing the more fundamental problems in our relationship with space. The research presented in this report reflects both sides of this schism . The statistics concern the popular land problems of ownership, production, and price, yet in doing so, they describe the structure of land markets, quantify the decreasing importance of land ownership to urbanites, and demonstrate the increasing paramountcy in urban land and particularly land use change, of large public and private institutions. This introductory delineation of the duality begins the disclosure of a way to develop better cities,while describing the price problems and attempting to locate their sources.

2.0 RESIDENTIAL LAND AND HOUSING IN METROPOLITAN CANADA

Over the past decade people have become increasingly aware of high prices, and rapid price increases, in the residential land markets of urban Canada. Lot prices have escalated sharply, as have housing costs generally. These conditions have helped push up all costs as all economic activity requires space, and in particular, have aggrevated the housing problems of people receiving low or even average incomes. Since people are continuing to migrate to the largest cities, it has been necessary to build new accommodation unceasingly in these places, in spite of the high costs. As this pattern of rising prices and consumers accepting inflating prices has persisted, it appears to have become self-perpetuating.

In the face of rising prices in housing, the residential construction industry has rapidly shifted to less land-intensive forms of dwellings. While the sale or more frequently, leasing, of these apartments and townhouses lessens the impact of high land costs on consumers, market prices and rents of these dwellings have risen too, and the predominance of these forms of construction has gradually changed the structure of the housing stock. Most urbanites, in most cities, are now tenants although ownership of a detached house is still considered to be the ideal housing form. Thus homeowners and builders who place houses on the

market can interact with a numerically large demand for ownership housing, and can "high-grade" this demand by selling at top prices and to the upper income levels.

This situation has a range of implications for housing production, urban form, and personal and national economics generally. In a consumption-oriented society, considerable pressure is exerted through the political process for government intervention to lower prices so the desired commodity, detached houses, will be more accessible. A conflicting pressure emerges from national, urban and ecological (or absolute) economics, because the shift from ownership-type, detached houses to higher urban densities is usually financially efficient as it entails less energy consumption in building, servicing and maintaining each dwelling unit. The conflict between these divergent pressures appears to be the central political problem in urban policy for the next few decades. At present, industry and government appear to be balancing, instinctively, between these forces, planning for and creating a predominance of denser populations, while continuing to build about 20% of new units as detached houses. This compromised housing mix, which is the indirect product of a host of decisions diffused among local, regional, provincial and federal governments, still entails the development of enormous volumes of land over the next twenty years.

The following section reports these developments and trends in statistical form.

2.1 The Price Problem

The recent inflation of residential lot prices in urban Canada has been extraordinary. Between 1968 and 1972 the average annual rate of increase in the average price of detached lots[1] was 10 3/8% in Canada's metropolitan areas, 10½% in major urban areas, and 9 5/8% in the entire country. The average price inflation in lots in these metropolitan regions, during these four periods of annual change, exceeded 7% in 52 periods. These pervasive, spiralling lot prices are taking larger proportions of the total price of houses, and house prices are also rising quickly. This section quantifies the rise in lot prices numerically, geographically, and through time.

Table 2.0 contains average prices, and price increases, of lots for detached houses financed under the National Housing Act, in metropolitan Canada, between 1965 and 1972. This is a sample which, as explained in Section 1, is probably a consistent understatement of the prices of all lots and therefore is descriptive of the average rate of their increase.

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1. This is the increase, averaged, in the average price of the lots accompanying detached houses which were financed under the National Housing Act in these areas, in each year. As such, it tends to understate the average price of all house lots sold.

TABLE 2.0 : PERCENTAGE INCREASES: AVERAGE PRICES OF RESIDENTIAL LOTS 1965-1972, ALL METROPOLITAN AREAS. (BASED ON ESTIMATES PRODUCED BY NHA LOAN APPLICANTS)

METROPOLITAN AREA	← CMHC BRANCH AREA → NHA BUNGALOW LOTS →			← CENSUS METROPOLITAN AREA NHA SINGLE DETACHED LOTS →								PERCENTAGE INCREASES IN LOT PRICES	IMPLIED COMPOUND INTEREST RATE
	Price 1965	% Increase 1965-66	% Increase 1966-67	Price 1968	% Increase 1967-68	Price 1969	% Increase 1968-69	% Increase 1969-70	% Increase 1970-71	% Increase 1971-72	Price 1972	1968-1972	1968-1972
	$	%	%	$	%	$	%	%	%	%	$	%	%
Hamilton	4,839.	10.5	12.2	7,629.	27.2	9,350.	22.6	12.2	1.8	8.2	11,796.	54.62	11-1/4
Toronto	5,777.	22.8	17.0	8,330.	.3	9,667.	16.1	10.0	15.5	-5	11,507.	38.13	8-1/4
Vancouver	3,516.	7.5	5.2	4,723.	18.7	6,088.	28.9	16.5	15.4	18.2	9,667.	104.67	18-3/4
Sudbury	2,585.	22.1	-25.3	3,359.	42.4	4,398.	30.9	32.4	11.5	27.0	8,240.	145.31	20-1/8
Victoria	2,764.	9.2	7.9	5,250.	61.3	7,087.	35.0	-4.4	10.6	3.9	7,795.	48.47	10-1/8
Kitchener	3,006.	27.7	18.2	5,157.	13.6	6,134.	18.9	8.9	4.8	6.7	7,467.	44.79	9-1/2
Windsor	3,013.	39.4	8.7	5,203.	13.9	5,785.	11.2	8.5	6.6	13.0	7,101.	36.47	7-7/8
Edmonton	3,541.	1.0	3.7	4,665.	25.8	5,307.	13.8	10.9	13.2	3.8	6,913.	48.18	10-1/8
London	3,010.	9.4	13.3	4,644.	24.4	5,941.	27.9	-2.9	8.0	5.4	6,568.	41.42	8-7/8
Calgary	3,071.	8.1	8.0	4,168.	16.3	4,925.	18.2	5.4	13.1	8.1	6,320.	51.63	10-5/8
Ottawa-Hull	2,758.	.5	3.9	3,616.	25.6	4,793.	32.5	17.5	10.7	-.9	6,105.	68.83	13-1/2
Halifax	2,018.	1.4	-3.7	7,629.	287.7	4,273.	-44.0	11.3	14.3	4.5	5,677.	-25.59	NIL
All CMA's	2,996.	11.0	8.3	3,695.	2.6	4,543.	22.9	7.3	17.1	-.1	5,535	49.79	10-3/8
All MUA's	2,471.	10.2	4.9	3,624.	26.9	4,947.	36.5	-9.3	18.8	23.1	5,460.	50.66	10-1/2
Winnipeg	3,241.	-4.5	47.6	4,160.	-8.9	4,525.	8.8	1.3	-.3	14.5	5,190.	24.75	5-5/8
St. John's	2,978.	10.5	1.9	3,695.	10.1	4,675.	26.5	20.7	-8.9	-.4	4,910.	32.88	7-1/4
CANADA	2,816.	8.9	2.9	3,350.	6.2	4,202.	25.4	1.3	14.7	6.5	4,885.	45.82	9-5/8
Saint John	2,424.	2.3	4.8	2,209.	-15.0	2,897.	31.1	15.4	23.6	27.8	4,745.	114.80	20
Regina	1,973.	.1	7.9	3,038.	42.6	3,557.	17.1	-26.2	27.8	9.1	3,309.	8.92	1-1/2
Saskatoon	1,998.	11.4	5.5	3,120.	32.9	3,965.	27.1	26.0	15.2	6.2	3,257.	4.39	-7/8
Quebec	1,954.	10.0	8.7	2,292.	-1.8	2,536.	10.6	-10.5	9.7	13.9	2,753.	20.11	4-5/8
Montreal	2,455.	4.2	-13.0	2,078.	-6.6	1,976.	-4.9	12.3	-.3	-.4	2,171.	4.47	-7/8

SOURCE: Raw Prices 1965-1967 From CHS-1967 Table 77, p. 77
1966-1969 From CHS-1969 Table 82, p. 62
1970-1971 From CHS-1971 Table 87, p. 71
1972 From CHS-1972 Table 86, p. 70

NOTES: (1) Over this eight year period, NHA bungalow lots were a relatively constant, dominant proportion of NHA single-detached lots, nationally. Bungalow volumes, as percentages of single detached volumes, for the succesive years, were: 74.6%, 71.9% 76.9%, 76.4%, 72.8%, 74.4%, 68.7% and 69.0%. Bungalow prices as percentages of all single detached prices were: 91.0%, 88.7%, 88.2%, 89.4%, 86.4%, 87.6%, 87.0% and 88.7%. CHS-72 Table 85, p. 69

(2) CMA's are Census Metropolitan Areas; MUA's are Major Urban Areas (core cities having at least 25,000 population, plus surrounding areas).

The geographic area sampled decreases after 1966, and the type of lot reported changes after 1967 (causing an increase in the sample), but both aspects remain constant between 1968 and 1972. The extent and quality of lot services generally improved over this period, so the changing prices apply to a changing type of product. The series, then, provides a reasonable indication of the rate of change in the prices of lots in metropolitan areas, and a lesser indication of the middle level of these prices.

Examination of the levels of lot prices in the different centres discloses several groupings. In 1965, 1968 and 1969, average lot prices in most cities can be grouped in quite narrow ranges. Toronto, Hamilton and later the cities of British Columbia formed the high price range and the centres in Quebec and Saskatchewan made up the lower level.[1] By 1972, after considerable price increases in all but the Quebec cities, the high and low price groups remained the same while the range of prices across the rest of Canada had widened considerably. The upper end of this middle range occurs in southern Ontario, although the Alberta cities were rapidly approaching similar levels. Winnipeg and cities in the Maritimes formed the lower end of the middle price range, at levels which were $1000 - $2500 below prices in Ontario. The composition of these high

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1. In Quebec, the lower prices reflect the exclusion of lot services from the price as these are usually provided on a "local improvements" basis.

and low price groups and the locations which have stretched the mid-price range upwards suggests that higher land prices accompany concentrations of economic activity, generally. Thus, while lot prices have risen in most places, the rises are most pronounced in the economic metropoles, and are most restrained in the economic hinterlands.[1]

The rates at which lot prices have risen in recent years have been abnormally high. In the early 1970's, the federal government, and the Prices and Incomes Commission, proposed that 7% was a maximum rate of price increase allowable, to restrain inflation.[2] Between 1968 and 1972, annual increases in average lot prices consistently exceeded this rate in most cities. The average increase for all metropolitan centres during these years was 10 3/8%, only

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1. This is also indicated by the house price distribution curves which underlie the averages generated for the various cities. The curves in the hinterlands areas, are usually bell-shaped or skewed towards higher prices, while in the central regions the most frequent prices occur at high levels. In other words, in the largest cities of the economically poorer regions, the calculation of average house prices tends to include a predominance of houses in the lower price ranges, while in the richer cities (central Canada, British Columbia and Alberta), the average reflects a larger proportion of the higher prices. See CMHC, Canadian Housing Statistics - 1972, (Ottawa: CMHC, 1972), Table 83 and similar tables from other years.
2. This guideline proposes that a lot, which sells for $10,000 could sell a year later for $10,700 without exceeding inflationary limits, and that prices can double every ten years.

Halifax, Winnipeg, and the cities of Quebec and Saskatchewan averaged below the guideline, and extraordinary increases were seen in Hamilton, Vancouver, Sudbury, Ottawa-Hull, and Saint John. The high rates have been consistent and pervasive exceeding 7% in 52 of the 76 annual periods reported, and occurring at least once in every major city. There is, however, a trend to lower rates of increase discernible in the series, and in 1974, the spiral in land prices levelled off, although their rise continues.

Another approach to the significance of these increasing land prices is seen in Table 2.1, an estimate of the total value of land transactions which occurred in urban Canada in 1970. It is estimated that over one and one-third billion dollars was transacted in urban land markets in that year, a figure which represented nearly 2% of the Gross National Product, and indicates that land is a major economic activity in Canada. As land prices are rising at 10-11% per annum, the estimate suggests that the Canadian economy must generate an additional $134-$147 million each year in order to maintain the current volume of land transactions. Urban land, then, is a large inflationary pressure in the economy.

Table 2.2 contains the changing proportion of the total price of the average new house which goes to pay for the lot. Between 1965 and 1972, the average percentage lot price/total house price, in all metropolitan areas, rose

TABLE: 2.1 ROUGH ESTIMATE OF THE TOTAL VALUE OF URBAN LAND TRANSACTIONS IN CANADA - 1970

TYPE OF TRANSACTION AND ESTIMATION TECHNIQUE	ESTIMATED VALUE
Lots for New Housing (Volume x Price)	$ 235,637,720.
- 55,340 single and semi-detached, duplex and row house units completed in urban Canada (67% singles)[1]	
- $4,258 average price of NHA detached lot[2]	
Lots with Existing Housing (Sales Volume ÷ Land Factor)	$ 652,722,000.
- $1,631,805,000 total Multiple Listing Service residential sales volume in 60 cities.[3] MLS sales are a minimum estimate of all existing housing sales.	
- Existing dwellings contain economic and function obsolescence, and physical deterioration and have better locational attributes than new houses. Therefore, the proportion of their value attributable to land (or location) should be much higher than that for new houses.[4] New houses averaged 19.7% land value. Estimate existing houses @ 40% land value.	
Land for Non-Residential Buildings (Building Value x Land Factor)[5]	
- Industrial - Urban industrial building permits $354,337,000.[5] Estimated land proportion of industrial property value 15%	$ 62,505,046.
- Commercial - Urban commercial building permits $733,300,000[6] Estimate land proportion of commercial building value 25%	$ 133,325,000.
- Government and Institutional - Total urban building permits for government and institutional buildings $932,810,000.[7] Estimated land proportion 20% of total property value	$ 233,202,500.
Raw Acreage (Units started x units per acre x trading factor x acreage price)	$ 21,500,190.
- Gross residential land consumption, urban areas.[8]	
- single detached - 40,859 units @ 4 units per acre - 10,215 ac.	
- semi-detached - 8,993 units @ 8 units per acre - 1,124 ac.	
- row units - 15,359 units @ 19 units per acre - 808 ac.	
- Total 12,147 ac.	
- Trading factor - for every 100 acres developed, estimate 177 are sold	
- Minimum acreage price for urbanizing land is $1000 per acre	
Total	$ 1,338,892,456.

SOURCES:
1. CMHC, Canadian Housing Statistics, 1971, (Ottawa: CMHC, 1972) Table 9, p. 9.
2. Ibid., Table 87, p. 71.
3. Canadian Real Estate Association, Research Department, quoted in Toronto Real Estate Board, House Price Trends, January, 1971, p. 47.
4. Ibid., Table 85, p. 70.
5. Statistics Canada, Building Permits, Catalogue Number 64-203.
6. Ibid.
7. Ibid.
8. CMHC, CHS, op cit., Table 9, p. 9.

TABLE: 2.2

LAND COSTS AS A PERCENTAGE OF TOTAL HOUSING COSTS

- NHA ESTIMATES - 1965-1973

	- Bungalows -			All Single-Detached Houses						1973 Average Housing Cost
	1965	1966	1967	1968	1969	1970	1971	1972	1973	
SUDBURY	16%	16%	12%	17%	19%	23%	24%	25%	26%	38,049
TORONTO	29	31	33	33	34	35	38	36	37	36,218
VANCOUVER	19	19	19	21	24	28	30	32	35	36,067
HAMILTON	27	27	28	31	33	36	37	38	39	35,370
VICTORIA	14	14	16	23	25	26	27	27	30	32,932
WINDSOR	16	19	20	22	23	21	22	24	27	30,925
EDMONTON	21	20	19	23	23	23	23	26	25	30,924
KITCHENER	18	20	22	25	26	27	28	28	30	30,681
CALGARY	19	18	19	21	22	23	24	25	26	29,281
LONDON	20	20	21	24	25	24	25	25	26	29,002
HALIFAX	12	12	11	38	18	20	26	21	18	28,578
ST. JOHN'S	16	17	18	19	23	25	22	21	23	28,508
ALL MUA'S	16	16	16	19	19	21	23	22	20	27,647
OTTAWA-HULL	16	15	16	20	20	22	22	22	17	27,484
WINNIPEG	19	17	20	21	20	20	21	22	23	27,176
SAINT JOHN	16	15	13	13	14	16	16	18	18	25,559
CANADA	17	17	17	18	18	19	21	21	18	25,517
ALL CMA'S	18	18	19	19	20	22	24	23	20	25,471
REGINA	13	12	12	17	17	16	18	17	17	22,802
QUEBEC	13	14	14	14	14	13	13	14	14	21,402
MONTREAL	14	14	14	12	11	13	12	12	10	20,686
SASKATOON	13	13	14	17	19	17	19	19	18	19,937

SOURCE: Calculations from CHS - 1965 to 1973 inclusive.

from 18% to 23%. This is a pronounced shift in a relationship which was previously quite stable. In the central metropolises where average house prices are highest, over one-third of the price of a house now goes to the lot. As these proportions have risen in each metropolitan centre[1] and average housing prices have also increased, it is apparent that lot prices have escalated more rapidly than have house or total housing prices.

This introduces a central, "chicken or egg" question in land policy - what causes what, lot prices or house prices? Most people wrongly consider that lot prices are independent of house prices and thus high land prices are determinants of high house prices. Certainly the cost of land and other production costs constitute the minimum price a builder would charge for a house.[2] Moreover, as both house and lot prices are increasing quickly and the proportion of total housing price which pays for the lot is also climbing, people often conclude that the lot prices are pushing up the price

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1. During this period neither house and lot prices nor the lot price/housing price relationship has changed significantly in the statistics concerning centres in Quebec.
2. The distinction between cost and price is significant. Lot cost is the cash value at some date of those expenditures and liabilities incurred by a developer or builder in producing a lot - lot price is the cash value of the consideration paid for the lot by a buyer. When a builder buys a lot from a developer, the price paid becomes a cost to the builder, and a further retail price occurs when a consumer purchases the lot with a house.

of housing. Once this conceptual separation of the two prices is made, it becomes logical to conclude that lot producers (land developers) and the lot production process (involving producers and many government bodies) can control lot prices by direct manipulation and supply manipulation, respectively. Thus this conceptual distinction is at the heart of notions that lot prices can be controlled or lowered by interventions in the production process.

As most urbanites experience with lot prices comes when they are consumers buying houses, it is not suprising that they consider lots to be independent commodities. Two prices are usually quoted to the prospective purchaser - a house price and a lot price. Theoretically, the buyer could purchase the lot alone, although this occurs infrequently and is not allowed in many subdivisions. In the normal situation, the builder has a house under construction or completed on the lot, or offers a choice among several home designs at different prices which can be constructed there. From the viewpoint of the consumer, then, the house and lot are separate commodities which are offered by the builder at distinct prices.

How does the builder determine these prices, and particularly, the lot price? Certainly an entrepreneur

will attempt to obtain at least the property's market value[1], as at any lower price, the purchaser could resell the property to obtain its full value. A succinct introduction to the methods used to determine the market value of land is found in the training manual prepared by the Appraisal Institute of Canada. The manual states: "There are four basic methods of evaluating a site":

(1) "The market data or comparative method. This method analyzes the recent action in the market place and from this past record of sales of similar properties a value is indicated for the subject property.

(2) The abstraction method. This method allocates a value to the building in a recent property sale and by subtraction, reflects the land value portion of that property price.

(3) The development method. This is really an application of the cost approach to vacant land by the projection of a lot subdivision onto the site and estimating the worth of the parcel by the profit resulting from this hypothetical subdivision.

(4) The land residual technique. This is a practical application of the principle of Surplus Productivity, or the doctrine of the Agents in Production by which the income remaining to land from the projected highest and best use indicates the value of that vacant site."[2]

An appraiser might use one or all of these techniques to

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1. Market value has number of definitions, which vary slightly. The classic is: "The highest price, estimated in terms of money, which a property will bring if exposed for sale in the open market allowing a reasonable time to find a purchaser who buys with full knowledge of all the uses to which it is adapted and for which it is capable of being used". Quoted in Appraisal Institute of Canada, Real Estate Appraising in Canada. (Winnipeg: Saults and Pollard Limited, 1970), p. 3.
2. Appraisal Institute, op.cit., p. 79.

evaluate a single property. This methodology was developed by professional evaluators, has been accepted by the courts, and is in widespread use by business, government and private individuals. It is apparent that market value of the entire property, as developed or hypothetically, is the key to the land value. The market data method compares the subject lot with other lots. The development method determines the value of a site as a residual of the development and sale of lots on the site. In each case the evaluator is not determining lot price in an absolute sense, but is selecting a price for the subject lot from a range of prices determined for other lots. The abstraction method and land residual technique both determine prices of lots without reference to other lots and in both techniques, the land value depends on the market value of the developed property. In other words, while the value of a lot can be estimated by comparison with the prices of other lots, ultimately, its value and their value is determined by the market value of developed property. The lot price is a function of total housing price. This answer to the causation question must be remembered in all policy questions concerning land price as it is apparent that any policy which considers land to be independent of, or causative of housing prices is constructed on weak foundations. The remainder of this report primarily concerns land in context as an input in the process of producing residences, and particularly, in relation to that market which now

consumes most new land, the market for detached houses.

The examination of the market for houses begins with Table 2.3, which describes the size, tenure in, and recent change in, the total housing stock and the stock of detached houses, in metropolitan centres. This information gives a broad profile of the structure of the housing stock in each city, and some perspective on the significance of new residential construction, or growth, relative to the entire stock. The stock data comes from the census, so the series contains a boundary shift in 1971 when the area reported was expanded. Data concerning construction of detached houses comes from CMHC. This series reports all construction in the wide areas administered by the CMHC branch office in each city until 1967, thereafter it conforms to the current census boundaries.

The table demonstrates the enormous change which is occurring in the size and structure of our largest cities. In general, in metropolitan Canada, one dwelling unit in three is less than ten years old.[1] In fifteen of the metropolitan areas, the dwelling stock has more than doubled in twenty years and it is axiomatic that this residential growth has been accompanied by commensurate growth in the other sectors. In other words, each of our major cities has been rebuilt during the last twenty years. While this

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1. In Winnipeg and Saint John these relationships would be one in six and one in five, respectively. See Table A-2, in the Appendix for better detail on age structure in the housing stock.

TABLE: 2.3

DWELLING STOCK, OWNER-OCCUPANCY, AND DETACHED HOUSES- METROPOLITAN AREAS, 1951-1971

(ALL DATA ROUNDED)

METROPOLITAN AREAS GROUPED BY CHARACTERISTICS	TOTAL DWELLING STOCK (000s OF UNITS)			PROPORTION OWNER-OCCUPIED			CHANGE 1951-61[1]		CHANGE 1961-71[2]		ALL OWNER OCCUPIED DWELLINGS (000s)			OWNER-OCCUPIED SINGLE DETACHED HOUSES		OCCUPIED DWELLINGS AND DETACHED HOUSES					
														1961 HOUSES				1971 HOUSES[2]			
	1951[1]	1961[1]	1971[2]	1951[1]	1961[1]	1971[2]	STOCK (000s)	% OF 1961 STOCK	STOCK (000s)	% OF 1971 STOCK	1951[1]	1961[1]	1971[2]	AS % OF 1961 OWN-OCCD	AS % 1961 TOTAL STOCK	UNITS IN (000s)	CONST. 61-70 IN (000s)	1961 PLUS CONST. 61-70	UNITS IN (000s)	LESS 61 UNITS AND 61-70	AS % OF 1971 OWN-OCCD	AS % OF 1971 TOTAL STOCK
HIGH PROPORTION OF NEW STOCK, OWNERSHIP DECREASING				%	%	%		%		%				%	%						%	%
ST. JOHN'S	14.3	17.9	29.7	66	70	66	3.7	21	11.8	40	9.4	12.5	19.7	76	53	9.5	4.5	14.0	16.0	2.0	81	54
OTTAWA-HULL	68.9	107.6	170.0	45	52	50	38.7	36	62.4	37	31.1	55.6	85.6	94	48	52.0	22.4	74.4	78.8	4.4	92	46
TORONTO	297.9	482.5	774.0	71	67	55	184.6	38	291.5	38	210.9	325.2	424.8	83	56	269.0	63.4	332.4	355.0	22.6	84	46
KITCHENER	27.7	42.2	66.6	65	72	60	14.5	34	24.4	37	17.9	30.5	39.9	97	70	29.7	10.9	40.6	38.7	-1.9	97	58
LONDON	35.0	50.5	87.1	65	67	60	15.5	31	36.6	42	22.6	33.7	52.0	100	67	33.8	10.3	44.1	53.0	8.9	102	61
REGINA	19.2	30.1	42.5	58	67	60	11.0	36	12.4	41	11.1	20.1	25.5	107	72	21.6	7.9	29.5	29.1	-.4	114	68
SASKATOON	15.0	25.9	38.6	64	71	59	10.9	42	12.7	33	9.6	18.4	22.9	104	74	19.2	7.5	26.7	25.5	-1.2	111	66
CALGARY	41.1	78.4	121.2	60	63	57	37.3	48	42.8	35	24.7	46.5	68.8	109	65	50.8	25.0	75.8	73.1	-2.7	106	60
EDMONTON	47.3	89.0	144.7	62	65	55	41.7	47	55.7	38	29.4	57.9	80.1	107	69	61.8	25.3	87.1	90.2	3.1	113	62
VANCOUVER	163.4	228.6	345.9	69	70	59	65.2	29	117.3	34	112.0	159.3	203.5	108	75	171.6	43.3	214.9	216.5	1.6	106	63
VICTORIA	34.4	47.5	66.4	70	71	61	13.1	28	18.9	28	23.9	33.9	40.7	105	75	35.5	8.5	44.0	42.9	-1.1	105	65
HIGH PROPORTION OF NEW STOCK, OWNERSHIP INCREASING																						
CHI.-JONQUIERE	7.8	11.0	29.7	43	52	54	3.2	29	18.7	63	3.4	5.7	16.0	132	68	7.5	3.3	10.8	13.6	2.8	85	46
QUEBEC	55.2	79.1	127.4	36	42	42	23.9	30	48.3	38	19.6	33.5	53.7	69	29	23.2	18.7	41.9	45.1	3.2	84	35
MONTREAL	351.7	549.7	805.8	24	33	35	197.9	36	256.1	32	85.8	179.2	284.1	60	19	107.0	56.3	163.3	190.8	27.5	67	24
ST. CATH.-NIAGARA	22.4	41.0	88.9	64	70	72	18.6	45	47.9	54	14.3	28.7	63.9	111	78	31.9	9.5	41.4	55.4	24.0	102	74
SUDBURY	15.8	26.3	39.4	47	56	58	10.5	40	13.1	33	7.4	14.8	22.9	103	58	15.2	7.8	23.0	23.7	.7	103	60
AVERAGE PROPORTION OF NEW STOCK, OWNERSHIP DECREASING																						
HALIFAX	29.6	42.4	59.7	55	35	50	12.7	30	17.3	29	16.2	23.2	29.7	101	55	23.5	4.8	28.3	28.6	.3	96	48
HAMILTON	74.1	105.2	146.3	68	74	64	31.2	30	41.1	28	54.4	77.3	93.1	99	73	76.9	18.2	95.1	92.9	-2.2	100	63
WINDSOR	42.9	53.3	74.2	62	72	70	10.4	20	20.9	28	26.5	38.6	52.2	104	75	40.1	6.8	46.9	52.9	6.0	101	71
THUNDER BAY	17.7	23.3	32.2	73	75	73	5.6	24	8.9	28	13.0	17.5	23.6	110	82	19.2	4.0	23.2	24.5	1.3	104	76
WINNIPEG	96.7	128.5	166.5	61	67	59	31.8	25	38.0	23	59.2	85.9	98.4	105	70	90.4	18.3	108.7	105.6	-3.1	107	63
LOWER PROPORTION OF NEW STOCK, OWNERSHIP INCREASING																						
SAINT JOHN	19.7	24.1	28.7	38	44	51	4.4	18	4.6	16	7.5	10.7	14.5	83	37	8.9	3.2	12.1	12.9	.8	89	45

NOTES: 1. 1961 CENSUS BOUNDARIES 2. 1971 Census Boundaries

SOURCES: Statistics Canada, Census of Canada, 1951, 1961 and 1971, and CMHC, Canadian Housing Statistics.

is the product of a cumulative process, the significance of this statement, and undertaking cannot be missed. In a generation, this society and economy has expanded the effort, and consumed the energy in building and rebuilding, to create more than one-half of our present cities.

One aspect of the residential stock which changed dramatically during the 1960's is the dominant form of tenure. Until the sixties, most people in metropolitan areas owned their residences, and detached houses usually comprised 65-75% of the total dwelling stock. In the sixties, in spite of the growth of condominium ownership and a boom in ownership-type row house construction, owner-occupied dwellings declined noticeably as a proportion of all dwellings. By 1971, in most cities, only 55-60% of dwellings were owner-occupied, and this proportion was declining, indicating that most urbanites were tenants.[1] While in absolute terms, the number of owner-occupied units also doubled between 1951 and 1971, in relative terms ownership of a residence has become less common. In six cities, Saint John, Sudbury, St. Catharines -Niagara, Montreal, Quebec and Chicoutimi-Jonquière, the proportion of ownership, which is still lower than in most cities,[2] has risen since

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1. All residents of an owner-occupied dwelling do not hold equity, and are not, therefore, owners. If they are neither owners nor tenants in the technical definition of that word, then they lack security of tenure and are, technically, "tenants at will" of the landlord.
2. St. Catharines-Niagara is the only exception, as 72% of its dwelling stock is owner-occupied and this proportion is still rising.

1951 - in the rest of metropolitan Canada ownership is declining.

While tenure is changing, the detached house is still the largest single form of accommodation, comprising 50% or more of the housing stock in most centres.[1] The number of detached houses in a city approaches, and in the majority of centres exceeds, the total number of owner-occupied units - indicating that significant quantities of houses are rented. Like ownership, the proportion of detached houses in the total housing stock is declining in most centres. Increases are seen in Saint John, St. John's, Quebec, Montreal and Sudbury, and in each of these places the proportions of houses in the stock are relatively low.

In summary, then, this introduction to the housing stock has demonstrated the enormous effect when cumulated, of current levels of construction in the larger cities, and a major shift away from ownership-type property. While the detached house is still the most common type of dwelling, it is in relative decline and a minority of urban society owns and occupies a house.

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1. In Ottawa-Hull, Toronto, Chicoutimi-Jonquière and Saint John about 45% of the dwelling stock is detached houses. In Quebec and Montreal, these proportions are 35% and 24%, respectively. Montreal and Toronto have large numbers of apartment buildings, while the other cities have high proportions of lower-density, multiple-unit, residential buildings.

Further perspective on the housing market is provided in Table A-3, in the Appendix, which contains population and population growth statistics for the various metropolitan areas during the last twenty years, using 1971 census boundaries. Over three-quarters of Canada's population growth occurs in these twenty-two cities, which contained 55% of the nations population in 1971. Toronto, Montreal and Vancouver attracted 45% of the country's total growth during the 1960s, with a net increase of about one and one-half million people. In absolute numbers and as growth rates, metropolitan growth in that decade declined from the "baby boom" levels of the 1950s, however, these places are receiving an increasing proportion of the total population growth in Canada.[1] Non-metropolitan urban places are also expanding, adding 1,126,952 people during the 1960s, although their growth rate is also declining. Most metropolitan areas are growing at a rate of 20-30% each decade while Vancouver, Saskatoon, and Ottawa-Hull show higher rates and the Alberta cities, Kitchener and Toronto are experiencing very rapid growth. Relatively low rates are evident in Halifax, Saint John, Chicoutimi-Jonquière, St. Catharines-Niagara, Windsor, Thunder Bay and Winnipeg.

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1. This data also demonstrates the continuance of rural depopulation through the 1960s. Comparison of the population growth in Canada with the growth in all urban places, shows a net loss of non-urban population of 380,331.

In general, those centres where growth is relatively slow appear to have lower land prices than the high growth cities (see Table 2.0). Notable exceptions are the cities of Quebec and Saskatchewan, where prices are low although growth is at average levels. The fast and persistent growth rates across metropolitan Canada, and in urban areas, indicates the inadvisability of any urban policy which concentrates exclusively on the three largest cities, even though, absolute terms, these places receive about one-half of Canada's net population increase.

Table 2.4 contains statistics on the residential construction activity which has occurred in Canada during the 1960s to provide accommodation for these growing populations. The annual construction has also doubled during this period - a rate of increase that exceeds the rate of population growth. By 1973, Canada was starting over 250,000 new residences each year, a high rate of construction for a population which is increasing by about 3.3 million in ten years. About 40% of this construction is financed under (but not necessarily by) the National Housing Act. Through the 1960s, the proportion of NHA financed dwellings which were detached houses declined

TABLE: 2.4

RESIDENTIAL STARTS, CANADA, BY TYPE AND FINANCING
1961 - 1973

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
TOTAL UNITS STARTED	125,577	130,095	148,624	165,658	166,565	134,474	164,123	196,878	210,415	190,528	233,653	249,914	268,529
- AS % OF 1961 TOTAL	100.0	103.6	118.4	131.9	132.6	107.1	130.7	156.8	167.6	151.7	186.1	199.0	213.8
- % FINANCED NHA	48.5	38.4	35.2	33.8	33.4	38.6	39.2	37.1	39.8	56.4	55.7	53.5	38.9
NHA FINANCED SINGLE-DETACHED AS % OF ALL NHA	67.1	72.1	72.7	62.1	58.3	63.5	46.7	33.1	32.0	28.7	33.3	36.6	29.0
OTHER FINANCED SINGLE-DETACHED AS % OF ALL OTHER FINANCED	54.3	47.2	39.9	38.1	38.1	44.6	41.6	40.4	39.9	47.0	51.9	56.5	61.7

SOURCE: CHS 1972, Table 13, p. 13. NHA excludes VLA, Farm Credit Act, and Urban Military Housing Loans, and Direct Government Housing. Other financing includes conventional lenders, and other, non-institutional funds.

steadily from about 70% to approximately 30%. Other financing sources began the decade with about one-half of their funding going to detached houses, declining quickly to about 40% and then rising as the 1970s began through to 60% by 1973. The combination of the rise in construction volumes with the shift, by both types of financial sources, in the form of residential unit built, begins the explanation of the decreasing proportions of detached houses in the housing stock.[1]

The shift in new construction is more visible in Table 2.5, a summary of building permits issued, by type of structure, in metropolitan centres, during recent years. This data concerns incorporated municipalities (usually central cities) which differ from the total metropolitan areas reported in other tables. In 1966, in most of these cities, building permits were split quite evenly between low density houses (and duplexes) and apartments. By 1969, the dominant proportion of building permits authorized apartments in most cities, although in St. John's, Saint John and Sudbury, the majority of new residences were still

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1. The cost of the average unit in a multiple building structure is 55-60% of the cost of the average detached house. Accordingly, a financer could obtain 70-80% more units for a given expenditure by funding multiples instead of singles. See Canadian Housing Statistics, Tables 33 and 34.

TABLE: 2.5 NUMBER OF BUILDING PERMITS ISSUED, BY CATEGORY, SELECTED CITIES, 1966-1972 (UNITS)

METROPOLITAN REGIONS	1966 LOW DENSITY	1966 APART-MENTS	1966 CONVER-SIONS	1966 TOTAL	1969 LOW DENSITY	1969 APART-MENTS	1969 CONVER-SIONS	1969 TOTAL	1972 LOW DENSITY	1972 APART-MENTS	1972 CONVER-SIONS	TOTALS
Calgary	2,204	941	10	3,155	3,316	5,265	16	8,597	5,001	3,094	3	8,098
Edmonton	2,252	1,767	25	4,044	2,594	6,480	17	9,091	3,904	5,754	2	9,660
Halifax	201	395	8	604	771	2,904	17	3,692	436	2,375	9	2,820
Hamilton	2,189	2,048	9	4,246	1,802	3,626	24	5,452	3,241	4,208	9	7,458
Hull	455	81	31	567	683	1,491	71	2,245	1,288	2,928	28	4,244
Kitchener	1,296	1,414	16	2,726	1,626	2,224	16	3,866	2,241	3,217	10	5,468
London	994	865	18	1,877	1,296	2,816	49	4,161	1,506	2,498	2	4,006
Montreal	12,035	12,004	390	24,429	5,223	16,610	325	22,158	7,857	17,596	179	25,632
Ottawa	1,558	1,742	16	3,316	2,131	3,356	22	5,509	1,527	8,977	21	10,525
Quebec	2,002	1,185	140	3,327	1,441	5,541	216	7,198	2,556	5,483	393	8,432
Regina					714	802	ø	1,516	1,182	293	ø	1,475
Saint John	240	56	20	316	214	124	31	369	288	770	60	1,118
St. Johns	467	272	35	774	387	92	37	516	443	239	47	729
Saskatoon					794	971	15	1,780	773	76	2	851
Sudbury	297	119	4	420	1,005	575	17	1,597	591	988	12	1,591
Toronto	9,199	18,874	74	28,147	7,464	21,674	59	29,197	11,551	24,963	66	36,580
Vancouver	4,393	5,076	103	9,572	5,113	12,849	129	18,091	5,511	7,757	31	13,299
Victoria	632	608	24	1,264	904	2,867	39	3,810	1,543	2,679	44	4,266
Windsor	1,550	1,358	19	2,927	1,058	1,365	44	2,467	942	1,299	30	2,271
Winnipeg	42,771	49,549	968	93,288	2,486	5,908	19	8,413	3,673	5,106	3	8,782
	BUILDING PERMITS BY CATEGORY, AS PERCENTAGE OF ALL PERMITS ISSUED IN THAT CITY, IN THAT YEAR											
Calgary	70%	30%	1%		39%	61%	1%		62%	38%	1%	
Edmonton	56	44	1		29	71	1		40	60	1	
Halifax	33	65	1		21	79	1		15	84	1	
Hamilton	52	48	1		33	67	1		43	56	1	
Hull	80	14	5		30	66	3		30	69	1	
Kitchener	48	52	1		42	58	1		41	59	1	
London	53	46	1		31	68	1		38	62	1	
Montreal	49	49	2		24	75	1		31	69	1	
Ottawa	47	53	1		39	61	1		15	85	1	
Quebec	66	36	4		20	77	3		30	65	5	
Regina					47	53	ø		80	20	ø	
Saint John	76	18	6		58	34	8		26	69	5	
St. Johns	60	35	5		75	18	7		61	33	6	
Saskatoon					45	55	1		91	9	1	
Sudbury	71	28	1		63	36	1		37	62	1	
Toronto	33	67	1		26	74	1		32	68	1	
Vancouver	46	53	1		28	71	1		41	58	1	
Victoria	50	48	2		24	75	1		36	63	1	
Windsor	53	46	1		43	55	2		41	57	1	
Winnipeg	46	53	1		30	70	1		42	58	1	

NOTE: Low Density is singles and doubles.
Apartments are all buildings having three units or more.

SOURCES: Statistics Canada, Building Permits Catalogue No. 64-203, Ottawa: Information Canada, 1967, 1970 and 1973, Tables 5 (for 1966 and 1969 data) and 4 (for 1972 data).

houses. In 1972, Calgary and the Saskatchewan cities[1] had also returned to primarily low density construction, but in the other cities, over 60% of new units were apartments. A small, consistent proportion of permits in each city has authorized conversions, mainly of houses to apartments. This data, and similar information concerning all starts in Table A-1, demonstrate that residential construction increased in volume and changed to multiple unit forms through the 1960s. This shift has occurred to provide accommodation for the continuing high population growth in metropolitan areas, and has caused the changed structure of the housing stock and tenure patterns.

Table 2.6 is a report of the volume of detached housing construction in metropolitan areas since the mid-1960s. In most cities, the volume has fluctuated while rising, with a general increase occurring between 1970 and 1971. Annual house starts more than doubled between 1965 and 1973 in Vancouver, Calgary, Ottawa-Hull, St. John's and Halifax, and in the latter three places, all starts doubled. Other large increases in house starts occurred in Edmonton, Regina, London, Saint John, Victoria, Winnipeg and Sudbury, and the latter three also had large overall increases.

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1. It is notable that Regina and Saskatoon build a large proportion of detached houses and showed relatively low land prices, average to high growth rates, housing stocks comprising mainly detached houses.

PERCENTAGE INCREASES (DECREASES), SINGLE DETACHED STARTS - 1965-1973, ALL METROPOLITAN AREAS

TABLE: 2.6

METROPOLITAN	SINGLE-DETACHED DWELLING STARTS											AS % OF ALL DWELLING UNITS STARTED		NHA SINGLE DETACHED AS % OF ALL NHA STARTS		PERCENTAGE INCREASE ALL STARTS 1965-1973
	Number of Starts 1965	% Increase 1965-66	% Increase 1966-67	% Increase 1967-68	% Increase 1968-69	% Increase 1969-70	% Increase 1970-71	% Increase 1971-72	% Increase 1972-73	Number of Starts 1973	% Increase 1965-73	1965	1973	1965	1973	
		%	%	%	%	%	%	%	%		%	%	%	%	%	%
Hamilton	2056	5.1	9.0	(-18.3)	(-7.5)	(-44.1)	118.2	31.0	(-1.5)	2862	39.2	45.5	32.9	84.4	13.7	92.7
Toronto	7101	2.0	(-6.3)	(-18.2)	4.1	(-43.8)	92.2	44.3	13.2	8039	13.2	21.8	21.9	12.5	1.1	16.0
Vancouver	3923	10.2	38.3	(-13.9)	(-7.4)	(-5.9)	17.9	38.4	(-16.2)	8729	122.5	33.6	50.4	76.9	7.1	48.4
Sudbury	277	(-5.5)	45.4	62.5	81.7	(-21.6)	27.4	(-53.4)	14.8	515	85.9	89.6	55.2	90.3	10.6	201.9
Victoria	819	(-12.9)	16.4	23.2	(-1.5)	(-26.4)	34.3	24.3	(-13.0)	1427	74.2	50.9	35.6	87.3	15.9	149.3
Kitchener	1168	6.5	(-8.4)	7.5	15.0	(-39.7)	55.8	33.9	11.2	1593	36.4	41.4	31.5	96.4	31.4	79.2
Windsor	864	(-13.8)	(-8.5)	25.7	24.6	(-32.7)	18.6	27.7	7.1	1017	17.7	56.7	50.0	29.9	36.8	33.5
Edmonton	2776	(-23.6)	(-10.2)	36.8	(-9.3)	(-18.9)	64.3	25.4	(-14.8)	4643	67.3	60.6	62.9	99.1	39.2	61.2
London	1038	(-4.6)	(-4.1)	17.0	13.2	(-38.6)	73.0	45.6	10.2	1770	70.5	42.1	45.7	83.7	27.9	57.0
Calgary	2335	(-9.6)	4.8	10.5	24.4	(-5.8)	20.1	26.9	(-6.6)	4678	100.3	55.9	67.0	96.8	77.1	67.1
Ottawa-Hull	1691	(-1.3)	(-0.2)	43.7	7.3	(-14.4)	23.8	10.2	(-11.2)	3381	99.9	33.5	21.8	49.2	15.0	207.1
Halifax	422	(-10.9)	(-12.2)	11.9	17.4	(-7.2)	37.4	97.3	(-10.8)	1219	188.9	25.5	29.2	75.6	22.9	152.6
All CMA's	37733	(-3.8)	(-4.7)	(-0.2)	3.3	(-14.8)	37.6	43.5				32.8		49.4		
All MUA's	6282	6.3	(-9.2)	10.5	(-12.4)	(-7.5)	49.1	4.5	(-11.1)	9513	51.4	56.8	49.7	87.1	36.9	72.9
Winnipeg	1849	(-22.4)	(-9.5)	18.1	39.2	21.0	26.4	37.4	(-4.4)	3061	65.5	47.4	39.8	78.9	33.8	97.5
St. John's	446	(-33.5)	94.3	2.3	(-11.2)	(-4.9)	34.5	32.2	(-32.8)	1258	182.1	80.2	73.8	89.4	24.1	206.7
CANADA	75441	(-6.1)	2.7	3.9	4.1	(-9.8)	38.6	17.9	(-12.1)	131552	74.4	45.3	49.0	58.4	29.0	61.2
St. John	395	31.2	(-12.5)	(-8.4)	26.6	4.3	32.6	47.1	(-10.8)	630	59.5	53.7	58.1	37.3	14.9	47.4
Regina	1055	36.5	18.7	9.4	8.7	39.4	123.7	17.3	16.8	883	83.7	62.5	64.6	88.7	65.3	(-19.1)
Saskatoon	915	(-14.8)	2.6	12.9	29.1	(-10.5)	96.8	56.6	(-26.2)	1057	15.5	51.3	78.8	99.7	87.5	(-24.8)
Quebec	2232	(-2.5)	(-30.3)	(-21.2)	2.3	76.3	24.9	20.2	33.4	2428	8.8	52.8	52.2	83.9	49.7	9.9
Montreal	6371	5.2	(-34.6)	(-4.3)	(-14.0)	36.8	6.7	76.2	(-0.9)	9412	47.7	21.8	30.7	70.6	39.9	5.2

SOURCES: Raw Data For 1965-67 from CHS 1967, Table 10, p. 10; and for 1968-1973 from CHS-1972, Table 10, p. 10.
NHA Data from CHS-1965, Table 9, p. 26, and 1972 NHA Data from CHS 1972, Table 79, p. 65.
1973 Data from CMHC Statistics Division.

The centres in Saskatchewan and the above twelve cities (with the exception of Ottawa-Hull and Halifax) are building large proportions of new houses each year. In general then, it appears that the above cities where house construction has increased slowly also build lower proportions of their new construction in the form of houses.

The combination of Tables 2.1 to 2.6 discloses several general patterns which form the broad parameters of the contemporary housing market. In the face of rapidly rising metropolitan populations, the residential construction industry has shifted, to building multiple-unit, rental-type accommodation. By 1973, only Edmonton, Calgary, Regina, Saskatoon, Saint John and St. John's were building most of their new units as houses. This shift has altered the structure of the housing stock to the degree that most urbanites are now tenants. As homeowners are a minority and new construction is predominantly of a rental type, it is possible to see the outlines of a major inbalance between the number of potential buyers of new houses and annual house construction. This general pattern in the housing stock is a condition which at least supports, if not causes, a consequence like the general increase in house prices which is now evident in urban Canada. As this situation involves a relatively high demand for houses, it requires a commensurately high demand for residential land. As this stock condition exists, it is futile to expect any short-term policies favouring house

construction or ownership[1] to have significant effects on the level of house (or land) prices.

Within this general pattern there are three major regional variants. East of Ontario, metropolitan growth has been slower, lot prices lower, and the increases in lot prices have been slower than the Canadian average. In Montreal, Quebec, Chicoutimi-Jonquière, and Saint John most residences are not houses and are rented, while the stock of houses, and tenure follow the general pattern in the other centres. New construction is increasing at a high rate in Halifax and St. Johns, and the entire east is building large proportions of houses. In Ontario, growth rates and land prices are generally high, and the decline in house ownership is most evident. Windsor and St. Catharines-Niagara have sub-average growth and the house proportion of all construction is high but declining in the former, and average but declining in the latter. In Ottawa-Hull, Hamilton, Kitchener and Sudbury construction is booming but the proportion of new houses built is declining. Toronto and Ottawa-Hull have low proportions of houses in their housing stocks, and are experiencing very high population growth. Examination of the various series, longitudinally, seems to indicate that southern Ontario sets the national trends, as conditions

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1. In this sense, short-term would mean policies directed to effect anything short of a massive shift in the housing stock.

which emerge in these markets usually appear, later, across the country. The western cities are characterized by high growth rates, booming construction overall and in the house category, low proportions of renters, and high proportions of houses in the new stock. This is accompanied by high and quickly rising land prices, except in Winnipeg where growth is slower and house construction is declining, and in Regina and Saskatoon. In general, it appears the west is still building extensive suburbs of detached houses, the central region has shifted to higher density developments and the eastern region builds houses although its stock is predominantly rented.

This sketch of the broad parameters of the housing markets in metropolitan Canada gives some perspective on the pressures in the stock and production process which underlie rising house, and therefore land, prices. Within these generalized dimensions of supply and demand are numerous structural elements which defy the obvious solutions,[1] and constrain rigorous analysis. The size of the numerical difference between the tenant population and current house production levels (Tables 2.3 and 2.5) is so large that it is not feasible to consider building enough

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1. A typical, obvious solution which is often pronounced by pundits, is "build more houses". The analysis in Table A-4 shows, in 19 metropolitan centres and between 1965 and 1972, in over 90% of cases where annual lot production increased significantly, no significant price decrease occurred.

detached houses to accommodate the entire population.[1] Also while many urbanites prefer the convenience of renting residences, many don't, and consumer preferences require an enormus mix of housing types. Refined analyses using age groups, family formation and size, incomes and current accommodation are necessary and are used to simulate the ideal mix, and thereby locate particular pressure points in the current stock and production. However, changing tastes, lifestyles, and locational needs within urban populations have such differentiated, and volatile temporal effects in any locale that this generalized mix and hypothetical variance can only be aggregated descriptions of the actual market.

Table 2.7 provides more detail on the annual aggregate market for houses in each of the metropolitan centres. The first five columns on the left side allow comparison between the stock of houses and annual house sales in 1971. In the first column, owner-occupied dwellings are used as a surrogate for the stock of detached houses, thereby under-estimating the size of the stock.[2] The second column uses all detached starts to represent all new house

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1. Impossible because this would require an increase by orders of magnitude, in house production, which for financial reasons would probably entail a greater decrease in the construction of multiples. Thus while the number of houses would rise, total dwelling unit production would probably decline, and in the face of continuing population growth, aggregate housing per capita would decline.
2. The actual stocks of detached houses, which usually outnumber owner-occupied dwellings, were given in Table 2.3.

TABLE: 2.7 HOUSES AND HOUSE SALES 1965-1972 METROPOLITAN AREAS

CITY	HOUSING STOCK & SALES-1971					AVERAGE PRICES AND PRICE INCREASES[4] 1965-1972																PRICE INCREASE 1965-1972		
	ALL OWNER OCCUPIED DWELLINGS[1]	HOUSES SOLD NEW[2]	EXISTING[3]	TOTAL	AS % OF ALL	1965 HOUSE PRICES NEW	XTING	PERCENTAGE INCREASES - AVERAGE PRICE 1965-1966 NEW-XTING	1966-1967 NEW-XTING	1967-1968 NEW-XTING	1968-1969 NEW-XTING	1969-1970 NEW-XTING	1970-1971 NEW-XTING	1971-1972 NEW-XTING	1972 HOUSE PRICES NEW	XTING	NEW	XTING	AS AVERAGE ANNUAL COMPOUND INTEREST RATE NEW	XTING
QUEBEC	53,690	2,696	410	3,106	5.8	14,933	22,026	5 -16	5 24	0 2	11 0	-6 31	4 -10	6 37	19,720	38,190	4,787	16,164	4 1/4	8
TORONTO	424,780	6,972	15,587	22,559	5.3	19,677	18,883	17 16	8 12	7 19	8 8	4 0	9 5	-2 7	32,035	34,078	12,358	15,196	7 1/8	8 5/8
VANCOUVER	203,525	5,283	9.932	15,215	7.5	18,326	13,965	7 8	6 17	6 15	12 16	5 1	7 9	11 18	30,474	31,465	12,148	17,500	7 3/8	12
OTTAWA-HULL	85,600	2,725	2,767	5,492	6.4	17,880	17,829	11 21	1 1	2 13	17 11	7 -2	8 10	0 3	27,514	30,441	9,634	12,612	6 1/4	7 3/4
KITCHENER	39,905	1,323	1,699	3,022	7.6	16,671	16,808	13 25	9 12	3 19	10 1	7 1	1 8	5 -6	26,404	28,882	9,733	12,094	6 5/8	7 7/8
HAMILTON	93,140	2,155	5,299	7,384	7.9	17,951	15,131	11 12	7 14	8 12	26 7	1 4	-3 2	10 11	31,192	27,434	13,241	12,303	8 1/8	8 5/8
SUDBURY	22,860	1,268	641	1,909	8.4	15,914	17,642	20 -10	-4 18	5 0	30 10	3 4	4 21	25 -2	33,146	25,980	17,232	8,338	10 3/4	5 5/8
VICTORIA	40,735	998	2,039	3,037	7.5	19,339	12,386	7 6	1 16	2 15	30 28	-6 -2	8 6	3 8	28,642	25,610	9,303	13,224	5 7/8	10 5/8
EDMONTON	80,050	3,154	3,507	6,661	8.3	16,486	13,766	9 8	6 8	4 17	17 15	10 14	2 -1	7 4	27,414	25,522	10,928	11,756	7 3/8	9
CALGARY	68,830	3,441	4,251	7,692	11.2	15,999	14,816	12 5	6 16	6 16	13 16	-1 1	6 4	4 7	24,898	25,373	8,899	10,557	6 3/4	7 7/8
MONTREAL	284,085	5,293	5,722	11,015	3.9	17,034	22,915	6 4	-12 4	5 1	2 -3	2 -2	2 2	4 6	18,596	25,034	1,562	2,190	1 1/4	1 1/8
HALIFAX	29,715	551	523	1,074	3.6	16,302	16,372	4 10	5 6	6 -1	30 22	-2 0	13 3	2 5	27,644	25,003	11,324	8,610	7 3/4	6 1/8
LONDON	51,980	1,339	2,590	3,929	7.6	15,122	13,510	10 5	9 13	6 8	26 10	-2 -4	7 11	3 12	26,221	22,837	11,099	9,327	8 1/8	7 5/8
ST. CATHERINES	63,895	1,465	991	2,456	3.8	17,509	13,563	11 20	4 7	1 9	22 6	5 1	0 -5	4 20	27,329	22,580	9,820	9,017	6 1/2	7 3/8
WINDSOR	52,245	853	1,811	2,664	5.1	18,450	12,213	18 21	4 8	-2 17	23 10	7 2	0 2	2 2	29,904	22,470	11,454	10,250	7	8 7/8
SAINT JOHN	14,505	639	517	1,156	8.0	15,779	13,027	8 -2	3 13	3 9	12 5	1 0	4 19	22 7	25,900	20,488	10,121	7,461	7 1/4	6 3/8
ST. JOHN'S	19,705	382				18,317		4	-6	15	1	8	1	1	22,846		4,529		3 1/4	
THUNDER BAY	23,580	275	400	675	2.9	15,930	10.896	10 1	8 7	8 6	21 13	-1 12	7 4	16 19	29,887	20,299	13,957	9,430	9 1/4	9 1/8
WINNIPEG	98,375	2,129	4,950	7.079	7.2	17,126	13,588	7 1	2 0	5 7	16 7	2 6	-6 5	10 6	23,691	19,579	6,527	5,991	4 5/8	5 1/4
REGINA	25,520	879	1,202	2,081	8.2	15,162	12,395	9 0	5 11	3 5	18 11	-26 6	5 -4	13 3	19,032	17,220	3,870	4,825	3 3/8	4 3/4
SASKATOON	22,870	498	1.238	1,736	7.6	15,093	11,677	9 10	4 15	6 10	16 2	-18 -2	-3 -1	7 4	17,573	17,196	2,480	5,519	2 1/4	5 5/8
CHICOUTAMI - J	15,980	523				13,595		2	4	9	4	-1	-1	5	16,777		3,182		3	

SOURCES AND NOTES

1) Statistics Canada, 1971 Census, Catalogue #938730, Vol. 2, Part 3, pp. 12-1 to 12-4 inclusive.
2) CMHC, CANADIAN HOUSING STATISTICS, 1966-1972.
3) Canadian Association of Real Estate Boards statistics.
4) Average house prices from sources 2.) and 3.) -
New house prices are average prices of NHA -
Financed bungalows by CMHC office, 1965-1968
- all NHA - financed detached houses by census areas 1969-1972.
Existing house prices are average MLS house sales reported by urban real estate boards.

sales, on the assumption that the number of houses built through the winter or carried-over from the previous season is minimal and effectively constant. Existing house sales, in column three, are houses sold through the Multiple Listing Service as reported by the Canadian Association of Real Estate Boards, and are unquestionably underestimates of the actual number of existing houses sold in each area.[1] Column four is the sum of the relatively accurate new house sales and the underestimate of existing house sales, and is, therefore, an underestimate of all sales. Column five gives the percentages represented by the house sales underestimates of the slightly understated house stocks, and describes, therefore, slightly low turnover rates.

This sales volume data demonstrates that, in each city, a very low proportion of the stock of houses is built, or sold, each year. New house construction varies from a high of about 5% in Quebec, Sudbury, Calgary and Saint John to about 1.5% in Thunder Bay, Windsor, Toronto, Montreal, Halifax and St. John's,with most cities annual

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1. MLS house sales underestimate all existing house sales as they do not include realtor-sold exclusive listings, non-MLS realtor's sales or private sales, and may exclude parts of a metropolitan area. While the representativeness of MLS sales varies, a reasonable estimate of it's coverage is 60%. As non-detached houses are occasionally reported as house sales by MLS statistics, the entire table uses owner-occupied dwellings as a stock indication which is more compatible with the sales data.

construction at about 3% of their ownership stock. In most cities, the underestimate of existing house sales significantly exceeds the number of new houses built,[1] and while varying as well, represents 4-6% of the housing stock. This indicates that the average house is resold every 15-25 years. When new and existing sales are combined, it appears that 7-8% of a city's houses are sold in the market each year, with a range from about 4% to 12%. These very low proportions of sales, or turnover rates, demonstrate that few owners sell their homes every year, yet those that do place more houses on the market than are offered by builders. The corollary, which adds significant perspective on the market, is that in any year, the preponderance of house owners do not sell their houses.

The rest of Table 2.7 reports average prices of new, and existing houses in each city, in 1965 and 1972, annual changes in each price, and the total price increases over this period. As annual average prices of NHA financed detached houses are used to represent new houses, and these houses are a relatively constant sample of new medium-priced houses, this should be a good indicator of price changes.

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1. In Toronto, Ottawa-Hull, Hamilton, London, Windsor, Thunder Bay, Winnipeg, Regina, Saskatoon and Victoria, these low estimates of existing house sales were about double the volume of new houses built.

Average annual MLS house prices (total dollar sales of MLS houses ÷ number of sales) are a less satisfactory indicator of existing house prices as the composition of this sample is relatively unknown. MLS sales reflect the mid-price ranges among house sales, as more expensive houses usually receive exclusive listings and less expensive houses are often sold privately. MLS average prices slightly exceed the price of the average house sold through MLS, as the price distribution curves have been somewhat skewed towards lower prices in recent years.[1] In general then, while these statistics have limitations as absolute indicators of existing house prices, they both appear to be reasonable indicators of price change.

Examination of the change in prices of new and existing houses shows sustained rapid increases in most cities, particularly high escalation between 1967 and 1969, and in general, that prices of existing houses are rising more quickly than new house prices. In the high price cities of Ontario, Alberta and British Columbia, prices of new and existing houses nearly doubled through constant increases between 1965 and 1972. Both prices increased at average rates of 7-8% per annum. A broad pattern of high inflation is seen beginning in existing house prices in 1967 and 1968

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1. This statement is made after examination of the price distributions from Edmonton, Toronto and Ottawa, since 1969. Table A-5, a summary of the 1971 Census Sample of the value of all detached dwellings, exhibits a similar skew, with lower median prices.

and spreading to new house sales in 1968 and 1969. In general, lower price rises occurred in the Maritimes, while the lowest increases were in Quebec, Saskatchewan and Manitoba. While the increase in the price of existing houses generally exceeded the rate for new houses in the high price areas as well as in Quebec, Saskatchewan and Manitoba, new houses led the increase in the Maritimes. The average prices seldom declined, and most declines were in the Maritimes, Saskatchewan, Quebec and Sudbury, in 1970 and 1971, and in new house prices. The rates of increase of both new and existing prices appear to be slowing, although they still exceeded normal interest (or inflation) rates in the majority of cities in 1972, and when they were high they usually exceeded 15%.

Table 2.8 is further examination of the total house price increases between 1965 and 1972, which uses the Spearman Rank Correlation Test as a rudimentary indication of causation in the change of prices of new and existing houses. The cities were ranked under each category of houses, in descending order of absolute prices in 1965 and 1972, absolute price increases, and rates of increase. The rankings of these various price elements were then tested for correlation.[1] While this usage, and methodology does not produce a conclusive result, a high correlation co-efficient (approaching 1.0) would indicate a general (among

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1. For a description of the Spearman Test see Blalock, Hubert M., Social Statistics, (Toronto: McGraw-Hill, 1960), p.317.

TABLE: 2.8

SPEARMAN TESTS ON AVERAGE PRICES, NEW AND EXISTING HOUSE SALES - 16 CITIES

	EXISTING HOUSES, AVERAGE						NEW HOUSES, AVERAGE									
	E1 PRICE 1965	RANK	E2 PRICE INCRS 65-72	RANK	E3 % INCRS 65-72	RANK	E4 PRICE 1972	RANK	N1 PRICE 1965	RANK	N2 PRICE INCRS 65-72	RANK	N3 % INCRS 65-72	RANK	N4 PRICE 1972	RANK
TORONTO	18883	2	15196	2	80.5	5	34078	1	19677	1	12358	2	62.8	7	32035	1
VANCOUVER	13965	8	17500	1	125.3	1	31465	2	18326	3	12148	3	66.3	4	30474	3
OTT-HULL	17829	3	12612	4	70.7	8	30441	3	17880	5	9634	10	53.9	11	27514	6
KITCHENER	16808	4	12094	6	72.0	6	28882	4	16671	9	9733	9	58.4	8	26404	9
HAMILTON	15131	6	12303	5	81.3	4	27434	5	17951	4	13241	1	73.8	1	31192	2
VICTORIA	12386	15	13224	3	106.8	2	25610	6	19339	2	9303	11	48.1	12	28642	4
EDMONTON	13766	9	11756	7	85.4	3	25522	7	16486	10	10928	6	66.3	5	27414	7
CALGARY	14816	7	10557	8	71.3	7	25373	8	15999	12	8899	12	55.6	10	24898	12
MONTREAL	22915	1	2190	16	9.6	16	25034	9	17034	8	1562	16	9.2	16	18596	15
HALIFAX	16372	5	8610	11	52.6	12	25003	10	16302	11	11324	4	69.5	3	27644	5
LONDON	13510	12	9327	9	69.0	9	22837	11	15122	15	11099	5	73.4	2	26221	10
ST.CATH.	13563	11	9017	10	66.5	10	22580	12	17509	6	9820	8	56.1	9	27329	8
SAINT JOHN	13027	13	7461	12	57.3	11	20488	13	15779	13	10121	7	64.1	6	25900	11
WINNIPEG	13588	10	5991	13	44.1	14	19579	14	17126	7	6527	13	38.1	13	23691	13
REGINA	12395	14	4825	15	38.9	15	17220	15	15162	14	3870	14	25.5	14	19032	14
SASK.	11677	16	5519	14	47.3	13	17196	16	15093	16	2480	15	16.4	15	17573	16

SPEARMAN RANK CORRELATION TEST, RANK DIFFERENCES AND CO-EFFICIENTS

E4 E2	E4 N4	E4 E3	E4 E1	E4 N2	E4 N3	E2 E3	E2 E4	E2 N4	E2 N2	N4 E2	N4 N2	N4 E4	N4 E3	N4 N1	N4 N3	N2 N3	N2 N4	N2 E2	N2 E4
1	0	4	1	1	6	3		1	0		1	0	4	0	6	5			
1	1	1	6	1	2	0		2	2		0	1	2	0	1	1			
1	3	5	0	7	8	4		2	6		4	3	2	1	5	1			
2	5	2	0	5	4	0		3	3		0	5	3	0	1	1			
0	3	1	1	4	4	1		3	4		1	3	2	2	1	0			
3	2	4	9	5	6	1		1	8		7	2	2	2	8	1			
0	0	4	2	1	2	4		0	1		1	0	4	3	2	1			
0	4	1	1	4	2	1		4	4		0	4	5	0	2	2			
7	6	7	8	7	7	0		1	0		1	6	1	7	1	0			
1	5	2	5	6	7	1		6	7		1	5	7	6	2	1			
2	1	2	1	6	9	0		1	4		5	1	1	5	8	3			
2	4	2	1	4	3	0		2	2		0	4	2	2	1	1			
1	2	2	0	6	7	1		1	5		4	2	0	2	5	1			
1	1	0	4	1	1	1		0	0		0	1	1	6	0	0			
0	1	0	1	1	1	0		1	1		0	1	1	0	0	0			
2	0	3	0	1	1	1		2	1		1	0	3	0	1	0			
.882		.744		.544		.929		.865		.865		.782		.747		.932		.644.	
	.782		.659		.382		.882		.644		.835		.782		.659		.835		.544

SOURCE: TABLE 2.7

all cities) interdependence between two rankings. The variables which demonstrate interdependence are then examined for indications of causation. As might be expected, the highest correlations occur within the same category of houses, between the absolute price increases and the rates of increase (.932, and .929 for new and existing house prices, respectively). Also, prices in 1972 related to the absolute increases between 1965 and 1972 (.882 and .835 for existing and new, respectively). Existing house prices in 1972 showed some relationship to 1972 new house prices (.782), the rate of increase of existing house prices (.744) and a lesser relation to 1965 prices in this category. New house prices in 1972 were related with: the absolute increase in the price of existing houses (.865); and to a lesser extent, with absolute increases in the price of new houses (.835); existing house prices in 1972 (.782); the rate of increase of existing house prices (.782); new house prices in 1965 (.747); and finally, with the rate of increase in new house prices (.659). As the most obvious relationships did produce high correlation co-efficients, and prices of existing houses in 1972 related strongly with the absolute and relative increases in existing house prices, the test seems a useful indication of interrelatedness between price factors. It is, therefore, very interesting that the co-efficient showed that current prices of new houses were more closely related to the increase (and

increase rate) of existing house prices than to the increase (and increase rate) of new house prices. This perspective on price behavior in the market for houses supports the indications seen in the general patterns of sales, in trends in the stock, and in property appraisal techniques - existing houses are the dominant force in the housing market.

This section, then, has observed the high levels of land prices and land price increases in metropolitan Canada during recent years, and has disclosed several causes. Lot prices are, ultimately, a residual of house prices so these land price problems are actually derivatives of house price problems. The highest absolute prices, and rates of price increase occur in those cities where this nation's economic activity is concentrated - the metropolitan areas of Ontario, Alberta and British Columbia. Population growth has followed this economic activity as people follow jobs. To accommodate the larger populations, the construction industry in the central metropolae have built increasing proportions of rental housing, with the consequence that home ownership has declined to the degree that owner-occupied houses are a minority in the housing stock. As home-ownership is widely desired, this indicates a high latent demand for houses. However, a very small proportion of the stock of existing houses are sold each year, (say 5%) and these sales are often double the number of new houses built, so the market for

houses is dominated by existing houses. The examination of changes in average prices of new and existing houses indicated that prices of existing houses have increased more, and more quickly, than new house prices. Thus, the increasing prices charged by the relatively small proportion of home-owners who sell each year, drives up the market value of all houses, new and existing. With this rise in the market value of houses, the value of residential lots (houses less the cost of building a house and profit), increases commensurately.

Table 2.9 illustrates the effect of sustained lot price increases at current levels, by using current rates of increase to project 1972 lot prices to 1985. Two average lot prices are reported for most metropolitan areas in 1972 - the average price of lots for new NHA-financed detached houses, and average lot prices as reported in various local newspapers. As NHA average prices tend to be low, and newspaper reports tend to over-state average prices,[1] the two numbers provide a useful range of base prices. The base prices for each city are projected to 1985 using the rate that lot prices escalated between 1968 and 1972 in the respective cities. The resulting prices exaggerate the gap between

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1. Newspapers often report, as average prices, small surveys undertaken by a reporter on the telephone in one day.

TABLE: 2.9 RATES OF INCREASE, LOT AND HOUSING PRICES, METROPOLITAN CANADA

	Average Lot Prices 1972		NHA Increase 1968-1972 As Compound Interest Rate[1]	Increase in Average Price of NHA Houses, 1965-1972 As Compound Interest Rate[3]	Projected Lot Price -1985 (Using current rate of Increase)	
	NHA Series[1]	(Other[2] Reports)			NHA Series	Other Reports
Hamilton	$11,796	(20,000)	11 1/4	8 1/8	$48,941	($ 82,978)
Toronto	11,507	(22,000)	8 1/4	7 1/8	32,915	(62,929)
Vancouver	9,667	(14,000)	18 3/4	7 3/8	99,349	(143,879)
Sudbury	8,240	(10,000)	20 1/8	10 3/4	99,039	(120,194)
Victoria	7,795	(11,000)	10 1/8	5 7/8	28,149	(39,722)
Kitchener	7,467	(9,600)	9 1/2	6 5/8	24,955	(32,083)
Windsor	7,101		7 7/8	7	19,382	
Edmonton	6,913	(9,300)	10 1/8	7 3/8	24,964	(33,583)
London	6,568		8 7/8	8 1/8	20,310	
Calgary	6,320	(7,000)	10 5/8	6 3/4	24,280	(26,889)
Ottawa-Hull	6,105	(12,000)	13 1/2	6 1/4	33,362	(65,576)
Halifax	5,677	(7,200)	Nil	7 3/4		
All CMA's	5,535		10 3/8		20,615	
All MUA's	5,460		10 1/2		20,652	
Winnipeg	5,190	(7,100)	5 5/8	4 5/8	10,571	(14,461)
St. John's	4,910		7 1/4	3 1/4	12,392	
Canada	4,885		9 5/8		16,581	
Saint John	4,745		20	7 1/4	56,552	
Regina	3,309	(5,000)	1 1/2	3 3/8	4,015	(6,067)
Saskatoon	3,257		7/8	2 1/4	3,647	
Quebec	2,753		4 5/8	4 1/4	4,955	
Montreal	2,171		7/8	1 1/4	2,431	

SOURCES: 1. Table: 2.0
2. Various newspaper articles. See Table: 2.11.
3. Table: 2.7. These are rates of increase in total housing price, including land and buildings.

prices in the central areas ($25,000 - $100,000 per NHA lot, $30,000 - $140,000 per other reports) and prices in Saskatchewan, Manitoba, Quebec and the Maritimes[1] ($2,500 - $16,500). Assuming that lot prices reach the projected levels,even if they absorbed a greatly increased proportion of house prices it is apparent that few people could buy houses in the central metropolae, while widespread home ownership would be possible in the hinterland cities. This dramatises two potential consequences of a continued escalation in housing prices - in the biggest cities, detached houses would become the exclusive housing form of the rich, and most people who wanted this housing form would have to emigrate to smaller places.[2] Both of these potential consequences of high prices would be reinforced by the trend away from construction of detached houses. While these projections and these consequences may appear extreme, they are reasonable extrapolations from present trends, and illustrate the drastic result of a sustained and rapid inflation on a high priced product.

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1. A higher price is projected for Saint John because it's lot prices escalated very quickly during the early 1970s. This high rate partially reflects the increasing extent of prepaid services in lot prices, and distorts the projection.
2. If such an immigration occurred, and jobs were created in the hinterland areas to employ large populations, the attendant higher demand for houses would undoubtedly cause rapid price inflation, while the out-migration would slacken demand and deflate prices in the central areas.

2.2 RELATED PROBLEMS: PRICE EFFECTS, COSTS AND SUPPLY

With the perspective provided by this discussion of house prices, it is possible to examine some of the other elements of land policy related to rising lot prices. These related problems include raw land prices and speculation, servicing costs, and land supply. High lot prices are often attributed to deficiencies in one or more of these related areas.

Table 2.10 is a rough illustration of the residual pricing mechanism that inter-relates raw acreage prices to house prices. The table, moving from left to right, contains estimates of all non-land cost elements associated with building and selling a house in each of the 19 metropolitan areas, in 1971. Generally costs are over-stated in an attempt to counterbalance the omission from this simplified approximation, of some variable cost elements such as sales expense and overhead. The total house construction, servicing, and capital cost, with profit is then subtracted from the average sale price of a house, to obtain the amount of money an average builder could have paid for each unit, or lot, of unsubdivided land. A profit component is then removed from this amount, leaving the residual value of the lot, which is then converted (at five lots per acre) to a value for raw land. This acreage value is the highest price a builder/developer could pay, in 1971, for land suitable for immediate subdivision,

TABLE: 2.10 RESIDUAL VALUE OF RESIDENTIAL LAND, FROM AVERAGE COST FACTORS FOR SINGLE DETACHED DWELLINGS, METROPOLITAN AREAS 1971

METROPOLITAN AREA	COST OF HOUSE				COST OF LOT SERVICING											IMPLIED ACREAGE VALUE AT FIVE LOTS PER ACRE[6]		
	FLOOR AREA (sq.Ft.)[1]	CONST. COST ($ per sq.ft.)[1]	BASIC HOUSE COST $	INCLUDING 6 MONTH'S HOLDING AT 10% p.a.	LOT FRONT-AGE (ft.)[2]	SERVICING COST ($per f.f.)[3]	SUBDIV. PREPARATION AND TAXES 12%[4]	IMPOST ALLOWANCE ($)[5]	ONE YEAR CARRYING COST AT 10 % p.a.	PROFIT ALLOWANCE 15%	TOTAL SERVICING COST ($)	SUM OF HOUSE AND SERVICING COST ($)	ACTUAL SALE PRICE OF HOUSING ($)[1]	VARIANCE (LAND COST PLUS PROFIT) ($)	LAND PROFIT ALLOWANCE 15%	RESIDUAL VALUE OF LOTS ($)	PRESENT VALUE - 1971	1966 VALUE - 7½% MORTGAGE +2% TAXES	1961 VALUE - 7½% MORTGAGE +2% TAXES
TORONTO	1318	$14.72	$19,400.96	20,371.01	45*	$91.00	491.40	1000.	558.64	921.76	7066.80	27,437.81	32,567.	5,129.19	769.38	4,359.81	21,799.05	13,840.67	8,793.48
WINDSOR	1161	19.94	23,150.34	24,307.86	54	N/A		500.					30,322						
HAMILTON	1192	14.22	16,950.24	17,797.75	44	74.00	390.72		364.67	601.71	4613.10	22,410.85	28,429	6,018.15	902.72	5,115.43	25,577.15	16,239.46	10,317.53
VICTORIA	1142	17.71	20,224.82	21,236.06	62*	53.15	395.44	300.?	399.07	658.47	5048.28	26,284.34	27,918	1,633.66	245.05	1,388.61	6,943.05	4,408.29	2,800.75
OTTAWA-HULL	1369	15.27	20,904.63	21,949.86	57*	50.70	346.79	500.	373.67	616.55	4726.91	26,676.77	27,775	1,098.23	164.73	933.50	4,667.50	2,963.49	1,882.82
VANCOUVER	1210	15.68	20,540.80	21,567.84	60*	28.76	207.07	300.?	223.27	368.39	2824.33	24,392.17	27,389	2,996.83	449.52	2,547.31	12,736.50	8,086.70	5,137.76
HALIFAX	1195	17.64	21,079.80	22,133.79	62	40.00	297.60	500.	327.76	540.80	4146.16	26,279.94	27,155	875.05	131.26	743.79	3,718.95	2,361.24	1,500.18
SUDBURY	1085	17.95	19,475.75	20,449.54	58	80.00	556.80	500.?	569.68	939.97	7206.45	27,655.99	26,580						
EDMONTON	1222	15.17	18,537.74	19,464.63	55	45.00	297.00	700.?	347.20	572.88	4392.08	23,856.71	25,709	1,852.29	277.84	1,574.45	7,872.25	4,998.25	3,175.57
LONDON	1205	15.53	18,713.65	19,649.33	59*	47.75	338.07	250.	340.53	561.88	4307.73	23,957.06	25,344	1,386.94	208.04	1,178.90	5,894.50	3,742.54	2,377.77
KITCHENER	1166	15.15	17,664.90	18,548.14	50	38.50	231.00	600.?	275.60	454.74	3486.34	22,034.48	25,122	3,087.52	463.13	2,624.39	13,121.95	8,331.40	5,293.24
SAINT JOHN	1269	16.23	20,595.87	21,625.66	61	29.00	212.28	200.	218.13	359.91	2759.32	24,384.98	24,865	480.02	72.00	408.02	2,040.10	1,295.30	822.95
CALGARY	1177	15.15	17,831.55	18,723.13	57	43.00	294.12	700.?	344.51	568.44	4358.08	23,081.21	23,965	883.79	132.57	751.22	3,756.10	2,384.82	1,515.17
ST. JOHN'S	1096	15.69	17,196.24	18,056.05	54	40.00	259.20	300.?	271.92	448.67	3439.79	21,495.84	22,795	1,299.16	194.87	1,104.29	5,521.45	3,505.68	2,227.29
WINNIPEG	1063	15.79	16,784.77	17,624.01	56	26.00	174.72	200.?	183.07	302.07	2315.86	19,939.87	21,672	1,732.13	259.82	1,472.31	7,361.55	4,674.00	2,962.39
QUEBEC	1023	15.28	15,631.44	16,413.01	N/A	N/A							18,449						
REGINA	1018	14.52	14,781.36	15,520.43	54	34.00	220.32	200.	225.63	372.29	2854.24	18,374.67	18,298						
MONTREAL	1087	14.24	15,478.88	16,252.82	N/A	38.00	(Laval)						18,042	135.98	20.40	115.58	577.90	366.92	233.12
SASKATOON	997	14.53	14,486.41	15,210.73	61	27.75	203.13	200.	209.59	345.82	2651.29	17,862.02	17,998						

SOURCES:
1. CHS-1971, Table 87, p. 71, Construction cost per square foot includes an unidentified profit component.
2. Average frontage of NHA-financed, detached lots, by city, provided by CMHC Economics and Statistics Division.
3. Servicing costs per front foot, including at least sanitary and storm sewers, water, curbs and gutters, paving and sidewalks, plus any other services which are usually installed in the respective cities. Provided in a background study by Dr. J. H. Chung, for CMHC.
4. Includes engineering, planning and surveying fees, management expense and taxes, based on CMHC/OHC subdivision - Malvern Phase I.
5. Imposts are estimates, question mark (?) indicates doubt.
6. This calculation pays for excess land to be deeded to municipality for streets, schools, etc.

servicing and construction of houses, with expenses and profits as given, to be able to sell the houses at the stated average prices.

The acreage values produced by these calculations generally parallel the lot and house prices in the respective cities. In Quebec and Saskatchewan where house prices are relatively low, the cost figures in the table exceeded average selling prices, indicating very low acreage values. A similar situation occurred in Sudbury where servicing costs are very high. The Maritimes were the next lowest price range, from $2040 in Saint John to $5521 in St. John's, while progressively higher acreage prices were calculated for Manitoba, Alberta, British Columbia and Ontario. This reinforces the earlier finding that land values follow demand (indicated by population growth and economic activity), but does not explain the low prices in Saskatchewan and Quebec.

Several basic mechanisms in the land market are illustrated by the method of calculation in Table 2.10. It is apparent that when house prices rise more quickly than construction, servicing, or capital costs, the value of raw acreage rises.[1] If a large number of sellers were competing,

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1. This relationship should be noted when considering proposals, such as Planned Unit Densities, which use smaller lots to obtain more houses per acre. This would increase the dollar yield per acre, and while decreasing lot costs in the short run, would increase acreage prices (and thus lot costs) after a brief period of adjustment.

this might depress market value, and land developers or builders could obtain the variance between the depressed value and the residual value. If only a few sellers existed, and they forced prices above the residual value, then developers and builders would have to cut other costs or receive net losses as their production costs would exceed market prices for houses. As all of these values, costs and prices are inter-related, any proposal to intervene at one stage, or in isolated components of this production process/pricing mechanism, must be cognisant of its immediate and longer-run effects through the entire mechanism.

The large appreciation in land value in the pre-development process of urbanization is also illustrated by the figures in Table 2.10. The most common pre-urban use of land is agriculture, as slow contours, good drainage, and the absence of rock are prerequisites for economical farming and cheap urban development. The value of agricultural land is also a residual function, basically the capital value of the net income produced by a farm, prorated on a per-acre basis. While this varies across Canada it seldom exceeds $500 per acre, and is usually about $300 per acre. As these values are greatly exceeded by the residual values of acreage suitable for urban use, a parcel of urbanizing land appreciates through a wide range of values. People who buy

and sell land during this period of rapid price appreciation are often known as speculators. In practice, there are relatively few pure speculators as many farmers do not sell their land until development is imminent, and many developers buy acreage in likely growth locations far in advance of need.[1] The two columns at the right side of Table 2.0 discount the 1971 land values for five years and ten years, using a 7½% annual borrowing rate and allowing 2% per year for taxes. These discounted values are the highest prices a developer could pay, in 1966 and 1961 respectively, for acreage to be held in inventory under the given financial conditions, and still have a book value equal to market value in 1971. These demonstrate that in all of the higher price areas a builder can pay well above agricultural values for farmland, hold the land for ten years, and recoup all expenses when the developed acreage is sold. Alternatively,

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1. Table A-6 in the Appendix illustrates the various factors that determine the relative suitability of all land around a city, for development purposes. Urbanizing pressures occur differentially, and only to that limited area of developable land where the relative proximity to development infrastructure begins to rank the land supply. As farmland moves into this ranking, the farmer begins to receive pressure, in the form of rising taxes, changing milieu and offers to buy. As land banking developers are becoming more prevalent, and farmers are becoming more financially sophisticated, there is less room for pure speculators in this land supply process. As speculators attempt to buy low and sell high, they may be outbid by developers, or the farmer may decide to hold the land, perhaps entering a joint venture with a developer.

if the developer buys at agricultural prices, or the farmer holds the land, the accrued appreciation in the value of this land inventory gives the owner borrowing power to finance its development.

Table 2.11 is focussed on this appreciation in the value of urbanizing agricultural land. In this table, typical servicing costs and a profit of 10% are subtracted from the average sale price of a developed acre, and the result is compared with estimates of agricultural values. In six of the nine areas in the table, separate estimates of revenue per acre in 1972-73 are shown, based on CMHC data and newspaper reports of average lot prices. Agricultural values are increased by 40% to account for that land in a development which does not produce revenue, and carrying costs and taxes are charged for 10 years to simulate the expense of holding this farmland. The difference between the cost of the held farmland, and the amount that sales revenue exceeds development costs, is identified as a return due to scarcity, and is shown as a percentage of total revenue. In other words, the table indicates the proportion of the selling price of a developed acre which is appreciation of land value above the estimated agricultural value. Using the lower, NHA revenue estimates, these proportions vary from 10-20% in Halifax, Saint John, Saskatoon, Calgary and Edmonton to 37% in Ottawa and over 50% in Toronto and Vancouver. When the higher

TABLE: 2.11 An Approximation of Land Revenue & Land Costs, 1972-73, Nine Canadian Cities

	Halifax	St. John	Ottawa		Toronto		Regina		Saskatoon	Calgary		Edmonton		Vancouver	
	NHA	NHA	NHA	Other	NHA	Other	NHA	Other	NHA	NHA	Other	NHA	Other	NHA	Other
Revenue (Sale of 1 Acre)[1]	$28,385[5]	$23,725[5]	$42,000[5]	$75,000[6]	$57,535[5]	$110,000[7]	$16,545[5]	$25,000[8]	$16,285[5]	$31,600[5]	$35,000[9]	$34,565[5]	$45,000[10]	$48,335[5]	$70,000[11]
Less Costs															
-Profit Allowance[2]	2,583[10]	2,159[12]	3,822[10]	6,825[10]	5,236[13]	10,010[13]	1,506[14]	2,275[14]	1,482[15]	2,875[16]	3,185[16]	3,145[16]	4,095[16]	4,398[10]	6,370[10]
-Servicing Costs	20,915[10]	16,500[12]	19,405[10]	19,405[10]	20,000[13]	20,000[13]	15,500[14]	15,500[14]	10,437[15]	20,805[16]	20,805[16]	20,805[16]	20,805[16]	16,000[10]	16,000[10]
-Carrying Costs on Services[3]	2,090	1,650	1,941	1,941	2,000	2,000	1,550	1,550	1,044	2,081	2,081	2,081	2,081	1,600	1,600
Excess (For Land Acquisition Carrying Costs, Tax, etc)	2,794	3,415	16,832	46,829	30,299	77,990	- 2,010	5,675	3,322	5,839	8,928	8,534	18,021	26,337	46,030
Estimated Agricultural Value	100	100	300	300	400	400	80	80	80	150	150	250	250	300	300
-Increase 40% for Gross Land[4]	140	140	420	420	560	560	112	112	112	210	210	350	350	420	420
-Plus Holding Costs-10 Years at 8%, Taxes at 2%	371	371	1,114	1,114	1,486	1,486	297	297	297	557	557	929	929	1,114	1,114
-Implied Returns to Scarcity, or Speculative Gain	2,423	3,044	15,118	45,715	28,813	76,504	- 2,307	5,378	3,025	5,282	8,371	7,605	17,092	25,223	44,916
-As % of Total Revenue	8.5%	12.8%	37.2%	60.9%	50.1%	69.5%		21.5%	18.6%	16.7%	23.9%	22.0%	38.0%	52.2%	64.2%

ASSUMPTIONS:
1. One acre sells as 5 serviced lots.
2. Sale price includes 10% profit.
3. Servicing costs are carried for one year at 10%.
4. For each saleable acre (5 lots), 1.4 acres must be acquired and held.

SOURCES:
5. Five lots at average price of NHA-financed detached lots in 1972, given in CMHC, Canadian Housing Statistics, 1972, p. 70.
6. Lot prices in Ottawa Journal, 11 June, 1973, p. 3.
7. Lot prices in Toronto Star, 30 March, 1973, p. 1.
8. Lot prices in Regina Leader Post, 16 July, 1973, p. 3.
9. Lot prices in Calgary Herald, 10 July, 1973, p. 3.
10. CMHC estimates.
11. Lot price in Toronto Globe & Mail, 14 December, 1972, p. B-9.
12. Toronto Globe & Mail, 27 July, 1973, p. B-9.
13. Toronto Globe & Mail, 18 June, 1973, p. 29.
14. Regina Leader Post, 10 June, 1973, p. 25.
15. Letter H. E. Wellman, Director of Planning.
16. Mill Woods report.

revenue estimates are employed, in the latter three cities, returns to scarcity exceed 60% of the cost of a lot. The builder or developer who sells the lot does not necessarily obtain this entire return to scarcity as parts of it might have been realized by the original farm-owner, and any interim owners. However, in those increasingly common situations when developers buy land directly from farmers long before development, and hold it in banks for future use, it is likely that large proportions of the eventual selling price of their lots are returns to scarcity. This appreciation of land value or return to scarcity is often described as the social increment in land value, as the added value is created by the local society or economy, rather than the landowner. It is this social increment in the value of urbanizing land, and in the increase of the market value of developed property, that is usually the object of proposals to increase taxation on land.[1]

The cost of providing services for new residential lots is another area which is said to be responsible for increasing land prices. Table 2.12 illustrates the distribution of total servicing costs among the various component services in recent projects sampled in seven metropolitan areas[2]. As indicated by the three projects where land costs are also given,

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1. This is discussed further in Section 5.1.3.
2. A much better, more-current examination of this subject is Derkowski, Andrzej, Costs in the Land Development Process, (Toronto: Housing and Urban Development Association of Canada, 1976)

TABLE : 2.12 COSTS OF INDIVIDUAL LOT SERVICES AS PROPORTIONS OF TOTAL SERVICING COSTS---SEVEN CITIES

SERVICING COMPONENTS	CALGARY	EDMONTON (a) (Lot)	EDMONTON (b) (Front Ft.)	SASKATOON (Per Front Ft.)	WINNIPEG (PER FRONT FOOT) (a)	(b)	(c)	(d)	LONDON (Per Lot)	TORONTO	OTTAWA (Per Lot)
Survey and Planning	2.1%	3.7%	4.0%						3.6%		
Pro. Fees and Bonding										3.2%	
Municipal Imposts	9.6			9.6						11.3	20.6%
Sanitary Sewers	6.6	11.9	7.9	13.2	7.9%	17.9%	22.8%	14.6%		6.1	11.8
Storm Sewers	13.8	27.0	25.9	11.3	14.6	24.8	22.1	25.8		19.3	13.1
Water	13.7	5.7	6.8	13.2	14.1	19.6	9.8	14.1		8.5	10.2
House Connections	10.1			10.3	9.2	3.5	7.6				
Underground Wires		3.1	3.5		1.0		.7		8.2		7.7
Street Lights	3.3	1.9	2.2		1.6	1.6	1.0	1.4		1.3	
Walks	12.7	10.0	8.2								
Lanes	4.1	4.3	4.2	3.0							
Catch Basins	2.0										
Curbs										6.8	6.6
Sidewalks		7.3	8.4	16.8	1.6	2.4	0.7	2.6			8.7
Rough Grade	10.7			2.2	3.5				15.6		
Roadway	11.3	21.7	22.1	19.2	43.0	30.2	31.6	38.7		19.2	21.2
Supervision										2.5	
Financing		3.4	7.9								
Miscellaneous				1.4	3.5		3.7	2.8		21.8	
Total Services - %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- $		4161.	85.59	41.75	39.90	40.18	65.89	47.20	6980.		3881.
Land - $		2200.	45.00						2020.		

Sources: Individual subdivisions in :
-Calgary and Ottawa, from CMHC surveys.
-Edmonton from McFadyen, S. M. and C.T.L. Janssen, A Research Design for the Mill Woods Impact Study, Edmonton: June 1973, pp.139 and 140.
-Saskatoon from Parsons, K. C. and H.L. Budke, Canadian Municipal Land Acquisition and Development Control, Miniographed manuscript, undated, p.35.
-Winnipeg from Dubois, R. The Impact of Public Investments on Urban Land Values, Masters Thesis, Winnipeg: University of Manitoba, October 1972, pp. 123-130.
-London reported by Sifton Properties Ltd. official at housing seminar, University of Guelph, June 1973.
-Toronto in federal/provincial records, Malvern project, calculated January 1973.

servicing costs constitute less than two-thirds of the total cost of a project or lot. Of the total servicing cost, roads require 20-30%, storm and sanitary sewers take another 25-35%, and the remainder is spread among a number of smaller expenses. The table demonstrates a considerable variance in both total servicing costs and the costs of individual services, across Canada and within the same cities. It appears, then, that a large increase in the cost of an individual lot servicing component may be a small increase in total servicing cost. While the total servicing cost is a large proportion of the total lot cost, lot costs can vary considerably within the same market, and among markets. Finally, lot prices in the respective cities are considerably higher than their lot costs, so it is unlikely that costs are pushing prices.

Two studies provide some understanding of the variation in lot servicing costs. Norman Pearson examined subdivision services in British Columbia in the mid-1960s, and determined that their marginal cost declined with increasing lot size, lot depth, and the number of services.[1] Thus if land costs could be minimized, as lot sizes increased more services could be obtained for progressively declining increments of cost. However, to absolutely reduce servicing

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1. Pearson, Norman, What Price Suburbia, (New Westminister: Lower Mainland Regional Planning Board, November 1967), passim.

costs it is necessary to decrease the range of services provided as well as lot sizes, and particularly depth. Joseph Chung examined the variation in servicing costs across Canada.[1] He used CMHC data in a regression analysis with land cost, labour cost and the cost of construction material as independent variables, and found these factors explained about three-quarters of the regional cost variance. The cities of southern Ontario had both the highest unit servicing costs, the widest deviation from national average costs, and the most expensive mixture of services. Nationally, materials costs were significant factors due to widely differing qualities and amounts of materials used, but labour costs did not relate strongly to the total cost variation. Most significantly, the analysis showed each dollar of increase in land price led to an increase of $3.00 in servicing cost (i.e., the elasticity of servicing cost in respect of land price is 1.14). Expensive land seems to require expensive servicing, probably because municipalities demand higher standards of servicing in areas where land prices are highest. Unfortunately, the logical conclusion which emerges from the two studies is that servicing costs can be minimized by decreasing lot sizes. As described previously, smaller lots

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1. Chung, Joseph H., Land and Low Income Housing, background study for the Task Force on Low Income Housing at CMHC, unpublished, 1971, pp. 38-44 and Tables XV, XX, and Chart 111.

increase the net dollar yield per developed acre which is clearly an inflationary pressure on raw land prices.

Table 2.13 demonstrates the changing methods of financing and constructing services during the 1960s which has also affected lot costs. This table shows total national expenditures, and expenditures by several government and industrial categories, for the construction of different types of services, every third year from 1957 to 1972. Total expenditures for each type of services increased irregularly through the 1960s with a particular jump occurring between 1969 and 1972. Until the early 1960s, federal, provincial and municipal governments, and their utility companies, constructed most storm and sanitary sewers and water systems. Thereafter, only 20-30% of expenditures for storm sewers and 10-20% of the water system expenditures were borne by governments.[1] This shift occurred because, beginning in Ontario, municipalities began transferring the responsibility for construction of subdivision services to land developers, while retaining the responsibility for treatment plants, trunk services, and operations and maintenance throughout the system. By 1972 Quebec was the only region in Canada which installed lot services primarily on a local improvements basis - elsewhere it had become

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1. A smiliar shift occurred with sanitary sewers, which is obscurred in these figures because of rising government expenditures for sanitary plant, and the manner in which these statistics were gathered.

TABLE: 2.13 SELECTED CONSTRUCTION EXPENDITURES, CANADA 1957-1972 (DATA IN CURRENT $MILLIONS)
EXPENDITURES BY GOVERNMENTS, OR INDUSTRY CATEGORY, BY YEAR

TYPE OF WORK PERFORMED	FED	PROV	MUN	FIN	UTIL	TOTAL *	FED	PROV	MUN	FIN	UTIL	TOTAL *	FED	PROV	MUN	FIN	UTIL	TOTAL *
				1957						1960						1963		
TOTAL CONSTRUCTION	367.4	573.1	330.6	444.3	1,744.9	7,023.0	376.5	679.6	441.4	534.9	1,343.0	6886.2	274.3	678.1	534.3	541.0	1391.5	7716.0
- BUILDING CONSTRUCTION - TOTAL	225.9	54.4	44.0	412.3	133.9	3,886.5	205.5	57.6	50.7	509.1	150.1	4051.1	147.6	55.0	74.9	526.0	130.9	4692.3
RESIDENTIAL - TOTAL				-	-	1,813.0	-	-	-	-	-	1913.1		-		-	-	2257.4
- LOW DENSITY														-				
INDUSTRIAL - TOTAL	29.0	2.8	3.5	7.8	40.6	610.7	27.1	2.9	2.2	9.7	43.4	451.6	15.8	-	-	11.9	40.0	535.6
COMMERCIAL - TOTAL	95.3	17.4	23.6	401.2	50.7	656.2	66.8	34.8	24.2	494.9	53.8	738.1	54.5	25.6	51.1	509.8	47.7	736.9
INSTITUTIONAL - TOTAL	30.9	24.8	11.5	2.9	.3	519.2	29.3	17.6	14.2	2.7	.1	615.2	17.4	19.4	8.8	1.1	-	856.6
- EDUCATION	17.1	-	-	-	.3	285.0	15.7	-	-	-	.1	346.6	8.7	-	-	.2	-	577.6
- ENGINEERING CONSTRUCTION TTL	141.5	518.7	286.6	32.0	1,611.1	3,136.5	171.0	621.9	390.8	25.7	1,192.8	2835.1	126.7	623.1	459.4	15.0	1260.7	3023.7
- ROADS, HIGHWAYS & AEROPORTS	67.3	410.0	166.0	10.1	9.9	708.8	69.3	484.2	214.6	7.0	10.5	830.4	40.9	471.7	236.6	4.9	24.9	846.1
- WATERWORKS AND SEWAGE SYSTEMS	-	-	-	4.1	77.1	200.1	-	-	-	2.6	91.4	232.8	-	-	-	1.9	75.8	266.3
- STORM	-	8.8	10.4	1.6	.01	23.6	1.2	1.2	16.8	.6	.1	21.1	.8	2.9	-	.7	.1	25.2
- WATER	2.6	.4	-	.8	66.1	76.8	3.9	.2	-	1.3	66.5	78.3	2.7	.6	-	.5	63.7	91.1
- SANITARY	3.2	-	76.2	1.7	3.4	88.1	2.6	-	97.4	.7	9.2	113.4	1.6	.7	126.8	.6	.3	132.3
				1966						1969[1]						1972[2]		
TOTAL CONSTRUCTION	350.8	913.6	604.0	793.4	1,743.7	9,867.9	467.9	1120.7	824.8	836.0	2072.2	13207.4	534.8	1507.4	1208.9	1279.0	2819.8	17027.5
- BUILDING CONSTRUCTION - TOTAL	186.5	95.1	110.4	749.4	130.9	5,905.6	217.7	116.4	99.5	814.4	214.1	8055.5	294.5	187.1	180.9	1187.7	219.5	10106.0
RESIDENTIAL - TOTAL				-	-	2,751.5				-	-	4227.9				-	-	5760.4
LOW DENSITY				-	-											-	-	
INDUSTRIAL - TOTAL	18.9	-	-	19.1	36.1	775.5	18.3	-		21.2	41.2	869.1	12.3	-	-	51.2	28.1	898.2
COMMERCIAL - TOTAL	69.2	51.2	59.0	714.4	54.2	1,015.1	108.5	52.5	53.2	783.4	63.8	1151.8	143.0	59.4	116.9	1125.1	69.6	1602.6
INSTITUTIONAL - TOTAL	49.4	19.0	19.1	.6	.01	1,019.3	42.5	35.1	23.0	7.7	.03	1334.5	48.1	87.6	34.2	3.8	.2	1303.1
- EDUCATION	13.4	-	-	-	.001	671.7	16.2	-	-	-	.007	961.5	17.9	-	-	-	-	844.0
- ENGINEERING CONSTRUCTION TTL	164.2	818.5	493.5	44.0	1,612.8	3,962.3	250.1	1004.	725.3	21.6	1858.0	5151.9	240.3	1320.3	1027.9	91.3	2600.3	6921.5
- ROADS, HIGHWAYS AND AEROPORTS	32.8	659.2	251.6	6.9	31.9	1,067.0	50.8	774.4	325.4	6.6	8.9	1255.3	78.2	1026.4	389.6	35.9	5.9	1617.7
- WATERWORKS AND SEWAGE SYSTEMS	-	-	-	6.0	125.4	361.3	-	-	-	4.6	10.3	397.8	-	-	486.8	37.7	1.4	712.3
- STORM	1.2	6.8	-	1.1	.2	31.2	.7	13.9	-	2.1	.01	44.1	1.3	28.8	-	21.8	.05	157.1
- WATER	3.2	.9	-	2.5	97.2	131.4	8.1	2.0	-	1.1	4.7	111.0	8.1	38.8	-	6.8	.97	198.9
- SANITARY	1.4	3.1	151.8	2.3	.08	163.3	3.4	.3	277.4	1.5	3.6	208.8	10.6	19.5	-	7.9	.10	313.2

Sources and notes

Statistics Canada, CONSTRUCTION IN CANADA Catalogue No. 64-201, Ottawa: Information Canada, 1959, 1963, 1965, 1967, 1969, 1971 and 1973 editions.

* Totals are actual totals and not the sum of rows.

1. Until 1969 municipal spending on water works was reported under utilities.
2. All data are actual expenditures except 1972, which are preliminary figures

usual for services to be prepaid as part of the price of a lot.[1] While this shift removed considerable annual expenditure from municipalities, developers were forced to pick up the added expense, and absolute lot prices were boosted across Canada through the 1960s as consumers were forced to begin paying for services in a lump sum. As pre-payment for services is also becoming more common in larger subdivisions in Quebec, this condition may be expected to elevate that region's average lot prices through the 1970s. Outside Quebec, the current relevance of this aspect of land policy and land prices is minimal, as it is largely historical. It appears then, that the actual costs of lot services do not usually affect lot values, although the method used to pay for services can alter lot prices and there are significant general relationships between services and land value.

Some relationships between services and land values may be misinterpreted as price effects caused by servicing costs. As was mentioned in relation to Table A-6, the proximity, in terms of location and time, of a site to trunk services is one of the factors which ranks the supply of development land. In this ranking, or range of land values, the highest values occur at those sites which have the

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1. In most places this occurs because the developer installs the services, however, in some cities and particularly in the west and in public land assembly projects, municipalities still service land but now require complete or partial "lump-sum" payment for the facilities.

greatest relative quantity of services.[1] One illustration of this effect which is particularly relevant to contemporary urban policy is the situation when a site receives an improvement in transportation, such as a rapid transit station, which significantly increases its accessibility to work or recreational concentrations. As this improved access increases the intensity with which the site can be used, its capacity to generate revenue increases and accordingly, its value rises both absolutely and in relation to less accessible sites. Land values also appreciate in proximity to major roadway networks, the set of trunk development infrastructure (including roads, sewer and water lines as a group), schools, shopping and recreational facilities. It is notable that this appreciation in land value occurs because public money was expended to build facilities which increased its useability, but because the land is usually in private ownership, individuals realize the increased value.[2] Regardless of the equitability of this distribution, the main point here is that while the presence of trunk services allows land values to increase, the extent of the increase is not determined by the cost of the services.

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1. This occurs because the residual value, described earlier, of a fully serviced developable site is both higher, and can be established with more certainty (less risk) than a site which lacks trunk services.
2. This is the process, or mechanism which produces the social increment in land value, described previously.

Land value is also related to the relative levels of services provided at a site. If a subdivision includes some desirable service, its lots will bring a higher price than lots in an otherwise similar project which lacks the service, although the price differential will not necessarily reflect the cost of the service. This market effect occurs with virtually any subdivision feature, from hardware items like underground wiring, street lights, and sidewalks to "softer" facilities like parks, playgrounds, walking paths and day-care centres, although it is difficult to quantify the relationship.[1] Because services have values in the market place, it is possible to increase or decrease the total market value of a lot by providing greater or lesser quantities of services, but the utility of this technique to lessen or control lot prices is obviously slight.

At higher levels of aggregation, a different magnitude of values enters the consideration of servicing cost. In an urban region, or perhaps a single municipality, the unit cost of a given service or mix of services can vary considerably with the form of service provided and can entail vastly different consumptions of energy, labour, and replaceable and non-replaceable resources in both the local

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1. The quantification problem arises because it is seldom possible to find two lots which are identical in all other respects so the value differential associated with a single varying service can be isolated.

jurisdiction, and much larger communities. The most obvious example is transportation services, although similar cases are being demonstrated concerning heating, waste creation and use, forms and uses of buildings, and the form of cities themselves. The urban highway alternative now in use requires extensive rights-of-way and massive structures which carry large numbers of short-lived gobblers of non-replaceable materials that emit noxious fumes. The mass transit alternatives employ renewable energy sources to repeatedly move a few compact carriers over small roadbeds. As data is emerging which quantifies for all rational minds, the excessiveness of this nation's consumption of earth's undeniably finite resources, and prices of the resources rise in response, the self-destructive nature of the economics that underlies each decision to build another road, or to purchase another $50,000 detached house, will become obvious. To date, the limited research undertaken in the area of unit costs of trunk services and different urban forms is inconclusive,[1] although the existance of

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1. A recent study in the United States reviewed previous examinations and concluded: "Research and prevailing beliefs about the effect of urban form on the costs of urban services have been greatly affected by ideology". Since World War II most planners have believed that unit servicing costs diminish with increasing density, although some research demonstrates the contrary, and all of this research was generally unsatisfactory because of it's exclusions. See Kain, John F., Urban Form and the Costs of Urban Services, (Boston: M.I.T. - Harvard Joint Centre for Urban Studies Program on Regional and Urban Economics, 1967), pp 95-96 and passim.

scale economies, such as those shown in Appendix B, is unquestionable. Pure research in this vital, futures area of social, economic, urban and industrial policy lacks short-term payoff, is really needed, is virtually nonexistent, and is particularly absent from the Canadian academic scene. It would certainly make more sense to pursue this larger understanding of servicing costs than any continuation of the current crude deception that attempts to relate rising lot values to rising costs of lot services.

Finally, across metropolitan Canada in recent years there have been widespread, persistent and increasing claims that there is a shortage of serviceable residential land and that this shortage is driving up lot and housing prices. These claims seem to have been accepted without question as reference to the "land shortage" is a standard component of housing and economic analyses by academics, real estate and housing industry spokesmen, politicians and other pundits. However, the shortage has not been documented, its relevance to the increasing market values of houses has not been demonstrated and there are good indications that the shortage does not exist.

It is interesting to postulate the existence of a short supply of raw land in light of existing conditions in metropolitan housing markets, to determine the theoretical relationship between the short supply and house prices. The data in Tables 2.3 to 2.8 disclosed that in most cities,

while a bare majority of all residences are houses, most new residences built are not houses and both residential construction and house construction are booming in urban Canada. Annual house construction comprises about 3% of the existing stock of houses. As the volume of house construction is increasing in spite of the postulated land shortage, the shortage cannot be a decrease in the supply, but instead a constraint on the acceleration of this increase, that is holding the new house supply below current demand levels and thus prices are pulled upwards. However, this is inconsistent with the finding that prices occurring in the more numerous sales of existing houses are increasing at faster rates than new house prices. Moreover, if the postulated shortage did exist and was corrected to the extent that vastly increased numbers of new houses were constructed, there would be an accompanying, numerically - greater decrease in the number of multiple units constructed. As a result, the total stock of housing units would not keep up with current urban population growth and the over-all demand for residences would increase, pulling up housing prices in general and apartment prices in particular. It seems clear from this theoretical examination that the postulated land shortage cannot be a shortfall in absolute supply, but could be one of a number of factors which maintains the equilibrium between high and low density residential development and consequent prices.

There are a number of empirical indications that the land shortage does not exist. Detached houses require separate lots, lots are produced from raw land, and Table 2.6 showed that the volume of detached starts in each metropolitan area has sporadically risen through the eight years reported, so the land shortage is not evident. The city case studies which follow in Section 3, and the examination of land developers in Sections 4.1 and 4.2 do not indicate land shortages. Recent reports by the building and development industry which refer to the shortage usually concern the future supply, rather than a current problem.[1] As such, they may be more indicative of the industry's need for government input into their advance planning and budgeting than a concern with the current land supply.

Finally, another data series maintained by CMHC indicates large numbers of lots remain unbuilt at the end of each production season - a finding which is in direct opposition to the notion of a supply shortage. Each winter CMHC offices inventorize the unbuilt lots (including a small proportion of unserviced lots) in subdivisions which have been accepted for NHA lending purposes - this inventory

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1. Examples include: Urban Development Institute - Ontario Land Inventory Survey - Zone 1 of the Toronto-Centred Region, Toronto: the Institute, 1973. Home Builders Association of Metropolitan Ottawa, Brief to the Regional Municipality of Ottawa - Carleton on the Draft Official Plan, Ottawa: the Association, 1974.

is presented in Table 2.14, and Table 2.15 shows the relationship between this lot carry-over and the total detached starts which occurred in the following year. Although many subdivisions do not receive acceptance for NHA lending and thus this winter inventory understates the actual vacant lot carry-over, it demonstrates that a large carry-over has been consistent in every city reported during the entire study period. Although these proportions vary among cities and by year, this winter inventory usually constitutes between 25% to 150% of the total detached starts which occur in the following year, indicating a widespread potential for, if not existence of, an over-supply of lots.[1] These strong indications that the land supply is not short, but instead, relatively strong, are wildly divergent from contemporary conventional wisdom in land and housing circles.

It is likely that nature of expertise in land markets explains the variance between continual claims concerning a land shortage, and the apparent adequacy of the land supply as described in this section. Land and house prices are rising quickly, and the most common cause of increasing prices is inadequate supply. It would require complex time-consuming, expensive econometric research to

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1. Sarnia and Victoria are exceptions with relatively low winter inventories.

TABLE: 2.14

WINTER LOT INVENTORY, NHA ACCEPTED SUBDIVISIONS, VARIOUS CITIES, 1965-1973

URBAN REGION	NUMBER OF DIFFERENT SUBDIVISIONS 1965	66	67	68	69	70	71	72	73
HALIFAX*	15	87	79	91	23	20	13	8	6
MONCTON*	N/A	9	7	6	12	5	5	4	6
FREDERICTON*	11	14	7	8	10	7	6	4	7
ST JOHN*	7	8	7	7	8	9	10	7	6
ST JOHN'S*	4	4	4	6	3	2	4	1	6
TROIS RIVIERES	4	N/A	10	11	N/A	N/A	N/A	N/A	N/A
QUEBEC*	39	29	55	50	64	55	60	65	N/A
MONTREAL	211	62	57	51	59	109	79	47	86
HULL*	16	22	17	20	21	24	19	13	8
OTTAWA*	16	24	23	17	17	13	11	6	5
KINGSTON*	6	3	4	3	6	4	6	4	4
PETERBOROUGH*	6	6	5	6	6	6	2	2	3
OSHAWA*	22	20	N/A	11	9	8	11	6	7
TORONTO*	N/A	23	26	21	20	21	25	15	19
HAMILTON*	22	19	26	25	8	8	11	27	13
KITCHENER*	13	9	9	13	13	9	9	10	9
LONDON*	15	14	12	15	12	8	N/A	11	11
SARNIA	12	3	3	3	1	1	1	N/A	1
WINDSOR*	4	3	4	3	3	6	4	3	2
SUDBURY*	12	9	8	8	10	11	14	5	7
THUNDER BAY*	7	5	5	6	5	4	6	8	3
WINNIPEG*	30	36	32	30	24	26	17	N/A	14
BRANDON*	5	4	4	4	3	2	1	2	3
SASKATOON*	10	11	12	9	10	6	5	6	5
REGINA*	9	10	13	10	7	8	9	6	7
EDMONTON*	14	13	12	9	7	9	7	13	8
CALGARY*	14	16	17	14	13	16	18	23	13
VICTORIA	6	11	8	4	2	3	0	0	N/A
VANCOUVER	27	32	35	32	28	27	26	26	N/A
TOTAL	570	506	501	493	404	427	380	322	259
TOTAL*	310	398	388	392	314	287	274	249	172

NUMBER OF VACANT LOTS FOUND, JANUARY TO MARCH 1965	1966	1967	1968	1969	1970	1971	1972	1973
876	1777	N/A	1015	761	1044	660	360[1]	1837
N/A	N/A	404	214	577	159	214	518	773
707	960	N/A	325	366	169	445	65	199
530	1001	N/A	387	324	392	432	210	147
428	300	N/A	340	113	204	200	26	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	2420	2801	2274	2787	4120	N/A
N/A	N/A	N/A	8294	8539	N/A	10200	2319	N/A
N/A	N/A	N/A	2231	1956	1861	1839	1178	1151
N/A	N/A	1965	1324	951	1606	1120	409	290
N/A	N/A	N/A	144	220	403	664	541	522
321	430	290	301	136	246	258	52	367
1140	N/A	N/A	280	567	386	342	642	730
N/A	N/A	N/A	2866	2496	3879	3980	1767	2678
N/A	637	1446	1072	400	581	550	1599	821
533	836	849	1225	917	660	889	1324	624
N/A	N/A	N/A	1583	1392	1486	N/A	2123	1578
1254	N/A	N/A	17	65	17	10	N/A	N/A
336	175	435	67	429	1024	318	1639	1092
N/A	N/A	309	457	456	610	396	243	235
330	402	265	184	396	N/A	184	201	182
2769	2065	2170	2844	2218	2556	1568	N/A	1758
384	301	248	172	147	125[2]	163[2]	211[2]	98
N/A	N/A	N/A	912	1994	1858[2]	1732[2]	1589[2]	565
1117	555	1834	1503	968	1018	1364	570	750
N/A	N/A	N/A	2404	1181	2034	1390	2381	1033
1606	1425	777	1589	1816	2643	2816	4350	2894
N/A	N/A	N/A	17	16	14	0	0	N/A
N/A	N/A	N/A	5410	5720	5880	7180	6850	N/A
12341	10864	10992	39597	37922	33066	41701	35292	21217
11087	10864	10992	25859	23582	27155	24311	26113	21217

*Indicates generally thorough and clear reports by CMHC office.

Halifax is Halifax, Dartmouth, Halifax County, East and West (Halifax reports were generally quite detailed).
Montreal includes south shore, in most figures. Reliability varies as West Island and North Shore data not always included.
Hull includes surrounding municipalities from Alymer to Angers.
Ottawa includes from Kanata to Rockland, including Manotick area.
Kingston is Kingston and Kingston Township.
Oshawa includes Whitby, Bowmanville.
Toronto includes surrounding municipalities east of Oakville, south of Barrie, west of Whitby/Oshawa.
Hamilton includes Burlington, Ancaster, Saltfleet.
Kitchener is Kitchener and Waterloo.
Winnipeg includes all metro area municipalities.

1. Also, 3000 lots in Sackville were becoming available.
2. Excludes lots held in public assemblies (1970 - 64 in 8, 1971 - 94 in 7, 1972 - 386 in 10).

SOURCE: CMHC APPRAISAL DIVISION

TABLE: 2.15 WINTER LOT INVENTORY IN NHA - APPROVED PROJECTS AS % OF ALL DETACHED STARTS IN THE FOLLOWING YEARS

	1965	1966	1967	1968	1969	1970	1971	1972	1973
HALIFAX	207%	473%	-%	276%	176%	260%	120%	33%	151%
MONCTON			154	68	266	71	48	83	103
ST. JOHN	134	368		177	117	136	113	37	23
ST. JOHNS	96	101		58	22	43	31	3	
QUEBEC				202	228	105	103	127	
MONTREAL*				197	235		193	25	
HULL				390	318	204	165	88	61
OTTAWA			157	73	49	125	69	25	20
KINGSTON				47	49	109	114	106	85
PETERBOROUGH	146	193	139	145	87	147	99	17	99
OSHAWA	128			63	100	106	59	63	90
TORONTO				43	42	108	57	19	33
HAMILTON		29	61	56	22	52	25	57	29
KITCHENER	46	67	74	100	65	78	67	75	39
LONDON				142	110	192		109	89
SARNIA*	342			6	26	10	5		
WINDSOR	39	23	64	8	40	142	37	150	107
SUDBURY			81	74	40	61	31	41	46
THUNDER BAY	67	90	89	62	123		67	50	30
WINNIPEG	150	144	167	185	104	151	74		57
SASKATOON				101	312	734	348	203	54
REGINA	106	83	336	252	149	259	155	55	85
EDMONTON				92	50	106	44	60	22
CALGARY	69	67	35	65	60	92	67	100	62
VICTORIA*			2	2	2				
VANCOUVER*				105	120	131	136	94	

* Small Samples.

SOURCES: Winter Lot Inventory from TABLE: 2.15
Detached Starts from TABLE: 2.6

determine exactly what causes these price increases because the general inflation and other factors undoubtedly contribute, but the answer would necessarily involve some element of supply/demand imbalance. Land supply is a complicated subject, known primarily on a project by project basis by individual developers, local planners and real estate professionals. These experts work with daily problems in land development, have vital and often competing concerns about the future supply and location of land and services for urban growth, and are generally too busy to seriously address causation factors behind short-term concerns like the current level of land or house prices. The real message behind the claim which originates from these experts, that "the land shortage" causes current house or land prices, is "never mind the prices, the problem is the future land supply". As land prices are consequences of house prices, and house prices are dominated by the hundreds of thousands of homeowners who sell their houses at sky-high prices each year, they have a point. Rising land prices pose a real problem for low income families and a budgeting and prediction problem for other people and organizations in the market place. But while this first problem requires the attention of governments, and the second problem requires improved information, the prices themselves are small wounds which this consumption-oriented society inflicts upon itself, at tremendous expense to the

entire economy. It is logical, therefore, that the experts concern themselves with assuring a future land supply so this merry game can continue.

Table 2.16 contains an estimation of the residential acreage needed by each metropolitan area for the period 1971 to 1986. In each area, projections prepared by CMHC of net new household requirements during this period were employed to calculate acreage needs under two alternative density mixes, and a preferred estimate was selected. The basic density calculations used were five residential units per acre for detached houses, and 25 units per acre for all multiple housing forms. The latter is lower than average current densities for multiple units, and is selected in anticipation of a continuing decline in high rise apartments in favour of row housing forms. The alternative density mixes used, 75% multiples and 75% detached houses, are probably the most polar extremes that could emerge in new construction over such a brief period. This produces an estimated range in total residential land consumption in metropolitan Canada for 15 years, of from 204,400 acres to 408,800 acres. In every city except St. John's, Saint John, Quebec, Regina and Saskatoon, a predominance of multiple construction is anticipated, so the preferred total estimate is 214,900 acres. While this is a very large area, nearly 350 square miles, when examined city by city and as a

TABLE : 2.16 ESTIMATED RESIDENTIAL LAND REQUIREMENTS 1971-1986, METROPOLITAN CANADA

Metropolitan Area	POPULATION Actual 1971[1] (000's)	Projected 1986[2] (000's)	Projected 2001[3] (000's)	Increase 1971-86 (000's)	PROJECTED NEW Households Required[4] (000's)	PROJECTED RESIDENTIAL ACREAGE REQUIRED 1971-1985 Assuring Various Density Mixes Low Density Mix 75% @ 5 Units pa.	25% @ 25 Units pa.	Total	High Density Mix 25% @ 5 Units pa.	75% @ 25 Units pa.	Total	Preferred Estimate 1971-1985	Others Estimates Chung[5] 1971-1981	CMHC[6] 1971-1980
St John's	129.3	127.5		-1.8	9.1	1,365	91	1,456	455	273	728	1,456	689	-
Halifax	220.3	227.0		6.7	9.4	1,410	94	1,504	470	282	752	752*	631	2,250
Saint John	105.2	106.2		1.0	3.8	570	38	608	190	114	304	608	531	-
Montreal	2,724.9	3,549.4	6,374.	824.5	531.4	79,710	5,314	85,024	26,570	15,942	42,512	42,512*	25,699	12,000
Quebec	476.3	593.8	1,178.	117.5	88.4	13,260	884	14,144	4,420	2,652	7,072	14,144	4,887	-
Toronto	2,609.6	4,213.3	6,510.	1,603.7	758.3	113,745	7,583	121,328	37,915	22,749	60,664	60,664*	29,117	19,600
Ottawa-Hull	596.2	856.7	1,616.	260.5	143.5	21,525	1,435	22,960	7,175	4,305	11,480	11,480*	8,128	8,128
Hamilton	495.9	773.0	1,201.	227.1	123.5	18,525	1,235	19,760	6,175	3,705	9,880	9,880*	7,153	-
London	284.5	365.4	674.	80.9	66.5	9,975	665	10,640	3,325	1,995	5,320	5,320*	3,834	4,252
Windsor	255.2	317.6	577.	62.4	36.7	5,505	367	5,872	1,835	1,101	2,936	2,936*	-	3,000
Kitchener	224.4	420.0		195.6	95.4	14,310	954	15,264	4,770	2,862	7,632	7,632*	-	-
Sudbury	154.0	141.7		-12.3	7.2	1,080	72	1,152	360	216	576	576*	-	-
Winnipeg	534.7	589.2	1,614.	54.5	39.6	5,940	396	6,336	1,980	1,188	3,168	3,168*	3,968	8,000
Regina	133.0	163.6	438.	30.6	14.3	2,145	143	2,288	715	429	1,144	2,288	-	1,250
Saskatoon	125.1	155.0		29.9	15.2	2,280	152	2,432	760	456	1,216	2,432	-	-
Edmonton	490.8	751.1	1,223.	260.3	144.0	21,600	1,440	23,040	7,200	4,320	11,520	11,520*	5,264	8,790
Calgary	400.1	616.8	937.	216.7	103.1	15,465	1,031	16,496	5,155	3,093	8,248	8,248*	5,260	7,500
Vancouver	1,071.0	1,588.2	2,482.	517.2	319.1	47,865	3,191	51,056	15,955	9,573	25,528	25,528*	20,619	8,000
Victoria	194.9	287.3		92.4	46.7	7,005	467	7,472	2,335	1,401	3,736	3,736*	4,571	4,571
TOTALS	11,644.0	15,842.8		4,198.8	2,555.2	383,280	25,552	408,832	127,760	76,625	204,385	214,880		

Sources: 1. Statistics Canada, 1971 Census, preliminary figures using 1971 boundaries
2. Kirkland John, Demographic Aspects of Housing Demands to 1986,(Ottawa?CMHC 1971), Table 5,p.26 (Projections on 1966 boundaries)
3. Litwick, N.H., op.cit., p.133
4. Kirkland, ibid, Table 19, pp.67-69.
* In all cases with high density mix preferred, high redevelopment rates and terrain or planning limitations on expansion are expected, and current mix in starts is dominated by row and appartments units.
5. Chung, Joseph H., Land and Low Income Housing, study for Task Force on Low Income Housing, CMHC July 1971, Table II, p.8.
6. CMHC Appraisal Division,Quoted in Dennis and Fish, op.cit. p.32.

yearly consumption, the magnitude becomes less awesome and the problem of locating this immense supply is more manageable. The central questions posed by these estimates, are the same issues which concern the "land shortage" proponents - what specific locations in each urban region will be used to provide this acreage, what type of development will be permitted in each, when will each designated location be provided with the services necessary for it's development, and who will own this land supply? Section 3 will provide some further perspective on these questions, through case studies which examine historical and contemporary trends in urban growth and land development in several of these sites.

2.3 THE PRICE SYNDROME

This examination of aggregate data concerning residential construction and land markets has provided some detail on the circumstances related to recent increases in metropolitan land prices. As homeowners and builders have charged progressively higher prices when selling their increasingly desirable product, the value of all urban detached housing has appreciated steadily, raising the related value of residential land. As these appreciated raw land values become higher production costs in succeeding years' land

development, each increase in the level of house prices is then "locked in" as a base for future prices.[1] As consumers, in receipt of higher incomes, continue to buy in the face of the rising prices it appears they expect the inflation to persist, and this further inflames the market. While the housing stock is still dominated by detached houses, the majority of residents do not live in their own house, and the trend in new construction indicates that home ownership is in continuing decline in metropolitan areas. These structural conditions in the stock and production, combined with continued population growth and family formation in metropolitan areas, indicate this scenario cannot change quickly. The residential construction industry and its underlying financial structure demonstrated their capacity for change through the 1960s, however, it would require a dramatic consumer-led shift in tastes to return owned, detached houses to primacy in the housing stock. Such a shift in popular tastes is probably also constrained,as it appears to entail increased per capita consumption of resources, from the building materials and energy needed to create and service many dispersed small dwellings, to the fuel necessary to provide economical, but individualized,

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1. This refers to the "rachet" effect described in Smith, Wallace, Housing. Berkeley: University of California Press, 1970.

heating and transportation. It appears then, that high house and land prices, though exacerbated by inflation, are the consequence of a variety of deep-rooted factors in the structure of modern urban life which are not likely to change.

There are two broad variations within this general pattern. The level of housing prices is highest, and increases most quickly, in the central metropolae of Ontario, British Columbia and Alberta. As the large cities on the prairies, particularly in Alberta, still have and build a predominance of detached houses, the level of house values should become more moderate in these places, relative to levels in other quickly growing cities. In Quebec and the Maritimes stock and starts conditions mirror the norm, but as money is generally tighter, the rise in prices is more gradual.

Faced with this scenario, the major actors on the urban scene must provide housing for increasing numbers of urbanites while resolving the conflicting demand for large numbers of detached houses. The current response to this inherent conflict has been, essentially, to hold to a slowly-rising level of house production while providing multiples to house the growing urban populations. The maintenance of this solution would require governments, at the local and regional levels, to designate substantial acreages and sums for

infrastructure over the next few years, to provide land for future development. The alternative, which would require a deeper change in the political culture, would redirect the immense effort now expended on new construction into a more comprehensive, compact, efficient urban environment. Urban Canada is at a break-point - urban settlement has changed to the extent that one-half of the society is living in a compact, increasingly integrated situation, and one-half symbolically apes self-sufficiency in miniature farmhouses. Meanwhile workplaces and transportation systems are altering as quickly and completely as the culture will allow, to efficiency-oriented modes of integrated and mass utility. For most people this observation may seem theoretical and irrelevant as it does not appear to affect their immediate situation. For urbanists, the entire situation constitutes a real, substantive decision which each individual will make-explicitly or implicitly. The urbanist can, in his daily work, keep "inventing the wheel" and thereby maintain a comfortable existence while holding the form of cities on this threshold, whatever the cost. Alternatively, urban experts can provide a substantive choice to this society, by defining, in dollars, forms and personal actions, the expenses and benefits entailed in maintaining the current urban environment or adopting forms of habitation which are designed for social and ecological efficiency. At current rates of construction we are rebuilding our cities each generation - it is apparent that the urban future is now.

3.0 METROPOLITAN LAND DEVELOPMENT - SIX REGIONAL STUDIES

This section contains brief case studies which describe trends in the land development and spatial growth of six metropolitan regions in Canada. The regions include three rapid growth centres of different sizes in Ontario, fast and slower growth centres on the prairies, and Vancouver. The studies are informal examinations, based on available data and analysis, which describe broad patterns in the form and process of spatial growth in the respective regions, emphasizing the designation of growth zones and land holding in these designated areas. The integration of the various studies yields some understanding of the dynamics, at the regional scale, of the production processes and urban change which were outlined in the statistics of the previous section. The case studies are presented east to west.

In the Ottawa study, regional growth planning can be isolated, conceptually, because the existing central area is surrounded by a well-established, publicly-owned greenbelt, and new development has been focussed at those locations where roads and other services extend through this greenbelt. Private firms have responded by assembling huge tracts for development at these exit points, and the firm's production schedules and regional population growth forecasts and allocations are quite congruent. As vacant sites within the greenbelt are gradually filling, this

design is producing a limited, structured, inter-firm or inter-nodal competition in the growth dynamics of the region.

While the Toronto market is considerably more complicated, the same general patterns are evident. Governments are consciously controlling Toronto's expansion, by application of growth-limiting regulations in some areas, and placing development designations and infrastructure in other places, with the result that enormous growth concentrations have emerged on parts of the urban periphery. Again, relatively few specialist firms have assembled huge tracts in the growth zones for development as integrated communities in support of regional planning. This sustained concentrated activity generates growth momentums which tend to make the nodal development pattern self-perpetuating. The development approval process, designed to ensure expert review of, and high standards in, the complex new environments being created by developers, have become constraints on the pace of the region's expansion - and in the clamor for growth, concerns about this process have begun to obscure the need for the content of development regulations. The continued expansion of this "mature" growth centre has forced major improvements in the transportation system - in response land uses and values have changed dramatically at access points along the improved corridors. These varied relationships, which are particularly visible in the sustained expansion of Toronto are emerging more gradually

in other growing cities, and provide a preview of the consequences of many policies under development in these other places.

Kitchener and Winnipeg are examples of smaller metropolae which, under different growth conditions, demonstrate increasing similarity to the larger centres in the pattern of their land development. Kitchener-Waterloo is a medium size region which is expanding rapidly in the economic heartland of southern Ontario. Regional land development is becoming focussed at limited locations where servicing can proceed readily, and the larger developers have responded by acquiring substantial land inventories in the path of growth. While growth has slowed in the entire Winnipeg region, several suburban municipalities are expanding rapidly, and major developers own significant proportions of the total stock of vacant land in these places. In both regions, while the short-term land supply appears adequate (given appropriate servicing conditions) the same concentration evident in ownership of the land supply in larger centres, is emerging

The case study of Edmonton traces the cyclical, heavy involvement of government in the region's spatial expansion from the late 19th century to the present. Through this period the city has promoted growth by various means, including low-price land sales to subsidize new projects while leaving actual development substantially in

private hands. As the region's growth accelerated following World War II, diminishing stocks of low-priced, developable land available in private ownership led to increasing public involvement culminating in the provincial government's purchase, in the late 1960s, of a nine square mile tract which is now emerging as a new town. This will institutionalize competition between the public sector and the few large corporate projects which had become Edmonton's land supply. Thus, while the growth locales in this land market exhibit the same concentrated ownership seen in the other cities, this prosperous region has introduced a new public owner into the oligopoly structure.

A different type of public initiative has affected land development on Vancouver's expanding periphery. In this region, expansion land is owned by a large number of small investors and ex-urbanites and the market is relatively active, but the stock of agricultural land which feeds British Columbians is running low. In 1973 the Provincial Government established the Land Commission to halt the expansion of cities on arable land. While this action is seen as a unique constraint on Vancouver's long-term land supply, in effect, it is the same policy which is manifest in the regional plans which are limiting growth in other provinces. This combination of private and public factors results in a land development scenario in Vancouver which

is more competitive and less volatile than those in most metropolitan areas, although land and housing prices in this region approach the levels in southern Ontario. Finally, the Vancouver case study is particularly useful as it is based on the most thorough land research which has been undertaken in any Canadian city, and it examines the high prices in an existing, competitive market, while competitive conditions are the goal of most current land policy proposals elsewhere.

These case studies are not proposed as definitive examinations of the land markets of the respective cities, but are syntheses of research material which highlight major trends in land development. They are included to indicate the nature of change which is occurring in the contemporary growth of Canadian cities, and do not describe its qualitative aspects. As the availability of data varies from city to city, the case studies offer little capacity for comparative analysis. They do, however, disclose sufficient detail about each region, and similarity in detail among regions, that they yield a basic insight on urbanization patterns in Canada, and their evolution.

3.1 Ottawa-Hull

The recent history of land development in the Ottawa-Hull region includes massive public intervention in land markets, growing concentration in the ownership of developable land, and,currently, a rapid escalation in land prices. Public planning agencies have effectively channeled growth to several manageable locales on the urban fringe and land ownership has become concentrated at these locations. This experience demonstrates the power contained in contemporary regional planning, and by default, the necessity to provide for entrepreneurial reaction when implementing public land-use plans.

While the roots of the region's spatial growth extend back to the canal-building period, since 1950 several major planning events can be identified which determined the land development configuration for years to come. In the early 1950's the masterful planning consultant, Jacques Gréber of Paris, completed an integrated plan of the region for the federal government.[1] This included the consolidation of a

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1. Gréber, Jacques, Plan for the National Capital, Ottawa: National Capital Planning Service, 1950. While there are a multiplicity of planning agencies in the region, the federal government is particularly powerful. It is the regions largest employer and the major land-owner and by right of the National Capital Act, has the legal authority to undertake planning schemes. This power is institutionalized in the National Capital Commission, a federal agency with considerable planning, design and construction expertise, backed by financial resources which are not available to most municipalities.

central Hull-Ottawa urban area, delineated by the Gatineau Hills to the north, and publicly zoned or owned greenbelts surrounding communities on all other sides. This delineation would be strongest in Ontario where the dominant growth pressures lay, as the urban core was to be encircled by the greenbelt system and the Ottawa River. Single regional sewage and water treatment plants were also placed within the greenbelts and a variety of transportation improvements were proposed to assure a high quality environment within the enclosed city. When the population became too large for this central urban place, new growth was to be contained in satellite nodal areas.[1]

While Greber's plan was generally supported by the Ottawa Planning Area Board, and tabled in Parliament, the suburban townships of Nepean and Gloucester, in Ontario, were unwilling to implement the greenbelts in their jurisdictions by zoning.[2] In the later 1950's the federal government created a new agency, the National Capital Commission to... "prepare plans for and assist in the development, conservation and improvement of the National Capital Region."[3] Between 1958 and 1962, the new federal agency acquired, partially by direct purchase and partially by expropriation, approximately

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1. See, generally Gréber, op. cit., pp. 191-204
2. Coleman, Alice, The Planning Challenge of the Ottawa Area Ottawa: Queen's Printer, 1969, p.26.
3. R.S.C. 1958, Chapter N-3, National Capital Act, p. 5129

41,390 acres to form a single greenbelt to surround Ottawa, at a total cost of about $40 million.[1] Regional sewage and water facilities were constructed in the interior area. Also, interior rail and industrial facilities were relocated, including the replacement of the crosstown railway tracks with a major trans-urban expressway. A regional planning study undertaken in 1958 concluded that new developments would occur outside the Greenbelt along major approach roads.[2] By the early 1960's, the regional population approached the 500,000 level Gréber forecast for the year 2000,[3] and while vacant land remained within the Greenbelt,[4] its price was escalating rapidly.[5]

The current land scenario in the Ontario portion of the region emerged from this background over the next five years. The east-west expressway had terminated at the Greenbelt's interior edge but it seemed clear that it would extend to leave the Greenbelt near the March-Goulbourn boundary to the west, and at the Orleans area to the east. Accordingly, developers began assembling large tracts at these exit points and along the highways immediately south of the

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1. Coleman, op.cit., p. 45.
2. National Capital Commission, Statistical Review with Explanatory Notes - National Capital Region, Ottawa: the Commission, 1964, p. 7.
3. Larry Smith and Company, Economic Prospects of the National Capital Region, Ottawa, Canada, Toronto: the firm, 1963, p. 28.
4. Ibid., p. 24.
5. Coleman, op.cit., pp. 56-62.

Greenbelt near Manotick on the Rideau River.[1] In 1963 a second planning study showed large scale future growth at the eastern, southern, and particularly the western Greenbelt limits.[2] In 1964,the National Capital Commission produced a population projection which located 65,000, 120,000, and 180,000 people in these respective nodes by the year 2001.[3] A year later, the regional transportation plan gave top budgetary priority to the Queensway extensions, predicated on extensive immediate growth of the east and west nodes.[4] Co-incident with this planning activity, developers had continued to assemble land at the three nodes and by 1965 the major firms had about 20 years supply in hand.[5]

Development began in the satellite nodes through the later 1960's and the private land assemblies proceeded. The western node in the March-Goulbourn area, now known as Kanata and Glen Cairn received some water and sewage treatment facilities and by June 1970 Kanata contained 1,017 housing units.[6] New trunk facilities also were permitted to cross the

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1. Coleman, op.cit., pp. 44,58.
2. Larry Smith, op.cit., pp. 22-24.
3. NCC, Statistical Review, op.cit., pp. 9-15. At the time, the nodes contained 8000, 7000 and 6000 people, respectively.
4. DeLeuw Cather & Company of Canada et al, Ottawa Hull Area Transportation Study Ottawa: the firm, 1965, pp. 60, Appendix 4.
5. Coleman, op.cit., pp. 44-60. It is noteworthy that most of this land was assembled at $500 to $1800 per acre, with very few prices above $3000 per acre.
6. Campeau Corporation, Kanata, Ottawa: the Corporation, undated brochure, eleventh page.

southwestern Greenbelt to the proposed Barrhaven subdivision,[1] and the Queenswood project was opened up at Orleans, the eastern node. While land values in the growth areas were rising rapidly, evidence that they were not excessive is seen in Campeau Corporation's option, in 1969, of 1300 acres adjoining the Greenbelt at Orleans, at a price of $1900 per acre.[2] Other large assemblies occurred in the southeast sector of the region, where a new highway was intended to emerge from the Greenbelt. By 1971, the CMHC survey summarized in Table 3.0 found eight private tracts exceeding one square mile among over 17,000 acres held by twenty-two firms, primarily in the growth nodes.

Tables 3.1 and 3.2 summarize the changing regional population growth, and construction activity through the 1960s. To relate these tables to the preceeding description, the "urban core" and parts of Nepean and Gloucester Townships lie within the Greenbelt, the western node is in March and Goulbourn, and the eastern node is primarily in Gloucester. The population data shows a declining growth rate in the central areas through the period, accompanied by massive suburban expansion focussed on Nepean and Gloucester Townships. As the satellite growth began appearing in the late 1960s

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1. Coleman, op.cit., p. 67.
2. This land was acquired by Richard Costain (Canada) Ltd. in early 1970 for about $2500 per acre and is now known as Convent Glen.

TABLE: 3.0

BUSINESS-OWNED TRACTS, EXCEEDING 200 ACRES, IN OTTAWA REGION

Name of Firm (Abbreviated)	ACREAGE HELD BY LOCATION ←Inside Greenbelt→			←Outside Greenbelt→				TOTAL Acreage
	Ottawa East	Ottawa West South	Nepean	WEST March	Goulbourn	EAST Gloucester	Cumberland	
Kanata Developments Ltd.				3000				3000
Youngsborough Devt. Ltd.							2000	2000
Campeau Corporation	37	213	160		61	1500		1971
Richard Costain Ltd.						1400		1400
Times Square Investments					1100			1100
Jockvale Realty			1000					1000
Nepean-Carleton Devt.			1000					1000
Queenswood Land Assoc.							1000	1000
Minto Construction Ltd.								758
Connolly Developments					600			600
McDonald Construction						600		600
Wm. Teron Ltd. & H. Shenkman				600				600
Wacu Ltd.					400			400
Jack Aron			300					300
Clyf Holdings				300				300
Bronson-Somerset Devt.					235			235
Sweatman Relocation Homes					235			235
Thomas C. Assaly Corp.		50	164					214
Simpson Homes Ltd.			200					200
Arterial Investment			200					200
Limebank Holding Co.						200		200
Hyman Soloway, Q.C. (In Trust)						200		200
TOTALS (22)	37	263	824 2200	3900	2631	3900	3000	17,513

Note: (1) Kanata Developments and William Teron are associated with Campeau Corporation, and Jockvale Realty is ssociated with H. Shenkman.

Source: CMHC Survey, 1971.

TABLE: 3.1 POPULATION AND POPULATION GROWTH

CITY OF OTTAWA AND OTTAWA URBAN REGION (ONTARIO ONLY) 1961-1971

	Population			Population Growth				Proportion of Regional Total	
	1961	1966	1971	1961-1966 Numerical	As Rate	1966-1971 Numerical	As Rate	Population Growth 1966-1971	Population 1971
URBAN CORE	294,845	317,256	326,956	22,411	7.6%	9,700	3.1%	17.7	72.1
-OTTAWA, VANIER, & ROCKCLIFFE	294,845	317,256	326,956	22,411	7.6	9,700	3.1	17.7	72.1
FRINGE	49,369	81,131	126,324	31,762	64.3	45,193	55.7	82.3	27.9
-NEPEAN	19,753	43,919	64,606	24,166	122.3	20,687	47.1	37.7	14.3
-MARCH, GOULBOURNE RICHMOND & STITTSVILLE	5,837	7,761	15,279	1,924	33.0	7,518	96.9	13.7	3.4
-GLOUCESTER	18,301	23,222	37,145	4,921	26.9	13,923	59.9	25.4	8.2
-CUMBERLAND	5,478	6,229	9,294	751	13.7	3,065	49.2	5.6	2.1
REGIONAL TOTAL	344,214	398,387	453,280	54,173	15.7	54,893	13.8	100.0	100.0

SOURCES: Statistics Canada, Census of Canada, 1961 and 1971.

TABLE : 3.2 DWELLING STARTS BY TYPE 1961-1972

CITY OF OTTAWA AND OTTAWA URBAN REGION (ONTARIO ONLY)

	DWELLING UNITS STARTED											PROPORTION OF REGIONAL TOTAL									
	1961-1965 Density			1966-1971 Density			1972 Detached					1961-1965 Density			1966-1971 Density			1972 Detached				
	Low	High	Total	Low	High	Total	Single	Semi	Row	Apt.	Total	Low	High	Total	Low	High	Total	Single	Semi	Row	Apt.	Total
URBAN CORE	6734	11991	18725	2517	18259	20776	294	36	473	6542	7345	25.4	45.2	70.5	7.4	53.3	60.7	2.7	0.3	4.4	60.5	68.0
-OTTAWA, VANIER, & ROCKCLIFFE	6734	11991	18725	2517	18259	20776	294	36	473	6542	7345	25.4	45.2	70.5	7.4	53.3	60.7	2.7	0.3	4.4	60.5	68.0
FRINGE	4740	3089	7829	8609	4850	13458	1363	110	866	1124	3463	17.8	11.6	29.5	25.1	14.2	39.3	12.6	1.0	8.0	10.4	32.0
-NEPEAN	4063	2500	6563	3912	3391	7303	383	6	448	485	1322	15.3	9.4	24.7	11.4	9.9	21.3	3.5	0.1	4.1	4.5	12.2
-MARCH, GOULBOURNE RICHMOND & STITTSVILLE	N/A	N/A	N/A	N/A	N/A	N/A	119	38	70	ø	227							1.1	0.4	0.6		2.1
-GLOUCESTER	677	589	1266	4696	1459	6155	631	34	348	639	1652	2.5	2.2	4.8	13.7	4.3	18.0	5.8	0.3	3.2	5.9	15.3
-CUMBERLAND	N/A	N/A	N/A	N/A	N/A	N/A	230	32	ø	ø	262							2.1	0.3			2.4
REGIONAL TOTAL	11474	15080	26554	11125	23109	34234	1657	146	1339	7666	10808	43.2	56.8	100.0	32.5	67.5	100.0	15.3	1.4	12.4	70.9	100.0

SOURCE: CMHC Statistics Division.

the western townships doubled their population while Gloucester increased by 60%. In the later period, three-quarters of the region's low density residential construction went to the fringe municipalities, and by 1972 much of this was located outside the Greenbelt. Vacant land has become scarce in the inner areas[1] and higher density construction has steadily increased. By 1972, 70.9% of all new housing in the region was constructed as apartments, none of which were outside the Greenbelt. In general, the data indicates the production of low density, land consumptive[2] housing shifted out beyond the Greenbelt through the 1960s, although some large developments continue in the inner areas.

Table 3.3 is indicative of the increasing concentration which has emerged in the production of lots for low-density housing. Since the mid-1960s the number of current subdivisions accepted for NHA lending has declined from about 20 to about 5, indicative that the emergence of new subdivisions has diminished to a trickle. Co-incident with this concentration of "on stream" land, prices have risen sharply. Smaller land developers faced with high-priced raw land, a development approval process

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1. About 5,855 acres of vacant land suitable for residential use remain within the Greenbelt, primarily along the southern edge of the developed area. Planning Department, Regional Municipality of Ottawa - Carleton, Official Plan - Summary of Technical Reports, Ottawa: the Department 1972, p. 16.
2. It is estimated that the region consumes about 400 acres of raw land annually, to supply low-density housing.

TABLE: 3.3 LOT PRICE RANGES, SERVICED SINGLE DETACHED LOTS IN NHA - ACCEPTED SUBDIVISIONS-
OTTAWA REGION (ONTARIO) - 1965-1973
(All Prices in Thousands of Dollars)

	CENTRAL				WEST						EAST					
	OTTAWA		NEPEAN		MARCH-GOULB'N		WEST	SUBTOTAL	GLOUCESTER		CUMBERLAND		EAST	SUBTOTAL	AVERAGE	REGION
	SUBS	PRICES	SUBS	PRICES	SUBS	PRICES	SUBS	PRICES	SUBS	PRICES	SUBS	PRICES	SUBS	PRICES	PRICE	PRICE RANGE	SUBS
1965	6	5 -6.1	6	4.3-5.5	1	4.	7	4 -5.5	ø		2	2.5-2.8	2	2.5-2.8	$3,355	2.5-6.1	15
1966	10 (6)	5 -6.6	6 (3)	4.0-7.0	1	4.1	7 (3)	4.0-7.0	ø		2	2.5-2.8	2	2.5-2.8	3,259	2.5-7.0	19 (9)
1967	8 (2)	5 -6.9	7 (1)	4.0-6.5	1	4.0	8 (1)	4.0-6.5	3	2.5-5.1	2	2.5-5.1	5	2.5-5.1	3,535	2.5-6.9	21 (3)
1968	4 (1)	5 -6.9	5 (1)	4.0-5.8	1	4.5	6 (1)	4.0-5.8	5 (2)	2.5-6.5	2	2.5-2.5	7 (2)	2.5-6.5	3,505	2.5-6.9	17 (4)
1969	5	5 -6.9	8 (3)	4.8-6.0	1	6.1	9 (3)	4.8-6.1	6 (1)	5.0-6.5	2	4.0	8 (1)	4.0-6.5	6,660	4.0-6.9	21 (4)
1970	2 (2)	7 -8.9	2 (2)	7.5-8.0	2 (1)	6.4-7.0	4 (3)	6.4-8.0	2	6.3-7.0	2 (2)	4.2-4.7	4 (2)	4.2-7.0	7,316	4.2-8.9	10 (7)
1971			3 (2)	6.5-7.5	1 (1)	4.5	4 (3)	4.5-7.5	4 (3)	4.4-7.5	1	5.5	5 (3)	4.4-7.5	7,349	4.4-7.5	9 (6)
1972	1 (1)	5.8	1	7.0	1	5.0	2	5.0-7.0	2 (1)	4.4-7.5	1	6.5	3 (1)	4.4-7.5	8,400	4.4-7.5	5 (2)
1973			1	7.8	1	7.5	2	7.5-7.8	2 (1)	9.3-9.6	ø		2 (1)	9.3-9.6		7.5-9.6	4 (1)

(1) CHS - 1965-72, figures for 1965-69 are bungalows, others are single detached.
(2) Number in brackets is new subdivisions.

SOURCE: CMHC Survey.

requiring at least 18 months and sometimes 3 years, and the trend to large-scale projects, have progressively been forced out of this market. Suburban development and higher prices tended to be in the west until recently when the overall land supply diminished and a larger proportion of development shifted to the eastern node. As the number of new subdivisions declined, lot prices have both escalated, and have become more uniform across the region.

Further public measures are entrenching the concentration of growth and land ownership in the ex-Greenbelt nodes. A regional water and sewage study completed in 1970 recommended an essentially sequential servicing program to provide sewer and water trunks to the western, then the eastern nodes.[1] In the summer of 1971, the Ontario Housing Corporation began assembling approximately 4500 acres south-east of the Greenbelt to form the heart of a new public growth node thereby assuring a measure of inter-nodal competition. Through 1972 and 1973, the planning department of the new Regional Municipality of Ottawa-Carleton has been developing a regional official plan - current proposals step back only slightly from the earlier, high growth approach.

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1. James F. MacLaren Limited and J. L. Richards & Associates Limited, Report and Technical Discussion on Master Plan of Water Works and Waste Water Control for the Regional Municipality of Ottawa - Carleton, Ottawa: Regional Municipality of Ottawa-Carleton, 1970.

The draft plan would develop all vacant land inside the Greenbelt in addition to the eastern and western nodes, then growth would move to the publicly-owned node and in the third stage, would expand the southern growth area.[1]

Institutionalized concentration of ownership is evident:

- in the western node where Campeau Corporation's "Kanata" plan would house 65,000 people on 3,200 acres,[2] the regional goal is to accommodate 1000,000;[3]

- in the eastern node where Richard Costain (Canada) Ltd.'s "Convent Glen" is to house 30,000 on 790 acres,[4] the regional target is 35,000;[5]

- the southeastern and southwestern nodes would each contain 100,000 people[6] - the former is 4,500 acres owned by the Ontario Housing Corporation while the latter is primarily owned by the Campeau Corporation and Jockvale Reality.

It is interesting to note the public objectives which underlie this growth plan. Paraphrased, these are:

- to protect agricultural, recreational, conservation and existing developed areas, and the environment generally;

- to provide choice in living accommodation;

- to provide public services economically;

- to given each area municipality an adequate tax base;

- and to reflect citizens' views as expressed to date.[7]

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1. Regional Municipality of Ottawa-Carleton, Official Plan for the Ottawa-Carleton Planning Area - Draft, Ottawa: the Region, August 1973. Part 4-7.
2. Kanata, op.cit., p. 4.
3. Draft Official Plan, op.cit., p. 4-7.
4. Richard Costain (Canada) Ltd., Costain in the New Town of Orleans, Ottawa: the firm, 1971, p. 10.
5. Draft Official Plan, op.cit., p. 4-7
6. Loc.cit.
7. Ibid., p. 4.2.1.

As, with the exception of the "choice" goal, each objective substantively limits the extent and type of land which is considered suitable for development, it is not surprising that quite limited growth designations emerge. The plan then provides for competition between the few private corporations which own the "first stage" land, a similar situation in the "southern" node, and finally, the introduction of a public monoply in the "southeast" node. The general philosophy is a cautious approach to large scale public development in a context of increasing growth limitation and public control. However, the first priority in the increasingly constrained system is the development of existing private land banks.

This summary of land development in the Ottawa region has described the central role occupied by public planning measures. The public sector indicated the growth zones, private firms assembled the land, then governments encouraged their development and have constrained growth elsewhere. As prices rose and competition declined, policy makers began to recognize the complex situation created by concentrating a region's growth in a few large projects. To date, the response has been the advance acquisition of a large new growth zone to be developed with public capital, hopefully under local control. As similar situations are emerging across Canada with the strengthening of urban regional planning, Ottawa's experience provides an advance example of problems that can accompany concentrating land development.

3.2 Toronto

The Toronto metropolitan region contains the highest absolute land prices, and perhaps the most complex land market, in urban Canada. Numerous reports have described some of its aspects, but due to the limited nature of the research, and the multiplicity of actors, rapidly changing character, and sheer size of this market, there is no integrated analysis of the region. This section combines a brief description of some land use change analysis undertaken in the developed parts of the area, with some detail on land development, public policy, and pricing factors, to form a broad overview of the residential land market in Canada's dominating metropolis.

The forces of urbanization reach out from central Toronto over a wide area, creating many types of essentially inter-related markets for land.[1] At the extremities, individuals and families go out and live in rural areas while maintaining a basically urban income and existence by their work and social behavior. Closer to the city, but beyond the immediate developing fringe, land ownerships, prices, and uses become crazy mixes due to increasing numbers of these ex-urbanites along with minor speculators, some land-banking rural developers, and some odd industrial, educational and

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1. For a discussion of characteristics and boundaries in these complex fields see Russwurm, Lorne H. The Urban Fringe in Canada, - Problems, Research Needs, Policy Implications, Ottawa: Ministry of State for Urban Affairs, 1973.

recreational functions, combined with a declining farm population. The immediate fringe is more polarized as owners are quite aware of their spatial/temporal proximity to development and the accompanying rise of land values, and tend to become active supporters or opponents of "growth". Urban planning covers this fringe, and land development companies own large tracts selected for their growth potential. Finally within the developed area urbanization focusses on scattered parcels of vacant land, and creates pressure to redevelop existing properties at locations where higher densities would produce net profits. The complexity of these markets is increased as they cross political jurisdictions, and demands rise, fall and change across the markets and through time.

Toronto's commutershed extends from at least Burlington to Barrie to Oshawa, with commuters concentrating in towns and near transportation routes to the central city.[1] In this vast outer area, case studies have shown ex-urbanites are the largest single class of landowners and buyers, and

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1. The boundaries selected for the Toronto-Central Region Plan, and research undertaken by Found and Morley, indicate most land owned by Torontonians or by people who work in Toronto, is within about 100 miles of central Toronto. See Found, W. C., and C. D. Morley, A Conceptual Approach to Rural Land Use-Transportation Modelling in the Toronto Region. Toronto: University of Toronto/ York University Joint Program in Transportation, Research Paper No. 8, 1972.

now hold about 20% of all acreage.[1] In Punter's study areas in Caledon and King Townships, most prices paid for acreage crossed the breakpoint for purely agricultural use[2] in the mid-1950s.[3] Found and Morley's research in Albion Township,[4] and Martin's data from the North Pickering/Uxbridge area,[5] indicate these areas were dominated by non-farm buyers by the early, and mid 1960s, respectively. Green examined prices paid for acreage in 1968-69 within 1.75 miles of highways north of the boundary of Metropolitan Toronto, and found only occasional sales at farmland prices within 40 miles along Highway 400, and a few farm prices before 20 miles along Highway 48.[6] While most of these studies were

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1. Excellent studies of land use change, ownership, price and other behavior in this commutershed are: Punter, John V., The Impact of Exurban Development on Land and Landscape in the Toronto-Centered Region (1954-1971), Ph.D. dissertation, Toronto: University of Toronto, Department of Geography, 1973, forthcoming; and Martin, Larry R. G. Land Use Dynamics on the Toronto Urban Fringe. Kitchener: University of Waterloo School of Urban and Regional Planning, 1973, forthcoming.
2. Top prices for farmland would not exceed $350 per acre, See Biggs, E. The Challenge of Abundance, Toronto: Report of the Special Committee on Farm Incomes in Ontario, 1969, pp. 24-26.
3. Punter, op.cit., Chapter 5, page 27.
4. Found and Morley, op.cit., p. 62.
5. Martin, op.cit., p. 36.
6. Green, W. W., The Effects of Metropolitan Access Routes on Adjacent Rural Land Values in the Metropolitan Toronto Region, B. A. Thesis, Toronto: York University Department of Geography, 1970, p. 37.

concentrated on land within 50 miles of Metro, the ownership data Found and Morley obtained indicates the Toronto ex-urban land market may extend twice this distance, covering perhaps 15,000 square miles.

The next zone, the inner edge of ex-urbia, is receiving some semi-formal designation to limit the extent of its development. The Metropolitan Toronto Planning Board's area (1966) and the Census Metropolitan Area of Toronto (1966) cover 720 and 799 square miles,[1] respectively, including most land which is receiving direct pressures of urbanization.[2] Harper's comparison of present land use in this fringe, with the planned ultimate use, found only one-third of residential land, and one-fifth of industrial land was in its final use, while the quota for commercial area was reached about 1968, and excesses over planned use were in the open space, institutional, transportation and farmland categories.[3] If consumption follows existing trends, agricultural land will decline to its planned minimum by 1976, and residential use will rise to its maximum by 1982. While the MTPB plan is

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1. Harper, Peter P. Alternative Land Use Futures for Metropolitan Toronto, Toronto: University of Toronto Centre for Urban and Community Studies, Research Paper No. 50, 1971, p. 4. Metropolitan Toronto covers 240 square miles within these areas.
2. These also roughly coincide with Zone 1, (the urban area) of the Toronto-Centred Region Plan, indicating the Ontario governments intended limits for Toronto.
3. Harper, op.cit., pp. 32-33. MTPB is the Metropolitan Toronto Planning Board. Seventy-eight per cent of the land area was classified agricultural in 1968.

not a binding limitation on the development of this mid-fringe area, it is illustrative of a plethora of official documents[1] that indicate public authorities intend that the sprawling expansion of Toronto will not reach these lands. There may be considerable changes in ownership and intensity of use within this fringe, but in effect, it is to be the "zone of containment" marking the outer limits of the purely "urban" land market.

The next fringe, which is the inner part of the area described above, surrounds the developed city and is the effective land supply for the Toronto region. The Urban Development Institute (York Region Committee) reports this area contained about 40,000 acres of vacant land designated for residential development in 1963, which declined to 24,000 acres by 1968.[2] Less than one-half of the vacant supply in 1968 was inside Metropolitan Toronto, and 9,430 acres of it was located in Mississauga. In 1973 the Ontario Chapter of the Institute reported 40 member firms held 41,693 acres in the entire region intended for residential development, although

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1. Most notable is the Ontario government's Toronto Centred Region Plan. Others include the early MTARTS plans, the new regional government structures in the area, and numerous local and regional sewage and water, transportation and land use plans.
2. Fenco Ltd. Brief to the Regional Municipality of York on "Design for Development", Toronto: Urban Development Institute, York Region Committee, 1972, Figure 2.

11,421 acres were in conflict with the Toronto Centred Region Plan.[1] Over 17,000 acres of this total holding was in Mississauga. As this report is said to include 85-90% of the vacant, developable land within the urban zone of the TCR Plan, it appears the total residential expansion supply for Toronto is in the range from 33,600 acres to 49,000 acres.[2]

While this rough definition of the immediate development fringe[3] is particularly imprecise, it describes a sufficiently clear place, conceptually, to observe the outlines of Toronto's land policy. As the region consumes about 2500 acres of new residential land each year,[4] unless densities increase or housing construction declines it appears Toronto will use up the total supply of land allocated for its residential expansion, between 1986 and 1992. In other

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1. Urban Development Institute - Ontario, Land Inventory Survey - Zone 1 of the Toronto Centred Region, Toronto: The Institute, 1973. Tables 1 and 2.
2. Calculations of 100% assuming a low of 85% = (41,693 - 11,421 acres), and a high of 90% = 41,693 acres. It is notable that this constitutes only 11 - 16% of the total area of the "fringe", or 14 - 20% of it's undeveloped lands, as defined by MTPB (1966). See Doucet, M. J., Trends in Metropolitan Land Use and Land Consumption: Metropolitan Toronto, 1963-68, Toronto: University of Toronto Centre for Urban and Community Studies, Research Paper No. 35, 1970, p. 12.
3. This place is usually described as the speculative fringe, however, given the particular attributes of the Toronto case, immediate or future development zone seem more appropriate descriptions.
4. See Fenco, op.cit., p. 11 and UDI - Ontario, op.cit., Table 1.

words, there is now a substantive public policy that the sprawling growth of metropolitan Toronto will be halted within a generation. The lands where this last stage of spatial expension will be allowed are, for the most part, designated and in the ownership of about forty development firms.[1]

Before further examining Toronto's development area, it is useful to complete the spatial-structural overview of the entire region by looking at its 153,640 acres of primarily developed land - the Municipality of Metropolitan Toronto. In 1968, the proportions of this total area in various land uses were as follows:[2]

Residential	39.2%	Undeveloped (Agricultural & Vacant)	22.1%
Industrial	8.1%	Open Space	13.9%
Institutional	5.1%	Transportation & Utilities	8.0%
Commercial	3.6%		

While one-fifth of the municipality is still undeveloped, residential land occupies 50% of the developed area and 92% of the residential land is in the form of single-family housing.[3]

This is not a static structure, and most land use change within this area does not occur on undeveloped land.

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1. In addition, the government of Ontario is assembling a 20,000 acre townsite within the zone (8 years supply at current consumption rates), which slightly modifies, but does not substantively alter this analysis.
2. These are gross land uses (adjoining streets are included with each parcel). Data from Doucet, op.cit., p. 5.
3. Doucet, loc.cit.

Bourne and Doucet's major study of the growth of Metropolitan Toronto during the 1950s and 1960s revealed that over 1% of it's developed land is physically redeveloped each year,[1] with three major redevelopment patterns or concentrations evident[2] - nucleation[3], growth along infrastructure networks[4], and core expansion.[5] Most redevelopment occurs on residential land in approximate proportion to the residential share of total land uses.[6] Bourne found that 33.9% of all properties redeveloped in Toronto between 1951 and 1966 were single family homes, 0.5% were apartments and 10.9% were other residential types.

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1. Bourne, L. S. "Trend in Urban Redevelopment - The Implications for Urban Form", pp. 80-91 in The Canadian Realtor, Volume 16, Number 2, May, 1970, p. 82.
2. Bourne, L. S. and M. J. Doucet. Dimensions of Metropolitan Physical Growth: Land Use Change, Metropolitan Toronto 1963-1968. Toronto: University of Toronto Centre for Urban and Community Studies, Research Report No. 38, 1970, pp. 6-30.
3. In these nodes of redevelopment, 10% to 30% of a small area was observed changing use within 5 years. Bourne and Doucet, loc.cit.
4. The most obvious examples are the subway alignments, where densities have increased rapidly as Toronto's subways come into use, and adjacent land values have escalated to 3 to 7 times their pre-subway levels. See Willoughby, B. E. "The Toronto Subway and Its Effect on Real Estate", pp. 65-69 in Montreal Real Estate and Business Review, Montreal: Montreal Real Estate Board, 1965.
5. While core expansion is a very visible form of growth which often involves the city's larger buildings, it also occurs at high densities and accordingly, is a less important redevelopment area in terms of the space it occupies. Bourne and Doucet, op.cit., p. 29.
6. On this "share of total land use" basis, redevelopment took overproportionate amounts of vacant land, proportionate amounts of residences, and less than proportionate amounts of commercial, industrial, transportation and institutional land.

Vacant lots provided 33.7% of the redevelopment stock (and many of these were formerly houses), offices contributed 1.8%, industrial property yielded .3% and all other uses gave 6.3%.[1] While most redevelopment occurs on ownership-type, family residential land, the product which emerges from this process is usually income-producing property (land supporting improvements constructed for rental). In 1963, three-quarters of Metropolitan Toronto's land area used as garages, gas stations and car lots was on land which had been redeveloped since 1952, as was one-half of the parking lots, 40% of apartment buildings, over 25% of offices and warehouses, and over 10% of industrial, hotel and general commercial buildings.[2] Bourne's [3] analysis also generated probabilities, on the assumption that a given parcel would be redeveloped, for each of the possible post-redevelopment uses. The following table contains these probabilities, and beside each, shows the former uses which have, historically, preceeded the new use in most cases.

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1. Bourne, "Trend in .....", op.cit., p. 87. It is likely, then, that residential land contributes over 50% of redevelopment space.
2. Bourne, op.cit., p. 85.
3. Bourne, L. S. Dimensions of Metropolitan Land Use - Cross Sectional Structure and Stability, Toronto: University of Toronto Centre for Urban and Community Studies, Research Paper No. 31, 1970. Subsequent research (Bourne and Doucet, Dimensions...op.cit.) disclosed that significant proportions of the changes in the three commercial and industrial and warehousing categories, were due to reclassification of unchanged properties.

NEW LAND USE	PERCENTAGE PROBABILITY	DOMINANT FORMER LAND USE
Low Density Residential	5.3%	Vacant, Low Density Residential
High Density Residential	11.9	High Density Residential, Low Density Residential, Transportation
Vacant	9.2	High Density Residential
Office Commercial	11.3	General Commercial, Warehousing
General Commercial	8.0	General Commercial, Warehousing
Auto Commercial	11.7	Auto Commercial, Parking, Transportation
Parking	19.9	Parking, Transportation, General Commercial, Low Density Residential
Warehousing	10.7	Warehousing, Vacant, Industrial
Industrial	10.9	Industrial, Warehousing, Vacant
Transportation	1.1	Transportation

The residential category is the most frequent former use, and this land is redeveloped mainly for apartments, vacant lots and parking lots. As the latter two are typically interim uses which in turn give way to further redevelopment, it becomes apparent that residential land is the location of much of Toronto's densification.[1] It is notable that, between 1951 and 1961, within the Toronto metropolitan area, while the

1. Two types of residential property were infrequently redeveloped. These were high-income, inner-city residential districts and older working-class neighbourhoods located at some distance from the core.

total housing stock increased by about 184,600 units, the owner-occupied proportion of this stock declined from 71% to 67%, and by 1961 single detached houses comprised only 56% of the total stock.[1] Between 1961 and 1971 the stock increased by about 291,500 units, while owner-occupied dwellings fell to 55%, and single detached houses dropped to 46% of the total. The combination of redevelopment demolishing existing houses with the dominance of high density forms in new construction has rapidly changed the structure of the housing stock. As a result, most Torontonians do not, now, own a detached house, and as other studies have determined that home ownership is a continuing ideal in Toronto,[2] the magnitude of potential demand for detached housing is apparent.

Table 3.4, a summary of all recent detached house starts and all house sales in nine municipalities in the region, provides a profile of Toronto's home ownership market. Total sales (of new and existing houses) have consistently outnumbered new houses started, by at least 4 to 1, with an average of 6 to 1 between 1967 and 1972. Few new houses (less than 5% of total starts) are being built in the City

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1. See Table 2.3
2. Michaelson, William, Environmental Change - The Physical Environment as Attraction and Determinant: Social Effects in Housing. Toronto: University of Toronto Centre for Urban and Community Studies, 1973, pp. 7, 11, 12, 64, 65.

TABLE: 3.4 ALL HOUSE SALES,[1] AVERAGE PRICES[2] AND NEW HOUSE STARTS[3], NINE MUNICIPALITIES - TORONTO REGION

PLACE	YEAR REPORTED 1967	1968	1969	1970	1971	1972	1966-72	% CHANGE 1966-1972
CENTRAL[4]								
Toronto								
-All Sales	12,850	11,977	10,432	9,093	7,224	7,270	58,846	- 43%
-All Starts	108	110	133	123	171	185	830	+ 71%
-Average Price	$26,800	$17,700	$28,000	$29,100	$28,800	$30,900		+ 15%
East York								
-All Sales	1,607	2,853	1,293	1,362	1,041	6,964	15,120	+ 333%
-All Starts	32	61	35	13	23	32	196	0%
-Average Price	$23,400	$30,100	$24,300	$27,000	$26,300	$33,300		+ 42%
York								
-All Sales	3,148	1,513	2,237	2,168	1,495	2,304	12,865	- 27%
-All Starts	82	70	74	36	52	62	376	- 24%
-Average Price	$23,900	$27,300	$26,700	$28,300	$37,900	$29,700		+ 24%
FRINGE								
North York								
-All Sales	8,540	7,456	5,297	6,178	5,385	1,493	34,349	- 83%
-All Starts	1,730	1,400	2,214	1,308	2,480	1,958	11,090	+ 13%
-Average Price	$33,900	$45,300	$33,400	$35,900	$35,400	$29,000		- 14%
Etobicoke								
-All Sales	5,022	6,326	3,793	3,931	3,091	4,396	27,059	- 3%
-All Starts	625	479	505	212	649	308	2,778	- 51%
-Average Price	$30,500	$31,900	$33,000	$34,200	$32,900	$31,400		+ 3%
Scarborough								
-All Sales	5,703	4,475	5,220	5,669	4,029	6,946	32,042	+ 22%
-All Starts	2,034	2,003	1,719	768	1,719	2,073	10,316	+ 2%
-Average Price	$24,600	$37,200	$29,300	$29,100	$32,100	$37,100		+ 51%
Markham[5]								
-All Sales	1,178	1,706	920	253	799	1,465	6,321	+ 24%
-All Starts	970	439	315	454	862	1,467	4,507	+ 51%
-Average Price	$29,743	$30,878	$32,157	$37,450	$38,200	$39,900		+ 34%
Richmond Hill								
-All Sales	548	409	403	68	474	491	2,393	- 10%
-All Starts	15	32	18	16	59	340	480	+ 2167%
-Average Price	$24,300	$26,400	$24,400	$30,600	$29,100	$31,600		+ 30%
Vaughan[5]								
-All Sales	318	534	245	102	207	230	1,636	- 28%
-All Starts	79	87	121	55	44	71	457	- 10%
-Average Price	$29,000	$40,700	$31,400	$33,200	$34,700	$44,500		+ 53%
SUBTOTALS								
Sales -All	38,914	37,249	29,840	28,824	23,745	32,059	190,631	+ 50%
-Fringe	21,309	22,419	15,878	16,201	13,985	15,521	104,839	- 46%
-% Fringe	55%	60%	53%	56%	59%	48%	55%	
Starts								
-Central	222	241	242	172	246	279	1,402	+ 26%
-Fringe	5,453	4,440	4,892	2,797	5,828	6,217	29,627	+ 14%
-All	5,675	4,681	5,134	2,969	6,074	6,496	31,029	+ 14%
-Missisauga	2,565	1,776	2,083	1,152	2,577	3,404	13,557	+ 33%
-Metro[6]	8,856	7,300	8,317	5,111	9,755	14,585	53,924	+ 65%
-All Starts % All Sale	15%	13%	17%	10%	26%	20%	16%	
-Average Price								
-Central	$25,992	$20,730	$27,478	$28,767	$28,423	$31,750	$ 5,758	+ 22%
-Fringe	$30,053	$35,301	$31,648	$34,853	$35,030	$34,717	$ 4,664	+ 16%

NOTES AND SOURCES:

1. Sales are all house sales registered in this municipality or group of municipalities, in the year preceeding May of the year reported, as recorded by Teela Market Surveys, and compiled by the Research Department of The Toronto Real Estate Board in TREB, House Price Trends, 1971 and 1973 editions, Sections 1, Parts 8.
2. Prices are averages for this municipality or group of municipalities, calculated from TREB, loc.cit.
3. Starts are all new single and semi-detached, and duplex units started in this municipality or group of municipalities in this calendar year, from CMHC data.
4. Central areas were selected by their relative lacking in current low-density construction.
5. Markham and Vaughan include both the towns and townships bearing these names.
6. Census Metropolitan Area of Toronto.

of Toronto, East York and York, although about 50% of all sales occur in these central municipalities. Also, while the outer six municipalities produce virtually all of the regions new houses, in each year sales of existing houses in these suburbs also outnumber new houses started.[1] Over the period, new house starts declined in the central city and Etobicoke, while rising in the outer areas, particularly in Mississauga, North York and Scarborough, resulting in a general rise in starts in the region. Mississauga warrants particular note as this high growth area[2] has consistently provided more than 20% of the regions new houses. Sales of existing houses have generally declined, particularly in the central areas. When the 1971 sales data is compared with 1971 Census data in the various municipalities, low turnover rates for detached housing are produced,[3] indicating the market is becoming very tight. Accompanying these falling sales volumes are rising prices, and while the central areas exhibit lower prices than the suburbs, the rise in central prices exceeds the suburban rise. Sales of older houses in

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1. Exceptions are seen in North York 1972, Markham 1967, 1970, 1971, 1972, and Richmond Hill 1972.
2. Mississauga's growth rate between 1966 and 1971 averaged 10.5% per annum, Chinguacousy (also in the west) experienced annual growth of 13.7%, Markham (to the east) grew by 10% each year while Metropolitan Toronto's rate was only 3.0%. From UDI - Ontario, Land Inventory..., op.cit.
3. Turnover rates (the average number of sales per 100 houses) were:

Toronto	14%	North York	9%	Richmond Hill	7%
East York	6%	Etobicoke	4%	Vaughan	5%
York	7%	Scarborough	7%	Fringe Average	6%
Central Average	14%	Markham	10%	Overall Average	8%

the central areas dominate the market for houses, numerically, while leading market prices upwards through their increases, and the less-plentiful new and newer-used houses in the suburbs have higher absolute prices, which rise more slowly. As the aggregate data on the housing stock revealed the high potential demand for detached houses, and the market profile demonstrates the supply of detached houses is dominated by existing houses which are sold infrequently, in diminishing numbers, at quickly rising prices, the existence of an enormous demand pressure for new houses, and thus residential land, becomes apparent.

On Toronto's fringes, the supply of land which is suitable for, and designated for, residential development is limited in both extent and ownership. The limitation of residential development designation by provincial,regional and local authorities to about 40,000 acres was mentioned above, as was the Urban Development Institute's report that 40 member firms held 41,693 acres intended for residential use. Table 3.5,a summary, by subregion, of total land holdings of developers as found in the Development Corporation Survey,[1] locates 41,188 acres held by 23 firms, (including 36,472 acres held by 14 UDI members). Fifty per cent of the developers land is in the western fringe, 20% is north of

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1. Development Corporations Survey is described in Section 4.1. It is likely that the UDI report is a more accurate description of residential lands.

TABLE: 3.5

DEVELOPMENT CORPORATIONS SURVEY

CORPORATE LAND HOLDINGS - TORONTO REGION

FIRM NAME (ABBREVIATED)		HOLDINGS BY SUBREGION									
		METRO TORONTO		EAST		NORTH		WEST		TOTAL	% OF
		ACRES	% OF TOTAL	ACRES	% OF TOTAL	ACRES	% OF TOTAL	ACRES	% OF TOTAL	ACRES	TOTAL
Revenue	*	24	.06	1,100	2.64	6,600	15.84			7,724	18.54
Canadian Equity	*	200	.48					6,678	16.03	6,878	16.51
Bramalea	*	229	.55	745	1.79	696	1.67	3,261	7.83	4,931	11.84
Markborough	*	140	.34			858	2.06	3,900	9.36	4,898	11.76
Runneymede	*	140	.34	3,960	9.50					4,100	9.84
McLaughlin	*	14	.03					3,426	8.22	3,440	8.25
Caledon Mt. Ests.								2,100	5.04	2,100	5.04
Great Northern	*			34	.08	161	.39	1,038	2.49	1,233	2.96
Alliance	*	230	.55	950	2.28					1,180	2.83
Monarch	*	433	1.04			505	1.21			938	2.25
Pinetree		812	1.95							812	1.95
North American		550	1.32							550	1.32
Trans-Nation		160	.38					317	.76	477	1.14
Costain	*	396	.95							396	.95
Wimpey		396	.95							396	.95
Cadillac	*					170	.41	90	.22	260	.63
Western	*	260	.63							260	.63
Consolidated	*	100	.24					120	.29	220	.53
Hambros		62	.15					45	.11	107	.26
Orlando								100	.24	100	.24
Marathon		92	.22							92	.22
Kaufman & Broad		82	.20							82	.20
Campeau	*	14	.03							14	.03
TOTALS (23)		4,334	10.41	6,789	16.29	8,990	21,58	21,075	50.59	41,188	98.87

EAST is Ajax and Pickering.
NORTH is Markham, Uxbridge, Richmond Hill and Unionville.
WEST is Brampton, Caledon Hills, Georgetown, Mississauga, Oakville, Port Credit, Streetsville.

* indicates UDI member. UDI total - 14 firms, 36,472 acres.

Toronto, and 16% is on the eastern fringe. Eighty-seven per cent of the total developer acreage (about 35,800 acres) is held by nine firms, primarily in seven large projects, each of which exceeds one square mile.[1] Another giant project, of 20,000 acres, is being assembled at North Pickering by the provincial government. It seems that most development now planned on the fringe is in the form of integrated projects on large single-owner holdings. While there is still acreage in diverse ownership,[2] the existence of the huge tracts owned by the largest development firms and intended for integrated "new town" type projects,[3] severely limits the ability of smaller developers and landholders to enter the land supply.[4] It appears, then, that the land which will be used to provide housing during this terminal phase of Toronto's spatial expansion now rests,

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1. These are Century City, Erin Mills, Bramalea, Meadowvale, Runneymede's South Pickering, Mississauga City, and Glen Abbey.
2. Tables A-7 and A-8 in the Appendix contain examples of widely held, but essentially speculative parcels.
3. These immense undertakings are well described in Vito, Virginia W. The Toronto Region's Privately Developed New Communities. Toronto: Bureau of Municipal Research, 1973.
4. This limitation can be seen as risk, or cost. Although the small project is intended to compete with the large one, everyone - financial institutions, governments (who must approve and supply services to either or both), builders, and ultimately buyers will tend to favour the large project as it produces "more bang for the buck". Accordingly, risk is higher on the small project, and all costs are higher, placing it at a competitive disadvantage.

primarily, in the hands of relatively few specialist development firms. The public sector has made the supply finite, and the private corporations have responded, logically, by assembling the scarce commodity. There is no question of long-term supply - the Toronto-Centred Region Plan (like Bill 42 in British Columbia, and many official plans elsewhere) has defined the limits to Toronto growth.

Within this basic framework for development there are particular problems in the short-term supply. Land development is a complicated process at the best of times. After interviewing 20 Toronto developers, Chamberlain identified four general stages in the process, including: site acquisition (with eleven necessary sub-stages in the developers decision to buy, and eight categories of additional participants); site preparation (involving eleven categories of participants); production (with seven participating groups); and marketing (with six groups of actors).[1] Governments are vitally involved in the second stage, site preparation, as this usually includes the creation and approval of a detailed plan of subdivision with all related services, and often requires a zoning by-law and the amendment

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1. Chamberlain, Simon B. Aspects of Developer Behavior in the Land Development Process. Toronto: University of Toronto Centre for Urban and Community Studies, Research Paper No. 56, 1972, pp. 38-39.

of an official plan.[1] The subdivision approval process is not standardized,[2] criteria for approval also vary,[3] and the process may involve upwards of 70 separate stages and over 30 different agencies.[4] The average plan approval period, assuming trunk services are available, is one to two years, while official plan ammendments add an average of 4 to 6 months, and a contested zoning change (most are) requires at least four months.[5] These characteristics constitute severe problems in that: small firms have difficulty raising and carrying capital for the extended period required to move land through to approval; innovative design is discouraged as "status quo" projects may clear the process more quickly; and the uncertainty associated with this complicated system precludes even the largest developers from maintaining the team of specialized labour and equipment necessary for sustained, efficient, high-volume production.

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1. The Community Planning Branch of the Ontario Department of Treasury Economics and Intergovernmental Affairs receives about 1000 subdivision applications each year from the entire province, and approves about 450 plans of subdivision. This volume is down from about 1600 applications and about 800 approvals, in 1960. See Comay Planning Consultants Ltd. et al, Subject to Approval - A Review of Municipal Planning in Ontario, Toronto: Ontario Economic Council, 1973, p. 67.
2. See, generally, Ontario Housing Advisory Committee, The Housing Production Process in Ontario, Toronto: Ontario Advisory Task Force on Housing, 1973. Especially pp. 9-28.
3. Comay et al, Subject to....., op.cit., p. 71.
4. See Derkowski, A., Residential Land Development in Ontario, Toronto: Urban Development Institute, 1972, pp. 19-33, 63-67.
5. Comay et al, Subject to...., op.cit., p. 65.

Since 1950, subdivision approvals in the Toronto region have occurred on progressively larger tracts in increasingly fewer places , and lately, have been located primarily, on the western fringe. Table 3.6 is a report of the acreage approved for subdivision in the various townships of the region, grouped into three sub-regions, during the periods 1950-1959, and 1960-1968. Subdivisions within two miles of existing towns are shown separately from rural approvals. As most of Toronto's new lots are created by subdivision,[1] this data shows some of the volume of land moving through an essential stage of the development process. Nearly 40 per cent of the acreage approved during the 1950s was north of Toronto, near towns on either side of Yonge Street, although significant rural acreages were subdivided in this subregion in Markham and King Townships. The other half of the regions total approvals was split between the eastern and western sectors, and was mostly around towns. In the 1960s, the concentration of activity on a single sub-region increased, the area subdivided dropped sharply and the focus shifted from the north to the west. While over one-half of all subdivision occurred in the west,

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1. In York County, the northern part of the region, 70% of new lots registered between 1965 and 1970 were created by subdivision plan while 30%, primarily in rural areas, were created by municipal consents. Paterson Planning and Research Limited, Report on Planning Organization in the Region of York. Toronto: the firm, 1970, p. 21.

TABLE: 3.6 SUBDIVISION ACTIVITY IN THE TORONTO REGION 1950-1968

LOCATION (Township)	ACREAGE SUBDIVIDED 1950-1959 AROUND TOWNS	1950-1959 IN RURAL AREAS	1960-1968 AROUND TOWNS	1960-1968 IN RURAL AREAS	PERCENTAGE OF TOTAL ACRES SUBDIVIDED 1950-1959 TOWNS	1950-1959 RURAL	1960-1968 TOWNS	1960-1968 RURAL
WEST	ACRES	ACRES	ACRES	ACRES	%	%	%	%
CALEDON	238.9	12.8	250.5	277.7	2.1	.1	4.6	5.1
CHINGUACOUSY	585.9	146.8	1821.8		5.1	1.3	33.2	
ESQUESING	561.2		88.3		4.9		1.6	
MISSISSAUGA	753.7	54.4	278.4		6.5	0.5	5.1	
OTHERS	271.5	119.7	40.7	75.2	2.4	1.0	0.7	1.4
SUBTOTAL	2411.2	333.7	2479.7	352.9	20.9	2.9	45.1	6.4
NORTH								
YONGE SECTOR	2076.6		183.3		18.0		3.3	
KING	516.8	374.0	40.4	7.4	4.5	3.2	0.7	0.1
MARKHAM	392.3	371.0	115.2	274.0	3.4	3.2	2.1	5.0
VAUGHAN	454.7		108.7		3.9		2.0	
WHITCHURCH	631.3	160.3	158.7		5.5	1.4	2.9	
OTHERS	112.0	347.5	239.7	19.3	1.0	3.0	4.4	0.4
SUBTOTAL	4183.7	1252.8	846.0	300.7	36.2	10.8	15.4	5.5
EAST								
PICKERING	509.2	405.7	325.6	474.2	4.4	3.5	5.9	8.6
WHITBY	681.0	73.5	40.2		5.9	0.6	0.7	
WHITBY EAST	1693.2		657.6		14.7		12.0	
OTHERS	6.8	0.0	16.4	2.3	0.1		0.3	0.1
SUBTOTAL	2890.2	479.2	1039.8	476.5	25.0	4.1	18.9	8.7
TOTAL	9485.2	2065.7	4365.6	1130.0	82.1	17.9	79.4	20.6

SOURCE: Hodge, G. "Subdivision Activity in the Periphery of the Toronto Urban Field" pp. 221-228 in Bourne, L.S., R.D. MacKinnon and J. W. Simmons, eds., The Form of Cities in Central Canada, Toronto: University of Toronto Press, 1973, pp. 224 and 226.

most of this western activity was focussed on the existing centres in Chinguacousy and Mississauga Townships. Marked decreases occurred in both town and rural subdivisions in the other sub-regions. This data indicates that Toronto's western suburbs have become the dominant supply of new land in the region.

Finally, the short-term development problems in Toronto have spatial-temporal dimensions associated with designation of specific sites, and provision of trunk services. Land development cannot occur in a district without considerable expenditure on: major transportation routes; large-volume sanitary sewers and treatment facilities; water purification and distribution plant; electricity and gas distribution equipment; property protection and maintenance services; areal drainage collection; and educational and other public service facilities.[1] Municipal financial weakness, including divided jurisdictions which affect many of these programs slows the provision of these major services, and tends to favour larger public projects where expenditures on development infrastructure can achieve economies of scale. Also, as there is considerable inter-dependence between preparation and approval of district plans, planning and placement of services, and local zoning or other development designations, and as each of these is

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1. While each component of this total package may require public expenditures of millions of dollars, overall, the highest costs are always in educational facilities which usually involve more than 50% of the total.

necessary to land development, these elements become refined determinants of the short term land supply. Thus another dimension of Toronto's land supply is visible in sewerage schemes: the giant $130 million South Peel Scheme was established in 1968-1969 and is providing trunk services to the western fringe; a similar major scheme in South Pickering is now establishing plant, to service the eastern/northeastern fringe in the late 1970s,[1] and some excess capacity now exists in trunk services near Steeles Avenue which Metropolitan Toronto is making available to the northern municipalities.

The survey of member firms in Toronto undertaken by the Ontario Chapter of the Urban Development Institute quantifies the current supply more specifically. Table 3.7 is a compilation of the acreage in each sub-regional area, whose development is impeded by various specific problems. Most problems are seen in the west where 18,217 acres are tied up, primarily in Mississauga and Oakville. Within Mississauga the absence of concrete highway, parkway, airport, hydro and general growth decisions sterilizes vast acreages. Oakville's reluctance to permit growth on its eastern boundary holds up 1,500 acres. Some sewer and water lackings affect land in the western area, but this appears to be a less severe constraint than other problems.

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1. Vito, op.cit., pp. 19, 24-25.

TABLE: 3.7 DEVELOPER'S RESIDENTIAL ACREAGE HOLDINGS WHERE DEVELOPMENT IS DELAYED, BY SUBREGION AND CAUSE OF DELAY, METROPOLITAN TORONTO, 1973.

DEVELOPMENT HALTED BY	ACREAGE DELAYED						MUNICIPALITY WHERE MAJOR DELAY IS LOCATED	
	METRO	NORTH METRO	NORTH	EAST	WEST	TOTAL[14]		
MUNICIPALITY	222	1771		1242	2509[1]	5744	1. Oakville delays	1559 ac.
REGIONAL GOVT.			132	1361[2]	96	1589	2. Pickering "	1069 ac.
HIGHWAY	95	81		105	4620[3]	4901	3. Mississauga "	4270 ac.
HYDRO					1791[4]	1791	4. Mississauga "	1791 ac.
GROWTH					2632[5]	2902	5. Mississauga "	2480 ac.
SEWER	495	1369	225	6597[6]	3214	11930	6. Pickering "	3794 ac.
STORM	495	1369		3239[7]	2202	7305	7. Pickering "	2866 ac.
WATER	168	530		4429[8]	1016	7143	8. Pickering "	2738 ac.
SUBTOTAL								
TCR		3663[9]	97	5588	2073	11421	9. Border decision delays	3663 ac.
PARKWAY		1167			5226[10]	6393	10. Mississauga "	5096 ac.
ENVIRONMENT			28	2720[11]	275	3023	11. Unionville "	1691 ac.
PROV. & FED.	231			857	3595[12]	4679	12. Mississauga "	3595 ac.
CONSERVATION				82	275[13]	357	13. Milton "	275 ac.
SUBTOTAL							14. Total is not the sum of each row	
TOTAL DELAYED[15]	883	4025	290	8307	18217	31722	15. Total delayed is not column total	

SOURCE: Urban Development Institute (Ontario), Land Inventory Survey: Zone 1 of the TCR Plan. Toronto: UDI, 1973.

East of Toronto, particularly in Pickering Township, the potential for an alternative to the emerging concentration of growth in the west is blocked by the absence of growth infrastructure. About 8,300 acres await development when the eastern region receives more trunk services (say 1975-1977). Over 6,500 acres in the east now lack sanitary sewers. Nearly 5,600 acres are affected by the unclear boundaries of the Toronto-Centred Region plan, and other government approvals delay 1,200 - 2,500 acres. Major development cannot occur in the eastern region for 2 to 4 years.

There is limited acreage held for development in the northern region, however, south of highway 407, in the northern Metro fringe, 4,025 acres could develop if the TCR boundary and parkway decisions were clarified and sewers provided. This development could be accelerated as sewer capacity is available south of Steeles Avenue if political blockages concerning Metro Toronto's expansion were cleared away.

Table 3.8 shows the projected activity of the 40 developers, assuming current restrictions remain, for the next five years. The time period itself warrants attention - these 40 firms can describe acreage development plans with a 5 year time horizon. The public sector does not appear to project as definitely. The developers report their acreage production will drop from 2,554 acres in 1973 down to under 2,000 acres in 1975, then collapse to about 1,100 acres in the fourth and fifth years. Similarly, their production capacity will decline

TABLE: 3.8 PROJECTED LAND DEVELOPMENT - 40 UDI FIRMS, TORONTO URBAN REGION, 1973-1977

TYPE OF DEVELOPMENT (Projected by Year)	LOCATION OF DEVELOPMENT METROPOLITAN TORONTO	FRINGE AREAS EAST	FRINGE AREAS NORTH	FRINGE AREAS WEST	TOTAL	PERCENTAGE IN WEST
Single Family Units-1973	1003	1551	110	2211	4875	45%
-1974	413	1025	73	2205	3716	59%
-1975	454	746		1698	2898	59%
-1976	194	305		1105	1604	69%
-1977	210	295		1135	1640	69%
All Dwelling Units -1973	3417	2791	268	6505	12981	50%
-1974	3019	2152	173	6686	12030	55%
-1975	1493	1857		5597	8942	63%
-1976	545	906		3760	5211	72%
-1977	509	1195		3621	5325	68%
Percentage S/F -1973	29%	55%	41%	34%	37%	
Units -1974	13	47	42	33	30	
-1975	30	40		30	32	
-1976	35	33		29	30	
-1977	41	29		31	30	
Acres Required -1973	683	479	70	1322	2554	52%
-1974	533	432	180	1297	2442	53%
-1975	241	396		1162	1799	65%
-1976	111	196		777	1084	72%
-1977	107	206		779	1092	71%
Av. Units Per Acre -1973	5.0	5.8	3.8	4.9	5.1	
-1974	5.8	5.0	1.0	5.1	4.9	
-1975	6.2	4.7		4.8	5.0	
-1976	4.9	4.6		4.8	4.8	
-1977	4.8	5.8		4.6	4.8	

SOURCE: Urban Development Institute - Ontario, Land Inventory Survey - Zone 1 of the Toronto Centred Region, Toronto: the Institute, 1973.

from a low 13,000 units in 1973 to 9,000 in 1975, then rest at about 5,000. Most of this production would occur in fringe areas, particularly in the west (where growth is already concentrating) and the proportion of detached housing would decline through the period to about 30% of annual volume.

In summary, Table 3.8 shows that while developers can maintain current production levels in the fringe areas of Toronto through 1973, thereafter production will fall off drastically to about one-third of present levels. Inside Metro, their production in 1973 will only supply about 25% of recent levels in both total and detached starts, and following 1974 the firms anticipate little production there. The firms are not indicating increasing densities in their developments over time, although the proportion of detached housing started would decline slightly.

In general UDI's data clearly locates problems in the region's land supply, and points to both their solution and future problems. Development can't occur in the east for several years as major sewage works must be constructed. Supply must come from northern fringe, and the west. The limited holding north of Toronto indicates that, even if some supply is released in this area, most of Toronto's new development will occur in the west for at least five years. This heightened concentration will place enormous demands on public and private facilities in the western region, and the few

firms who control development there will be "the only game in town" in Toronto. Moreover, it will be difficult, very costly, and perhaps unlikely, for development which emerges in the east to compete with the awesome momentum of growth which has built up, and will swell, in the west. Again, this demonstrates the public sector's ability to create monopoly conditions for a few land developers.

A brief summary of the situation on Toronto's development fringe highlights the more fundamental questions it poses. Current public policy is directed to halting the urban spatial growth in this region so that, if people continue to move to Toronto, in the long term the region will expand upwards through co-ordinated redevelopment, rather than sprawling outwards. In the interim, most spatial growth on the fringe will occur in big, comprehensively planned nodes which can economically provide a lot of necessary services to large populations. Major private (and public) developers have now assembled huge tracts of fringe land, on which integrated "new community" plans are emerging in drawings, budgets and concrete. The region's land development, and particularly low density construction, is already concentrating in these projects, primarily in the "new towns" west of Metropolitan Toronto. While the number of projects will grow somewhat when the northern and eastern sub-regions receive trunk services, it appears that the concentration of development on a few owner's land will increase. This monopoly structure could imply that,

in new developments, innovation in design will decline, the consumers choice in housing will lessen, and the price of housing will rise. Also, as these lands were assembled at relatively low prices, are highly leveraged, and held at relatively low carrying costs, if housing prices (and therefore lot prices) continue to escalate, the few developers who own these sites will receive large returns from their land operations. If these become substantive effects of the current efforts to contain Toronto's growth, the efforts would obviously be deficient. The central question is, then, "will they occur?"

There are reasons to anticipate that these possible disadvantages will not become problems in Toronto. Each of the monopolist developers is a large public corporation, with shares in reasonably diverse hands. This creates a structual motivation, if not an absolute requirement, that the firm's seek consistent, long-run profits rather than maximizing short-term gains. While the sales and starts data in Table 3.4 demonstrated that a few fringe developers can dominate the supply of new houses, it also showed that, unless construction within the developed area is stopped, they cannot dominate the total supply of new dwellings. Also, the fringe builders have a locational disadvantage relative to in-city housing. Finally, as the supply of new houses in Toronto is outnumbered, by about 6 to 1, by sales of existing houses, and house sales represent only about 8% of the total stock,

it appears impossible for new sales to dominate the market for detached houses. Innovation in design, and choice of housing types should continue to be assured by redevelopment and rehabilitation in the inner areas, inter-developer competition, intra-project sub-development by proposal call, and smaller developers activities on the boundaries of the major projects. In general then, the examination of Toronto's land supply does not appear to justify claims that the structure of this supply will cause qualitatively inferior housing. However, it is apparent from this structure that, if housing prices continue to rise, the consequent appreciation in the value of these monopolist firm's banked, low-cost land, will produce enormous gains.[1] While this appreciation is partially the product of a shrewd investment decision by the firm's management, it is due, primarily, to the urban societies collective decision to allow development on these, rather than other, sites. Accordingly, it would be more equitable if these gains went back to the local society, either indirectly through taxation or directly, by having the public sector in the position of monopolist developer.[2]

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1. It is unlikely that these gross gains would be reflected as net profits, as they would usually be internalized in other elements of the firms operations. This is discussed further in the Section 4.1.
2. The public monopolist could use the profits to finance other projects, provide better facilities within projects, or to offset general expenditures and thus reduce the need for revenues from taxes.

However, as private firms have already assembled a long-term land supply in large tracts at relatively low prices, the public monopolist alternative seems unlikely in this market for some time.

The evolution of the inter-connected land markets of the Toronto region presents a range of problems, or policy issues, which are both local concerns, and informative for other urban regions. Toronto's land markets are not Canada's markets, although many conditions similar to those in Toronto are emerging in other cities. The high costs, congested roads, heavy consumption of natural resources and energy, elimination of farmland, and a dissatisfaction with the aesthetics and social life of extensive suburbs leads individuals and governments to seek other living environments. This movement of urbanites out of the city increases the pressure on the diminishing stocks of close-in agricultural land, and creates demands for expanded and more-varied services in these rural areas. On the other hand, the governments actions to halt urbanization increases the pressure to redevelop existing neighbourhoods, and necessarily limits the supply of expansion land. As Toronto's governments move to replace energy-consumptive private cars with more efficient mass transportation modes, densification follows the increased traffic volumes on these alignments. As Toronto's governments and industry move to replace sprawling

subdivisions with more economical integrated communities, the effective supply of raw land becomes concentrated in relatively few owners. Through these changing conditions, the buying and selling interactions of thousands of individuals and firms which constitutes the land market, though ill understood, acts as an equilibrator balancing the various phenomena. The publicly caused spatial/temporal concentrations in land development and redevelopment create increased land values, which results in some land-owners realizing large gains. At present, both homeowners and professional developers are largely exempted from taxation on this gain, so the socially-created value goes to the individual. While there are a range of other issues in its land markets, urban Toronto provides one of Canada's clearest examples of the inequity of unredistributed appreciation of land value.

3.3 Kitchener [1]

Land development prospects in the City of Kitchener illustrate a typical and increasing concentration of urban growth on relatively few, corporate projects.

A medium size city of about 110,000 people, Kitchener is the core and contains one-half of the

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1. A similar analysis is Etherington, F. and Marilyn Anderson, "Kitchener-Waterloo: Locking Up Housing Land" pp. 16-20 in City Magazine, Volume I, Summer 1974.

population of the Kitchener-Waterloo urban region.[1] Table 3.9 shows Kitchener receives one-half of the regions growth, while the adjacent city, Waterloo, accounts for another 20% of the regional total. Waterloo Township, which surrounds the two cities, receives less than 2% of regional growth and its five year growth rate, at 6% is far below the 23% and 31% recorded for Kitchener and Waterloo, respectively.

Table 3.10 shows the residential construction activity in Kitchener, Waterloo and the region, which has provided physical facilities for these population increases. Over one-half of the region's starts occur in Kitchener, although this predominance has declined since the early 1960s. Kitchener starts in 1972 were split at about 5:8 between low and high density forms, and have maintained approximately this relationship for the last decade. The City of Waterloo receives larger proportions of row and apartment buildings while the rest of the region repeats the Kitchener pattern. The proportion of Kitchener's housing stock which is owner-occupied, is among Canada's highest.

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1. Regional planning was recently formalized in Kitchener-Waterloo by the installation of a two-tier regional government structure. Although the City of Kitchener is slightly under represented, it has 35% of the seats on the regional council.

TABLE: 3.9

POPULATION AND POPULATION GROWTH -- 1961-1971

CITY OF KITCHENER AND KITCHENER-WATERLOO URBAN REGION

	Population 1961	1966	1971	Population Growth 1961-66 Numerical	As Rate	Population Growth 1966-71 Numerical	As Rate	Proportion of Population Growth 1966 - 1971	Regional Population In 1971
URBAN CORE		126,554	150,856			24,302	19.2%	70.3	66.5
KITCHENER	74,485	94,446	111,804	19,961	26.8%	17,358	23.3	50.2	49.3
WATERLOO	21,366	29,997	36,677	8,631	40.4	6,680	31.3	19.3	16.2
BRIDGEPORT		2,111	2,375			264	12.5	0.7	1.0
FRINGE		65,721	75,990			10,269	15.6	29.7	33.5
WATERLOO TWP		8,269	8,733			464	5.6	1.3	3.9
CAMBRIDGE*	39,407**	52,593	61,963	13,186	33.5	9,370	17.8	27.1	27.3
OTHERS		4,859	5,294			435	8.9	1.2	2.3
REGIONAL TOTAL		192,275	226,846			34,571	18.0	100.0	100.0

Sources: Statistics Canada, Census of Canada, 1966 and 1971
Notes: * includes Galt, Preston and Hespeler
** excludes Hespeler

TABLE: 3.10

DWELLING STARTS BY TYPE -- 1961-1972

CITY OF KITCHENER AND KITCHENER-WATERLOO URBAN REGION

	DWELLING UNITS STARTED											PROPORTION OF REGIONAL TOTALS									
	1961-1965 Density			1966-71 Density			1972					1961-65 Density			1966-71 Density			1972			
	Low	Hi	Tot.	Low	Hi	Tot.	Det	S/D	Row	Apt	Tot.	Low	Hi	Tot	Low	Hi	Tot	Det	S/D	Row	Apt	Tot
KITCHENER	2720	3385	6105	4679	5574	10252	855	232	260	1506	2853	27.2	33.8	61.0	23.4	27.9	51.4	16.0	4.3	4.8	28.1	53.3
WATERLOO	1051	1722	2773	1850	2761	4611	407	2	103	806	1318	10.5	17.2	27.7	9.3	13.8	23.1	7.6	0.0	1.9	15.1	24.6
OTHERS	1021	103	1124	2343	2747	5091	510	128	71	469	1178	10.2	1.0	11.2	11.7	13.8	25.5	9.5	2.4	1.3	8.8	22.0
REGION	4792	5210	10002	8872	11082	19954	1772	362	434	2781	5349	47.9	52.0	99.9	44.4	55.5	99.9	33.1	6.8	8.1	52.0	99.9

SOURCE: CMHC Statistics Division

Low density housing seems well accepted in Kitchener, and appears likely to persist as a strong housing form, provided land supply and price are adequate.

Land consumption is a function of the type and quantity of housing started. Kitchener started 1087 detached and semi-detached houses in 1972, and low density starts were increasing at about 11% per annum. At an average density of 5 units per gross acre, this would require about 220 acres a year, currently, or about 5600 acres by 1986. Higher densities require little land, and are often built within the existing city, so these would not contribute significantly to Kitchener's acreage needs.

The City of Kitchener's 1973 registration map indicates approximately 8,000 acres held for development. In an examination of this acreage, planning board officials indicated that lands west of the built-up city were more favourable to residential development for three reasons: favourable drainage patterns in the west; availability of services in the west; and the need for forced mains in the east if extensive development were to go in that direction.[1]

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1. The relative cost of gravity or forced mains varies with soil conditions, sizing and fiscal needs. It is not assumed that either transmission method is more costly.

The registration map reflects this emphasis as all land designated for proposed or possible registration in 1973 and 1974 is located west of the built-up area. This suggests that the momentum or path of growth must be in the west for several years. This combination of public and private plans, terrain and historical growth pattern should ensure that a significant proportion of the regions growth occurs in the west of Kitchener for some time.

Table 3.11 provides data on the ownership and staging of development of approximately 6400 acres of the land on the registration map, with a focus on the western sector. Corporate ownership of this vacant residential land is spread among 29 firms, the City of Kitchener and Ontario Housing Corporation (the latter hold 2% and 4% of the Table Total, respectively.) Five or six major corporations own substantial acreage, most of which is to the west of the city. These firms include Buildevco [1,2], Dutchman[1], Major Holdings[2], Costain, Paul Tuerr, and H. Freure Ltd.[1]

Further discussions with planning department personnel indicated that if the city were to grow in the familiar

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1. Buildevco is jointly owned by H. Freure Ltd. and Dutchman Homes Ltd. Much of H. Freure's land holdings are registered under the Buildevco name.
2. It is also noted that Buildevco Ltd. and Major Holdings Ltd. have large holdings adjoining the western and northern sections of the Waterloo developed area.

TABLE: 3.11

LARGE CORPORATE LAND HOLDINGS
CITY OF KITCHENER

ACRES HELD

NAME OF FIRM (ABBREVIATED)	NO.WEST	SO.WEST	NO.EAST	SO.EAST	DEVELOPER TOTALS
H. FRUERE	114				114
C.STOLTZ	105				105
TRADERS DEV.	(100)				100
VOISIN	(161)				161
BUILDEVCO	*(66)* (78) 210	120			474
COLLINS	112				112
KROPP	118				118
R.COSTAIN LTD	*(128)*				128
DUTCHMEN HOMES	*(145)* (78) 105	351			679
ALPINE INVESTMENTS	265				265
BECKER	125				125
ONT. HOUS. CORP.		(287)			287
KAISER INVEST.LTD.		240			240
HIPP INVESTMENTS		*(185)*			185
P. TUERR		(281)	170		451
BUDD PLANT		125			125
BIG SPRINGS FARMS		280			280
BRESLAU FARMS		100			100
CITY OF KITCHENER		139			139
MAJOR HOLDINGS LTD.		*(100)* 335			435
STEINBURG		112			112
TOP DEVS LTD.			(93)		93
L. CROTH			110		110
K. BUTLER			110		110
PARKWOOD DEVELOPMT.			(200) 200		400
A. LACKNER			112	117	229
R. HIPPLE			123		123
CALGAR HOLD. LTD.				280	280
A.B. & W. CHRIS				106	106
CARL C. HAGLEY				127	127
HARLOCK				102	102
PROPOSED AND POSSIBLE 1973/74 REGISTRATION ( )	*(339)*	*(285)*	*(-0-)*	*(-0-)*	*(624)*
TOTAL CONCEPT STAGE 1974 and POST 74 ( )	(417)	(568)	(293)	(-0-)	(1278)
BALANCE	1,154	1,802	825	732	4,513
TOTALS IN ACRES	1,910	2,655	1,118	732	6,415

SOURCE: 1973 Registration Map, City of Kitchener. Where figures not stated an estimate of acreage was made. This is representative of the new city boundaries comprising a total land mass of 33,780 acres.

concentric rings that 55 to 60% of all developable land would be held by 5 or 6 developers within 10 years. While this was qualified as a ball park figure and the firms not mentioned, the registration map gives support to this opinion and suggests that the firms mentioned earlier would be likely candidates.

While land development in Kitchener appears to be concentrating on a few corporate land holdings, the current land supply appears to be satisfactory, and perhaps increasing. Proposed registrations exceed the estimated consumption. Another indicator is seen in Table 3.12, the inventory of vacant lots in Kitchener in January 1973.

TABLE: 3.12 PROPOSED STAGING OF LAND DEVELOPMENT CITY OF KITCHENER, 1973.

	Single Family		Semi-Detached or Duplex	Townhouse	Aparts.	Triplex
	Regular	Spec. Dev.				
Vacant In Registered Subdivisions (January 31, 1973)	326	105	152	1,155	8,415	42
Proposed Registration in 1973	1,114	218	158	640	634	-
Possible Registration in 1974	1,500	1,750	400-500	300-400	up to 2,000	-

Source: City of Kitchener, Staging of Development Report 1973, p.15

This inventory greatly exceeds 1972 starts in the row house and apartment categories, suggesting at least four years supply. As well, about one-half years supply were on hand in the detached and semi-detached categories, before the 1973 production season began. While this data does not prove an adequate land supply it does indicate a short supply is unlikely.

Regardless of the adequacy, or inadequacy of land supply, many people are concerned about land price. While average NHA lot prices in the Kitchener region, at $7,467 (1972) are the fifth highest in metropolitan Canada, this relationship has persisted for a decade, and Kitchener's lot price increases, while high, are not unlike those seen in other large, well-to-do cities. Lot prices are closely related to the total price of new housing - in Kitchener more existing houses sell, each year, than new houses, and average existing house prices and price increases are higher than those in new house prices. This suggests that in aggregate terms, the owners who sell existing houses are leading the increase in Kitchener's housing, and thus land, prices.

Two tentative conclusions are made. Demand, not supply is increasing Kitchener's lot prices. The growing concentration of land development on a few holdings warrants examination by the public authorities who are creating and can change this situation.

3.4 Winnipeg

In the Winnipeg region, urban growth also appears to be concentrating at relatively few locales, where large corporate holdings await it.

As Table 3.13 demonstrates, recent growth in this region is suburban. The City of Winnipeg declined from 50.5% of the regional population in 1966, to 45.1% in 1971, and lost 4.2% of its 1966 residents during the period. At the same time the outer municipalities of Assiniboine Park, St. James-Assiniboia and East Kildonan grew by 56.7%, 20.5% and 17.5%, respectively, and provided for nearly 80% of the regions overall population increase.

The residential construction which accompanied these population shifts is reported in Table 3.14. Total construction rose from nearly 20,000 units in the early 1960s, (over one-half of which were detached and semi-detached houses), to over 34,000 units between 1966 and 1971 (over 63% of which were multiples). Low density housing and all construction has begun to increase again in the past few years. While most of Winnipeg's starts are now apartment units, detached housing is the dominant form of construction in the outer municipalities, and nearly 60% of the regions total dwelling stock is still owner occupied.

Five municipalities which contained 31% of the

TABLE: 3.13

POPULATION AND POPULATION GROWTH --1961-1971

CITY OF WINNIPEG AND WINNIPEG URBAN REGION

	POPULATION			POPULATION GROWTH				PROPORTION OF REGIONAL	
				1961-66		1966-71		POPULATION	POPULATION GROWTH
	1961	1966	1971	NUMERICAL	AS RATE	NUMERICAL	AS RATE	1971	1966-71
URBAN CORE	-	394130	399731	-	-	5601	1.49	74.0	17.8
WINNIPEG	265429*	257005*	246246	-8424	-3.2	-10759	-4.2	45.6	-34.1
ST. BONIFACE	37600	43214	46714*	5614	14.9%	3500	8.1	8.6	11.1
ST. VITAL	-	29528*	32963*	-	-	3435	11.6	6.1	10.9
EAST KILDONAN[1,2]	27305*	40751*	47865	13446	49.2	7114	17.5	8.9	22.6
WEST KILDONAN	20077*	23632	25943	3555	17.7	2311	9.8	4.8	7.3
FRINGE		114629	140531	-	-	25902	22.6	26.0	82.2
ASSINIBOINE PARK[3]	-	9853	15438	-	-	5585	56.7	2.9	17.7
ST. JAMES-ASSINIBOIA	-	59255	71431	-	-	12176	20.5	13.2	38.6
OTHERS	-	45521	53662	-	-	8141	17.9	9.9	25.8
REGIONAL TOTAL	-	508759	540262	-	-	31503	6.2	100.0	100.0

SOURCES:

TABLE: 3.13 STATISTICS CANADA, Census of Canada, 1966 and 1971

TABLE: 3.14 CMHC STATISTICS DIVISION

Notes: BOTH TABLES
*Boundary Change
#Partial figure
1. Includes North Kildonan
2. Includes Old Kildonan
3. Includes Charleswood and Tuxedo

TABLE: 3.14

DWELLING STARTS BY TYPE --1961-1972

CITY OF WINNIPEG AND WINNIPEG URBAN REGION

	DWELLING UNITS STARTED											PROPORTIONS OF REGIONAL						TOTALS				
	1961-1965 DENSITY			1966-71 DENSITY			1972					1961-1965 DENSITY			1966-1971 DENSITY			1972				
	LOW	HIGH	TOTAL	LOW	HIGH	TOTAL	DETACHED	S/DET	ROW	APT	TOTAL	LOW	HIGH	TOTAL	LOW	HIGH	TOTAL	DET	S/D	ROW	APT	TOTAL
URBAN CORE	3403#	6712#	10115#	3340	13435	16775	1765	401	42	3316	5524	17.3	34.1	51.4	9.7	39.1	48.8	19.3	4.4	.5	36.3	60.5
WINNIPEG	725	5020	5745	420	6932	7352	220	20	-	1398	1638	3.7	25.5	29.2	1.2	20.2	21.4	2.4	.3	-	15.3	17.9
ST. BONIFACE	1496	551	2047	990	1704	2694	244	16	-	619	879	7.6	2.8	10.4	2.9	5.0	7.8	2.7	.2	-	6.8	9.6
ST VITAL	665	664	1329	590	3003	3593	565	62	17	333	977	3.4	3.4	6.8	1.7	8.7	10.5	6.2	.7	.2	3.7	10.7
EAST KILDONAN[1]	476#	477#	953#	783#	1550#	2333#	434	203	25	552	1214	2.4	2.4	4.8	2.3	4.5	6.8	4.7	2.2	.3	6.0	13.3
WEST KILDONAN[2]	41#	- #	41#	557#	246#	803#	302	100	-	414	816	.2	-	.2	1.6	.7	2.3	3.3	1.0	-	4.5	9.0
FRINGE	7790#	1745	9535	9177	8412	17589	1160	387	194	1869	3610	39.7	8.9	48.6	26.7	24.5	51.2	12.7	4.2	2.1	20.5	39.5
ASSINIBOINE PARK[3]	326#	25	351#	2014#	225#	2239#	320	140	53	351	864	1.7	.1	1.8	5.9	.7	6.5	3.5	1.5	.6	3.9	9.5
ST. JAMES-ASSINIBOIA	3688	852	4540	2571	2122	4693	299	123	51	231	704	18.8	4.3	23.1	7.5	6.2	13.7	3.3	1.3	.5	2.5	7.7
OTHERS	3776	868	4644	4592	6065	10657	541	124	90	1287	2042	19.2	4.4	23.6	13.3	17.6	31.0	5.9	1.3	1.0	14.1	22.3
REGIONAL TOTAL	11193	8457	19650	12517	21847	34364	2925	788	236	5185	9134	57.0	43.0	100.0	36.4	63.6	100.0	32.0	8.6	2.6	56.8	100.0

region's population in 1971 provided 52% of its total housing starts in 1972, including nearly two-thirds of its detached houses. These were: St. Boniface - 260 (low density units); St. Vital - 627 units; East Kildonan - 637 units; West Kildonan - 402 units; and Assiniboine Park - 460 units. These proportions and production figures have increased significantly from the late 1960s, so it appears growth momentum is established in these municipalities.

Table 3.15 summarizes a survey of vacant land ownership in these five municipalities conducted in 1971 by Raymond Dubois of the Federal/Provincial Task force on Low-Income Housing. It demonstrates that a few firms, notably BACM Industries Ltd., Ladco Co. Ltd., and Qualico Limited, own from 10% to 44% of all acreage in plots of two acres or more, in these municipalities. This is not intended to suggest that these firms control the regional land supply - the presence of the firms large holdings in these growth locations does indicate that they can continue to be major land developers for some time.

It is estimated that, at current construction levels and housing mix, this region requires about 600 acres of residential land each year, or about 9,000 acres by 1986.[1]

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1. This is considerably higher estimate than the estimate in Table 2.16, of 3000 acres, indicating the low household formation projected for this region in the base figures underlying the latter table.

TABLE: 3.15

CORPORATE LAND HOLDINGS, AND ALL LAND HOLDINGS
OF TWO ACRES OR MORE
- SELECTED MUNICIPALITIES, WINNIPEG URBAN REGION - 1971

MUNICIPALITY AND OWNERSHIP (FIRM NAMES ABBREVIATED)	LAND HOLDINGS OF TWO ACRES OR MORE PRIVATE ACRES	PLOTS	PUBLIC ACRES	PLOTS	% OF MUN.TOTAL ACRES	PLOTS
ST.BONIFACE						
LADCO	429.5	7			12.9	9.2
TWIN CITIES (LADCO)	416.6	11			12.5	14.5
PROV. OF MANITOBA			194.5	3	5.8	3.9
MUNICIPALITY			164.8	18	4.9	23.7
SUBTOTAL,CORPORATE	846.1	18			25.4	23.7
ALL OTHER PRIVATE	2128.0	37			63.8	48.7
ST. VITAL (INCOMPLETE)						
PROV. OF MANITOBA		N/A	1714.8	N/A	N/A	N/A
PREFERRED DAIRIES	543.6	N/A			N/A	N/A
CHRISTIE-DAVIS	366.0	N/A			N/A	N/A
MUNICIPALITY		N/A	274.2	N/A	N/A	N/A
NOVOTNY BROS.	214.7	N/A			N/A	N/A
METROPOLITAN HOMES	54.0	N/A			N/A	N/A
SUBTOTAL,CORPORATE	1178.3	N/A			N/A	N/A
NORTH KILDONAN						
BACM	531.4	22			20.0	10.6
LAND DEVELOPMENT CO.	516.5	4			19.4	1.9
MUNICIPALITY			163.1	11	6.1	5.3
QUALITY CONSTRUCTION	130.9	7			4.9	3.4
SUBTOTAL,CORPORATE	1178.8	33			44.3	15.9
ALL OTHER PRIVATE	1317.6	164			49.6	78.8
OLD KILDONAN						
BACM	773.0	26			20.4	12.5
MANITOBA HYDRO			161.7	4	4.3	1.9
SUBTOTAL,CORPORATE	773.0	26			20.4	12.5
ALL OTHER PRIVATE	2857.1	178			75.3	85.6
CHARLESWOOD						
METROPOLITAN WINNIPEG			1176.6	4	8.2	1.4
BACM	727.5	13			5.1	4.6
MC CREARY INV. LTD.	376.8	2			2.6	0.7
MONICO	286.3	3			2.0	1.1
MUNICIPALITY			147.4	9	1.0	3.2
QUALITY CONSTRUCTION	102.8	6			0.7	2.1
SUBTOTAL,CORPORATE	1493.4	24			10.4	8.5
ALL OTHER PRIVATE	11524.9	244			80.4	86.8

SOURCE: DUBOIS,R. THE IMPACT OF PUBLIC INVESTMENTS ON URBAN LAND VALUES. Thesis, Winnipeg: University of Manitoba, 1972 pp 167-8
and Background study for the Task Force on Low-Income Housing at CMHC, August 1971, Tables 6-10 inclusive.

If the five municipalities in Table 3.15 continue to receive 80% of the regions growth and most of this growth occurs on the corporate holdings, it appears they will be running low on land supplies by the early 1980s.

Land prices in Winnipeg are neither high, nor increasing rapidly, relative to other large cities in Canada. Housing prices, a determinant of lot prices, have fluctuated while rising slowly over the last seven years at an average rate of 4 5/8%. Twice as many existing houses sell as new houses, and their price rise has been slightly more rapid, although average new house prices exceed existing house prices by about 20%. Although new housing starts declined in the mid-1960s, the number has risen each year since 1967, and seems to keep abreast of population growth. It appears, then, that Winnipeg does not have the degree of land problems seen in other large Canadian cities, although land ownership in the growth areas is concentrating and the land supply may become tight in the early 1980s.[1]

3.5 Edmonton

Edmonton is the largest of the Canadian cities which have developed through extensive government involvement in land markets. During this century the land policies of the City of Edmonton have varied from indirect

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1. Since 1973 Manitoba Housing and Renewal Corporation has assembled over 5000 acres of land in over 20 parcels across the Winnipeg expansion area.

activity to facilitate private development to widespread direct aquisition, production and sale of industrial and residential land, through periods of depression and rapid expansion. This experience shows that large cities can directly intervene in their land markets and create a desired environment with beneficial effects for the private sector generally, and the entire society.

As the twentieth century began, Edmonton's municipal government was vigorously promoting private development.[1] Between 1885 and 1915 it attracted four railroads to the city; purchased, subdivided and sold at cost at least 350 acres of land for industrial use; purchased and enlarged the hydro, telephone, water and transit companies to improve service;[2] conducted a concerted compaign to promote immigration by people and industry; provided tax deferrals, cheap land and services to new industry; extended its jurisdiction to cover 41 square miles of which only 5.5 square miles were developed,

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1. This historical section is based on Dale, Edmund H. The Role of Successive Town and City Councils in the Evolution of Edmonton, Alberta, 1892 to 1966. Phd. dissertation, Edmonton: University of Alberta, Department of Geography, 1969.
2. See Table 3.16.

TABLE: 3.16

CITY OF EDMONTON, OPERATIONS OF PUBLIC UTILITIES
1892-1966, AVERAGE ANNUAL FIGURES BY PERIOD

	AVERAGE ANNUAL OPERATIONS DURING PERIOD			PERCENTAGE INCREASES	
	1892-1914	1915-1945	1946-1966	1892/1914 to 1915/1945	1915/1945 to 1946/1966
	(ALL DATA IN THOUSANDS)			%	%
POPULATION	72.5(1914)	111.0(1945)	381.2(1966)	54.2%	285.6%
Av. Assessment	$31,490	79,280	311,650	151.7	293.1
-Taxes	540	3,900	20,920	622.2	436.4
-Bldg. Permits-No.	692 permits	1025 permits	6905.15 permits	48.1	573.6
-Value	$ 2,010	2,420	66,370	20.3	2642.5
UTILITIES					
Expenditures					
-All	$ 956.15	2,683.99	17,547.38	180.7%	553.7%
-Light & Power(1902-14)	189.99	871.1	8,278.19	358.4	850.3
-Water(1902-1914)	114.06	553.24	1,915.21	385.0	246.1
-Telephone(1904-1914)	87.06	408.76	4,047.94	369.5	390.2
-Street Railway(1909-1914)	565.04	850.89	3,306.04	50.5	288.5
REVENUES					
-All	867.19	3,057.38	19,774.37	252.5%	546.7%
-Light & Power(1902-14)	212.43	1,043.2	7,813.57	391.0	649.0
-Water(1902-1914)	113.27	647.85	3,458.16	471.9	433.7
-Telephone(1904-1914)	81.17	549.62	5,100.28	577.1	827.9
-Street Railway(1909-1914)	460.32	816.71	3,402.36	77.4	316.5
GROSS PROFITS(LOSSES)					
-All	($68.80)	$239.18	$2,780.51		1162.3%
-Light & Power(1902-14)	24.6	123.6	1,110.52	402.4%	798.4
-Water(1902-1914)	(3.36)	32.0	749.97		2343.6
-Telephone(1904-1914)	(3.56)	123.31	1,052.8		753.7
-Street Railway(1909-1914)	(86.48)	(39.73)	(132.78)		
GROSS PROFIT AS % OF EXPENDITURE					
-All		8.9%	15.8%		77%
-Light & Power(1902-14)	12.9%	14.1	13.4	9.3%	
-Water(1902-1914)		5.7	39.1		585%
-Telephone(1904-1914)		30.1	26.0		
-Street Railway(1909-1914)					

SOURCE: Dale, Edmund Herbert. The Role of Successive Town and City Councils in the Evolution of Edmonton, Alberta, 1892-1966. Phd. dissertation. Edmonton: University of Alberta Department of Geography, 1969. Appendices 4, 7, 9, 11, 13.

and ran municipal services out into adjacent municipalities to foster their growth. This active public role facilitated private land development, which, in combination with the prairie wheat boom led, in 1912, to the emergence of Edmonton's great land rush.

The land binge lasted into the war years, but by 1918 the market had collapsed, building permits plummeted from over $10 million to under $500,000 and tax arrears began to accumulate as speculators cut their losses. During the peak of the boom in 1913-14 the city's net assessment was inflated to nearly $200 million, a level that was not reached again, despite continual population growth and rising land values, until 1954. So much subdivision occurred that the city was still re-plotting these areas forty years later. When the boom collapsed, 70,000 lots went into municipal ownership after tax sales between 1918 and 1920, and through the twenties 43% of the city's buildable area[1] was forfeited.

During this period, while the city inadvertantly became a major land owner through tax defaults, it deliberately altered other aspects of its land policy to limit further excesses of speculative development. Site value taxation was dropped in 1918 in favour of a land and improvement tax, as the single tax proved difficult to administer equitably during the speculative period and could not raise adequate revenue when land values collapsed. In 1923 and 1925 zoning by-laws

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1. Buildable area is total area less streets, roads and lanes.

were passed which required set backs, side and rear yards, and segregated noxious uses from residential districts. Council began exercising these powers and existing provincial laws, notably the 1906 Land Titles Act and the 1913 Planning Act. The provincial acts set out procedures for subdivision approval, and required standard road allowances and lanes, parkland dedications and school imposts. In 1929, a new Alberta Planning Act permitted a municipality to replot land with the consent of the owners of 60% of the value and area of a scheme. Lastly, between 1920 and 1929 the municipality re-sold 9% of the forfeited land, amounting to 4% of the buildable area.

Tax forfeits, city purchases and resales continued through the Depression and the Second World War.[1] During this period, it is possible to see the council's policies as an attempt to transfer private debt to the public sector. Through the Depression municipal debenture debt held at about $15 millions[2], tax levies declined from over $4.0 millions in the early thirties to $3.6 millions before the war, and the proportion of the tax levy actually collected fell below 75%. During the mid-thirties the council temporarily relaxed its foreclosure policy in respect to residential property thereby

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1. See Table 3.17.

2. Edmonton's debenture debt held at about $10 million until the mid-1920's when heavy land expenditure moved it to the $15 million level. It did not decline from that level until the mid-1940's.

TABLE: 3.17 CITY OF EDMONTON, MUNICIPAL LAND OPERATIONS AS PROPORTIONS OF TOTAL MUNICIPAL AREA AND HOUSING DATA 1916-1966.

	1916-20	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1951-55	1956-60	1961-66
Percentage of: Total Tax Levy Collected[1]	62.4%	79.8%	86.8%	76.4%	82.2%	91.2%				
Land acquired by the City after tax forfeit:										
- as % of the total buildable area of the City (1945)		43%[2]		13%[3]			7%[4]			
- and resold by the City during this period, as % of the total tax forfeit land acquired by the city		9%[2]		37%[3]			24%[4]		20%[5]	
- and exchanged by the City during this period, as % of the total tax forfeit land acquired by the city		3%[2]		7%[3]			5%[4]			
Detached Houses Constructed		3949.0[6]		3134.0[6]		17,861.0[6]		30,886.0[6]		
Total Stock-detached Houses within 1951 Developed Area		9084.0[7]		12,643.0[7]		14,487.0[7]		27,799.0[7]		27,079.0[7]
Average Size, New Lots (Sq. Feet)		5394.0[8]		5808.0[8]		6,092.0[8]		6,328.0[8]		

1. Dale, Edmund H. The Role of Successive Town and City Councils in the Evolution of Edmonton, Alberta, 1892 to 1966. Phd. Dissertation, Edmonton: University of Alberta, Department of Geography, 1969. P. 159.
2. Dale, op.cit., p. 168. Period is 1920-1929.
3. Dale, op.cit., p. 169. Period is 1930-1945.
4. Dale, op.cit., p. 170. Period is 1946-1954.
5. Dale, op.cit., p. 171. Period is 1955-1966.
6. McCann, Lawrence D. Changing Morphology of Residential Areas in Transition. Phd. Dissertation, Edmonton: University of Alberta, Department of Geography, 1972, p. 25. Periods are 1922-31, 1932-41, 1942-51, and 1952-61.
7. McCann, op.cit., p. 28, Census years.
8. McCann, op.cit., p. 23, Periods are 1920-29, 1930-39, 1940-49, after 1949.

bringing the tax arrears debt directly onto the municipal corporation. However, the overall policy was clearly to acquire defaulting property[1] and while acquisitions slowed during the 1930's, by 1945 about 56% of the city's buildable area had come under public ownership. The council's exemption came after the worst of the Depression, as by 1935 the decline in building permits had reversed, and the city's resales of tax lands were increasing. Between 1930 and 1945 the city re-sold 46% of all land it had acquired after tax arrears, and exchanged an additional 10% of such property. As these sales occurred at relatively low prices, they allowed some people to replace their tax-defaulted homes, while raising revenue and encouraging the city's growth. When the "go west" movement emerged after the war, and oil was discovered nearby, Edmonton experienced a second land rush.

The second building boom has not stopped yet, but has become accepted as "normal" growth. Between 1941 and 1951, over 17,000 homes (mainly single-family frame bungalows and 1½ storey houses) were built, almost doubling the cities housing stock to about 35,000 houses and 2000 apartment units. Between 1951 and 1961 the stock nearly doubled again, as 30,900 houses and 7,000 apartment units were added. Most of

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1. While this appears callous, particularly in retrospect, it is notable that, in aggregate, the policy used public debt capacity to re-circulate some buying power to defaulting property owners in a depressed period, without raising taxes. The unanswered social policy questions would concern treatment of non-defaulting property owners, and non-owners.

this new construction occurred on city-sold, low cost lots re-plotted on the tax-defaulted subdivisions of the previous boom[1], and growth was at low densities with average lot sizes in excess of 6000 square feet. By 1954 the city had sold 70% of the tax land, and private developers were producing subdivisions across the urban periphery. The city bought and developed additional blocks of 473 and 485 acres, the municipal boundary expanded slightly, and by the late 1950's, 40% of the regions growth was occurring in outer towns[2] where annual growth rates often exceeded 25%. The sprawling region was absorbing up to 2200 acres each year, and many of the new developments lacked adequate services.

As the city's direct role in land was declining with the exhaustion of the tax lands, its indirect facilitative role increased. To restore orderly growth the Alberta Planning Act of 1957 required that local municipalities adhere to the regional plan prepared by the Edmonton Regional Planning Commission.[3] This barred septic tank subdivisions,

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1. During this period the city re-plotted many of the old grid-type subdivisions on a school-centered, neighbourhood unit basis, often withdrawing 35% of the re-plot area for public uses.
2. Among the high growth municipalities were Beverly, Jasper Place, St. Albert, Sherwood Park, Strathcona and Sturgeon. Considerable re-development occurred in parts of the City of Edmonton, as the detached housing stock declined 3% between 1951 and 1961, and 9.1% of the 1951 stock was converted to other uses.
3. Until 1957 the Commission was an advisory body and compliance with it's policies was voluntary.

set up "greenbelts" of land zoned in agricultural use, and initiated growth-staging. A series of incorporations and annexations between 1957 and 1966 expanded the city boundaries on all sides, so the city was responsible for servicing much of the region's development land. By 1966 the tax lands were depleted, only a few industrial parcels and the parks system remained in public ownership, and the city's functions in land markets were limited to zoning, subdivision approval, and the provision of trunk and local services. Seventy-six per cent of the metropolitan population was located within five miles of the city core, and increasing redevelopment, primarily apartment construction, had become a major concern within the city proper.

As land development shifted to the private sector and local government became more involved in growth planning, land and housing prices began to rise sharply. In the early 1960's, the increase was attributed to improvements in lot services and house amenities but through the latter part of the decade, although the service package became relatively standard, lot prices rose more than 10% per annum and took nearly one-quarter of the total house price. Conflicting theories were proposed to explain the high prices. Builders claimed the city was not servicing adequate volumes of land, and detached dwelling starts did decline during the late 1960's. However, as inventories of unsold lots equal to at least 40% of annual sales were found in quarterly surveys

throughout the period, it does not appear that any lot shortage existed from the viewpoint of buyers. During the winters of 1968 and 1970 enough lots were carried over in NHA-accepted subdivisions alone, to meet 90% of the following years starts, yet average lot prices rose 13.9%, and 13.2% in the respective following years. Alternatively, some claim the land market came under oligopoly control, with the major developers setting high prices. Land development did become concentrated in relatively few large firms during the 1960's, and the regions "growth staging" plans which made the provision of trunk services more efficient, heightened this concentration in temporal terms. By 1968 it was estimated land absorption had dropped to 810 acres per annum, nearly one-third the consumption rate observed a decade earlier. However, a general inflation was also emerging in the late 1960's, and prices of existing houses (which constitute over one-half of all house sales) were rising at a faster rate than the increase in new house prices.

Against this background of conflicting claims and market pressures, in 1969 the Alberta Housing and Urban Renewal Commission decisively acted to restore a direct public role in land development. During the summer of 1969 agents working for a law firm, in trust for AHURC, quietly assembled 4864 acres held by about 38 owners, in the south-eastern section of the Edmonton region. As this site had been designated for industrial use and was off the path of

and years away from development, the land was purchased relatively cheaply - prices averaged $2094 per acre. In the fall of 1969 AHURC advised city council of the project, secured financing under Section 42 of the National Housing Act, and formal planning began for a municipal/provincial/federal "new town" of Mill Woods to house 120,000 people, commerce and industry over 20 years. While regional lot prices declined by about $1000 at the time of the Mill Woods announcement, the project was not a permanent force in the market until 1973, when regular production began on the site. Interim servicing was used to market about 700 lots before 1973, and about 1600 lots in 1973, at prices from $1000 to $2000 below comparable private sales.[1] The Mill Woods project is a clear statement that the public sector has decided to return to a direct role in Edmonton's land market for the foreseeable future.

The market conditions which Mill Woods faces are similar to those which evolved in the large Ontario cities during the 1960's. Market segmentation has become pronounced, as increasing concentration is seen in both temporal and spatial terms, in land holding, development and re-development activity, of various types. Table 3:18 shows the continued

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1. This data indicates the twin-pronged nature of public land policy in Edmonton. As the region now sells about 4000 lots per annum, a production level near 2000 lots at Mill Woods increases supply by about 50%, while the low prices force private developers to price-compete.

TABLE: 3.18

POPULATION AND POPULATION GROWTH
CITY OF EDMONTON AND EDMONTON URBAN REGION
1961-1971

	POPULATION (numerical)			POPULATION GROWTH				PROPORTION OF REGIONAL TOTAL	
				1961-1966		1966-1971		POPULATION GROWTH	
	1961	1966	1971	Numerical	As %	Numerical	As %	1966-1971	POPULATION 1971
URBAN CORE		390,810	454,751			63941	16.4%	90.9	91.7
EDMONTON	281,027	381,846	438,152	100,819	35.9	56306	14.7	80.0	88.4
STURGEON CO.N.		2,266	2,077			- 189	-8.3		0.4
STRATHCONA CO.S.		6,698	14,522			7824	116.8	11.1	2.9
FRINGE		34,560	40,951			6391	18.5	9.1	8.3
FORT SASK.		4,176	5,726			1550	37.1	2.2	1.2
ST. ALBERT	4,059	9,736	11,800	5,677	139.9	2064	21.2	2.9	2.4
OTHERS		20,648	23,425			2777	13.4	3.9	4.7
REGIONAL TOTAL		425,370	495,702			70332	16.5	100.0	100.0

SOURCES: Statistics Canada, Census of Canada, 1966 and 1971.

TABLE_ 3.19

DWELLING STARTS BY TYPE
CITY OF EDMONTON AND EDMONTON URBAN REGION
1961-1972

	DWELLING UNITS STARTED											PROPORTIONS OF REGIONAL TOTALS									
	1961-1965 Density			1966-1971 Density			1972					1961-1965 Density			1966-1971 Density			1972				
	Low	Hi.	Tot.	Low	Hi.	Tot.	Low Den. Det.	S/D	High Den. Row	Apt.	Tot.	Low	Hi.	Tot.	Low	Hi.	Tot.	Low Den. Det.	S/D	High Den. Row	Apt.	Total
EDMONTON	11969	8167	20136	11126	30317	41443	1356	295	1464	3649	6764	50.4	34.4	84.7	24.0	65.5	89.5	14.3	3.1	15.4	38.4	71.2
STRATHCONA	614	17	631	2901	545	3446	1474				1474	2.6	0.1	2.7	6.3	1.2	7.4	15.5				15.5
ST. ALBERT	921	12	933	823	556	1379	n/a	n/a	n/a	n/a	n/a	3.9	0.1	3.9	1.8	1.2	3.0					
FORT SASK.	n/a	n/a	n/a	n/a	n/a	n/a	876	26	73	8	983							9.2	0.3	0.8	0.1	10.3
REGIONAL TOTAL	15124	8636	23760	14865	31418	46283	3955	337	1545	3663	9500	63.7	36.3	100.0	32.1	67.9	100.0	41,6	3.5	16.3	38.6	100.0

SOURCE: CMHC Statistics Division.

population growth in the region through the decade, with disproportionately high growth rates in suburban counties and municipalities. The residential construction data in Table 3.19 indicates new housing within Edmonton has shifted to the high-density, row and apartment categories, while the suburbs build mostly detached housing. The high-rise boom of the late 1960's held up Edmonton's proportion of total construction in the region, but this proportion is now falling as the suburban volume increases.

Nearly 44,000 of the 45,000 high density units built in the region between 1961 and 1972 were located in Edmonton proper. Most of these units (98% of high rises, 74% of walk-ups) were built on redeveloped land,[1] at the expense of nearly 1800 houses or 7% of the city's housing stock.[2] McCann studied the redevelopment that constructed 22,500 of these apartment units, concentrated in five districts, all of which had good access to the university or core area. Within these typically low density residential areas, developers first chose large land parcels, having older houses of poorer construction. As redevelopment proceeded, prices rose and developers bought smaller, better quality and newer properties. McCann's examination of family income

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1. McCann, Lawrence D. Changing Morphology of Residential Areas in Transition, Phd. dissertation, Edmonton: University of Alberta, Department of Geography, 1972, pp. 28 and 35.
2. Ibid., p. 34.

and rent levels indicated high rise developers seek out the better housing stock in higher rent and income districts as these possess social prestige. However, they avoided such areas when a large proportion of the houses had been converted to function as income property. About one re-developed property in five had been owned for less than three years,[1] indicating that most sellers are longer-term residents and while pure speculation occurred, it was clearly not a dominant force in redevelopment.

Table 3.20 shows a summary of vacant lots in developing areas inventoried quarterly by the City Planning Department, and indicates a growing concentration in lot production. In the western sector, a few lots remain in several subdivisions but new development is limited to the Springfield area. In the southwest where staged growth was introduced in the early 1960's, the current areas are Duggan and Brander Gardens. The current north and northeastern areas are Castle Downs, Dickinsfield and Steele Heights. Mill Woods in the southeast is the only other major development area within the city boundaries. These seven inner areas accounted for about one-third of the regions detached starts in 1972. Sixty-five percent of starts occurred in the five satellite communities which contain "on stream" land[2], and most of this is in the

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1. Ibid., p. 180.
2. St. Albert, Spruce Grove, Leduc, Fort Saskatchewan and Sherwood Park.

TABLE 3.20

LOT INVENTORY FOR DETACHED HOUSES, EDMONTON 1968-1972

SECTOR AND SUBDIVISIONS	INVENTORY OF VACANT SERVICED LOTS BY DATE															ALL REGISTERED DETACHED LOTS			BUILDING PERMITS FOR DETACHED HOUSES			% OF TOTAL	DETACHED STARTS 1972
	← SINGLES AND DUPLEXES →							← SINGLE DETACHED LOTS →															
	7/68	10/68	12/68	3/69	6/69	9/69	12/69	3/70	9/70	10/70	12/70	3/71	10/71	4/72	10/72	3/70	10/72	CHANGE	1970	1971	1972[1]		
BUENA VISTA								19	12	12	12	6	2	2	1	103	101	-2	5	10	1	.1	
PATRICIA HEIGHTS								22	16	15	14	10	8	7	6	293	293	ø	9	5	2	.2	
QUESNELL HEIGHTS								45	35	35	34	30	24	20	14	123	123	ø	15	10	10	.9	
RIO TERRACE								7	5	5	5	4	4	4	4	507	507	ø	2	1			
WESTLAWN								15	9	9	9	3	3	3	3	202	202	ø	6	6			
SPRINGFIELD(THORNCLIFF)									142*	142	142	119	204*	123	130*	ø	372	372		85	128	11.2	
CALLINGWOOD												82*	63	36	17	ø	106	106		43	46	4.0	
ALDER GROVE (PRIMROSE)															0	ø	224	224					
WEST SUBTOTAL	290	289*	268*	189*	137	123	117	108	219*	218	216	254*	308*	195	175*	1228	1927	699	37	160	187	16.3	
DICKINSFIELD								747*	615*	599	588	607*	244*	192*	96	1071	1762	691	308	649	307	26.8	
LONDONDERRY								76	34	41	40	19	9	6	4	1406	1405	-1	54	31	5	0.4	
RUNDLE HEIGHTS								150	130	129	127	86	54	44	34	545	545	ø	28	73	20	1.7	
STEELE HEIGHTS								110*	154	135	124	84	38	34	36*	1424	1406	-18	77	86	32	2.8	
NORTH EAST SUBTOTAL	816	906*	793*	741*	1040*	1026*	1103*	1083*	933*	904	879	796*	345*	276*	170*	4446	5118	672	467	839	364	31.8	
DUGGAN								9	56*	31*	159	120*	261*	167	282*	341	1074	733	43	209	208	18.2	
LANSDOWNE								22	17	17	17	15	10	9	8	342	342	ø	6	7	2	0.2	
BROOKSIDE(RIVERBEND)								108	81*	76*	228	187	61	47	36	416	579	163	62	167	25	2.2	
BRANDER GAR.(RIVERBEND)									91*	91	90	83	164*	96	145*	91	288	197	2	32	110	9.6	
WESTBROOK ESTATES								51	33	32	31	23	21	12	7	257	264	7	24	21	14	1.2	
SOUTHWEST SUBTOTAL	259	308*	346*	370*	275	235*	220	190	278*	247	525*	438*	517*	331	478*	1356	2547	1191	135	436	359	31.3	
WARWICK(CASTLE DOWNS)															200*	ø	200	200			ø		
NORTH SUBTOTAL															200	ø	200	200			ø		
RICHFIELD(MILL WOODS)														268*	57	ø	396	396			236		
SOUTHEAST SUBTOTAL														268*	57		396	396			236	20.6	
TOTALS, EDMONTON CITY	1394	1503*	1407*	1300*	1452*	1384*	1440*	1381*	1430*	1369*	1620*	1488*	1170*	1070*	1080*	7030	10188	3158	639	1436	1146	100	1356
OUTER AREAS (ESTIMATE)																							
ST. ALBERT														720									
SPRUCE GROVE														220									
LEDUC														153									
FORT SASKATCHEWAN														200									
SHERWOOD PARK														1100									876
SUBTOTAL OUTER AREAS														2393									2599
TOTAL METROPOLITAN AREA														3463									3955

NOTES: * Indicates additional lots were serviced since last period.
1) To October 1972.

SOURCES: Vacant serviced lot inventory for Edmonton, and 1972 estimate for outer areas from Research Branch, Planning Department, City of Edmonton, Supply of Vacant Serviced Lots in Developing Residential Areas, various dates.
- Detached starts, 1972 from CMHC, Statistics Division.

form of large corporate projects. Predominant among these are BACM Ltd's Castle Downs development and Sherwood Park in the County of Strathcona[1] where Great Northern Capital Ltd., Melton Real Estate Ltd., Carma Developers Ltd., and Qualico Ltd., may house 30,000 additional people by the year 2000. This situation appears to parallel the evolution which occurred in eastern cities during the past decade, as the supply of land designated for suburban development became increasingly concentrated in large blocks, owned by the largest firms. As most of Edmonton's private land banks were assembled in the 1960's at prices below $4000 per acre, and held at relatively low interest rates, their production costs are greatly exceeded by current prices. This relationship between costs and prices translates, in the view of other actors in land (such as financial institutions, governments and sub-contractors) as relatively low risk, so the land-bank owners obtain a self-perpetuating competitive advantage over other developers. In other words, concentration in land markets leads to further concentration at the expense of competition and particularly, the entry of new, smaller developers.

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1. As Strathcona is essentially a dormitory suburb lacking community services, it's residents must obtain these in the nearby city, at the expense of the Edmonton taxpayer. Attempts by the city to annex the area have been resisted, largely because residents are satisfied by the availability of Edmonton's services, and enjoy relatively low taxes due to the presence of several oil refineries in their area.

Table 3.21, a summary of new house sales & Multiple Listing Service sales between 1969 and 1971, indicates that the new subdivisions do not control the housing market. The volume of new house sales is about equal to the MLS volume over the period, although many existing houses are not sold through the MLS system. While average new house prices are higher than average existing house prices, the rate of increase is higher with the latter. Most new houses in Edmonton receive NHA-approved financing (over 80%) and these tend to be grouped in the same price range, while existing house sales include more high and low prices. The sales volume of both house types fluctuated during the period and declined in the lower price ranges while rising in the higher ranges, indicating integration within the housing market, rather than a domination by any particular seller or sellers. This points to the interaction between all buyers and sellers as the source of rising prices. The concentration in the land development function on the supply side, and the associated low cost characteristics, allows these producers to capitalize on the cost/price inbalance, but does not mean they create it.

The renewed public land development activity is intended to directly intervene in this integrated market to hold prices down while creating an improved environment. Land uses would be integrated to provide the Mill Woods communities with a wide range of public and commercial services,

TABLE: 3.21

EDMONTON RESIDENTIAL SALES 1969-1971
MLS SALES AND NHA-FINANCED NEW HOUSES, BY PRICE RANGE

YEAR AND PRICE RANGES[1] (EXISTING HOUSE)	EXISTING HOUSES SOLD BY MULTIPLE LISTING SERVICE						NEW HOUSES, ALL SALES AND ALL NHA - FINANCED SALES AND PRICE RANGES			
	PRIMARILY MATURE AREAS		PRIMARILY EXPANSION AREAS		REGIONAL TOTAL	TOTAL AS %	NHA SALES		ALL NEW HOUSE SALES	NEW HOUSE PRICE RANGES (NHA FINANCED)
	ZONES 1-7	ZONES 8-13	ZONES 14-19	ZONES 20-25			TOTAL	AS %		
1969										1969
-under $10,000	77	10	23	53	163	7%				
-$10,000-$20,000	385	98	214	274	971	44				-under $21,000
-$20,000-$30,000	254	96	278	262	890	40				-$21,000-$31,000
-over $30,000	17	47	98	26	188	8				-over $31,000
-ALL SALES	733	251	613	615	2212	99%	1649		2368	-ALL SALES
-AVERAGE PRICE[1]	$17,821	$23,518	$21,998	$19,970	$20,376		$22,897			-AVERAGE PRICE
1970										1970
-under $10,000	41	22	22	41	126	5%				
-$10,000-$20,000	378	100	245	235	958	40	271	16%		-under $21,000
-$20,000-$30,000	329	93	314	288	1024	44	1312	79%		-$21,000-$31,000
-over $30,000	29	61	124	38	252	11	80	5%		-over $31,000
-ALL SALES	777	276	705	602	2360	100%	1663	100%	1920	-ALL SALES
-AVERAGE PRICE[1]	$18,560	$22,314	$22,430	$19,936	$21,742		$25,161			-AVERAGE PRICE
1971										1971
-under $10,000	54	17	8	27	106	4%				
-$10,000-$20,000	416	90	221	241	968	34	325	12%		-under $21,000
-$20,000-$30,000	423	126	404	460	1413	50	2070	79%		-$21,000-$31,000
-over $30,000	40	88	154	64	346	12	225	9%		-over $31,000
-ALL SALES	933	321	787	792	2833	100%	2620	100%	3154	-ALL SALES
-AVERAGE PRICE[1]	$19,056	$24,562	$23,316	$21,125	$22,554		$25,709			-AVERAGE PRICE

1. MLS zone average prices are averages of averages.

with employment, a diversified tax base, an integrated social structure including all incomes and age groups, and distinctive neighbourhoods. Planning is advanced in seven communities now, and five of these are occupied or on stream - Lee Ridge (128 lots sold in one morning of April 1973),Richfield (325 lots sold in 1972 after 1000 prospective buyers applied), Tweedle Place, Kameyosek and Michaels Park (in the three 600 lots sold to builders in August 1973).[1] As the new, $12 million storm sewer allows further production in 1974, Mill Woods should at least maintain the 1600 lot production level it reached in 1973, and phasing of the entire project may be accelerated from a 15-20 year schedule to completion in the early 1980's.

The public sales policy is changing as the project develops. Production costs are in the order of $2200 for land, and $4200 (or $83 per front foot) for full services.[2] Sales prices have risen from about $5500 in the early sales in Richfield to $6000-$8500 in Lee Ridge in the spring of 1973 and on to $6000-$10,000 in Tweedle Place later that year. The early sales generated profit while under-cutting the market price for comparable lots by about $2000, while in 1973 higher volumes of sales have occurred at about $1000 below market

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1. Meyonuhk and Tepaskan should be active by late 1975.
2. Lee Ridge neighbourhood, quoted in McFadyen, Stuart M. and Christian T. L. Janssen, A Research Design for the Mill Woods Impact Study. Edmonton: University of Alberta, Department of Economics, 1973, p. 139.

prices. Current sales policy chooses buyers by lottery, and most lots are now being sold, in groups of 5 to 12, to builders on the stipulation that construction occurs quickly. Builder sales have been encouraged as many of the earlier homeowner purchases failed because buyers were unable to arrange for adequate construction. Economic consultants have been engaged to examine alternative pricing policies,[1] and it appears likely that a high volume, slight discount policy will emerge.

Mill Woods is the beginning of a new era in the evolution of public land policy in Edmonton. Over the past eighty years the city has promoted private land development continuously, yet three times circumstance has required that the public sector assume a more direct role. With Mill Woods government has again decided to function as a major developer, acting in the land market in reaction to rising prices for the benefit of the entire society. It is possible that this experience will cool the market sufficiently that the city can step back to a facilitative role as Mill Woods becomes depleated. It seems more likely, though, that the market forces which created the need for Mill Woods will remain, and that the project will demonstrate the utility of a permanent public role in land development.

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1. McFadyen and Janssen, op.cit.

3.6 Vancouver

The Vancouver urban region exhibits significantly different market conditions in both the private and public sectors, than those found in most Canadian cities. Developable land appears to be in smaller holdings and its ownership more dispersed than is typical elsewhere. Public land policy in Vancouver recently underwent a significant shift in the direction of increased public control, although the substance of current provincial and municipal activity in land is not markedly different than the acts of many western and Ontario cities. Finally, as aspects of this market have been studied by academics specializing in land,[1] the Vancouver situation has received considerably more thorough examination than any other major Canadian city. Although the special conditions in this quickly growing urban region appear to have removed some volatility from its land market, the typical concentration in land development, abrupt price swings and a current rapid price escalation are evident.

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1. Hamilton, Stanley W. Price Movements in Urban Properties Facing Development: A Study of West Vancouver, 1949-1967. Phd. dissertation, Berkley: University of California, 1969.

   Ratcliff, Richard U. and Stanley W. Hamilton, Suburban Land Development, Vancouver: Union of British Columbia Municipalities, 1972.

   White, Philip H. and Stanley W. Hamilton, The Real Property Tax in British Columbia, Vancouver B. C. School Trustees Association, 1972.

   Hamilton, Stanley W. and Ronald Roberts, Condominiums: Development and Ownership Vancouver: Greater Vancouver Real Estate Board, 1973.

Table 3.22 contains statistics on the remarkable population growth which has occurred in the Vancouver region through the last two decades. While the region's population has increased by over 15% in each five year period (about 3% per annum) the entire fringe grew by nearly one-half between 1966 and 1971 and the suburban municipalities of Coquitlam, Richmond and Surrey continually attracted disproportion shares of this growth. In general the region boomed during the 1950's, growth slowed in the early 1960s, and has increased again since 1966. Currently, rising growth rates are evident in Richmond and Surrey, while the expansion of the others, and particularly Vancouver and West Vancouver, is slowing. The companion Table 3.23 summarizes the residential construction activity which has accommodated this rising population. Over the period low density, single and semi-detached construction has declined as a proportion of all new housing, with a major drop seen during the general decrease in starts of the early 1960s. Large volumes of high-density construction in the City of Vancouver coincided with the regional drop in low density starts, while the suburban municipalities did not shift to apartment types until the late 1960s. The four suburban municipalities included in the table have consistently provided over one-third of the region's detached starts, as they have built over 40,000 low density units to accommodate a population increase exceeding 167,000 people, over twenty years.

TABLE: 3.22 POPULATION AND POPULATION GROWTH
CITY OF VANCOUVER AND VANCOUVER URBAN REGION 1951-1971

	POPULATION (numerical)					POPULATION GROWTH									PROPORTION OF REGIONAL TOTAL	
	1951	1956	1961	1966	1971	1951-56 NUMERICAL	AS %	1956-61 NUMERICAL	AS %	1961-66 NUMERICAL	AS %	1966-71 NUMERICAL	AS %		POPULATION GROWTH 1966-1971	POPULATION 1971
URBAN CORE[1]				823,863	926,119							102,256	12		69	86
FRINGE[2]				109,228	156,233							47,005	43		31	14
Vancouver	344,833	365,844	384,522	410,375	426,256	21,011	6	18,678	5	25,853	7	15,881	4		11	39
West Vancouver	13,990	19,197	25,454	31,987	36,440	5,207	37	6,257	33	6,533	26	4,453	14		3	3
Richmond	19,186	25,978	43,323	50,460	62,121	6,792	35	17,345	67	7,137	16	11,661	23		8	6
Surrey	33,670	49,366	70,838	81,826	98,601	15,696	47	21,472	43	10,988	16	16,775	21		11	9
Coquitlam	15,697	20,800	29,059	40,916	53,073	5,103	33	8,259	40	11,857	41	12,157	30		8	5
All Others	134,584	183,832	236,969	317,527	405,861	49,248	37	53,137	29	80,558	34	88,334	28		59	37
REGIONAL TOTAL	561,960	665,017	790,165	933,091	1,082,352	103,057	18	125,148	19	142,926	18	149,261	16		100	100

SOURCES: Statistics Canada, Census of Canada, 1966 and 1971. Definitions of Core (1) and Fringe (2) by Statistics Canada.

TABLE: 3.23 DWELLING STARTS BY TYPE
CITY OF VANCOUVER AND VANCOUVER URBAN REGION 1951-1972

	DWELLING UNITS STARTED													PROPORTIONS OF REGIONAL TOTALS										
	1952-55		1956-60		1961-65		1966-71		1972					1951-55		1956-60		1961-65		1966-71		1972			
	Low Density	All Starts	Low Density	All Starts	Low Density	All Starts	Low Density	All Starts	Low Density Det.	Low Density S/D	High Density Row	High Density Apt.	All Starts	Low Density	All Starts	Low Density	All Starts	Low Density	All Starts	Low Density	All Starts	Low Density Det.	Low Density S/D	High Density Row	High Density Apt.	All Starts
VANCOUVER	5,997	9,762	4,298	5,814	4,082	22,737	3,103	23,849	577	24	518	1,418	2,537	22	36	10	14	9	49	4	28	4	ø	4	10	18
WEST VANCOUVER	1,230	1,320	1,516	1,672	1,142	2,778	1,188	2,565	137	2	N/A	183	322	5	5	4	4	2	6	1	3	1	ø	N/A	1	2
RICHMOND	1,698	1,698	4,535	4,581	1,987	2,072	3,133	6,321	630	88	217	779	1,714	6	6	11	11	4	4	4	7	4	1	2	6	12
SURREY	N/A	N/A	7,606	7,761	2,078	2,402	4,669	7,789	1,032	38	130	1,290	2,490	N/A	N/A	18	18	4	5	5	9	7	ø	1	9	18
COQUITLAM	1,074	1,078	2,450	2,462	2,560	2,712	2,394	5,067	316	34	40	515	905	4	4	6	6	6	6	3	6	2	ø	ø	4	6
ALL OTHERS	11,738	13,042	11,370	20,183	7,215	13,690	17,635	39,813	2,969	146	640	2,373	6,128	44	48	27	48	15	29	21	47	21	1	5	17	43
REGIONAL TOTAL	21,737	26,900	31,775	42,473	19,064	46,391	32,122	85,404	5,661	332	1,545	6,558	14,096	81	100	75	100	41	100	38	100	40	2	11	47	100

SOURCE: CMHC Statistics Division.

The market analysis in Vancouver has focussed on land for low density housing in these four municipalities since 1954. In West Vancouver, data was examined concerning 742 of the 2048 separate taxable units of undeveloped land which appeared on the municipalities assessment rolls in 1968. In the suburban land development study, sections of land which were undergoing substantial growth were selected in Richmond, Surrey and Coquitlam, and respective samples of 1787, 746 and 422 properties were examined. In each case, the transactional history of the parcel was analyzed, and the later study considered changes in parcel characteristics such as size, development, zoning and extent of servicing. Table 3.24 is a summary of the lot sales and sales prices found in these studies, with prices deflated to indicate pure gain or loss in sales values.[1]

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1. Prices were deflated to 1954 values, using a mortage interest deflator to remove the "costs of capital" associated with land holding. As this produces a greater deflation than the Consumer Price Index, it accounts for more than general inflation, and should produce values indicative of the pure profit or loss associated with holding lots during this period. (i.e.: A lot purchased in Richmond in 1957, and resold before 1962, probably produced net profits, but would have created losses if it was resold between 1962 and 1965).

TABLE: 3.24 LOT PRICES AND VOLUMES SOLD, IN A SAMPLE OF VANCOUVER, WEST VANCOUVER, RICHMOND AND SURREY PROPERTIES (IN CONSTANT 1954 DOLLARS)

YEAR	DEFLATED LOT PRICE AND SALES DATA						PERCENTAGE CHANGE FROM PREVIOUS YEAR						LOT PRICE DEFLATOR[3]	OTHER DEFLATED LAND PRICES	
	WEST VANCOUVER[1]		RICHMOND[2]		SURREY[2]		WEST VANCOUVER		RICHMOND		SURREY			AVERAGE NHA - LOT VANCOUVER[4]	3 YEAR MOVING AVERAGE ACREAGE PRICE IN 3 SAMPLED AREAS[5]
	NO. OF SALES	PRICE	NO. OF SALES	PRICE	NO. OF SALES	PRICE	SALES %	PRICE %	SALES %	PRICE %	SALES %	PRICE %			
1954	158	$2,980	12	$1,550	27	$2,500							1.0		$2,651
1955	150	3,375	21	1,564	42	2,417	-5	13	75	1	56	-3	.948		2,538
1956	109	4,014	32	2,110	29	2,245	-27	19	52	35	-31	-7	.898		2,695
1957	108	4,376	30	2,459	21	2,459	-1	9	-6	17	-28	9	.848		3,718
1958	133	4,400	218	2,640	47	2,240	23	1	627	7	124	-8	.800	$2,184	4,704
1959	131	4,175	192	2,643	26	2,492	-2	-5	-12	1	-45	11	.755	2,199	5,026
1960	41	4,694	38	2,651	23	2,086	-69	13	-80	ø	-12	-17	.707	2,251	4,808
1961	27	4,310	31	2,615	15	2,185	-34	-8	-18	-1	-35	5	.662	2,371	4,265
1962	29	4,870	38	2,115	25	1,866	7	12	23	-20	67	-14	.622	2,222	3,693
1963	29	4,171	33	2,048	22	1,755	ø	-14	-13	-3	-12	-7	.585	1,974	3,125
1964	55	3,962	21	2,314	23	1,074	90	-5	-36	13	5	-39	.551	1,881	2,865
1965	46	4,263	34	2,383	23	1,450	-16	8	62	3	ø	35	.518	1,821	2,547
1966	61	4,040	29	2,571	24	1,140	33	-5	-15	8	4	-21	.485	1,833	2,387
1967	50	4,313	40	2,724	25	840	-18	7	38	6	4	-26	.454	1,806	2,260
1968			28	2,662	30	894			-30	-2	20	6	.416	1,965	2,139
1969			18	2,660	11	893			-36	-1	-63	ø	.380	2,313	2,239
1970			7	2,408	2	1,170			-61	-9	-82	31	.344	2,440	2,789

1. From Hamilton, S. W. Land Price Movements in West Vancouver, 1949-1967. Phd. dissertation. Berkley: University of California, 1970. pp. 4-10 and 4-21.
2. From Hamilton, S. W. and Richard V. Ratcliff, Suburban Land Development, Vancouver: Union of British Columbia Municipalities, 1972. Sales from p. 21, prices extrapolated from Chart 9, and expanded to a constant, 10,000 square foot lot.
3. Deflators are the reciprocals of an index (1954=100) of compounded mortgage interest rates used for NHA - insured loans during the period.
4. CMHC loan applicants estimates.
5. Hamilton and Ratcliff, op.cit., Table 21. Sample areas were Richmond, Surrey and Coquitlam.

The highly deflated price data in Table 3.24 is indicative of many influences which produce change in land markets. Before deflation, the data used were four series of increasing prices, with slight declines in all sample areas during the construction lag of the early 1960s. Other declines were recorded in Surrey in the late 1950s, and again in the late 1960s, as this market has been somewhat unstable since its speculative binge of 1950-1955. However, the series indicate relative stability in the sampled markets as the deflated prices both increase and decrease over time while the series ultimately rise. As this deflator removed the varying costs of money from land prices, changes in the deflated values demonstrate, on average, whether investments in land made or lost money. In West Vancouver land: made money through 1958 as the new Second Narrows bridge was opening the area for development; lost briefly around the recession of 1960; then began a year to year fluctuation. In Richmond average values rose steadily until 1960, lost until 1964, rose as building picked up in the mid-1960s, then declined slightly after 1967. Surrey experienced a fluctuating decline throughout the period with the market turning up in 1970 as the study ended. The deflated, average price of lots for new detached houses financed under the National Housing Act rose until 1961, declined somewhat until 1968, then began increasing again as low density construction picked up. Acreage prices in the composite series which included Surrey, Richmond and Coquitlam

samples rose from $2651 in 1954 to a peak of about $5000 in 1959, then, in the 1960 recession, began a decline which continued until 1969. Although acreage prices picked up in the last two years reported to about $2800 in 1970, it is interesting to note that this deflated price is only $400 above the deflated prices of serviced lots, indicating that the cost of raw land, as an input into lot production, has remained relatively low. In general then, the sampled land prices in the Vancouver region have increased gradually for nearly twenty years indicative of the ultimate profitability of investment in land, while adequate conditions for short-term gains and losses are seen in the occasional sharp rises or falls.

The combination of the sales volume and price data in Table 3.24 with the starts data Table 3.23 provides an understanding of the price movements in Vancouver's land market. In general, the number of sales in the sample declined through the period and prices rose. While this behavior roughly resembles the traditional economic relationship between supply and price, in some years supply and price declined together, and relative increases in supply were sometimes accompanied by price increases.[1] While it is possible that

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1. These non-economic movements are seen in West Vancouver in four of the 14 years studied, in Richmond in 10 of 17 years, and in Surrey in 5 of 17 years.

this behavior reflects inadequacy in the sample data, it seems more likely that it points to changes in the relative demand for lots as the explanation of the increasing price. Table 3.23 demonstrated that, while the number of low density starts, and all starts, increased in the region over the period studied, lower density units decreased in proportion to about 40% of all new housing. As this means that while more people obtained new housing a lesser proportion of this housing was in the form of detached units, and as lots for detached houses rose in price, it seems likely that the demand for house lots exceeded supply.

Dr. Hamilton's analysis augments this superficial observation of the Vancouver market with considerable detail and insight. In the total Vancouver sample,[1] the researchers observed 528 lots and 480 parcels of 2965 acres (average 6.2 acres per parcel) located in growth areas in 1949, change to 1921 lots and 1034 parcels of 1701 acres (average 1.6 acres) in 1970. Within the sample, then, was considerable subdivision of acreage producing lots and smaller parcels. Between 1954 and 1970, 1716 of these lots were sold, dominantly in regular, "arms length" transactions.[2] Non "arms length"

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1. Ratcliff and Hamilton, op.cit. This is the composite of the Richmond, Surrey and Coquitlam Samples.
2. Eighty-six per cent of all sales were deemed to be "arms length" or normal market transactions. The most frequent non "arms length" sales occurred between associated companies, and from builders to buyers conditional on the builder being contracted to construct a home.

sales increased through the period, rising to 25% of total lot sales in 1966 and reaching 78% in 1970. As lot sales exceeded lot development in each year, the lot supply appears adequate. Longitudinal study of individual lots found 60% were developed, 15% were resold and 24% did not change within two years of sale, and the ratio of sales to development declined over the period. In 95% of the cases where developers purchased lots, the lots were developed within one year. Most development occurred in subdivisions, and this proportion increased during the period. Sixty-seven per cent of subdivided lots were developed within two years of their subdivision. The high proportions of development after sale, and after subdivision, indicated there was little, and decreasing, speculation in lots but the increasing inter-corporate sales reflects declining competitiveness in this market.

There was a similar increase in non-market trading of raw acreage holdings between 1954 and 1970, although the supply remained adequate and land holding became more dispersed. Eight hundred and sixty-seven of the 1263 acreage sales were "arms length" transactions but over 25% of sales in each year after 1958 were not, nor were over one-half of the 1969 and 1970 sales. Turnover remained quite high, averaging 15% per year and on average 177 acres sold for every 100 acres which developed. These demonstrate an active

market in raw land, and, as 89% of parcels sold were subdivided within two years (66% within one year) the market does not seem particularly speculative. The rapid turnover, and development, and the fact that these behaviors did not vary with parcel size, demonstrate an absence of private land banking which is atypical in metropolitan Canada.[1] The large and increasing number of parcels, and the small and declining average parcel size, demonstrate dispersed ownership of raw land which is also atypical.[2]

The integration of the acreage and lot information, and starts data, indicates that lot prices are not "pushed up" by rising acreage prices. Between 1956 and 1959, as starts boomed acreage prices rose quickly and lot prices rose slowly. Starts were relatively low between 1962 and 1967 and acreage prices fell but lot prices began rising quickly. The researchers conclusion warrents particular note:

> "The evidence indicated that the price of lots placed on the market was not artificially influenced by the behavior of prices in undeveloped parcels of land. In fact, the evidence clearly indicated the causation to be from lot price to acreage prices, not visa versa, allowing for the slow readjustment of acreage prices once the period of rapid increase is over."[3]

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1. Jack Poole, President of Dawson Developments, Ltd. estimates 90% of undeveloped land in the Vancouver region is held by small investors, not realtors. Vancouver Sun, 7 July 1973, p. 43.
2. A clear contrast is seen in Table 3.15, the survey of raw land holdings in the Winnipeg region.
3. Ratcliff and Hamilton, op.cit., p. 43.

The earlier, West Vancouver[1] study yields further insight into the causes of lot prices. As it examined 776 lots which remained undeveloped for 18 years, prices in this sample received minimal "value added" distortion. High turnover is seen between 1953 and 1957, indicative of the heightened market created by the announcement, construction and completion of the Second Narrows bridge. However, average annual price increases of 18.5% preceeded the increase in turnover by two years, and declined two years before the sales rate dropped, suggesting the presence of knowledgeable investors in this market.[2] While investment skill and/or "insider" status may influence the market, Hamilton's regression analysis pointed to causation by demand-oriented factors. Price increases related most strongly to population growth and rising per capita income,[3] and less clearly with rising housing starts and mortgage interest rates.[4] He concluded "...the evidence strongly suggests landowners act as price - takers.[5]

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1. It is notable that in this municipality of 24,447 acres, Hamilton reports British Pacific Properties Ltd. has been the dominant landowner and developer since 1931, holding 2800 acres including 1286 immediately developable acres in 1968. Hamilton, op.cit., pp. 4-2, 4-3, A1-2.
2. Hamilton, op.cit., p. 4-23.
3. Ibid.,p. 5-24.
4. Ibid.,pp. 5-24 and 5-25.
5. Ibid., p. 6-5. Thus the price of residential acreage is ultimately a function of the demand for houses, as each house must have a lot. More particularly in a competitive market, as the price of house lots is a residual of house price, and as acreage price is a residual of lot price, acreage price is a function of the demand for houses.

The burden of this research is, then that Vancouver has had a competitive, active land market although there are indications that this situation is changing. While acreage ownership is dispersed and in small parcels, Table 4.7 of the Development Corporations Survey reports 5,435 acres held by 9 developers, including the British Pacific Properties holdings.[1] Several of these firms only recently arrived n the Vancouver market and there are indications that larger firms are looking for "new town" size land banks.[2] Non "arms length" transactions increased dramatically in the sample areas over the period studied, indicating less competitive trading. Finally, while detached starts have remained quite high, lot prices have skyrocketed in Vancouver between 1968 and 1973 - a certain indication of imbalance in the land market.

The recent actions of the public sector in British Columbia land markets are often, but inaccurately described as the most stringent public controls on land in Canada. The province certainly needs strong controls. Urban British Columbia is experiencing very high and continuing population growth. The mountainous province has serious, absolute land

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1. The smallest holding found in the survey was 54 acres.
2. Western Realty announced this intention in 1971 (Vancouver Sun, 1 May 1971).

problems as its urban centres are located on and expanding on an already small stock of vital agricultural land. This Malthusian problem is compounded on the Lower Mainland, by a direct physical threat as short-term development pressures have moved to large expanses of floodplain.[1] In the face of these real problems, the provincial government has gradually, but increasingly, acted to protect farmland and is now developing companion measures to assure a supply of land for urban use. These parallel programs are emerging in legislation which is similar in substance to other provincial programs although the form, particularly of the Land Commission, is somewhat different.

British Columbia's controls on land markets include the usual range of instruments found across urban Canada. Vancouver was one of the first municipalities in Canada to use zoning and adopt an official plan,[2] and by 1973 about 80% of British Columbians, including most urbanites, lived on zoned land.[3] Between 1965 and 1968, 14 regional districts were incorporated through the urbanized parts of the province to consolidate growth planning at the regional level. In 1966 the Greater Vancouver Regional District's growth plan

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1. The British Columbia Community Planning Association reported "...urban settlement on the flood plain could be wiped out at a tremendous cost in one of our 100-year floods." (Montreal Gazette, 6 January 1973, p. 6) While this may not be a regular occurrence, once is too much.
2. Vancouver's first official plan was developed between 1926 and 1929.
3. Toronto Globe and Mail, 28 June 1973, p. 47.

designated 60,000 vacant acres in the "urban one" and "urban two" categories, for future expansion, in the face of a consumption rate of about 2000 acres per annum.[1] On the floodplain south of Vancouver, the minimum plot size allowed without a subdivision plan is 10 acres, while a 5 acre minimum is employed in other parts of Surrey.[2] It appears, then, that typical measures to control urban growth have been in place in Vancouver for some time. However, as the British Columbia Federation of Agriculture estimated, in 1972, that 3,000 acres of Fraser Valley farmland were still being lost to developers each year,[3] it appears these basic controls were not being applied adequately.

It is not suprising that municipalities in the Vancouver region have had a "laisser-faire" attitude towards land development. This is a young, prosperous growing region and it has been natural not to interfere with a "good thing." As landholding remained dispersed, and land prices were relatively low, there was little public concern about land development. Municipalities in British Columbia, relative to those in other provinces, were extra-ordinarily dependent on the property tax, as it provided up to three-quarters of

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1. Vancouver Province, 7 June 1973, p. 6.
2. Vancouver Sun, 8 December 1972, p. 57.
3. Vancouver Sun, 19 December 1972, p. 13.

their revenue.[1] This gave them a financial incentive to allow development, as it expands their tax base and borrowing power - the latter being particularly important as most lot services are provided on a local improvements basis. Also, as the courts disallowed attempts by municipalities to extract cash imposts from developers, the tax base and transfer payments from other governments remained the only sources of municipal revenue.

Against this background of extant controls, rising prices, agricultural needs, growth pressures, and municipal finances, the provincial government acted in late 1972 to rationalize land development. An Order in Council under the Environment and Land Use Act halted all subdivision and applications to subdivide agricultural land as of 21 December 1972. Farmers and developers demanded clarification of the governments intention concerning farmers incomes,[2] and definition of agricultural land[3], respectively. On January 16, 1973 the provincial Minister of Agriculture announced the freeze applied to all land classified, 1, 2, 3, 4 and orchard under the Canada Land Inventory, [4] and on 22 February 1973, Bill 42, the Land Commission Act, was introduced in the legislature. It proposed the establishment of agricultural,

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1. White and Hamilton, op.cit., p. 2.
2. Vancouver Sun, 19 December 1972, p. 13.
3. Financial Post, 13 January 1973, p. 13.
4. Vancouver Province, 17 January 1973, p. 9.

parklands, greenbelt and landbank reserves in the province's urban regions retroactive to the freeze, under the administration of a commission having a budget of $25 million for land acquisition. A month later,[1] the government ammended Bill 42: to specify that the Commission could designate only agricultural lands; to provide for advice from the regional districts in determining these reserves;[2] to ensure that no compensation was to be paid to owners because of the agricultural zoning; and to allow limited building to occur on farm land. The commission was authorized to purchase land for park, greenbelt and land bank use. The ammended Bill received final reading on April 16, 1973, and a month later the commissioners, chaired by a lawyer and land specialist, were announced.[3] By late June the Commission was prepared to consult with the regions, with maps covering 4.5 million acres of the main agricultural land, prepared by the provincial Department of Agriculture. On 4 July, 1973 an Order in Council activated that section of Bill 42 which required the regional districts to prepare land use plans for their jurisdictions within 90 days.[4] In less than one

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1. 21 March 1973.
2. The regional districts were required to hold public hearings and present a plan within 90 days. This device also established an avenue for appeal by any landowners affected by the designations.
3. The Commission appears to have an urban, but not necessarily pro-development, orientation in its composition. Other members include a planner, a business man, an ecologist, and a farmer.
4. Vancouver Province, 6 July 1973, p. 10.

year a strong system of zoning to protect British Columbia's diminishing agricultural land was in place.

The Land Commission is inaccurately regarded as a unique coercive instrument which interferes with landowner's rights to develop property. Zoning, by definition is the society's determination of the way in which an owner may use land. In general, there is no question of compensation - the society has traditionally had this right of determination. In urban Canada strong and specific zoning is commonplace, while its use in rural areas is increasing,[1] particularly in counties near urban centers. Bill 42 is unique, however, in the provisions for local and citizen input in the designation process and the location of the ultimate land use decision in a quasi-judicial board at the provincial level. While this process gives a voice to local interests at the time of the original designation of agricultural land, thereafter the ability to change this zoning is removed from the local or provincial political arena - hopefully to a safe

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1. In most rural areas, while there is still little zoning of a form that specifies land use, there is a conceptually more absolute form of public control over individuals property. This is in the form of requirements that building permits or severances must be obtained from the municipal council before land can change use. These can be granted, or withheld, quite arbitrarily, while some type of zoning at least codifies "the rules of the game". Rural zoning or reference to a municipal "plan" are rapidly increasing as criteria for use in granting municipal consent to applications to change land use.

repository which will conserve farmland to assure a future for British Columbians. While agricultural zoning occurs across Canada, no other government has acted this disinterestedly in attempting to remove a long-term resource from short-term needs and greeds.[1]

At the same time Bill 42 is sealing urban British Columbia from the surrounding fertile soils, companion measures are evolving to assure that cities have adequate supplies of land for their growth. Before Bill 42 was tabled, the Municipal Affairs Minister, James Lorimer, announced the provincial government intended to spend over $5 million to acquire development land in 1973, primarily in Vancouver and Victoria.[2] In March, 1973 this program announcement was expanded to $8.8 million in the Greater Vancouver region, and $25 million in the entire province, of which $15 million was to be provided by the province.[3] By July, 1973, the province had appointed Lorne Nicholson to be Canada's first cabinet minister solely responsible for housing, and this ministry had acquired 150 acres and was negotiating for another 350 acres, to begin a public land bank.[4] This activity is still, essentially an ad hoc program, with a budget of about $10 million under the British Columbia Incentive Fund Act.

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1. Optimistically, it is noted that Al Larson, President of the Alberta Real Estate Association predicts this principle will be copied across Canada. Toronto Globe and Mail, 26 May 1973, p. B-2.
2. Vancouver Province, 31 January 1973, p. 6.
3. Vancouver Province. 6 March 1973, p. 9. $10 million was to be obtained from the federal government.
4. Toronto Star, 7 July 1973, p. 19.

The housing minister has also announced the government is considering land developments to be marketed on a leasehold basis, on the 1700 acre University of British Columbia Endowment Lands, the 650 acre former Blair Rifle Range in North Vancouver, and a 200 acre tract on Burnaby Mountain.[1] Although the province's land banking program is not clearly defined yet, it appears to be departing from the previous municipal practice in British Columbia, which was to use public land development to generate revenue.[2,3] These current and proposed assemblies are generally larger projects with longer terms than those undertaken by Vancouver's private sector, and as the government is moving rapidly in this program area, it seems the underlying public policy is to move the market towards more comprehensive development forms. Finally, at the same time it is strengthening the public role in land, the government is promoting private development. In mid-1973, there were 29,000 acres of undeveloped land zoned for urban use within the Greater Vancouver Regional District, with provision to develop 6,700 acres as 40,000 single family houses, and 1,450 acres as 60,000 multiple units, before 1980.[4] In effect the government is gearing to support a boom in private development and construction, with increasing public involvement in the former as the growth proceeds.

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1. Vancouver Sun, 12 July 1973, pp. 1 and 2.
2. One example is Vancouver's massive Champlain Heights subdivision.
3. HUDAC reported several municipalities on the Lower Mainland made over one million dollars each, from land assemblies, in recent years. (Calgary Herald, 25 August 1972, p. 26.)
4. Vancouver Sun, 5 July 1973, p. 18.

While the Vancouver urban region faces real limitations due to its geographical location and the necessity to protect farmland, its land market seems to be among the most competitive in Canada. Undeveloped land is in small parcels under diverse ownership, and where large block holdings are emerging, they are owned by the various levels of government in the region. Until the late 1960s land prices rose and fell, while gradually advancing at a rate slightly above the rising costs of capital. However, in the past few years a rapid, demand oriented increase in land prices is evident, although behavior in the market seems to indicate the supply is adequate and competitive. Development plans announced by governments indicate that this adequacy will continue for several years, that they are acquiring a public supply for future use, and that agricultural land will be protected. As a result of these market conditions and public policies, land development in Vancouver is proceeding with less difficulty and volatility, and more restraint than is characteristic of high growth centres elsewhere.

3.7 Metropolitan Land Development - On Overview

These case studies have demonstrated a number of recurrent patterns in urban development which add the dynamics of growth to the stock and basic market data of Section 2. The form and process of a region's land development allows new housing stock to be placed on the market, determines the nature of the urban environment, and contains its own constraints on the manner and extent of short-term change which can occur in that region.

In the regions studied, the development of new land is becoming increasingly concentrated in terms of the distribution of all low-density housing, the number and size of growth locations, and land ownership in these locations.[1] Regional planning is focussing growth at relatively few manageable locales[2] to protect farmland while providing the widest range of public and commercial services at the lowest unit cost to the people who will inhabit the new developments.

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1. These types of concentration were not as evident in Vancouver.
2. A recent thesis examined causation in the pattern of spatial growth in London, Ontario between 1875 and 1970. Until 1950, the region expanded contiguously, maintaining the same shape through increasing sizes. After 1950, the negative controls of planning halted expansion in some directions, and where growth occurred, it was usually contiguous. See Millward, Hugh A. Simulation of Urban Spatial Growth, with reference to London, Canada and West Nottinghamshire, England. Masters Thesis, London: University of Western Ontario, Department of Geography, 1972.

Large scale projects are encouraged at these locations, as both market forces and planning tendencies favour compact integrated communities with industrial, commercial and recreational facilities accompanying new residences. In recognition of the financial implications of this expansion form, large specialist land development firms have formed and assembled tracts in the designated or likely growth areas. This mixture of concentrative forces tends to limit competition from smaller, dispersed sites where entrepreneurs and governments cannot achieve comparable scale economies in development. While it is apparent this structure does not promote competition, the Vancouver example illustrated that competition alone does not produce low land prices, so policy proposals that would break up the concentration with the expectation of consequent price declines appear inadequate. Concentration in regional land development is a fact, but at this stage of analysis the fact has not been shown to be a problem.[1]

The case studies showed growing tendency for the public sector to enter this concentrated system with it's own stocks of residential land. In Ottawa and Toronto large public tracts were recently assembled for development, Edmonton and Vancouver have begun marketing public lots and

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1. It is noted that widespread publicity has been given to claims that concentration, in itself, is the problem.

a large publicly owned land bank was purchased near Kitchener and has received a partial growth designation.[1]

Finally, the case studies showed a tendency for land market phenomena which emerge in southern Ontario to occur, later, in other cities. Planning at the level of the urban region spread across Ontario from the south in the late 1950s, and grew in Winnipeg and Edmonton during the mid-1960s. Toronto's private integrated "new towns" began nearly 20 years ago while Ottawa's emerged with the Greenbelt in the late 1950s and Edmonton's are now emerging from assemblies undertaken in the mid-1960s. This spreading pattern can be useful to the smaller metropolae as they can draw on the experience of the central cities when preparing themselves for change, and design more comprehensively than their predecessors.

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1. It is sometimes claimed that substantial acquisition by governments removes land from the market and drives up the price of the remaining raw acreage in private hands - this effect is not evident.

4.0 LAND DEVELOPERS - PRIVATE AND PUBLIC

Two types of developers own, hold, develop and market the new land on which Canadian cities expand. These are private firms, usually large, specialized public stock corporations, and the various government departments and agencies which undertake public land assembly projects. The former are widely reputed to be the cause of current levels of house and land prices, while the latter are often proposed as the solution to high prices. This section is an examination of the activities of both developer-types, directed to determining the nature and extent of their respective activities, and any significant differences between the two.

The purpose of this examination is to complete the presentation of data concerning land markets, by describing major structural and operating characteristics of the land development industry. This research is, like preceeding sections, superficial,as it is directed to determining concise, salient highlights of developers' diverse activities, and depth of detail is foregone in this process. The overview which emerges from this type of analysis provides useful insight for the development of policy at macro levels (nation, industry, region) and for the medium to long term, but is not particularly useful to policy making at a municipal level or for short-term

purposes. The diversity of this subject matter is complicated by the relative absence of research concerning the entire land development industry. This overview, and five other assemblages of information[1] comprise the Canadian effort in this field to date.

The nature of land development has been changing during the last twenty years as this activity is undertaken by progressively few, increasingly large, specialist groups. A number of sources indicate a growing concentration in the production of residential lots. Table 4.0, a summary from the Winter Lot Inventory described previously, indicates that subdivisions have become larger in each city reported, through the study period. While this is a very rough sample as its relationship to all land developments is not determined, it does illustrate a widespread trend to larger

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1. These are: Barker, Graham, Jennifer Penney and Wally Seccombe, Highrise and Superprofits, Kitchener: Dumont Press Graphix, 1973.
Chamberlain, Simon B. Aspects of Developer Behavior in the Land Development Process, Toronto: University of Toronto Centre for Urban and Community Studies Research Paper No. 56, 1972.
Lewinberg, Frank Robert. Towards a Political Economy of Urban Land and Housing: The Canadian Situation. Masters Thesis, Boston: Massachusetts Institute of Technology, 1973.
Lorrimer, James. A Citizens Guide to City Politics, Toronto, James Lewis and Samuel, 1972.
Roberts, C.J.B. A Survey of the Canadian Homebuilding Industry, Background Study for the Task Force on Low Income Housing, Ottawa: CMHC, unpublished 1971.

TABLE: 4.0 AVERAGE NUMBER OF LOTS PER SUBDIVISION FOUND IN WINTER INVENTORY- NHA ACCEPTED SUBDIVISIONS - VARIOUS CITIES

URBAN REGION	AVERAGE NUMBER OF LOTS PER SUBDIVISION								
	1965	1966	1967	1968	1969	1970	1971	1972	1973
Halifax	58.4	20.4		11.1	33.1	52.2	50.7	45.0	306.3
Hull				116.0	93.1	77.5	96.8	90.6	143.9
Ottawa			85.4	77.9	55.9	123.5	101.8	68.2	58.0
Peterborough	55.1	71.7	58.0	50.2	22.7	41.0	129.0	26.0	122.3
Toronto				136.5	124.8	184.7	153.1	117.8	140.9
Kitchener	41.0	92.9	94.3	94.2	70.5	73.3	98.8	132.4	69.3
Winnipeg	92.3	57.4	67.8	94.9	92.4	98.3	92.2		125.6
Edmonton				267.1	168.7	226.0	198.6	183.1	129.1
Calgary	114.7	89.1	45.7	113.5	139.7	165.2	156.4	189.6	222.6
AVERAGE LOTS PER SUBDIVISION (ARITHMETICAL)									
	35.8	27.3	28.3	65.0	75.1	94.6	88.7	104.9	123.3

SOURCE: Calculated from data in Table 2.14

projects. Similar indications were seen in Tables 3.3, 3.6 and 3.20, which described subdivisions in Ottawa, Toronto and Edmonton, respectively. Table 4.1 is a report on all building firms that received direct loans under the National Housing Act between 1961 and 1972. As about 35% of all NHA financed units are built by direct builder loans, and about 50% of all starts are currently financed under the National Housing Act, this table is a sample of approximately 15% of all residential construction in Canada. In this sample, the number of builders stayed relatively constant from 1961 to 1973, while the number of small builders declined slightly, and the number of medium and large building firms increased slightly. The production of units by medium-sized firms stayed relatively constant, despite their increased numbers, while small firms' production dropped by about one-third, and large firms production more than doubled. In 1973, over 40% of all new residences surveyed were produced by the 4.3% of building firms which construct over 100 units per annum. Table 4.2 reports another survey, undertaken by questionnaire in 1971, which produced a similar indication of concentrated production. It found that, in 1970, the 20% of all builders who construct over 100 units, produced 80% of all new housing units, 87% of these "large" firms also develop land, and 39% of them consider land development a most important aspect of their

TABLE: 4.1 STRUCTURE OF BUILDERS RECEIVING DIRECT NHA LOANS, CANADA, 1961-1973

YEAR	RESIDENTIAL UNITS STARTED BY ALL NHA LOANS[1]	BY DIRECT BUILDER LOANS[2]	% OF NHA UNITS BY DIRECT BUILDER LOANS	BUILDERS RECEIVING DIRECT NHA LOANS[2]	% CHANGE FROM PREVIOUS YEAR DIRECT BUILDERS	DIRECT UNITS	PROPORTIONS OF DIRECT NHA ACTIVITY BY BUILDER SIZE[2] SMALL FIRMS (UNDER 26 UNITS P.A.) % OF FIRMS	% OF UNITS	MEDIUM FIRMS (26-100 UNITS P.A.) % OF FIRMS	% OF UNITS	LARGE FIRMS (OVER 100 UNITS P.A.) % OF FIRMS	% OF UNITS
1961	59,870	30,559	51.1%	2415			88.6%	40.2%	9.7%	35.7%	1.7%	24.1%
1962	48,003	27,858	57.9%	2264	-6.3	-8.9	89.2%	41.9%	9.3%	36.7%	1.5%	21.3%
1963	50 267	33,852	67.4%	2481	9.5	21.5	88.6%	35.7%	9.5%	33.8%	1.8%	30.4%
1964	55,349	30,647	55.4%	2226	-10.3	-9.5	87.5%	35.1%	10.3%	35.0%	2.2%	29.9%
1965	54,842	30,163	54.9%	2334	4.8	-1.6	88.0%	37.4%	10.1%	38.0%	1.8%	24.7%
1966	51,529	26,114	50.7%	2158	-7.6	-13.5	89.2%	41.0%	9.3%	36.0%	1.4%	22.9%
1967	63,208	26,134	41.2%	2206	2.2	NIL	89.1%	42.3%	10.1%	34.4%	1.4%	23.1%
1968	72,242	24,402	33.8%	1763	-20.1	-6.7	88.2%	34.1%	9.8%	36.6%	1.9%	29.2%
1969	82,061	18,146	22.1%	1154	-34.6	-25.7	86.3%	30.2%	10.7%	32.7%	3.0%	37.0%
1970	106,553	42,803	40.2%	2151	86.3	135.8	84.2%	24.4%	11.7%	27.7%	4.1%	47.7%
1971	129,244	52,554	40.6%	2623	21.9	22.7	83.2%	27.7%	14.9%	35.2%	3.7%	37.1%
1972	132,972	52,229	39.3%	2419	-7.8	-6.2	80.9%	25.1%	14.7%	34.0%	4.3%	40.9%
1973	132,969	38,537	34.4%	1816	-24.9	-26.2	81.1%	21.8%	14.6%	34.9%	4.3%	43.2%

SOURCE: 1. CHS - 1973, Table 14, p. 14, includes NHA loans, aids to low income groups and other loans under Section 58-59.
2. CHS - 1965, Table 83, p. 71, for 1961 to 1965 data.
CHS - 1973, Table 108, p. 87, for 1966 to 1973 data.
Proportion totals inexact due to rounding.

TABLE: 4.2 PROJECTED STRUCTURE OF RESIDENTIAL BUILDING AND DEVELOPMENT INDUSTRIES FROM HUDAC SAMPLE - 1970

SIZE OF FIRM	BUILDING INDUSTRY			DEVELOPMENT INDUSTRY	
	% OF ALL UNITS BUILT*	% OF ALL FIRMS*	INDICATED NUMBER OF BUILDER/DEVELOPERS**	% OF BUILDERS THAT DEVELOP LAND**	INDICATED NUMBER OF DEVELOPERS**
Small (1-25 units per annum)	4.5%	55%	1155	42%	485
Medium (26-100 units per annum)	14.5%	25%	525	72%	378
Large (over 100 units per annum)	81%	20%	420	87%	365
	100%	100%	2100		1228.

SOURCE: *Firm size definitions and corresponding percentages extrapolated from Figure 4.1b and 4.1c in Charney, op.cit., October 1971 draft.
**Numbers calculated on the assumption that there are 2100 builder/developers in Canada.

operations.[1] Finally, the asset structure of real estate operators and developers summarized in the taxation statistics in Table 4.3 shows the same pattern of concentration. If the largest 94 firms (0.8% of all firms) each held the minimum $5,000,000 in assets in 1970, their holding would about equal the maximum holdings of the 4592 firms (41.3% of all firms) which form the "small" category. This body of data, albeit inconclusive, strongly indicates the progressive concentration of land development in the largest development firms.

Table 4.4 provides some indication of the variance in the structure of the building industry across Canada and during the last decade. The table reports the same type of data as Table 4.1, builders receiving direct NHA loans, by city, every third year from 1961 to 1973 inclusive. The

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1. In 1971 Melvin Charney, an architect contracted to the Task Force on Low Income Housing at CMHC, in cooperation with the executive of the Housing and Urban Development Association of Canada, mailed a questionnaire to the entire HUDAC membership of 3,245 firms. He received 431 responses of which 81 arrived too late for analysis, so his study reports 10.7% of the HUDAC organization. From the questionnaire he concluded that HUDAC's 1700 builder/developers produced 67% of Canada's housing starts in 1970, with the remainder produced by individuals and about 400 other firms. Table 4.2 uses this total figure of 2100 firms as representative of the entire building/developing industry in 1970, which receives some corroboration in the data in Table 4.1. Charney, Melvin et al, The Adequacy and Production of Low Income Housing, Background study for the Task Force on Low Income Housing at Central Mortgage and Housing Corporation, unpublished draft, July 1971.

TABLE: 4.3 TAXABLE INCOME OF REAL ESTATE OPERATORS AND DEVELOPERS REPORTING POSITIVE TAXABLE INCOME BY ASSET SIZE - 1969 AND 1970

TOTAL ASSETS OF FIRMS	AVERAGE TAXABLE INCOME	NUMBER OF FIRMS	% OF FIRMS	TOTAL TAXABLE INCOME	% OF TAXABLE INCOME
		1969			
Under $100,000.	$5,807.93	4,587	41.5%	$26,641,000.	15.2%
$100,000 - $249,999.	$11,926.91	3,106	28.1%	37,045,000.	21.1%
$250,000 - $999,999.	$20,417.22	2,694	24.3%	55,004,000.	31.2%
$1,000,000 - $4,999,999.	$52,452.73	550	4.9%	28,849,000.	16.4%
$5,000,000 - plus	$311,344.44	90	1.2%	28,021,000.	16.1%
Total	$ 15,920.92	11,027	100.0	175,560,000.	100.0
		1970			
Under $100,000.	$5,683.79	4592	41.3%	$25,800,000	14.8%
$100,000.- $249,999.	$11,594.20	3174	28.6%	$36,800,000.	21.1%
$250,000.- $999,999.	$19,920.75	2650	23.8%	$52,900,000.	30.4%
$1,000,000.- $4,999,999.	$53,521.59	602	5.5%	$32,200,000.	18.5%
$5,000,000.- plus	$278,723.40	94	.8%	$26,200,000.	15.2%
Total	$ 15,641.65	11112	100.0%	$173,800,000.	100.0%

SOURCES: Statistics Canada Corporation Taxation Statistics - 1969, Catalogue Number 61-208 Annual, 1969 and 1970, Table 7.

TABLE 4.4

STRUCTURE OF BUILDERS RECEIVING, AND HOUSING UNITS PRODUCED BY, DIRECT LENDING UNDER THE NATIONAL HOUSING ACT, BY SIZE OF FIRM, 1961-1973

CMHC OFFICE	SMALL BUILDERS (1-25 UNITS PRODUCED ANNUALLY) PERCENTAGE OF ALL BUILDERS					PERCENTAGE OF ALL UNITS PRODUCED					LARGE BUILDERS (MORE THAN 100 UNITS PRODUCED ANNUALLY) PERCENTAGE OF ALL BUILDERS					PERCENTAGE OF ALL UNITS PRODUCED				
	1961	1964	1967	1970	1973	1961	1964	1967	1970	1973	1961	1964	1967	1970	1973	1961	1964	1967	1970	1973
HALIFAX	91%	94%	98%	98%	93%	63%	62%	85%	45%	32%	ø%	ø%	ø%	1%	3%	ø%	ø%	ø%	50%	49%
ST. JOHN'S	100	100	90	87	83	100	100	40	48	37	ø	ø	ø	ø	ø	ø	ø	ø	ø	ø
FREDERICTON	82	92	94	87	75	32	42	55	39	27	ø	ø	ø	ø	ø	ø	ø	ø	ø	ø
CHICOUTIMI	100	100	100	94	92	100	100	100	73	72	ø	ø	ø	ø	ø	ø	ø	ø	ø	ø
QUEBEC	96	95	95	88	97	63	70	63	33	79	ø	ø	ø	4	ø	ø	ø	ø	41	ø
MONTREAL	79	82	82	70	75	34	36	40	18	19	1	3	1	7	4	14	20	17	51	31
HULL	N/A	81	85	68	74	N/A	25	42	7	7	N/A	3	ø	10	13	N/A	27	ø	69	78
OTTAWA	74	82	83	70	73	11	22	20	7	7	11	4	5	14	10	72	38	49	78	74
PETERBOROUGH	100	100	97	96	88	100	100	84	86	69	ø	ø	ø	ø	ø	ø	ø	ø	ø	ø
TORONTO	84	58	69	49	19	44	10	15	5	3	2	9	12	21	57	17	54	61	79	87
HAMILTON	87	90	83	75	71	78	55	49	14	20	ø	1	1	6	9	ø	8	10	55	48
KITCHENER	96	94	87	89	83	76	55	38	43	30	ø	1	3	2	1	ø	21	26	23	16
ST.CATHARINES	96	96	94	93	81	81	78	72	67	34	ø	ø	ø	ø	ø	ø	ø	ø	ø	ø
LONDON	94	88	89	88	88	65	51	53	41	49	ø	ø	ø	ø	ø	ø	ø	ø	ø	ø
WINDSOR	92	80	80	86	64	44	13	49	39	7	ø	7	ø	4	ø	ø	58	ø	31	ø
SUDBURY	100	94	95	79	83	100	75	76	29	28	ø	ø	ø	ø	ø	ø	ø	ø	ø	ø
THUNDER BAY	70	61	81	69	60	27	20	21	11	8	ø	7	ø	8	20	ø	33	ø	27	58
WINNIPEG	90	85	85	85	79	34	28	26	19	12	4	3	6	8	8	46	45	48	63	59
REGINA	65	85	96	88	87	16	36	64	41	26	ø	ø	ø	ø	2	ø	ø	ø	ø	39
SASKATOON	69	66	80	73	72	21	21	31	35	17	6	3	2	ø	5	24	20	20	ø	37
CALGARY	85	81	76	62	73	16	13	11	12	18	7	11	9	13	7	65	75	63	65	46
EDMONTON	88	92	86	84	91	40	50	47	30	39	3	1	ø	5	2	29	16	ø	46	33
VANCOUVER	**98**	**94**	**94**	**93**	**78**	**59**	**40**	**47**	**24**	**12**	1	2	2	3	7	28	34	38	55	48
VICTORIA	100	100	93	85	91	100	100	40	24	50	ø	ø	1	3	ø	ø	ø	31	23	ø
AVERAGES (24)	85	87	88	82	78	54	50	49	33	29	1.5	2.3	1.8	4.5	6.2	12	19	15	32	29

SOURCES: CMHC, Canadian Housing Statistics, 1973: Table 108, p. 87.
1970: Table 105, p. 84.
1967: Table 87, p. 82.
1964: Tables 78, 79, pp. 68, 69.
1961: Tables 72, 73, pp. 46, 47.

table contains "proportion of total" data for large firms, whose total annual production exceeds 100 housing units, and small firms producing up to 25 units per annum - figures for medium-sized firms may be interpolated.

In most cities, this data indicates over 90% of all builders are small firms but they produce less than 30% of all new housing, and both of these proportions have declined during the last decade. In Fredericton, Montreal, Hull, Ottawa, Hamilton, Thunder Bay, Saskatoon and Calgary, about three-quarters of all firms are small firms, and they account for 10-20% of total production. Large firms comprise 5-10% of all firms in Ottawa, Hamilton, Winnipeg and Vancouver, and produce between 50% and 80% of all new housing. In Montreal and the smaller metropolae under 5% of firms are large, and their production ranges between 30% and 60% of the total. In Toronto, nearly 60% of all builders are now large, and they produce nearly 90% of all production, as the numbers of small and medium-sized firms have declined sharply. Fredericton, St. John's, Chicoutimi, Peterborough, St. Catharines, London and Sudbury do not have large builders yet, but the proportions of their new housing built by small firms is declining in favour of medium-sized builders. This sample demonstrates, then, that while the small builder dominates the building industry numerically, in terms of production most new housing is built at large scale by the bigger operators, and this situation is common across Canada and

is increasing.

Several conditions which emerged in the land development milieu of the last two decades have facilitated and encouraged this change towards a concentrated structure. The introduction of government-insured mortgages removed considerable risk from housing production, with the intended effect of attracting investment capital during the post-war period when many young families needed houses. However, as large scale and organized investment usually locates with experienced management and bigger, more inclusive projects, this government initiative facilitated the capitalization of the larger firms. During the 1950s, governments assembled unprecedented large tracts of land for future development in several centres, providing an example which the private sector quickly followed. The pressure on municipal finances caused by rapid suburbanization during the 1950s led municipalities to shift responsibility for subdivision services forward to developers, creating a formidable financial obstacle for the small producer. At the same time, the economics of production were working for the bigger firms, as they incurred lower unit costs through volume production, and began structural integration to further reduce their expenses. The strengthening of local and regional planning and the requirement for better services, and commercial and industrial facilities in new developments have accelerated this process as only larger firms have been

able to hold substantial land inventories which can mesh with advance growth planning. Finally, the snynergy of these various factors attracted "big" capital into land development during the 1950s and 1960s[1] and the consequence is an industry with a deep-seated concentrated structure.

As this data has indicated that most new residential lots in metropolitan Canada are now produced by the larger developers, the remainder of this examination focuses on these major public and private enterprizes. This emphasis then, is on the majority of land development rather than the majority of developers.

4.1 Land Development - The Private Sector

This overview of private development focuses on about sixty firms which produce most of the new residential land in metropolitan Canada. It examines their position in the development industry, their characteristics and activities, a survey of their assets, and a sample of their operations. It shows private development corporations are well organized, diversified, vertically and horizontally integrated, long-term producers who have and can hold a major share of the land markets in metropolitan areas.

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1. A survey of 100 of Canada's largest development corporations found 8 firms were incorporated or active before 1940, 4 firms entered the industry during the 1940s, 31 firms entered during the 1950s and 57 entered during the 1960s. See Clark, Penney and Seccombe, op. cit., Table B. p. 17.

It is estimated that the land development industry now comprises 1300 firms, about 400 of which operate in metropolitan areas. The Housing and Urban Development Association of Canada, which consists primarily of builders, had 1305 members in metropolitan Canada in 1973, from a total of 4000 member firms and individuals.[1] If this membership parallels the structure found in Charney's sample,[2] about 400 HUDAC members, including 120 large firms, develop land in metropolitan areas. The Urban Development Institute includes only developers, and has 140 member firms, all of which are located in metropolitan areas, and one-half of which have head offices in Toronto.[3] The association of the largest developers, the Canadian Institute of Public Real Estate Companies is also metropolitan based and has 23 members. It appears, then, that about 30% of the total land development industry operates in metropolitan areas, including nearly all of the large firms. There are probably 120 to 140 of these large firms active in metropolitan Canada, and while they comprise about 30% of metropolitan producers, they probably account for over three-quarters of metropolitan lot production.

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1. Calculated from the membership list in The Canadian Real Estate Annual, 1973 edition, Toronto: Maclean-Hunter, 1973, pp. M-34 to M47.
2. Table 4.2.
3. Canadian Real Estate Annual, 1973, op. cit., pp. M-65 to M-68.

4.1.1. Major Assets of Private Developers

This examination is focused on about sixty of the largest metropolitan developers. The size and composition of this sample primarily reflect the availability of data - although it is likely that it includes all of the major developers in Canada. Data was obtained from a variety of sources - the firms themselves, their annual reports and investment prospectuses, trade magazines, planning studies, and newspaper reports. Most of the data was assembled as part of the Development Corporations Survey , an assemblage of information concerning the assets, operating locales, and ownerships of sixty firms. This survey and its sources is summarized in Table A-9. The survey is not exclusive - it reports those assets described in the sources listed, but the completeness of this coverage varies from firm to firm. This section describes the assets, and particularly the land held by the firms, comments on their significance, then integrates this data into an overview of the metropolitan private development industry.

Table 4.5 lists the major assets found in the survey,owned by sixty development firms in twenty-four different metropolitan areas. Forty-seven firms hold 119,192 acres (186 square miles) of land, including 34 firms which each own more than one square mile. Forty-five firms own 50% or more of 272 subsidiary companies, and 21 of them have lesser proportions of ownership in 103 affiliated firms.

TABLE: 4.5 DEVELOPMENT CORPORATIONS SURVEY 1973

SUMMARY OF REAL PROPERTY HOLDINGS

NAME OF FIRM (ABBREVIATED)	NUMBER OF CITIES AFFECTED	ACREAGE HELD	APARTMENTS HELD		COMMERCIAL SPACE HELD		HOTELS	SHOPPING CENTRES	SUBSIDIARIES (FIRM OWNS OVER 50%)	AFFILIATES (FIRM OWNS UNDER 50%)
			BLDGS.	UNITS	BLDGS.	SQ. FEET				
BLOCK	2	UK	UK	2,030	UK	175,400	UK	UK	14	UK
CEMP/FAIRVIEW	9	UK	UK	UK	14	UK	UK	16	2	4
CITY PARKING	7	UK	UK	UK	UK	UK	1	UK	1	UK
CONCORDIA	2	UK	UK	4,000	1	UK	2	UK	9	UK
CORPORATE	4	UK	UK	309	3	40,000	UK	5	11	UK
GREENWIN	1	UK	UK	10,000	UK	UK	UK	UK	7	UK
HALIFAX	1	UK	UK	306	5	154,000	1	UK	2	0
MANUFACTURERS	9	UK	11	3,205	6	UK	UK	UK	UK	UK
MORENISH	1	UK	3	590	45	UK	UK	UK	2	3
OLYMPIA & YORK	2	UK	UK	UK	8	UK	UK	UK	3	UK
TRIZEC	12	UK	7	1,666	38	9,448,855	7	14	9	UK
Y & F	2	UK	UK	UK	4	UK	UK	UK	5	2
MCLAUGHLIN	1	9,265	UK	1,800	1	UK	UK	1	10	UK
ALLARCO	4	8,803	UK	3,000	UK	286,000	10	3	6	8
REVENUE	3	7,724	UK	1,635	UK	882,000	UK	UK	4	UK
CAMPEAU	13	7,000	13	3,091	14	6,677,608	2	12	22	UK
CANADIAN EQUITY	3	6,908	UK	454	2	398,000	UK	5	3	UK
WESTERN ,	5	6,130	11	3,368	10	482,092	5	12	6	16
BRAMALEA	12	5,955	6	774	5	253,000	UK	4	5	12
GREAT NORTHERN	9	5,294	4	623	2	239,000	1	4	5	0
MARKBOROUGH	2	4,898	UK	2,210	9	934,000	1	UK	2	UK
CARMA	2	4,590	UK	UK	UK	UK	UK	UK	1	UK
RUNNYMEDE	1	4,100	UK	UK	UK	UK	UK	UK	UK	UK
QUALICO	3	4,000	UK	300	UK	UK	UK	UK	UK	3
BACM	2	3,532	UK	UK	UK	UK	UK	UK	14	0
MELTON	2	3,258	UK	459	UK	192,108	UK	UK	UK	1
BRITISH	1	2,800	UK	UK	UK	UK	UK	UK	UK	UK
NU-WEST	3	2,691	UK	718	UK	UK	UK	UK	4	5
MAJOR	1	2,600	UK	544	4	270,900	UK	3	UK	UK
MONARCH	5	2,535	UK	528	5	264,875	1	2	7	1
DAMSON	3	2,300	UK	700	2	335,000	UK	UK	11	1
ALLIANCE	4	2,256	UK	1,185	3	UK	UK	3	3	16
COSTAIN	5	2,218	3	353	UK	UK	UK	UK	2	2
CALEDON MT. ESTATES	1	2,100	0	0	0	0	0	0	0	0
GEORGE WIMPEY	4	1,897	UK	3,750	UK	UK	UK	UK	UK	UK
WALL & REDEKOP	1	1,694	UK	1,600	UK	UK	UK	UK	11	0
PINETREE	2	1,564	UK	1,423	UK	405,850	UK	UK	UK	UK
ST. LAWRENCE	2	1,435	UK	UK	UK	UK	UK	1	8	UK
LADCO	1	1,426	UK	UK	UK	UK	UK	UK	5	2
HEADWAY	7	1,252	11	2,076	UK	UK	1	5	12	2
SIFTON	3	1,120	UK	800	UK	UK	UK	2	UK	UK
GRT. YORK GP.	5	1,000	UK	UK	2	UK	1	18	4	UK
CLAYTON	1	970	UK	1,100	UK	UK	UK	UK	UK	UK
MACLAB	1	900	UK	2,623	4	UK	UK	6	UK	5
MINTO	1	758	UK	8,000	UK	UK	0	1	UK	UK
BUILDEVCO	1	700	UK	UK	UK	UK	UK	1	UK	UK
NORTH AMERICAN	12	550	9	1,955	4	UK	1	3	2	UK
GROSVENOR - LAING	2	500	UK	UK	2	UK	UK	2	6	1
TRANS-NATION	2	477	UK	UK	UK	UK	UK	UK	3	UK
CADILLAC	5	325	42	15,168	4	561,500	UK	12	11	UK
CAMBRIDGE	8	301	UK	UK	UK	UK	UK	20	3	UK
METRO STRUCTURES	1	300	UK	4,000	5	200,000	1	UK	UK	UK
CONSOLIDATED	1	220	UK	2,552	UK	UK	UK	UK	4	3
MARATHON	6	217	UK	1,027	8	1,400,000	1	21	11	9
ASSALY	1	214	UK	UK	UK	UK	UK	UK	UK	UK
HAMBROS	2	107	UK	1,268	UK	UK	UK	3	5	3
ORLANDO	5	100	1	374	15	2,945,000	1	5	2	1
CONCORD GROUP	1	96	UK	30	UK	16,000	1	UK	5	UK
KAUFMAN & BROAD	1	82	UK	1,080	1	25,000	UK	UK	4	UK
PARAGON	2	30	2	2,500	1	37,000	UK	1	6	3
ALL HOLDINGS - 60		119,192	123	95,174	223	26,623,188	38	185	272	103
ACREAGE - 47		119,192								
APT. BLDGS. - 13			123							
APT. UNITS - 42				95,174						
COMM. BLDG. - 29					223					
COMM. UNITS - 23						26,623,188				
HOTELS - 16							38			
SHOPPING CENTRES - 27								185		
SUBSIDIARIES - 45									272	
AFFILIATES - 21										103

SOURCE: Development Corporations Survey - 1973. See Table A-9.

NOTE: UK indicates unknown.

Forty-two firms hold 95,174 apartment units, including 13 firms with 123 apartment buildings. Twenty-nine firms have 223 office and other commercial buildings, while 23 firms have nearly 26,000,000 square feet of commercial space. While these commercial and apartment figures may appear large, the survey is particularly incomplete in these areas.[1] Finally, twenty-seven firms have 185 shopping centres and sixteen firms own 38 hotels. Despite its incompleteness, this summary demonstrates that Canada's largest developers have immense holdings of real property, with considerable diversity in the largest firm's portfolios and marked specialization in the assets of a few firms.

A few examples provide perspective on the significance of these holdings, as their relevance is easily lost in a numerical aggregation like Table 4.5. In the "Acreage Held" column, Headway Corporation has 1252 acres in seven cities. This includes 1190 acres in Thunder Bay, a holding which, according to one analyst's report, is:

"..... giving it a virtual monoply on land

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1. The Cemp Investments portfolio illustrates the understatement contained in the commercial assets as reported in the survey. While the survey found about 26,000,000 square feet of commercial space, and 223 buildings, with only 14 buildings held by Cemp Fairview, this company holds over 10,000,000 square feet of space, including about 6,000,000 in 10 of its office structures. See Ludwick, A.M. and K.W. Simpson "The Case of the Missing Property, OR, When Does 50% - ½?" pp. 17-29 in Canadian Chartered Accountant, April 1973.

sales".[1] Minto Construction owns about 8000 apartment units, most of which are located in surburban Nepean Township, which had a total of 5775 occupied rental dwellings in 1971.[2] The data on commercial buildings and space underscore the giant towers with which firms like Campeau, Trizec, Olympia and York, Marathon and Cemp have catalyzed the rebuilding of the cores of first Montreal and Toronto, then Vancouver, Calgary, Edmonton, Winnipeg, Ottawa and Halifax, during the last decade. Finally, the 185 shopping centres surveyed include most of the huge suburban regional centres which drastically changed Canadian shopping patterns during the last generation. The real impact of the large developers operations on urban life, from city form to living, shopping, working and recreational activities is not quantifiable but lies below the surface of the large numbers in Table 4.5.

Table 4.6 gives some perspective on the size and operations of these major developers. It is a summary of the total value of assets, gross revenue and source of profit, of thirty of Canada's largest developers. Twenty-six of these firms are included in the Development Corporations Survey, and, as all the firms in this table have assets valued in excess of $18 million, all are members of the top 0.8%

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1. Reported in Canadian Council on Social Development, Housing and People, Volume 2, Number 1, Ottawa 1971, p. 7.
2. Statistics Canada. 1971 Census of Canada-Housing, Catalogue No. 93-727, Volume 2, Part 3, p. 6-17.

TABLE: 4.6 SELECTED STATISTICS, 30 CANADIAN REAL ESTATE DEVELOPERS, 1970, 1971

FIRM NAME (ABBREVIATED)	ASSETS IN MILLIONS OF DOLLARS		GROSS REVENUE IN MILLIONS OF DOLLARS		RANK ORDER		AS % OF ASSETS				SOURCE OF OPERATING PROFIT PROPERTY					
							%	%	RANK ORDER		RENTAL		SALES		OTHER	
	1971	1970	1971	1970	1971	1970	1971	1970	1971	1970	1971	(1970)	1971	(1970)	1971	(1970)
TRIZEC*	$516.	$480.	$77.5	$94.0	2	1	15.0	19.6	21	17	98%	(80%)			2%	(20%)
CAMPEAU*	298	272	78.1	61.9	1	2	26.2	22.7	14	15	35	42	24	26	41	32
CADILLAC*	272	237	34.7	30.0	6	4	12.8	13.2	25	20	73	72	15	25	12	3
MEPC	95	80	10.7	7.9	19	17	11.3	9.8	26	25	100	99		1		
BRAMALEA*	93	81	44.6	27.6	3	6	48.0	34.1	8	10	8	2	69	82	23	16
WESTERN*	88	67	17.1	15.7	12	7	19.4	23.4	18	14	16	22	57	55	27	23
McLAUGHLIN*	87	65	21.4	2.0	8	27	24.6	3.1	15	30			95	77	5	23
MARKBOROUGH*	76	59	8.6	9.0	21	16	11.3	15.2	27	19	57	42	37	46	6	12
ALLARCO*	66	62	38.9	38.2	4	3	58.9	61.6	6	4	68	37	8	23	24	40
BLOCK*	63	55	17.7	13.6	10	10	28.1	24.7	13	13	26	13	15	22	59	65
CAN. EQUITY*	57	42	7.7	4.2	22	23	13.5	10.0	23	24	47	54	49	37	4	9
Y & R*	54	44	12.1	9.3	16	15	22.4	21.1	17	16	94	90	6			10
NU-WEST*	48	28	38.1	28.2	5	5	79.4	100.7	3	1	15	15	81	81	4	4
ORLANDO*	43	28	15.1	11.7	13	13	35.1	41.7	11	8	46	27	19	39	35	34
CAN.GOLDALE*	41	54	6.8	6.5	23	19	16.6	12.0	19	22	34	13	31	40	35	47
HALIFAX*	37	36	3.3	2.2	28	26	8.9	6.1	28	29	100	98		2		
PEEL-ELDER	36	28	5.9	5.3	25	22	16.4	18.9	20	18	58	61	34	28	8	11
CAMBRIDGE*	35	31	4.6	3.9	26	24	13.1	12.6	24	21	74	92	12		14	8
DAWSON*	35	25	26.1	15.3	7	8	74.6	61.2	4	5	14	7	74	68	12	25
WALL & REDEKOP*	30	25	12.3	13.5	15	12	41.0	54.0	10	6	14		24	20	62	80
IMPERIAL GEN.	29	25	9.7	1.9	20	28	33.4	7.6	12	28	55	91	34		11	9
SIFTON*	28	20	6.7	5.5	24	21	23.9	27.5	16	12	36	44	64	56		
MONARCH*	26	22	11.5	10.2	17	14	44.2	46.4	9	7	28	99	53		21	1
COSTAIN*	24	22	20.2	13.6	9	11	84.2	61.8	1	3			88	86	12	14
CONSOLIDATED*	24	20	14.8	7.7	14	18	61.7	38.5	5	9	20	39	70	61	10	
MAJOR*	23	21	3.4	2.3	27	25	14.8	10.9	22	23	5		77	76	18	24
PARAGON*	22	19	11.0	6.4	18	20	50.0	33.7	7	11	-23		80	84	43	16
HEADWAY*	21	15	17.3	14.6	11	9	82.4	97.3	2	2	7	6	78	94	15	
CORPORATE*	19	11	1.3	1.0	30	30	6.8	9.1	30	26	42		41	79	17	21
CAN.ALLIED	18	17	1.6	1.5	29	29	8.9	8.8	29	27	100	94				6
TOTALS AND AVERAGES																
-Subtotal *26	$2,126.	$1,841.	$550.9	$448.1			25.9	24.3			9	8	12	14	4	4
-All -30	$2,304.	$1,991.	$578.8	$464.7			25.1	23.3			13	12	13	14	4	4
AVERAGES -30	$ 76.8	$ 66.4	$ 19.3	$ 15.5			25.1	23.3								

SOURCE: A.E. Ames & Co. LTD. in Canadian Real Estate Annual 1971 and 1972 editions, pages 70 and 97, respectively.

NOTE: *Indicates inclusion in Development Corporations Survey. Underlined percentages in "Source of Operating Profit" columns are the dominant sources of operating profit in that year.

category of real estate operators and developers in Canada, as defined in Table 4.3. The firms have a total asset holding which is valued, conservatively, at $2.3 billion, and generate gross annual revenues exceeding one-half billion dollars. The source of these revenues varies among firms, between two main operating functions - property sales and income property. In general, the firms having the largest gross revenues and the most valuable asset inventories are income property operators like Trizec, Campeau, Bramalea, Allarco and Cadillac. A few of these operators, Trizec, MEPC, Y & R, Halifax and Canadian Allied, have specialized to the exclusion of sales, but most of them, and developers generally, operate in both revenue property and sales functions. The selling firms are also the suburban land developers, and the largest of these, Western, McLaughlin, and Markborough have assets and multiple operations at a scale slightly smaller than the larger income operators. The medium-sized selling firms - Costain, Headway, Nu-West, Dawson, Paragon and Consolidated, are essentially builders who had gross annual revenues exceeding one-half of the total value of their assets, an indication of the rapid pace and growth of their operations. The growth force within this industry is also indicated, as the average gross revenue of these thirty firms was $15.5 million in 1970 and from their average tax payments it appears the firms circulate about 150 times as much money as they pay

in taxes.[1]

Table 4.7 shows the distribution of the assets found in the Development Corporations Survey, by firm, among 24 cities including 17 metropolitan areas, with a further breakout of the holdings in the Toronto region. After the holdings of individual firms, the last row in each city section summarizes all holdings found in that city. The table demonstrates other aspects of the structure and diversification within this industry, as the largest firms operate both in various fields of real estate and across the country, while a few firms are major regional actors, and others operate primarily in one city. The extensive land and shopping centre holdings of the surveyed firms are evident, particularly in Montreal, Ottawa-Hull, Kitchener-Waterloo, Edmonton, Calgary and Toronto.

The considerable regional importance of some of these firms is exemplified by five of the surveyed companies whose holdings appear modest relative to the largest national developers. In 1972, if all businesses in British Columbia are ranked in terms of gross revenue, Dawson Developments Ltd. ranks 26th, Block Brothers Industries Ltd. ranks 30th, Western Realty Projects Ltd. ranks 31st, and Wall & Redekop ranks 36th. In terms of profitability, the ratio of earnings

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1. Table 4.3 showed that in 1970, the average taxable income of firms having over $5 million in assets was $279,000. If an average of 35% of this income went to taxes, each of these firms would have paid about $100,000 in taxes in 1970.

TABLE: 4.7 DEVELOPMENT CORPORATIONS SURVEY

SUMMARY OF HOLDINGS, BY CITY

CITY	NAME OF FIRM (ABBREVIATED)	ASSETS HELD IN THIS CITY ACRES	APARTMENTS BLDGS.	APARTMENTS UNITS	COMMERCIAL BLDGS.	COMMERCIAL SQ. FT.	HOTELS	SHOPPING CENTRES
Halifax - Dartmouth	Trizec		4	826	2	147,100		2
	Halifax			306	5	154,000	1	
	Clayton	970		1,100				
	North American		2	234				
	Manufacturers Life		1	55				
	(5)	970	7	2,521	7	301,100	1	2
Quebec	Trizec				2	380,000	1	
	Cadillac							2
	Concordia						1	
	North American		1	45				
	Great Northern						1	
	Headway		1	786				
	Gtr. York Group							2
	(7)	0	2	831	2	380,000	3	4
Montreal	Trizec				14	5,480,650		2
	Campeau	146	2	267	3	351,513		2
	Cemp/Fairview				9			4
	Bramalea	365						
	Concordia			4,000	1		1	
	Monarch	935						
	Marathon				2			1
	North American		1	415				
	Metro Structures	300		4,000	5	200,000	1	
	St. Lawrence	1,435						
	Revenue					886,000		
	Great Northern	305						1
	Manufacturers Life		2	1,137				
	(13)	3,486	5	9,819	34	6,918,163	2	10
Ottawa - Hull	Trizec		2	510				1
	Campeau	6,945	11	2,773	4	1,676,500	2	2
	Cadillac	4	2	488				2
	Bramalea	11						
	Costain	826	3	353				
	Minto	758		8,000				
	North American		2	728				
	St. Lawrence							1
	Great Northern	261						
	Manufacturers Life		1	108				
	George Wimpey	397						
	Alliance			394				
	Cambridge							3
	City Parking						1	
	Gtr. York Group							1
	Olympia & York				3			
	Assaly	214	1					
	(17)	9,416	21	13,354	7	1,676,500	3	10
Kingston	Trizec				1	35,000	1	
	Campeau				1	12,510		1
	Orlando							1
	Headway	34	1	676				1
	(4)	34	1	676	2	47,510	1	3
Peterborough	Marathon						1	1
	Headway	6						
	(2)	6	0	0	0	0	0	1
Oshawa	Campeau				1	83,414		2
	Cadillac	20						
	North American		1	147				
	Orlando							1
	Cambridge							1
	(5)	20	1	147	1	83,414		4
Hamilton	Cadillac	41	1	175				2
	Canadian Equity	30						1
	Cemp/Fairview							1
	Bramalea	76						1
	Monarch			128	2	145,448	1	
	Great Northern	454						
	Manufacturers Life		1	280				
	Cambridge							1
	Gtr. York Group							1
	(9)	601	2	583	2	145,448	1	7
Guelph	Bramalea	242						
	Sifton	120		800				1
	(2)	362	0	800	0	0	0	1

TABLE: 4.7 DEVELOPMENT CORPORATIONS SURVEY

SUMMARY OF HOLDINGS, BY CITY

CITY	NAME OF FIRM (ABBREVIATED)	ASSETS HELD IN THIS CITY ACRES	APARTMENTS BLDGS.	APARTMENTS UNITS	COMMERCIAL BLDGS.	COMMERCIAL SQ. FT.	HOTELS	SHOPPING CENTRES
Kitchener - Waterloo	Campeau				1	5,742		
	Cemp/Fairview							1
	Bramalea	10						
	Costain	368						
	Major	2,600		544	4	270,900		3
	Buildevco	474						1
	Monarch	262						
	George Wimpey	65						
	Alliance	20		502				1
	Cambridge							1
	(10)	3,799	0	1,046	5	2,766,642	0	7
St.Catherines	Cemp/Fairview							1
	Costain	116						
	Cambridge							1
	(3)	116	0	0	0	0	0	2
London	Campeau							1
	Bramalea	1						
	Sifton	1,000						1
	Monarch	400			1			
	Orlando							1
	Alliance							1
	(6)	1,401	0	0	1	0	0	4
Sarnia	North American							1
	Orlando							1
	Cambridge							1
	(3)	0	0	0	0	0	0	3
Windsor	Campeau							1
	George Wimpey	270						
	Cambridge							6
	(3)	270	0	0	0	0	0	7
Thunder Bay	Campeau							1
	Cadillac							1
	Headway	1,190	6	307			1	3
	Gtr. York Group							1
	(4)	1,190	6	307	0	0	1	6
Winnipeg	Cemp/Fairview							1
	BACM Ltd.	2,032						
	North American							2
	Great Northern		1	203				
	Manufacturers Life		1	240				
	Headway	22	1	40				
	Ladco	1,426						
	(7)	3,480	3	483	0	0	0	3
Brandon	Trizec							1
Regina	Trizec						1	1
	Campeau				2	32,096		1
	Western	39	1	107	2	151,000		
	Corporate							2
	Markborough				2		1	
	North American				2			
	(6)	39	1	107	8	183,096	2	4
Saskatoon	Trizec							1
	Great Northern	234						
	(2)	234	0	0	0	0	0	1
Edmonton	Trizec				5	798,205		
	Cemp/Fairview							1
	Nu-West	158						
	Bramalea	44						
	Western	3,923	3	1,248	3	162,000	1	4
	Dawson	58						
	Paragon				1	37,000		1
	MacLab	911		2,623	4			6
	BACM Ltd.	1,500						
	Corporate				1	40,000		
	Marathon			220				1
	Great Northern	2,807	1	133				1
	Allarco	8,803						
	Block					4,600		
	Melton	1,815		459		192,108		
	(15)	20,019	4	4,683	14	1,233,913	1	14

TABLE: 4.7 DEVELOPMENT CORPORATIONS SURVEY

SUMMARY OF HOLDINGS, BY CITY

CITY	NAME OF FIRM (ABBREVIATED)	ASSETS HELD IN THIS CITY ACRES	APARTMENTS BLDGS.	APARTMENTS UNITS	COMMERCIAL BLDGS.	COMMERCIAL SQ. FT.	HOTELS	SHOPPING CENTRES
Calgary	Trizec		1	330	12	1,626,400	1	1
	Campeau	37			1	66,209		
	Cemp/Fairview							1
	Nu-West	1,759						
	Bramalea	211						
	Western	2,063	4	1,454	4	169,000	3	8
	Dawson	1,400						
	Paragon	30						
	Qualico			300				
	Corporate			309				
	Marathon			202	3			1
	Great Northern				1	75,000		
	Manufacturers Life		1	52	1			
	Headway		2	267				
	Carma	4,500						
	Melton	920						
	(16)	10,920	8	2,914	22	1,936,609	4	11
Victoria	Campeau							1
	Grosvenor-Liang							1
	Concord Group	96		30		16,000	1	
	North American		1	120				
	(4)	96	1	150	0	16,000	1	2
Vancouver	Trizec				1	740,000	2	2
	Campeau				1	67,420		
	Cemp/Fairview				1			
	Nu-West	103						
	Bramalea	54						
	Western	757	3	559	1	92	1	
	Grosvenor-Liang	500			2			1
	Dawson	394						
	British	2,800						
	Marathon	125		605	1	25,000		2
	North American		1	266	1			
	Wall & Redekop	612		1,600				
	Manufacturers Life		1	150				
	Carma	90						
	Block			1,254		170,800		
	(15)	5,435	5	4,434	8	1,003,312	3	5
Toronto -General	Trizec				1	241,500	1	1
	Campeau	14						
	Cadillac		33	13,715				3
	Canadian Equity	200		454	2	398,000		1
	Cemp/Fairview				4			6
	Bramalea	229	1	91				
	Kaufman & Broad			1,080	1	25,000		
	Monarch	13		400	1	119,427		
	Corporate				2			2
	Marathon	92			2			
	Pinetree	812		329		405,850		
	Markborough			1,785	7	624,000		
	North American	550			1		1	
	Revenue	24						
	Hambros	62		1,268				1
	Consolidated	100		1,557				
	Great Northern				1	164,000		1
	Orlando				15	1,578,000		1
	Greenwin			10,000				
	Manufacturers Life		3	707	5			
	George Wimpey			2,000				
	Headway							1
	Alliance	230		239	3			1
	Cambridge							1
	Gtr. York Group							2
	Morenish		3	590	45			
	Olympia & York				5			
	Y & R				4			
	(27)	2,326	40	24,216	99	3,555,777	2	21
Toronto -Ajax	Bramalea							1
	Consolidated			595				
	Great Northern	34						
	George Wimpey			1,750				
	Alliance	950						
	(5)	984	0	34,215	0	0	0	1

TABLE: 4.7 DEVELOPMENT CORPORATIONS SURVEY

SUMMARY OF HOLDINGS, BY CITY

CITY	NAME OF FIRM (ABBREVIATED)	ASSETS HELD IN THIS CITY ACRES	APARTMENTS BLDGS.	APARTMENTS UNITS	COMMERCIAL BLDGS.	COMMERCIAL SQ. FT.	HOTELS	SHOPPING CENTRES
Toronto -Pickering	Bramalea	745	1	97				
	Revenue	1,100						
	Runneymede	3,960						
	(3)	5,805	1	97	0	0	0	0
Toronto -Uxbridge	Revenue	6,600						
Toronto -Markham	Cadillac	125						
	Markborough	858						
	Great Northern	161	1	54				1
	(3)	1,144	1	54	0	0	0	1
Toronto -Richmond Hill	Cadillac	45						1
Toronto -Unionville	Bramalea	696						
	Monarch	505						
	(2)	1,201	0	0	0	0	0	0
Toronto -Brampton	Cadillac		1	246				
	Bramalea	3,258	3	510	5	253,000		2
	Hambros	23						1
	Cambridge							1
	Gtr. York							1
	(5)	3,281	4	756	5	253,000	0	5
Toronto -Mississauga	Cadillac	90						1
	Canadian Equity	6,678						3
	Bramalea	3						
	Trans-Nation	317						
	Markborough	3,900						
	McLaughlin	2,400		1,800	1			1
	Hambros	22						1
	Orlando	100					1	
	(8)	13,510	0	1,800	1	0	1	6
Toronto -Caledon Hills	Caledon Mt. Estates	2,100						
Toronto -Georgetown	McLaughlin	1,026						
Toronto -Oakville	Consolidated	120						
	Great Northern	1,038						
	(2)	1,158	0	0	0	0	0	0
Toronto -Scarborough	Trizec							1
	Cadillac		4	326				
	Western	260						
	Costain	396						
	Kaufman & Broad	82						
	Monarch	420			1			1
	Markborough	140		425		310,000		
	Runneymede	140						
	George Wimpey	396						
	(9)	1,834	4	751	1	310,000	0	2
Toronto -Etobicoke	Cadillac		1	464				
	Bramalea		1	76				
	Monarch							1
	Corporate							1
	Trans-Nation	160						
	McLaughlin	14						
	Gtr. Northern		1	233				
	Orlando		1	374				
	Alliance			50				
	(9)	174	4	1,197	0	0	0	2
Toronto -CBD	Cadillac				4	561,500		
	Bramalea	10						
	Consolidated			400				
	Cambridge							1
	Gtr. York Group				2		1	
	(5)	10	0	400	6	561,500	1	1

to sales, Western Realty ranks 10th, Block Brothers is 24th, Dawson Developments is 40th and Wall & Redekop ranks 47th.[1] British Pacific Building Ltd. owns most of the prestigous mountain side of West Vancouver, a holding that involves over 10% of the municipal area and whose development required that the firm build the famed Lion's Gate Bridge. It is interesting that most of the other large businesses in British Columbia were mining and forest products industries - economic sectors which attract government attention as they are recognized to affect the state of the entire economy and society.[2]

Table 4.8 highlights the single-city firms, as it shows the holdings of each firm in the region where its head office is located, and the percentage that this holding represents of the firm's total surveyed assets of this type. Forty percent of the firms, mainly smaller firms located outside Toronto, only operate in their head office region. Nearly one-half of all firms in the survey have head offices in Toronto, and of these twenty-eight developers, seventeen also operate in other cities. In most cases where a firm owns a square mile or more of land, the holding is in the same region as the owner-firm's head office.

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1. Financial Post, 28 October 1972, p. 33.
2. It is also interesting that government regulates these other regional industries by control of land (mining and timber leases, royalties charged on an areal or volume extracted basis, etc.). In the development sector the firms own the land and may construct their operations around this control.

TABLE: 4.8

DEVELOPMENT CORPORATIONS SURVEY

CONCENTRATION OF CORPORATE HOLDINGS AT HEAD OFFICE LOCATION

URBAN REGION HEAD OFFICE	FIRM NAME	HOLDING IN THIS REGION, NUMERICAL AND AS % OF FIRM'S TOTAL HOLDINGS OF THIS TYPE, FOUND IN SURVEY													
		ACREAGE	AS %	APT. BLDG.	AS %	APT. UNITS	AS %	COMMERCIAL BLDGS.	AS %	COMMERCIAL SQUARE FT.	AS %	HOTELS	AS %	SHOPPING CENTRES	AS %
HALIFAX	Halifax					306	100%	5	100%	154,000	100%				
	Clayton	970	100%			1,100	100								
MONTREAL	Trizec							14	37	5,480,650	58			2	14%
	Cemp/Fairview							9	64					4	25
	Concordia					4,000	100	1	100			1	50%		
	Metro Structures	300	100			4,000	100	5	100	200,000	100	1	100		
	St. Lawrence	1,435	100												
OTTAWA	Campeau	6,804	97	11	85	2,773	89	4	28	1,676,500	25	2	100	2	17
	Minto	758	100			8,000	100							1	100
	Assaly	214	100												
TORONTO	Cadillac	260	80	33	78	13,715	90							3	25
	Cdn. Equity	6,878	99			454	100	2	100	398,000	100			4	80
	Bramalea	4,941	83	1	16	91	12								
	Kaufman & Broad					1,080	100	1	100	25,000	100				
	Monarch	938	37			400	76	2	40	119,427	45			2	100
	Corporate							2	67					2	40
	Pinetree	812	52			329	23			405,850	100				
	Markborough	4,898	100			2,210	100	7	77	624,000	67				
	N. American	550	100					1	25			1	100		
	Revenue	7,724	100			1,635	100								
	Hambros	107	100			1,268	100							3	100
	Consolidated	220	100			2,552	100								
	Great Northern	1,233	23	2	50	287	46	1	50	164,000	69			2	50
	Orlando	100	100	1	100	374	100	15	100	1,578,000	54	1	100	1	20
	Caledon Mt.	2,100	100												
	Greenwin					10,000	100								
	Manufacturers Life			3	27	707	22	5	83						
	Wimpey	396	21			3,750	100								
	Alliance	1,180	52			289	25	3	100					1	33
	Cambridge													2	10
	Grt. York	1,000	100					2	100			1	100	3	17
	Morenish			3	100	590	100	45	100						
	Olympia & York							5	82						
	Y & R							4	100						
	Costain	396	18												
	Trans-Nation	477	100												
	McLaughlin	9,265	100			1,800	100	1	100					1	100
	Runneymede	4,100	100												
KITCHENER	Major	2,600	100			544	100	4	100	270,900	100			3	100
	Buildevco	474	68											1	100
LONDON	Sifton	1,000	89											1	50
THUNDER BAY	Headway	1,190	95	6	55	307	15					1	100	3	60
WINNIPEG	Ladco	1,426	100												
	BACM	2,032	57												
EDMONTON	Western	3,923	64	3	27	1,248	37	9	90	162,044	33	1	20	4	33
	Allarco	8,803	100			2,092	69			286,000	100	10	100	3	100
	Melton	815	25			459	100			192,108	100				
CALGARY	Nu-West	1,759	65												
	Paragon	30	100												
	Qualico	2,500	62												
	Marathon					202	20	3	37					1	5
	Carma	4,500	98												
VICTORIA	Concord	96	100			30	100			1,160,000	100	1	100		
VANCOUVER	Grosvenor-Laing	500	100					2	100					1	50
	Dawson	394	17			700	100	2	100						
	British	2,800	100												
	Wall & Redekop	1,694	100			1,600	100								
	Block					1,254	62			170,800	97				

Tables 4.9 and 4.10 demonstrate the use intended for the developers land inventory and indicates the significance of the holdings in their respective regions. Table 4.9 contains some development projections of sixteen firms in seven cities, intended to provide housing for over 1,000,000 people within twenty years. This table is neither indicative of all developers' plans, nor all plans of the developers included in these cities. Nevertheless, the table indicates the immense volume of production intended by these firms, and is another manifestation of the increasing shift to large scale development projects. Table 4.10 compares the land holdings surveyed in each city, with an estimate of each city's current residential acreage consumption, to indicate the significance of the developers' acreage. In Ottawa-Hull, Toronto, Kitchener-Waterloo, Thunder Bay, Calgary and Edmonton, the surveyed firms hold sufficient acreage to provide all of the respective regions' new residential starts at current levels and densities for over 5 years, and to provide only low density starts at current levels for over 10 years. If densities were higher or the firms provided less than 100% of new production, both of which are likely, these time periods would be extended. In general then, these tables demonstrate that the developers' land holdings are large, relative to local consumption, providing an assured supply of raw land to their owners for extended production, and this is translated into

TABLE: 4.9

DEVELOPMENT CORPORATIONS SURVEY

DEVELOPMENT PROJECTIONS - VARIOUS FIRMS

CITY	STATED DEVELOPMENT PROJECTIONS FIRM NAME (ABBREVIATED)	PLOT SIZE (ACRES)	PLANNED HOUSES	TOTAL UNITS	TOTAL POPULATION
Halifax	Clayton	535	3,500		
		400		2,000	
		35		1,000	
	(1)	970	3,500	3,000	
Montreal	Campeau	146		8,000	
	Metro Structures	300		15,000	50,000
	(2)	446		23,000	50,000
Ottawa	Campeau	120		600	
		325	1,000	2,700	
		2,600			59,000
	Costain	769			49,500
	(2)	3,814	1,000	3,300	108,500
Toronto -General	Campeau	14		25,000	10,000
	Revenue	24		1,650	
	(2)	38		26,650	10,000
Toronto -Pickering	Bramalea	745			12,000
	Runneymede	3,960			22,500
	(2)	4,705			34,500
Toronto -Uxbridge	Revenue	6,600			32,000
Toronto -Brampton	Bramalea	3,258			125,000
Toronto -Mississauga	Canadian Equity	6,678			150,000
	Markborough	3,900			75,000
	McLaughlin	600		8,200	
	(3)	11,178		8,200	225,000
Edmonton	Western	2,188			33,000
	BACM Ltd.	1,500			20,000
	Allarco	803			20,000
	(3)	4,491			73,000
Calgary	Paragon	30		532	
Vancouver	Marathon	90		3,000	
		35		180	
	Wall & Redekop	405		985	
		100	400		
	(2)	630	400	4,165	

SOURCE: Development Corporations Survey - 1973.

NOTE: These projections are based on varying time frames, but are all intended within twenty years.

TABLE: 4.10 DEVELOPMENT CORPORATIONS SURVEY
COMPARISON OF CORPORATE LAND HOLDINGS, USING VARIOUS DEVELOPMENT ASSUMPTIONS WITH ESTIMATES OF CURRENT LAND CONSUMPTION, METROPOLITAN AREAS.

URBAN REGION	RESIDENTIAL STARTS - 1972		ESTIMATED LAND CONSUMPTION			CORPORATE LAND HOLDINGS, COMPARED TO ESTIMATED LAND CONSUMPTION				
	DETACHED AND SEMI-DETACHED (LOW DENSITY)	ROW AND APARTMENTS (HIGH DENSITY)	LOW DENSITY (@ 5 UNITS PER ACRE)	HIGH DENSITY (@ 25 UNITS PER ACRE)	TOTAL (CURRENT MIX)	NO. OF CORP. OWNERS	ACREAGE HELD	NUMBER OF YEARS OF LAND SUPPLY IN CORPORATE OWNERSHIP[1] ASSUMING USE FOR LOW DENSITY DEVELOP. ONLY	ASSUMING DEVELOP. AT CURRENT DENSITY MIX	ASSUMING IT PROVIDES ALL CURRENT STARTS, AT HIGH DENSITY ONLY
HALIFAX	1,187	1,353	237	54	292	3	970	4	3	9.5
MONTREAL	10,118	14,613	2,024	585	2,608	6	3,486	2	1	3.5
OTTAWA-HULL	3,188	11,699	638	468	1,106	8	9,416	15	8	15.8
KINGSTON	541	603	108	24	132	1	34	0	0	.7
PETERBOROUGH	299	536	60	21	81	1	6	0	0	.2
OSHAWA	1,137	695	227	28	255	1	20	0	0	.3
HAMILTON	3,254	5,067	651	203	853	5	601	1	1	1.8
GUELPH	415	184	83	7	90	2	362	4	4	15.1
KITCHENER-WATERLOO	2,134	3,215	427	129	555	7	3,799	9	7	17.8
ST. CATHARINES	2,099	2,120	420	85	505	1	116	0	0	.7
LONDON	2,097	3,347	419	134	553	3	1,401	3	3	6.4
WINDSOR	1,301	1,682	260	67	327	1	270	1	1	2.26
THUNDER BAY	552	587	110	23	134	1	1,190	11	9	26.1
WINNIPEG	3,713	5,421	743	217	959	3	3,480	5	4	9.5
REGINA	1,037	267	207	11	218	1	39	0	0	.7
SASKATOON	794	83	159	3	162	1	234	1	1	6.7
EDMONTON	4,290	5,208	858	208	1,066	9	20,019	23	19	52.7
CALGARY	4,743	2,311	949	92	1,041	8	10,920	12	10	38.7
VICTORIA	1,293	2,899	259	116	375	1	96	0	0	.6
VANCOUVER	7,679	8,531	1,536	341	1,877	9	5,435	4	3	8.4
TORONTO	14,585	24,110	2,917	964	3,881	24	41,198	14	11	26.6
TOTAL	66,456	94,531	13,291	3,781	17,072	47	103,092	8	6	16.0

1. Assuming all development occurs on this land, at current levels of construction.

production projections that indicate the firms intend to maintain sizeable shares of the local housing market. As the firms hold this land inventory now, they can plan future operations with a base, in terms of location and cost, which are not subject to as many variable factors, or risk, as their competitors. Finally, as current acreage prices continue rising[1], any new purchases by these firms or their competitors will be more expensive. While the competitors must quickly turn over close-in, high-priced land to stay in business, the land bank companies can roll over their inventory, developing the close-in land and using the attendant capital appreciation to increase their inventory from cheaper acreage further out. This self-sustaining aspect of the land banks combined with their capacity for development in large scale integrated projects which are desired by local authorities, ensures that their owners will maintain a strong share of the housing market, and consequently, maintain the concentrated structure of the land development industry.

4.1.2. Other Characteristics of Private Developers

This section is a brief summary of other salient characteristics of the larger private developers, including

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1. Section 2.2 discussed the mechanism which produces rising raw land prices.

indicative data about their staff levels, extent of sub-contracting, integration within and beyond the firms, and ownership. The section concludes with some information about two key corporate operating sectors, income property and land development.

Development corporations do not directly employ large staffs. Statistics Canada reports the "Real Estate Operators and Developers" industrial sector pays about 1% of its total asset value in wages and salaries each year, while service industries pay about 30%, construction pays about 12% and manufacturing about 8%.[1] Even this low figure is probably inflated by the real estate operators sub-category, which is more labour extensive than developers. Charney's sample disclosed that, on average; small builder/developers (which produce less than 25 units per annum) directly employ 4 people; medium firms (25 to 100 units per annum) employ 17; and large firms (100 units plus) employ 57.[2] These typical staffs comprise, in approximately equal numbers, a core group of skilled tradesmen and labourers, and an office group including managers, secretaries, supervisors and salesmen. It is apparent that real estate development, while massive in scope, is undertaken by relatively small organizations.

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1. See Statistics Canada, Corporation Financial Statistics, Catalogue Number 61-207 annual, various recent years.
2. Charney, op.cit., p. 116.

These compact organizations are able to carry out huge projects through extensive use of subcontractors. Charney found 60% of all HUDAC member firms contracted more than 75% of their work[1], and subcontracts range from planning, architectural, accounting and engineering tasks to heavy and light construction, and all building trades. The development firm, then, is an entrepreneurial,owning,organizing and managing entity rather than a physical builder.

Major developers, such as the firms included in the Development Corporations Survey, are characterized by another organizational mode which may hide some of their effective staff - that of vertically integrated producers. Vertical integration is the inclusion of a number of functions or stages of a production process within one ownership. This functional integration reduces costs and thereby increases profit for the owning producer, relative to non-integrated competitors. In the case of these major developers, three, often simultaneous forms of integration are observed, which can be described as internal, corporate and conglomerate. The existence of any one of these higher organizational forms gives a firm a competitive advantage over non-integrated competitors, and thus, the existence of this characteristic

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1. Charney, op.cit., p. 148.

constitutes a structural threshold in the development of a firm. Since the dominant producers are now integrated, smaller firms must integrate themselves, individually, collectively or by joining the large firms, in order to achieve competitive cost efficiencies in their operations.

Internal integration is used here to describe those development firms that own, in their own names or through subsidiary companies[1], a number of their basic production functions. This is characteristic of the land banking builder/developer in the Development Corporations Survey, as these firms often include units specializing in realty, engineering, surveying, planning, building materials, construction materials, pre-fabrication, landscaping, construction, house building, sales, mortgaging, property management and other functions. Ownership of these functions provides the firms with specialized services and materials at cost, knowledgeable buyers, and assured scheduling which are not available to competitors, and the latter must obtain these production necessities from the integrated firm or independent suppliers as well as paying the suppliers profit. Within the integrated accounts, profit, major expenses, and depreciation can be shifted in response to management needs - such as varying taxes payable, altering apparent production

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1. Table 4.5 reported 272 subsidiary companies owned by 45 firms. Nine firms held ten or more subsidiaries.

costs, and distributing profit. The economic efficiency of the integrated structure can produce, relative to smaller competitors, higher profits or qualitatively superior housing at a given price. While the highly integrated developers may offer some qualitative superiority in their product, the continuing growth of these firms manifest in their on-going acquisitions of land and other companies, and construction of income property indicates they use their efficiency primarily for regenerative profit taking.

Corporate or horizontal integration is used here to describe the multi-faceted aspect of these firms operations, as discussed earlier in connection with Tables 4.5 and 4.6. Larger developers are active, and are often vertically integrated in several real estate fields, including the development, construction, rental and management of properties for residential, commercial and industrial use as well as building and operating hotels, trailer parks and homes for the elderly, and selling all of these types of property. This type of integration spreads the firm across the various markets for urban space and shelter, so the firm can shift its operating emphasis in response to current demands, or corner a share of the total market for new space. In smaller cities a firm can virtually control its competition's ability to build through horizontal integration of the range of bulk building materials and supplies, from

concrete and wood to bricks and metal siding. Most of the largest firms, such as Trizec, Cemp/Fairview, Campeau, Cadillac, Western and Bramalea, exhibit this characteristic, as do a number of other large firms.

The third form of integration prevalent among the large developers can be described as conglomerate. This level of integration occurs beyond the basic organization of the firm, in the form of intercorporate ownership and management, and joint ventures with other firms. Joint venturing by a few large firms can produce enormous projects involving many specialized skills and shared subcontracts. An example is Canadian Equity's Erin Mills project west of Toronto, owned by Cadillac and Fairview, developed by Canadian Equity, Fairview and Cadillac, and built by Cadillac, Costain, Shipp, Whitehall and West Credit River Homes.[1] Directorships of development firms are frequently held by directors of major financial institutions and other developers.[2] Finally, the ownership of many small development firms and some large firms is often closely held by other developers or financial corporations. These integrations can lower production and finance costs, improve access to capital, increase the

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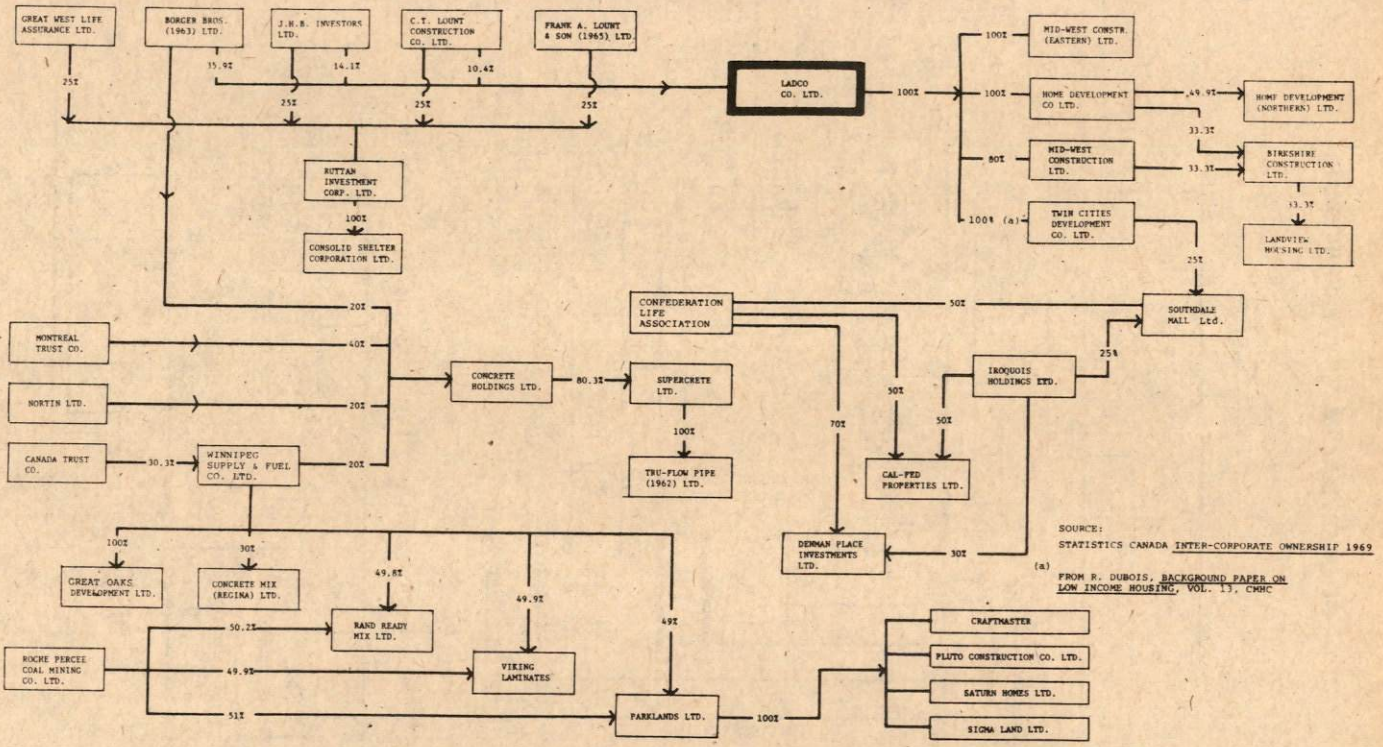
1. Other examples are outlined in Dennis, M. and S. Fish, Programs in Search of a Policy: Low Income Housing in Canada, Toronto: Hakkert 1972, p. 324.
2. Directorship and joint ventures are discussed in some detail in Clark, Penney and Seccombe, op.cit., pp. 16-76.

marketability of new housing, and provide specialized management for different phases of a development.

While these generalized descriptions have exemplified elements of the integrated structure of development corporations, in practice it is difficult to isolate parts of such large and variable organizations. Tables 4.11 and 4.12 demonstrate, respectively, the formal organization of two of Winnipeg's largest developers, the LADCO group and the BACM/Genstar structure. While the size and complexity of these firms is evident, and they are major developers in Winnipeg and Edmonton, these firms are relatively small in comparison with others in the Development Corporations Survey.

Tables 4.13 and 4.14 summarize the principal ownership of 47 of the firms in the Development Corporations Survey as of early 1974. Most of the firms, and particularly the largest ones, are public corporations although a predominant proportion of their shares are closely held. At least thirteen of the 47 are involved in interlocking ownerships. While most of the firms are Canadian-owned, nearly 40% of them, and nearly 50% of the public corporations are controlled by foreign interests, particularly British. Nationality of owners does not appear to vary with firm size. The foreign owners vary from British families to public stock corporations in the United States.

TABLE 4:11 LADCO OWNERSHIP CHART



SOURCE:
STATISTICS CANADA INTER-CORPORATE OWNERSHIP 1969

(a) FROM R. DUBOIS, BACKGROUND PAPER ON LOW INCOME HOUSING, VOL. 13, CMHC

GENSTAR / B.A.C.M. OWNERSHIP CHART

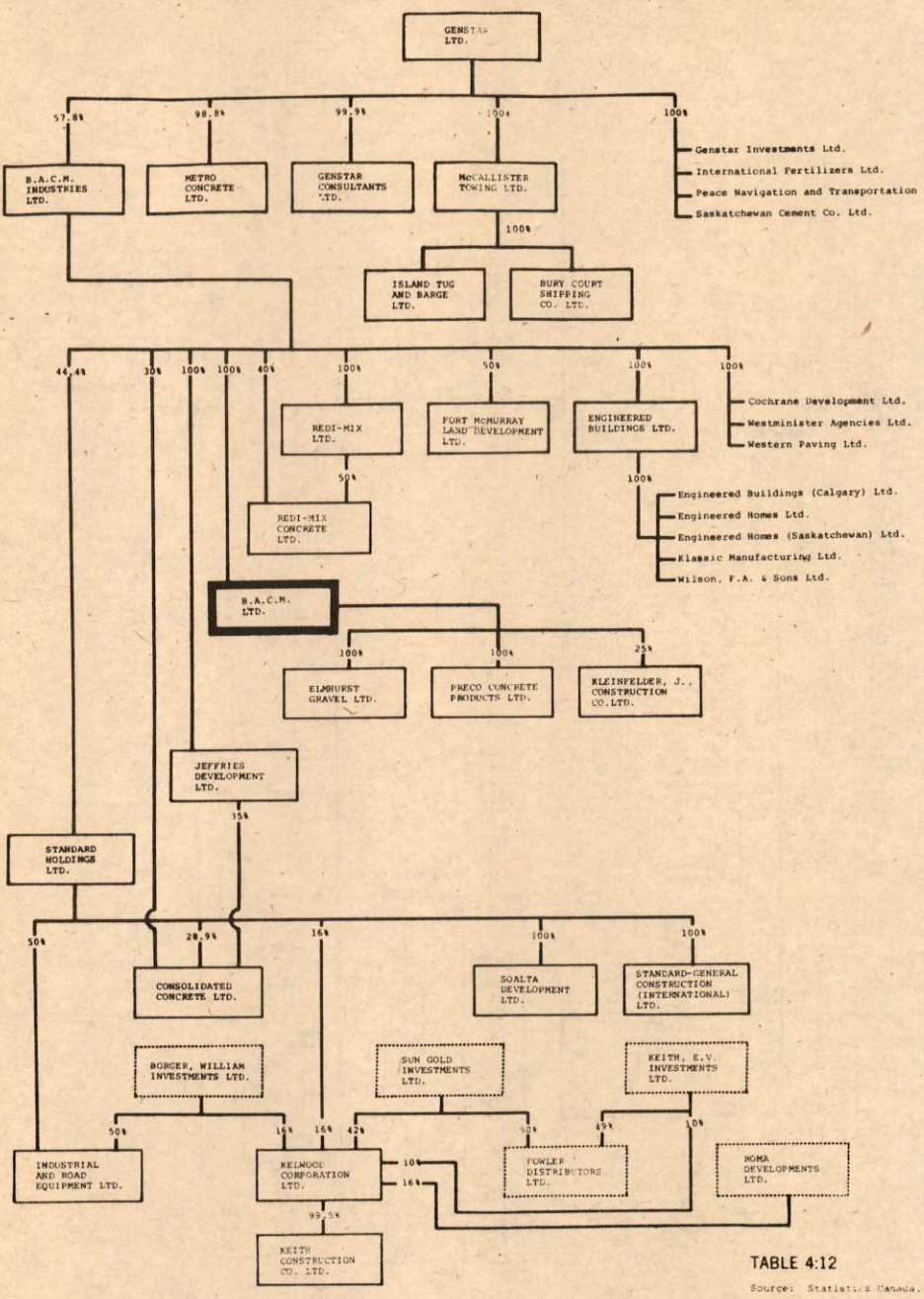


TABLE 4:12

Source: Statistics Canada,
INCORPORATE OWNERSHIP 1969

TABLE: 4.13 DEVELOPMENT CORPORATIONS SURVEY

SUMMARY OF PRINCIPAL OWNERS (DATA FROM PUBLISHED SOURCES, BUT ACCURACY UNVERIFIED)

NAME OF OWNED FIRM, ABBREVIATED	OWNERSHIP DATA OWNERS NAME (ABBREVIATED)	OWNER'S NATIONALITY	% OWNED	OWNER'S NAME (ABBREVIATED)	OWNER'S NATIONALITY	% OWNED	NOTES
PUBLIC CORPORATIONS							
ALLARCO	Dr. C. A. Allard	Canadian	49				
ALLIANCE	Slater Walker	British	38				See also Markborough
ASSALY	Thomas & Ernest Assaly	Canadian	90				
BACM INDUSTRIES	Genstar	Canadian	58	Societe Generale Belgique	Belgium	19	
				Portland Cement	British	11	
BRAMALEA	Bansco Ltd.	Canadian	15				
	Eagle Star Ltd.	British	10				Eagle Star Ltd. owns 18% of
	Br. Electric & Kayser	British	27				Star Holdings Ltd.(See Trizec)
CALEDON MT. ESTATES	McLaughlin	Canadian	96				See also McLaughlin
CAMBRIDGE	Tabachnick Family	Canadian	33				
	Eastern Construction	Canadian	40				
CAMPEAU	Robert Campeau	Canadian	16				
CANADIAN EQUITY	Cadillac	Canadian	42				Cadillac and Cemp/Fairview have
	Cemp/Fairview	Canadian	30				announced merger plans
CARMA	Nu-West	Canadian	35				See also Nu-West
CONSOLIDATED	Bovis Ltd.	British	20				
	L. Shankman	Canadian	18				
CORPORATE	Vincent Paul	Canadian	40				
COSTAIN	R.Costain (Holdings)Ltd.	British	49				
DAWSON	North American Life	Canadian	30				
	J. Poole	Canadian	30				
FAIRVIEW	Cemp	Canadian	70	Bronfman Family Trust	Canadian	100	Bronfman Trust owns Cemp
GT. NORTHERN CAPITAL	Capital Countries & Prop.	British	64				See also Western
HALIFAX	J. Jodrey & F. Sobey	Canadian	54				
HAMBROS	Hambroe Ltd.	British	42				
HEADWAY	R. Keenan & H. Ganja	Canadian	61				
LADCO	Borger Brothers	Canadian	35				
MAJOR	Vavasseur & Co.	British	49				
MARKBOROUGH	Slater Walker	British	10				Campeau Corp. offering takeover
MCLAUGHLIN	B. McLaughlin	Canadian	39				See also Caledon Mt.
MORENISH	Lehndorff Group	German	51				See also Y & R
NU-WEST	Ralph T. Scurfield	Canadian	48				See also Carma
PARAGON	C. Smith & N. Steinberg	Canadian	71				
SIFTON	Taylor Woodrow	British	50				
	Mowbray Sifton	Canadian	50				
TRIZEC	Star Holdings Ltd.	British	65				See also Bramalea
WESTERN	Capital Counties & Property	British	62				See also Gt. Northern Capital
Y & R	Morenish	German	52				
PRIVATE OR WHOLLY-OWNED CORPORATIONS							
BLOCK BROS.	AJ & HJ Block	Canadian	100				
BRITISH PROPERTIES	Guinness Family	British	99				
BUILDEVCO	Dutchman Homes	Canadian	49				
	Harold Fruere	Canadian	49				
CITY PARKING	Bernard Herman	Canadian	100				
CLAYTON	L. E. Shaw	Canadian	100				
CONCORDIA	Concordia Inc.	U.S.A.	100				
GTR. YORK GP.	G.Shefsky & E. Cogan	Canadian	100				
GROSVENOR-LAING	Grosvenor-Laing Holdings	British	100				
KAUFMAN & BROAD	Kaufman & Broad	U.S.A.	100				
MACLAB	J.de la Bruyere-S.MacTaggart	Canadian	100				
MARATHON	Canadian Pacific	Canadian	100				
METRO STRUCTURES	Metro Structures	U.S.A.	100				
MINTO	Greenberg Family	Canadian	100				
OLYMPIA & YORK	Reichmann Family	Canadian	100				
PINETREE	Tanenbaum Family	Canadian	100				
WALL & REDEKOP	P.Wall,P.J. Redekop,B.Lee	Canadian	100				
WIMPEY	George Wimpey Ltd.	British	100				

TABLE: 4.14 DEVELOPMENT CORPORATIONS SURVEY

SUMMARY OF OWNERSHIP, BY NATIONALITY

NAME OF OWNED FIRM	LOCATION OF FIRM'S HEAD OFFICE	PERCENTAGE OF DIRECT OWNERSHIP, BY NATIONALITY				
		CANADA	GREAT BRITAIN	U.S.A.	W. GERMANY	OTHER
PUBLIC CORPORATIONS --CANADIAN						
ALLARCO	Edmonton	49%				
ASSALY	Ottawa	90				
BACM	Winnipeg	58				
CALEDON MT.	Toronto	96				
CAMBRIDGE	Toronto	73				
CAMPEAU	Ottawa	16				
CAN. EQUITY	Toronto	72				
CARMA	Calgary	35				
CORPORATE	Toronto	40				
DAWSON	Vancouver	60				
FAIRVIEW	Montreal	70				
HALIFAX	Halifax	54				
HEADWAY	Thunder Bay	61				
LADCO	Winnipeg	35				
MCLAUGHLIN	Toronto	39				
NU-WEST	Calgary	48				
PARAGON	Calgary	71				
SUBTOTALS - 17	9	(17)56.8%				
PRIVATE OR WHOLLY-OWNED CORPORATIONS -CANADIAN						
BLOCK BROS.	Vancouver	100				
BUILDEVCO	Kitchener	98				
CITY PARKING	Toronto	100				
CLAYTON	Halifax	100				
GTR. YORK	Toronto	100				
MACLAB	Edmonton	100				
MARATHON	Calgary	100				
MINTO	Ottawa	100				
OLYMPIA & YORK	Toronto	100				
PINETREE	Toronto	100				
WALL & REDEKOP	Vancouver	100				
SUBTOTALS - 11	7	(11)99.8%				
PUBLIC CORPORATIONS - FOREIGN						
ALLIANCE	Toronto		38			
BRAMALEA	Toronto	15	37			
CONSOLIDATED	Toronto	18	20			
COSTAIN	Toronto		49			
GT. NORTHERN CAP.	Toronto		64			
HAMBROS	Toronto		42			
MAJOR	Kitchener		49			
MARKBOROUGH	Toronto		10			
MORENISH	Toronto				51	
SIFTON	London	50	50			
TRIZEC	Montreal		65			
WESTERN	Edmonton		62			
Y & R	Toronto				52	
SUBTOTALS - 13	5	(3)27.6%	(11)44.1%		(2)51.5%	
PRIVATE OR WHOLLY-OWNED CORPORATIONS - FOREIGN						
BRITISH	Vancouver		99			
CONCORDIA	Montreal			100		
GROSVENOR-LAING	Vancouver		100			
KAUFMAN & BROAD	Toronto			100		
METRO STRUCTURES	Montreal			100		
WIMPEY	Toronto		100			
SUBTOTALS - 6	3		(3)99.6%	(3)100%		
TOTALS						
ALL PUBLIC - 30	11	(20)52.5%	(11)44.1%		(2)51.5%	
ALL PRIVATE - 17	8	(11)99.8%	(3)99.6%	(3)100%		
ALL CANADIAN - 28	10	(28)73.7%				
ALL FOREIGN - 19	6	(3)27.6%	(14)56.0%	(3)100%	(2)51.5%	
ALL CORPS - 47	11	(31)69.3%	(14)56.0%	(3)100%	(2)51.5%	

to a German workers investment fund, and are not readily categorized. Canadian private corporations are usually family businesses, or partnerships. In general, while the ownership of large development firms is varied in nature, across this spectrum of owners it is common that a controlling core of direct or share equity is closely held.

The survey demonstrates that foreign ownership is prevalent among the larger real estate developers,[1] a situation which has drawn considerable criticism recently. While many people consider foreign ownership undesirable, a priori, it is useful to identify actual variances between foreign and non-foreign firms. Three variances are apparent, one of which may warrant further investigation from the viewpoint of Canadian land policy. Firstly, most foreign-owned firms have head offices in Montreal, Toronto and Vancouver. While there is a similar locational tendency among Canadian-owned firms, there are few exceptions among the foreign companies. This choice of locations probably

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1. Similar indications are seen in the following:
   a) Canada's largest realtor A.E. LePage Ltd., estimates that 35% of its corporate time is spent with European and Asiatic investors (Financial Times, 9 April 1973, p. 18.)
   b) Thirteen British-owned developers own 20,000 acres between Oshawa and Burlington (Ottawa Citizen, 12 August 1973, p. 6.)
   c) It is estimated that $1,000 million has been invested in Canadian real estate by German citizens. (Financial Post, 16 June 1973, p. 3.)

reflects the international banking, finance and travel capabilities of the three cities, but regardless, the evident concentrations of developers' operations in their head office regions[1] implies that these firms help focus growth momentum on the largest metropolises. Secondly the foreign firms export some proportion of their profits, using up some Canadian foreign exchange credits and removing some money from circulation in Canada.[2] Finally, it is often claimed that foreign owners are satisfied with a lower rate of return on their investments than is typical here. As it is unlikely this would occur through altruism, it would require that the foreign firm has higher expenses than domestic producers. In land markets, this could imply that foreign buyers inflate prices by paying too much for unfamiliar Canadian property. If this inflationary situation does exist, it would constitute a significant disadvantage of foreign ownership, otherwise the activities of foreign firms seem quite similar to those of domestic developers.

To complete this introduction to development corporations it is useful to review some information about two of their major residential activities - land development and the operation of income property. This brief review includes

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1. This concentration was described in connection with Table 4.8.
2. Reduced circulation in the sense of lessened multiplier effect and perhaps reduced re-investment.

samples of operating data concerning income property generally, and several major developers property.

Table 4.15 and 4.16 summarize some samples of financial and other data concerning various types of income property. Table 4.15 reports a small general sample of operating costs of properties in Canada's largest cities, published by the Institute of Real Estate Management. It indicates that, generally, 40%-50% of the gross rentals generated by all income properties goes to operating expenses, leaving 50%-60% for debt service, income taxes and profit. Expenses as a proportion of gross income are lower in row-type buildings, are becoming lower over time, and are lower in Ottawa, Toronto, Victoria and particularly Vancouver. The tenant appears to receive more rooms per rent dollar expended in large low-rise apartments generally, and in Montreal, Ottawa and Toronto generally. Expenses appear high in Montreal except in elevator apartments, and this high expense/low rent situation reflects the large competitive rental market in the city, while the converse low expense/ high rents scenario in Vancouver may reflect the low proportion of apartments in this region's housing stock. Property taxes are usually the largest single operating expense, accounting for 30%-60% of all expenses with varying incidence among building types and through time. In

TABLE 4.15 SAMPLE OF APARTMENT INCOME AND EXPENSE DATA, SELECTED CANADIAN CITIES - 1966, 1968, 1970

	1966					1968						1970					
	MONTREAL	OTTAWA	TORONTO	VICTORIA	CANADA	MONTREAL	OTTAWA	TORONTO	VANCOUVER	WINNIPEG	CANADA	MONTREAL	OTTAWA	TORONTO	VANCOUVER	WINNIPEG	CANADA
GARDEN TYPE APARTMENTS																	
Complexes sampled	2		3		7			2	2		5	3		2	4		10
1. Av. Apts. Per Complex	346		42.7		128.4			161.5	189.5		152	108.7		271.0	130.7		144.7
2. Av. Rooms per Apt.	4.1		4.3		4.1			4.2	4.5		4.5	4.1		4.7	4.0		4.3
3. Av. Rent per Apt.	106.55		138.55		112.48			131.87	196.83		164.55	117.89		158.33	214.47		170.04
4. Av. Ann. Net Income per Apt.	616.39		978.72		674.41			732.86	1630.35		1183.05	431.36		1130.82	1680.04		1185.38
% of Gross																	
- Net	46.0		56.7		48.7			44.3	63.9		55.9	29.1		55.3	62.1		54.9
- Expenses	52.6		42.9		50.1			55.3	34.9		43.2	58.3		43.4	35.8		41.6
- Property Tax	17.1		17.8		17.4			23.4	11.8		16.5	24.3		16.2	13.1		15.9
LOW-RISE APARTMENTS (12-24 UNITS)																	
Buildings Sampled	4	5			13	6	4		7		22	5	3		5		16
1. Av. No. per Bldg.	15.7	15.4			15.9	15.8	15.5		19.3		16.9	15.0	18.0		18.2		17.1
2. Av. Rooms per Apt.	3.6	4.1			3.7	3.8	4.2		2.9		3.4	3.6	3.1		3.0		3.3
3. Av. Rent per Apt.	117.53	102.38			107.02	136.56	107.33		111.80		118.57	117.45	118.02		116.72		120.72
4. Av. Ann. Net Inc. per Apt.	639.90	566.09			614.20	738.83	668.18		820.61		779.18	664.42	876.46		806.70		804.44
% of Gross																	
- Net	44.4	45.4				43.0	50.8		59.6		53.0	46.3	52.2		56.2		53.2
- All expenses	55.6	48.8				56.9	42.5		39.7		45.6	53.6	46.8		42.9		45.6
- Property Tax	14.9	20.4				18.0	19.5		13.3		15.9	17.6	18.1		13.6		15.6
LOW-RISE APARTMENTS OVER 25 UNITS																	
Buildings Sampled	3	5	4	3	16		3	7	3		16	2			11		16
1. Av. Apts. per Bldg.	28.7	40.4	58	40	42		41	60.1	36.3		46.4	25.5			56.1		49.3
2. Av. Rooms per Apt.	3.4	4.06	2.8	3.0	3.3		4.2	3.4	2.9		3.5	4.6			3.5		3.6
3. Av. Rent per Apt.	96.97	100.03	103.76	97.55	99.99		124.56	127.44	130.48		127.27	134.86			141.96		143.93
4. Av. Ann. Net Inc. per Apt.	589.32	614.03	607.85	611.91	612.61		810.77	796.42	1006.01		820.33	781.31			1081.39		1021.21
% of Gross																	
- Net	47.9	50.0	48.2	51.0	50.0		54.1	49.9	62.4		52.5	45.1			60.6		57.4
- Expenses	50.4	44.0	50.9	45.5	47.1		40.6	49.0	36.4		45.6	53.9			37.7		40.7
- Property Tax	14.1	19.3	23.4	15.1	19.2		17.5	21.3	12.7		18.8	18.1			13.8		15.2
ELEVATOR APARTMENT BUILDINGS																	
Buildings Sampled	6	3	10		24	4	4	7	2	3	25	6	5		6	2	20
1. Av. Apts. per Bldg.	61	113	77		79	51	113	87	180	66	99	136	101		134	70	117
2. Av. Rooms per Apt.	4.8	3.0	3.0		3.5	4.5	3.2	3.1	3.1	3.8	3.4	3.7	3.4		3.7	4.1	3.7
3. Av. Rent per Apts.	171.36	137.11	118.28		140.50	254.09	140.33	124.82	121.31	170.77	149.28	184.90	156.80		171.64	207.23	174.71
4. Av. Ann. Net Inc. per Apt.	823.06	703.95	819.78		818.19	1380.87	910.43	814.06	1016.12	994.31	1008.81	1270.81	959.51		1351.09	1359.60	1247.75
% of Gross																	
- Net	37.9	41.1	54.4		45.2	42.5	50.1	51.1	59.0	45.7	52.1	49.6	47.2		60.7	52.1	53.1
- Expenses	61.9	41.6	43.4		47.2	56.2	45.6	46.7	36.3	49.4	45.3	43.9	46.6		36.7	45.6	42.1
- Property Tax	22.8	17.6	19.8		19.1	21.7	18.3	21.9	15.0	17.3	18.4	18.5	19.5		15.0	17.0	17.3

Source: Calculated from data in Institute of Real Estate Management, Apartment Building Income/Expense Analysis, 1967, 1969, 1971 editions.

Notes: Average Rents per apartments do not include parking and are monthly.
Average net income per apartment is new annual income before income tax and debt service, on a per apartment basis.

TABLE: 4.16 APARTMENT INCOME AND EXPENSE DATA, NHA FINANCED DWELLINGS
SELECTED CANADIAN CITIES -- SEPTEMBER 1971 TO SEPTEMBER 1972

	HALIFAX	QUEBEC	MONTREAL	HULL	OTTAWA	TORONTO	HAMILTON	LONDON	KITCHENER	KINGSTON	SUDBURY	WINNIPEG	EDMONTON	CALGARY	VANCOUVER	VICTORIA	CANADA	CANADA Non-Profit	CANADA Profit
ROW - TYPE APARTMENTS																			
Buildings sampled	3	4	9	2	20	21	22	10	8	6	3	18	19	6	4	5	233	74	149
1. Av. Apts. Per Bldg.	24	20	63	42	38	82	39	36	26	49	52	31	59	25	44	28	43	48	40
2. Av. Rooms per Apt.	5.7	5	5.2	5.6	5.7	5.6	5.4	5.2	5.3	5.5	5.6	5.4	5.3	5.7	5	5.1	5.3	5.5	5.3
3. Av. Rent per Apt.	$138	179	150	216	185	206	188	181	186	105	171	127	141	208	$177	185	165	111	192
4. Av. Net Ann. Income per Apt.	$997	1385	1053	1304	1313	1531	1493	1295	1550	424	1176	639	1015	1664	$1460	1471	1198	469	1560
% of Gross Income																			
- Net Income	60.1	64.6	58.4	50.1	59.0	61.9	66.3	59.8	69.5	33.8	57.1	42.0	59.7	66.6	68.1	66.4	60.5	35.1	67.7
- All Expenses	39.9	35.4	41.6	49.6	41.0	38.1	33.7	40.2	30.5	66.2	42.9	58.0	40.2	33.4	31.9	33.6	39.5	64.9	32.3
- Property Taxes	18.6	18.2	26.3	25.5	19.8	19.4	19.2	18.3	16.0	27.6	19.8	25.3	19.6	14.1	14.3	11.8	18.9	28.5	16.4
WALK-UP APARTMENTS																			
Buildings Sampled	2	16	107	8	9	2		10	3	3		34	38	13	6	3	638	64	574
1. Av. Apts. Per Bldg.	30	189	524	12	27	120		26	61	57		48	53	27	90	15.9	26	46	23
2. Av. Rooms per Apt.	4.4	4.7	4.3	4.3	4.6	5.1		4.5	4.3	4.6		4.0	4.3	4.1	4.1	4.4	4.1	4.2	4.4
3. Av. Rent per Apt.	$170	144	101	141	149	188		150	151	133		138	150	141	$172	158	125	105	133
4. Av. Net Ann. Income per Apt.	1362	1048	759	1083	1075	1596		1030	1082	861		986	1128	1005	$1220	1114	935	618	1001
% of Gross Income																			
- Net Income	66.8	60.7	62.6	64.1	60.1	80.6		57.3	59.8	53.3		59.5	62.8	59.5	58.1	58.6	62.2	49.0	62.6
- All Expenses	33.2	39.3	37.4	35.9	39.9	29.4		42.7	40.2	46.2		40.5	37.2	40.5	40.9	41.4	37.8	51.0	37.4
- Property Taxes	14.1	18.7	19.9	19.0	20.4	12.0		19.4	17.2	18.2		15.6	15.0	15.4	12.2	12.9	17.7	19.5	12.9
ELEVATOR APARTMENTS																			
Building Sampled	3	8	18	15	30	70	23	10	5	4	4	9	6	8	23	16	301	13	288
1. Av. Apts. Per Bldg.	174	464	122	150	171	189	140	93	141	71	84	180	54	118	129	48	139	124	140
2. Av. Rooms per Apt.	3.6	3.7	3.5	3.8	4.0	4.2	4.3	4.0	4.3	4.3	3.9	3.6	3.9	4.1	3.8	3.8	4.1	4.9	4.0
3. Av. Rent Per Apt.	$176	169	164	164	188	178	159	155	178	135	151	154	184	160	$151	146	169	120	170
4. Av. Net Ann. Income Per Apt.	1326	1183	1096	1184	1338	1285	1094	1072	1252	782	1017	1104	1359	1186	$1048	1045	1203	593	1218
% of Gross Income																			
- Net Income	62.8	58.3	55.7	60.1	59.2	60.0	57.4	57.6	58.7	48.3	56.2	59.7	61.4	61.6	57.7	59.7	59.2	41.1	59.6
- All Expenses	37.2	41.7	44.3	39.9	40.8	40.0	42.6	42.4	41.3	51.7	43.8	40.3	38.6	38.4	42.3	40.3	40.8	58.9	40.4
- Property Taxes	14.1	20.0	24.0	17.0	20.7	20.6	20.2	18.7	18.9	20.2	18.2	17.6	15.7	14.9	14.0	14.4	18.7	25.6	18.6

Source: CMHC Appraisal Division

general, these taxes appear lower in Vancouver[1] and higher in the eastern centres.

Table 4.16 reports similar data from a larger sample of apartments in more cities during 1971-1972. The data are collected by CMHC from applicants for NHA loans, and includes both buildings operated on a profit and non-profit basis. There is a tremendous difference between the two financial strategies. The average tenant in a "profit basis" row house pays 72% more rent for 4% fewer rooms than a tenant in a "non-profit" row house. In a "profit" high rise, the average tenant pays 41% more rent for 19% less rooms, while in "profit" walk-up, the tenant receives 4% more rooms for 26% more rent. On a "per room" basis, the tenant in a "profit" row house or elevator apartment building pays a rent premium of about 75%, while this premium falls to about 20% in walk-up buildings. From the viewpoint of the owner, the actual dollar expense per room is 11% and 12% cheaper in row and walk-up buildings respectively, when operated for profit, but expenses per room in "profit" high-rises are 20%

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1. Another study of 65 apartment buildings in metropolitan Vancouver in 1970 found 66% of apartments paid between 13%-16% of their gross income in property taxes, and only 12% of buildings (mainly frame structures) paid a higher proportion. White and Hamilton, The Real Property Tax in British Columbia, op. cit., p. 43.

higher than those in "non-profit" buildings. Taxing authorities appear to have mixed feelings about the two types of buildings. Average property taxes per room on "profit" high rises are 19% higher than on non-profit, while the walk-ups which are favoured by non-profit operators pay 20% higher taxes than profit walk-ups and tax treatment of both types of row houses is about equal. The heaviest taxes apply to high rises and walk-ups pay the lowest tax. It should be noted that these figures and comparisons are based on national average data concerning new buildings, and do not necessarily apply to any city. However, these indications of the benefits to users of non-profit buildings invite further investigation; warrant a general commendation to the co-operatives, service and religious organizations, industries and builders who have chosen to build under the "non-profit" programs; and suggest that municipal governments might reconsider their taxing policies concerning non-profit walk-up buildings.

The city by city section of Table 4.16 aggregates profit and non-profit dwellings. In general, the data follows the pattern of Table 4.15, with expenses at about 40% of gross income for high rises and row houses, and slightly lower for walk-up. Expenses appear particularly high in Kingston, and generally higher in smaller cities. Property taxes are the dominant expense, and are highest in

the province of Quebec and smaller cities in southern Ontario. Nova Scotia, Alberta and British Columbia take the lowest proportion of gross income as property taxes. Net income reaches the highest proportions of gross income in: row buildings in Halifax, Quebec, Hamilton, Kitchener, Calgary, Edmonton, Vancouver and Victoria; walk-ups in Halifax, Montreal, Hull, Toronto and Edmonton; and in high rises the proportion is quite constant around 59% except in Kingston where it falls to 48%.

Table 4.17 concerns the same buildings reported in Table 4.16, and contains averages of estimates made by both loan applicants and CMHC appraisers of the land cost per unit, and annual returns on equity, associated with these buildings. CMHC appraises buildings and sites to determine lending values. The variance between the CMHC estimates and the loan applicants estimates indicates the considerable and frequent extent that CMHC appraisers consider loan applicants overvalue their property. The objective of this overvaluing is seen in the "return on equity" columns, which are calculations of average annual yields using the loan amounts requested by the applicant, and those authorized by the Corporation. It is apparent that mortgage houses such as CMHC can exercise a considerable

TABLE: 4.17 AVERAGE LAND AND TOTAL COSTS PER UNIT, AND ESTIMATED ANNUAL RETURN ON EQUITY, NHA FINANCED BUILDINGS, CANADIAN CITIES, SEPTEMBER 1971 TO SEPTEMBER 1972

CITY	ROW TYPE BUILDINGS							WALK-UP APARTMENTS						ELEVATOR APARTMENTS					
	NO. OF BLDGS.	LAND COST OWNER ESTIMATE	LAND COST CMHC ESTIMATE	LAND AS % OF TOTAL COST OWNER ESTIMATE	LAND AS % OF TOTAL COST CMHC ESTIMATE	ANNUAL EQUITY RETURN USING OWNER FIGURES	ANNUAL EQUITY RETURN USING CMHC FIGURES	NO. OF BLDGS.	LAND COST OWNER ESTIMATE	LAND COST CMHC ESTIMATE	LAND AS % OF TOTAL COSTS OWNER ESTIMATE	LAND AS % OF TOTAL COSTS CMHC ESTIMATE	ANNUAL EQUITY RETURN USING OWNER FIGURES	ANNUAL EQUITY RETURN USING CMHC FIGURES	NO. OF BLDGS.	LAND COST OWNER ESTIMATE	LAND COST CMHC ESTIMATE	LAND AS % OF TOTAL COSTS OWNER ESTIMATE	LAND AS % OF TOTAL COSTS CMHC ESTIMATE	ANNUAL EQUITY RETURN USING OWNER FIGURES	ANNUAL EQUITY RETURN USING CMHC FIGURES
HALIFAX	3	$2562	$2000	16%	13%	2%	4%	2		$ 919	7%	6%	17%	7%	3	$1781	$1126	11%	7%	13%	8
QUEBEC	4	1114	1072	8	8	29	6	16	1189	893	11	8	18	5	8	1367	1363	10	10	11	6
MONTREAL	9	991	1011	8	7	8	9	107	1916	1929	16	18	18	8	18	1988	1698	13	12	13	7
HULL	2		2914	19	16	9	5	8	1264	996	11	9	11	8	15	1265	1029	9	8	11	8
KINGSTON	6	1364	1490	8	9		4	3	473	1265	4	10		4	4	1404	1163	10	8		4
OTTAWA	20	2139	1496	11	10	14	3	9	1462	1462	10	10	13	7	30	1648	1128	10	7	12	6
TORONTO	21	7354	6874	28	27	9	7	2		2498	17	17	10	21	70	3345	3196	19	19	12	7
HAMILTON	22	4264	3768	21	18	11	4								23	2201	1531	14	11	13	6
LONDON	10	2840	2242	17	12	13	3	10	1506	1081	13	9	22	7	10	1615	1252	12	9	13	6
KITCHENER	8	7763	2643	16	15	12	4	3	1675	1458	12	11	8	4	5	1444	1359	9	8	10	6
SUDBURY	3	3939	2276	20	12	17	6								4	1428	1382	10	9	12	7
WINNIPEG	18	2146	1972	11	10	17	5								9	916	838	6	6	10	6
EDMONTON	19	3027	2677	18	16	15	7	38	2125	2005	16	16	14	6	6	2630	2097	14	11	13	7
CALGARY	6	2556	1733	12	8	12	6	13	1671	1813	13	15	13	5	8	1266	1702	8	11	13	7
VANCOUVER	4	2524	2454	15	15			6	2454	1876	18	14			23	2111	1909	14	14	9	5
VICTORIA	5	1748	1738	9	9	12	7	3	1357	894	9	6	9	3	16	1825	1509	14	12	10	5
NHA CANADA																					
-NON PROFIT	74	4258	4044	20	19			84	1231	1565	10	12			13	3039	2829	16	15		
-PROFIT	149	2807	2413	16	13	12	5	574	1355	1212	11	10	14	7	288	2160	1894	14	12	12	6
-ALL	223	3348	3028	17	16	12	5	636	1349	1225	11	10	14	7	301	2189	1929	14	13	12	6

SOURCE: CMHC APPRAISAL DIVISION

profit-limiting function in their lending activities.[1]

The two tables also demonstrate a general tendency for non-profit buildings to locate on much more expensive land than profit buildings. In general, non-profit buildings have higher land costs per unit, higher land to total cost per unit relationships, and more units per building. If further examination showed the non-profit sites to be superior locations, this would constitute another significant credit to this housing program. On the other hand, if the sites are not superior, it would demonstrate a gross inefficiency (as the total land costs average 32% higher for elevator buildings, 158% higher for walk-ups, and 101% higher for row houses.)

It is interesting to note the levels of equity return anticipated by borrowers - these are quite similar to findings of two other recent studies of rates of return on income property. Woods, Gordon and Co. examined average annual rates of return, after tax, on apartment investment during the 1960s and determined: individual apartment owners averaged 57.2% per annum; private corporations received 50.2% per annum; and public corporations averaged

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1. The extent of this activity is suggested by the coverage of Tables 4.16 and 4.17, which involves 10,019 rentable units in 223 buildings.

only 19.2% per annum.[1] It is notable that, in the late 1960s, about 50% of all rental income was received by individuals. Walter Keyser, vice-president of Gardiner and Co. Ltd., reported in 1972 that ten to fifteen year old apartments containing 85 to 100 units and located in lower middle class districts of Toronto were yielding upwards of 35% per annum, including capital appreciation and leveraging.[2] It appears, then, that while income property can yield very high returns, large corporations[3] generally settle for lower annual yields. This sharply contradicts the widely-held notion that the large developer/landlords commit the worst excesses in "ripping-off" their tenants. While there is not adequate data to determine rates of return by class of investor, the Woods, Gordon data certainly indicates that individuals and their private companies take the highest profits from real estate, and examination of income tax data for individuals and corporations certainly supports this finding. Any

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1. Woods, Gordon and Co. Comparative Survey of the Rates of Return on Apartment and Stock Investment, 1960-1969, 1970 as reported in a paper presented by Frank A. Clayton, Canadian Real Estate Research Corporation to the 23rd Tax Conference, Canada Tax Foundation, Vancouver, 17 November 1971.
2. Quoted in Belford, Terrence "Investment Properties ....", Globe and Mail, 12 May 1972, p. B-3.
3. It should be noted that most of the borrowers reported in Tables 4.16 and 4.17 are also those firms classified as "large" in Table 4.4

readers interested in observing the ethics for income tax purposes, of landlords by occupational group, are invited to examine Table A-10, and note in particular, the employment of that minority of landlords in the top half of the table who report spending more money on their property than it earns, while charging above-average rents.

Table 4.18 is a summary of data from seven developers annual reports which provides some indication of the returns received by these firms from income property operations. As these figures include mortgage and depreciation expenses, they are not comparable with the data in Tables 4.15 and 4.16. They indicate that the larger developers pay income tax on their rental properties, unlike most professionals in Table A-10, and their pre-tax rate of profit on gross income is in the range 5% - 18% and appears to be falling. The pre-tax rate of return on invested capital (not necessarily equity capital) is in the 1% to 3% range. Debt service is the major single expense, taking 25% to 40% of gross income, and as total costs exceed gross incomes by 800% - 1100% the building repayment periods are 20 to 40 years. It appears, then, that the corporate strategy for income property is to seek longer term gains through capital appreciation while maintaining the investment through modest current returns.

TABLE : 4.18

INCOME/EXPENSE DATA - SELECTED DEVELOPMENT CORPORATIONS

ALL DATA IN THOUSANDS OF DOLLARS FROM FIRMS 1972 ANNUAL REPORTS

	BRAMALEA	CADILLAC	CAMPEAU	G.N.C.	HEADWAY	NU-WEST	WESTERN
		1 9 7 2					
	$	$	$	$	$	$	$
ALL INCOME PROPERTY AT COST	37,743	189,731	200,915	15,483	20,674	11,508	52,600
GROSS REVENUE	3,923	31,135	32,881	1,977	1,043	1,421	6,670
- ALL EXPENSES	3,715	26,548	28,987	1,043	900		5,814
- OPERATING EXPENSE		14,301	18,110				2,069
- MORTGAGE EXPENSE		10,718	7,746				3,092
- DEPRECIATION		1,529	3,131	676	63		653
NET INCOME	208	4,587	3,894	257	143		855
- AS % OF GROSS - ALL EXPENSES	95%	85%	88%	53%	86%		87%
- OPERATING EXPENSE		46%	55%				31%
- MORTGAGE EXPENSE		34%	24%				46%
- DEPRECIATION		5%	10%	34%	6%		10%
- NET INCOME	5%	15%	12%	13%	14%		13%
		1 9 7 1					
ALL INCOME PROPERTY AT COST	18,257	163,459	192,786	17,747	6,306	7,859	45,195
GROSS REVENUE	3,930	26,495	26,204	1,108	567	747	4,935
- ALL EXPENSES	3,617	22,116	22,528	1,139	465		4,425
- OPERATING EXPENSE		11,920	12,069	575			1,989
- MORTGAGE EXPENSE		8,903	7,825				2,000
- DEPRECIATION		1,293	2,634	564	28		436
NET INCOME	313	4,379	3,676	- 31	102		510
- AS % OF GROSS - ALL EXPENSES	92%	83%	86%	103%	82%		90%
- OPERATING EXPENSE		45%	46%	52%			40%
- MORTGAGE EXPENSE		34%	30%				41%
- DEPRECIATION		5%	10%	51%	5%		9%
- NET INCOME	8%	17%	14%		18%		10%

Finally, Table 4.19 provides some indication of the extent of a landlords interaction with tenants in the open market. It contains tenant turnover data about the same buildings described in Tables 4.16 and 4.17, thus describing the landlord's dealings with new tenants as opposed to the captive market of existing tenants. Turnover rates are surprisingly high,in the 20-35% range for all categories of buildings,and appear to be rising. Tenants appear to move less frequently in smaller centres than in the larger metropolae. The implication of this data is that landlords must regularly attract new tenants as between one in five and one in three tenants vacate their premises each year. This high mobility requires that the landlord's rents are competitive, and as a large number of private individuals collect about 50% of gross annual rents, it seems unlikely that the large firms can oligopolize the rental market.

Tables 4.20 and 4.21 are reconstructions of data provided in annual reports which yield considerable insight into several of the largest developers land operations. Table 4.20 summarizes land and total revenue of two firms - Richard Costain (Canada) Ltd., and Bramalea Consolidated Developments Ltd., during several recent years. The table is intended to illustrate the significance of land operations in a developers enterprize and current trends in these

TABLE: 4.19 RATES OF TENANT TURNOVER

TURNOVER AS PERCENTAGE OF TENANT POPULATION,
BY TYPE OF APARTMENT BUILDING, BY YEAR

CITY	ELEVATOR BUILDINGS			LOW-RISE BUILDINGS OVER 25 UNITS			LOW-RISE BUILDINGS UNDER 25 UNITS			GARDEN-TYPE BUILDINGS		
	1966	1968	1970	1966	1968	1970	1966	1968	1970	1966	1968	1970
MONTREAL	16.5%	24.9%	16.4%	46.5%	35.3%	15.7%	30.2%	30.5%	25.3%	11.1%	12.1%	20.6%
QUEBEC	25.0	13.0										
OTTAWA	10.6	50.0	32.4	20.3	29.3	45.7	19.5	32.3	42.6			
TORONTO	35.5	27.2		34.2	27.3	16.7	16.2	6.3	13.6	36.7	22.9	35.4
HAMILTON		17.1								22.2		
WINDSOR					57.9	52.6			21.4			
SARNIA		17.0		10.5			27.8					
SUBDURY		21.7										
WINNIPEG	32.8	31.3	13.6									
REGINA									38.9			
EDMONTON	30.8	16.9										
CALGARY			36.5					53.1				64.3
VANCOUVER		40.7	10.0		33.6	25.9	66.7	20.7	19.4		42.7	44.9
VICTORIA				16.7								
CANADA	26.2	30.7	22.0	27.2	30.6	27.8	25.6	26.9	27.1	14.7	32.0	36.6

SOURCE: Institute of Real Estate Management, Apartment Building Income-Expense Analysis, (Chicago: the Institute). 1967, 1969 and 1971 editions.

NOTE: This data is based on small samples.

TABLE : 4.20

LAND REVENUE AND TOTAL REVENUE-SELECTED ANNUAL REPORTS

FIRM NAME (ABBREV.)	COSTAIN								BRAMALEA			
YEAR OF REPORT	1972		1971		1970		1969		1972		1971	
	($000s)	%	($000s)	%	($000s)	%	($000s)	%	($000s)	%	($000s)	%
ACREAGE	2218 ac		2058 ac		1944 ac		--		4960 ac		--	
LAND ASSETS AT COST												
-CURRENT LAND	$ 5,354		$ 4,854		$ 3,601		$ 4,562		$10,385		$19,176	
-BANKED LAND	10,617		11,196		10,534		4,557		25,414		9,213	
TOTAL LAND COST	15,971		16,050		14,136		9,119		36,299		28,389	
-% BANKED		66%		70%		75%		50%		70%		32%
-% CARRYING COST[1]		2		2		3		1		15		15
-% LEVERAGE[2]		90		48		46		37		48-78%		11
COST OF SALES												
-OPENING INVENTORY	16,050		14,136		9,119		--		28,389		--	
-PLUS - CARRYING COST[1]	270		390		367		106		10,654		--	
- PURCHASES	5,738		1,825		5,977		--		21,012		--	
-LESS - CLOSING INVENTORY	15,971		16,050		14,136		9,119		36,299		28,389	
-EQUALS SALES COST	6,087		300		1,328		--		23,755		--	
REVENUES												
-TOTAL REVENUE	26,582		20,158		13,684		16,133		65,820		44,577	
-SALES OF HOUSES & LOTS	21,125		18,550		12,289		14,262		49,418		21,274	
-ESTIMATED LOT SALES[3]	6,403		4,936		3,132		3,708		17,790		8,084	
-SALE OF LAND	4,978		1,225		970		1,702		N/A		N/A	
-TOTAL SALE OF LAND	11,381		6,161		4,102		5,401		17,790		8,084	
-AS % OF TOTAL REVENUE		43		31		30		34		27		18
GAINS - NET OF OVERHEAD												
-ON LAND SALE	5,294		5,861		2,774		--		5,965		--	
-AS % OF COST		87		1954		109		--		25		--
-ON ALL SALES	4,086		3,224		3,025		2,683		6,744		3,804	
-AS % OF SALES COSTS		18		19		28		20		11		9
-TOTAL PRE-TAX GAINS	2,486		1,972		1,478		1,421		3,680		-144	
-AS % OF ALL COSTS		10		11		12		10		6		0

NOTES: 1) Carrying costs are the pro-rated land proportion of total "work in progress" carrying cost reported by firms. These costs include interest, taxes, and appropriate proportions of salary and other expenses associated with land. Percentage is of total land cost. Bramalea carrying cost figure includes development cost, carrying cost percentage excludes development cost.

2) Leverage is the value of land mortgages as a proportion of the land cost, in the current year. Bramalea leverage unclear as to which of the two figures is accurate.

3) Lot sales were estimated as follows. Total house and lot revenues were pro-rated among the projects undertaken in that year, on the basis of housing units sold. Land proportions were calculated, using CMHC lot to total housing cost data, as follows:

	Ottawa	Kitchener	Toronto	St. Catharines
1972	.22	.28	.36	.27
1971	.22	.28	.38	.27
1970	.22	.27	.35	.26
1969	----------.26----------			

Results were summed to give total lot sale estimate. Bramalea house sales times Toronto lot proportion used to generate estimated lot sales. As Bramalea had both separate land sales, and industrial and commercial land sales, this produces a low estimate.

TABLE: 4.21 LAND OPERATIONS - SELECTED MAJOR CANADIAN DEVELOPERS, 1971 AND 1972

FIRM NAME, (MAIN LAND ACTIVITY CENTRE) AND YEAR REPORTED		TOTAL ASSETS AT COST ($000.)	TOTAL REVENUE ($000.)	LAND OPERATIONS: ACRES HELD	TOTAL IN ($000.)	TOTAL % OF TOTAL ASSETS	% LEVERAGE	LAND COSTS AS % OF MKT. VALUE	BY USE: % IN DEVT.	BY USE: % IN L. BANK	UNDER DEVELOPMENT: COST ($000.)	UNDER DEVELOPMENT: % RAW LAND	UNDER DEVELOPMENT: % HOLD COSTS	% DEVT. COST	LAND BANK: COST ($000.)	LAND BANK: % RAW LAND	% HOLD COSTS: INTEREST	% HOLD COSTS: TAXES	% HOLD COSTS: TOTAL	LAND REVENUE AS % OF TOTAL REVENUE	INTEREST RATES ON LAND MORTGAGE AND OTHER NOTES
Bramalea	1972	119,658	65,820	4,960	34,290	29%	50%*	-	26%	74%	8,876	24%	17%	59%	25,414	85 %	-	-	15	27*	7% to 9.5%, Land as
(Toronto)	1971	93,255	44,577	-	23,090	25	11	-	60	40	13,878	34	11	55	9,213	70	-	-	30	18*	% of unsold house cost - 33%
Cadillac	1972	332,064	60,519	3,000*	31,631	10	57	-	-	-	-	-	-	-	-	-	-	-	-	16*	-Land as % of unsold
(Toronto)	1971	272,195	35,207	-	25,143	9	50	-	-	-	-	-	-	-	-	-	-	-	-	8*	house cost - 44% (1971-19%
Campeau	1972	311,766	90,796	7,000	37,404	12	-	-	-	100	-	-	-	-	37,404	-	3	1	4	7*	-Breakdown in use
(Ottawa)	1971	297,309	78,118	7,250	35,796	12	-	-	-	100	-	-	-	-	35,796	-	3	1	4	7*	unclear
Dawson		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-Use breakdown based
(Vancouver)	1971	35,852	26,116	1,740	7,042	20	68	-	20	80	-	-	-	-	7,042	74	8	8	16	20*	on acreage. Development cost 10%
St. Northern Cap.	1972	100,395	35,315	5,131*	39,798	40	-	-	71	29	-	-	-	-	-	-	-	-	-	16*	-Use breakdown based
(Edmonton-Ottawa)	1971	61,292	35,050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14*	on acreage. Land and building cost as % of sales 1972 (48%), 1971 (41%)
Headway	1972	37,990	21,551	-	5,820	15	46	55	77	23	4,503	-	-	-	1,318	-	-	-	32	5*	
(Thdr. Bay, Wpg.)	1971	20,822	17,350	-	5,928	28	56	-	83	17	4,910	-	-	-	1,018	-	-	-	-	3*	
Nu-West	1972	64,884	57,945	2,691	7,147	11	39	34	-	100	-	-	-	-	7,147	92	6	1	7	31*	-0% to 11%. Break-
(Calgary, Edmonton)	1971	48,295	37,359	-	7,373	15	53	-	-	100	-	-	-	-	7,373	94	4	-	4	29*	-down in use unclear
Costain	1972	34,172	26,582	2,218	15,971	47	90	-	34	66	5,354	-	-	-	10,617	96	-	-	4	36*	-6 to 9.5%
(Ottawa, Kitchener)	1971	23,885	20,158	2,058	16,050	67	48	-	30	70	4,854	-	-	-	11,196	94	-	-	6	26*	
Western	1972	122,325	23,699	6,556	24,460	20	44	46	-	100	-	-	-	-	24,460	-	10	1	13	16*	-Breakdown in use unclear
(Edmonton, Vancouver)	1971	87,924	17,108	4,550	17,603	20	39	-	-	100	-	-	-	-	17,603	-	12	2	16	11*	

SOURCES: 1972 ANNUAL REPORTS FOR ALL FIRMS EXCEPT DAWSON DEVELOPMENTS, WHICH IS 1971 ANNUAL REPORT.

NOTES:
1) Leverage is total land mortgage value as percentage of total land cost.
2) Market Value is appraised value of land, as stated by firm.
3) Land revenue was estimated by combining reported land revenue with the proportion of house sales revenue currently attributed to land in the location where the firms dominant house - selling occured.

* ESTIMATED

operations - the choice of firms reflects only the availability of data.[1,2] Table 4.21 contains the same type of data, for nine firms from across Canada for the years 1971 and 1972.

Developers land banks are increasing in size, value and importance. Both tables demonstrate that, while the value of current or "on stream" land remains at about the same level each year, the value and size of land banks, and total land revenue is rising. Land, at cost, accounts for a progressively higher proportion of the firm's asset inventory even though land costs appear to be only 30%-55% of land value. Acquisition costs comprise 70%-95% of the total cost of banked land, interest or carrying costs run 3%-12% and taxes are 1%-8%. These raw land acquisitions are heavily leveraged, usually to 40%-60% of their costs, and generally at low rate mortgages between 6% and 11¼%. As the land moves "on stream" the scant data herein indicates the original acquisition cost constitutes one-quarter to one-third of total developed land costs, with development costs comprising 55%-60% and accumulated carrying costs

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1. Until recently most developers revealed little detail about land operations in their annual reports. Bramalea and particularly Costain were exceptions which accounts for their inclusion in Table 4.20. Developers reports are gradually including more detail about all of their activities, a situation which, in light of the importance of these firms to the entire society and economy, is commendable, desirable and should become standard.
2. These reconstructions are attempts to isolate land operations in the respective firms' annual reports - they should be regarded as approximations but not as facts.

amounting to 10%-20%. Land sales yield very high profits, and provide 5%-40% of the firms total revenue, however, when grouped with all other sales the yield declines to 10%-30% and the firms entire net income as a proportion of all costs, before taxes, is in the reasonable range below 15%. While land operations are clearly big money-makers, it appears these large developers have sufficient costs in other sectors that their total returns are relatively modest.

This varied and complex data has many implications, a few of which shall be noted here. Developers land banks are a valuable asset - the nine firms in Table 4.21 hold over thirty-three thousand acres costing over $200 million but leveraged by about one-half, and having a market value of at least two to three times its cost. It is sometimes suggested that governments should buy or expropriate developers land banks - this data gives some notion of the magnitude of the price that such a change in ownership might entail, in the case of nine firms in about eight cities. It is sometimes proposed that large developers are withholding land from the market, and that a higher property tax would increase their carrying costs to the extent that they would be forced to sell. The data indicates the unlikelihood of this effect, as a major increase in taxes would be required to escalate carrying costs to a level comparable with land acquisition costs, the sum of

acquisition costs and cumulated carrying costs is not as large an expense as development costs for "on stream" land, and the total costs of land sales are so much lower than current market prices that incremental additions to cost do not appear capable of forcing the land bank firms to do anything. However, as the data also showed that these largest land-banking, vertically-integrated developers realize scanty profits if not losses in non-land aspects of their operations, and recalling the concentrated structure of the entire industry and the necessity that smaller, less-efficient firms have the added disadvantage of buying land at retail prices, it is apparent that any measures directed at increasing production costs will strongly affect the numerous marginal small producers.[1]

This brief examination of private developers, has yielded considerable insight into the nature and operations of this industry. Metropolitan land development is dominated by relatively few, big, vertically integrated diversified producers who hold five-to-twenty year banks of land for future use, considerable residential and commercial rental property, and a large number of smaller, subsidiary

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1. There are two significant points here - that the primary consequence of a policy supposedly directed to increasing holding costs for large firms would be the elimination of more small firms, and that the elimination of small firms bars entry to land development thereby increasing concentration and decreasing competition in this industry.

firms. The largest of the firms are active across Canada, and most of these have headquarters in Toronto. Others, particularly western firms, have major regional operations. Inter-corporate ownership is frequent. While the corporations include public, private, foreign and domestic owners, ultimately, the controlling shares of each firm are held by a small group, usually the firm's directors. While these firms are vertically integrated, efficient organizations, which have lower costs than their smaller competitors, they do not receive particularly high profits. They appear to obtain lower rates of return on income property than smaller investors, and while they receive very high returns on land development, there are sufficient offsetting expenses and reinvestments in their operations that their net pre-tax income constitutes a modest return on current expenditures. The combination of these factors - modest current returns, large and expanding asset portfolios (land banks and income property holdings), frequent acquisitions of smaller firms, extensive vertical integration in production, financing and marketing, mergers and the top-heavy industry structure, with broad-based financing and close control manifest the predominant growth strategy in the industry. Metropolitan land development has been taken over by the giants, who are now consolidating their position by buying up their competition, and the suppliers and materials in

their production processes. The small builder, revered in the mythology of housing is an anachronism[1] - the residential construction industry in metropolitan Canada can be recognized as paralleling the structure of the automobile industry during the 1920s, or the aircraft industry in the 1940s. The understanding of this reality could lead to several different objectives for public policy, ranging from the break-up of the evolving cartel, to the nationalization of the firms, to increased public supervision of their products and prices. Of the three, the latter seems most directly related to the quality of life and substantive needs of this society.

4.2 Land Development - The Public Land Assembly Programs

This section introduces the existing government programs of residential land development. The primary purpose of the section is to define the programs in theory and practice, as the subject has already been advocated, opposed and produced expert analysts, without reference to a basic body of substantive data. The section contains a definition of the subject matter and an examination of

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1. Small builders are still active in smaller centres, rural areas and in the renovation field, but it is simply inaccurate to continue to describe them as the basic producers of new urban housing.

existing programs, objectives and activities. Also, as public land programs are often proposed as the solution to current land prices, or at least as an alternative to private development, the section examines specific differences between public and private development and any attendant relationships to prices.

The term public land assembly has evolved through several meanings during the last few decades. Originally it was a generic term which meant the acquisition of land by public authorities, through purchase or expropriation. The land could be one or more properties, which might, or might not be serviced or subdivided, but were always under-developed relative to the use intended by the acquiring authority. From this original limitation to the acquisition and where necessary, clearing of the land, it evolved through usage to include the holding, development and marketing phases of public land projects, and has come to refer only to projects which are predominantly residential. The term then, has evolved from connoting a quite specific activity to an all-encompassing term concerning public projects in residential land.

It has also become common usage to employ the term "public land banking" interchangeably with "public land assembly". Land banking, when properly used, refers to land which is acquired in advance of its intended

development, either in the sense that it is held for years before development begins, or because development follows acquisition immediately but the project is sufficiently large that it takes many years of regular construction to deplete the project.

In this section, public land assembly is used in the contemporary, generic sense as meaning any public residential land project, and public land banking is used to describe those specific projects which involve an extended holding period before development begins. These distinctions are almost trivial as they concern only the form of a land assembly project without regard to its performance or purpose.

At least four distinct objectives can be identified which a government body might pursue by undertaking a land assembly project. In brief the objectives are:

1) to reduce land costs for the ultimate consumer (i.e.: prices);
2) to control urban spatial expansion in support of planning goals, by leading or blocking the shape of a city's growth with the public land;
3) to provide land for various social needs not met by private enterprise. One such need is low-cost land for subsidized housing

projects for the elderly, public housing, and assisted ownership programs;

4) to generate net revenue (profit) for governments.

Each project has one or several of these objectives. The distinction between such varied goals is clearly important - it is surprising therefore that political parties, land and housing "experts", and other pundits advocate or oppose the concept of "land banking" without reference to any goals.[1]

Each objective warrants examination.

4.2.1 The Price Objective

It is proposed that the price goal can be attained both as a direct and indirect effect of a public land project. The goal is achieved directly when a government buys land suitable for residential development, holds it for a sufficient period that its cost is significantly lower than current prices of comparable raw land, then develops the site and sells it below market prices.[2] Thus buyers can obtain lots at reduced prices, a potential which amounts to one of two alternative

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1. An exception to this general criticism is the recent "expert" report by S. W. Hamilton, Public Land Banking - Real or Illusionary Benefits, Vancouver: University of British Columbia, Faculty of Commerce and Business Administration, 1974.
2. In this usage, the distinction between selling and leasing is not material.

kinds of benefits:

1) they can obtain housing they could not otherwise afford;

2) they can capitalize the amount of the price reduction, either directly by reselling the lot at market price or indirectly by using the "saving" for other consumption.

The latter is generally considered to be an inappropriate subsidy, and governments usually attempt to minimize its occurrance by scantily enforced regulations placing upper income limits on eligible buyers and restricting resales. The former is usually seen as an appropriate subsidy, as it, by definition, is a home ownership subsidy which goes only to families who could not buy a home without it. While this may seem a clearcut situation in theory, in practice it is difficult to distinguish between families who can barely afford homes (and thus should not receive the subsidy) and those who want a house but can't afford it (by the amount of the subsidy). This subsidy question has. generally, been avoided. In the larger cities where housing is needed most, public assemblies have been so small relative to demand that few people are concerned about the subsidy, and a superficial screening combined with a "first come/first serve" method of distribution[1] has further obscurred the subsidy issue when lots have been sold at sub-market prices.

Public land assembly projects are also said to reduce, or at least alter, land prices in the entire market as an indirect effect. During the project's acquisition phase it could inflate acreage prices in the private market if it paid unduly high prices, or the site boundaries were not clearly defined and created false expectations. In practise, government land assemblies probably do pay higher prices than private buyers as they attempt to be scrupulously fair to all owners[2], and although clear site boundaries are usually maintained and are better known than large private assemblies, they are not well publicized. It is sometimes claimed public assemblies increase prices by removing large acreages from the supply in the private market. This claim has never been substantiated, and is probably inaccurate. During the project's holding period, it is claimed the expectations in the market concerning the project's future low prices will drive down market prices through its development and marketing stages. Recalling the stock and sales data of Sections 2.1 and 2.2,

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1. First come/first serve has meant prospective buyers line up at the project office before a pre-announced sale date, and lots are sold to eligible buyers until the supply runs out. This drew considerable criticism in the press and political circles as a demeaning practice, and has been largely replaced by a lottery system.
2. This observation primarily applies to smaller projects. Large assemblies are usually carried out by private agents in trust or by block expropriations. In the latter case, the legal definition of compensation which is based on a replacement of utility concept, tends to produce high average prices but precludes high-priced "hold-outs".

this proposterous claim contemplates that the homeowners who sell 3-5% of the ownership housing stock each year, and the few large developer builders who sell most of the additional 2-3% of this stock which is the annual supply of new houses, will reduce their prices because of a future marketing by a public developer of some proportion of that future relatively small new house supply. Unless the public project is to produce a very large proportion of total starts in the local market, this price-reducing effect seems unlikely. However, if the public project sold reduced-price lots at a large scale, it would be subsidizing most new house buyers - a broad-based subsidy which sounds conflict-ridden as it would disadvantage the more numerous buyers of existing houses, and at the national level, would disadvantage new house buyers in any city that did not have a large scale public land program. As it was also noted in Section 2.2 that the highest land and housing prices occurred in the higher-growth cities, any public intervention in urban land markets at a national scale which artificially reduced prices in the growth centres could be seen as a deliberate growth promotion policy. In summary, these varied complications require that any decision to undertake large scale land assembly programs aimed at price reduction must be predicated on clear definitions of the eligibility for this subsidy, and the growth-promotion policy inherent in artificially lowered housing prices. On the other hand, these

observations demonstrate the utility of small to medium scale price reduction projects directed to lower income groups, and secondarily, to projects in those centres where growth is slower.

4.2.2 The Spatial Objective

The spatial objective is land assembly programs requires that governments induce, or impede the spatial expansion of a city in a planned direction or form, by ownership of strategic acreages. Public ownership of large acreages is an expensive method of blocking urban growth relative to less costly alternative techniques like zoning. It appears then, that unless the public land barriers serve other needed purposes, such as actively-used greenbelts, parks, or other extremely low-density developments, the blocking function is not an appropriate goal of public land assembly. In the positive, growth-directing role, the objective is not realized until the land is developed - so it is apparent that the defining purpose of the project concerns the nature of its development. Growth directing may be considered very important in other contexts, but from the viewpoint of land assembly policy it is a secondary objective, which can readily be included in the criteria or goals for a project initiated for another purpose.

4.2.3 The Social Housing Objective

The social goal in which governments buy land for future development as social housing or other needs not met by the private sector, also appears to be a secondary objective. As the public authority's decision to acquire such a site is based on a specific proposal for its final use, it is apparent that the decision initiates the acceleration of the "end use" housing program. In the case of a social project within a larger assembly, most of the land will be used for price reduction or revenue generation, so the secondary position of the social housing goal is again apparent. These comments are not criticisms of the social housing goal in general, but are attempts to place this activity in perspective. In small places where there is no effective private development, public land development can meet a social need. During periods of rapid land price escalation, purchasing land in advance of development will reduce total costs of a social housing project, and thus is a beneficial practice on the part of social housing administrators. But the latter is a cost reducing function within the social housing program and the former is a general housing program undertaken where there is no private market, so neither is an independent program in the general land market. Accordingly, while purchase of land for social housing is a beneficial sub-program which may be best performed by the land assembly program administration, this activity must be seen and evaluated as

a separate function associated with the mainstream public land assembly functions.

4.2.4 The Revenue Objective

The fourth objective which was identified as realizeable through public land assembly projects is the generation of revenue. The examination of private land developers' operations in Section 4.1 demonstrated that considerable profits are available from the banking and development of residential land. As much as this is a profitable activity in the private sector, it is more profitable in the public sector as governments can achieve lower fiscal costs than their private counterparts. Public developers have cost minimizing capabilities in their ability to acquire project hold-outs by expropriation, in their capacity to achieve higher leveraging and lower interest rates than conventional lending, and in their ability to reduce overall risk in a project through the placement of infrastructure.[1] The import of these capabilities is that

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1. It should be noted that this refers to actual out-of-pocket expenses rather than opportunity costs. If governments finance their projects at sub-market rates, the opportunities to spend the money in other ways and to receive higher returns on the project financing, are both economic costs against which the revenues and other benefits of the project may be measured. The argument being stated here is, assuming the public project is considered desirable at a given level of funding and method of financing, the project can have lower costs, and thus generate higher net revenues than a comparable private project.

public authorities can use their proximity to the planning process to acquire relatively inexpensive land which is receiving designation for future development, hold it at minimum cost, and then sell it to private developers or develop and market the land itself. In either case, government, as a representative of the society, receives the social increment in the appreciation of land value directly, rather than having to maintain an expensive administration to obtain part of this increment from taxation or circulating the increment through the private land industry.

While the profit which is available through public land activity is a major goal, other significant social benefits can be realized through such a program. Urbanization increases the value of land, producing profits for the landowner. The issue is not whether profits are big, small, good or bad - but who should receive them. The examination of land markets in Sections 2 and 3 demonstrated that land use planning designations are increasingly channeling urbanization onto relatively few large land-banking developers' tracts (for socially beneficial and economic reasons), so these few firms receive most of the appreciation. As the society at large creates the added value, and by growth designations selects the recipients of this value, it seems logical and equitable that the gain be returned to its creators. This appreciation may be considerable and is potentially a significant revenue

source for governments - in the case of banked land it appears to constitute as much as 60% of the selling price of a lot, or 85% of the price of an acre (150% to 550% of the cost of a land project).[1] If local governments owned this urbanizing land, the same society that created this large profit would realize it. The gain could be used to make the land program self-sustaining and finance development infrastructure and other services, thereby off-setting property taxes and local improvement charges. The current move towards complex and loophole-ridden taxes designed to recapture part of this increment, and evolving bureaucracy which would administer the taxes, could be halted. Politicians, planning authorities and the local citizenry could have direct control over the land supply, regulate development in accordance with their needs, and be directly responsible for their acts, without having private developers as a scapegoat for their problems. Also, as the private land banks have played a major role in forcing smaller builders and developers out of housing, a government monoply in development land might restore diverse competition by providing lots or developable land to all sizes of firms. Finally, by undertaking such a program governments would necessarily be vitally involved in all aspects of land markets and housing production

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1. In metropolitan areas in 1973, prices for detached lots averaged above $5000 and over 60,000 lots were sold. If the social increment averaged 50% of the selling price, use of land assembly as a revenue source for governments would have yielded about $150 million, approximately the same revenue as would be raised by a tax of $100 on every detached house in each of these 22 urban regions.

which would significantly improve their collective understanding of activities,and sensitize them to problems,in urban land. There are, then, a number of significant advantages to governments using land projects to make money.

While these capacities of government have been known, advocated, and occasionally used for at least thirty years, their use has been limited because of resistance to the several aspects of the proposal. Some people are ideologically opposed to any extention of government activities. Governments are now heavily involved in every aspect of private land development except receiving the profit - it seems the substance of the ideological argument was removed long ago but because its proponents have kept the public sector away from profits, this production function has become an example of private enterprize at public expense. Some say a government monopoly discourages innovation, and increases costs. In the present system of land development, most aspects of subdivision design in the private and public sectors emerge from private consultants, are approved by government, and implemented by private contractors - this system need not change. Also, as there would probably be a minority of private developments around the fringes of the various government projects, emerging inadequacies in the cost or form of public projects would be visible, and correctable. The disadvantages of profit-oriented government

land projects appear minimal in comparison to their advantages.

In summary, this theoretical examination has indicated two major and two minor objectives which may be pursued by public land assembly projects. These objectives concern the ultimate use of the assembled land, and more particularly, the relationship of this usage to other activity in the regional market. The major goals, land price reduction and revenue generation, both require large scale projects, extended holding periods, and the production of lots which are similar to those in the private market. Their divergent pricing policies[1] both require a thorough involvement with local land markets, with a wide range of subsidiary effects. One or both of these constitutes the heart of any program of public land assembly. The social objective is limited in nature, being essentially an acceleration of a social housing project, and requiring relatively small parcels of land or parts of larger land assemblies. The growth-shaping objective is probably too expensive to be pursued except as a secondary goal of a land project initiated for other reasons.

4.2.5 Public Land Assembly Under the National Housing Act

To move from this theoretical examination to a review of public land assembly in practice, it is useful to

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1. Both pricing policies could also be sub-optimized in a cost-plus, below market price which generated some profit while providing some housing subsidy.

observe the vehicle by which most governments in Canada have undertaken these projects. The National Housing Act has authorized CMHC to enter into land assembly projects since 1949 and since then most such projects in Canada have involved federal financing. The financing arrangements have been broadened by successive NHA amendments to make funds available in loan form, to increase the repayment period and decrease the borrower's equity requirements, to increase flexibility in the financial terms and project eligibility, and lately, to make funding more available to municipalities. Through this evolution, the federal legislation has developed a beneficial multi-purpose program for the use of any municipal or provincial government that decides to undertake land assembly projects.[1]

The current National Housing Act contains two sections, 40 and 42, which allow funding to purchase and develop land "...for housing purposes or for any purpose ancilliary thereto."[2] Terms and conditions are defined broadly, so the Act can support virtually any land assembly and/or development project which is strongly related to

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1. While the federal legislation authorizes financing for municipal land projects, in practice a municipality must receive provincial authorization before it can contract for the federal funds.
2. Revised Statutes of Canada, 1970, C.N. - 10, Part 6, Para. 40(1)(a) and Para. 42(1) as ammended by R.S.C., 1973, C-133, Para. 16 and Para. 17.

residential land use. In addition, Sections 45(1) and 45 (2) authorize funding for the acquisition, planning and development of entire "new communities."[1]

Land assembly funds may be provided to provinces, municipalities or agencies and corporations designated by these governments. Under Section 40, CMHC enters into a project partnership with a province or its agency, paying up to 75% of capital costs and sharing profits or losses. Similar terms apply in the "new communities" legislation of Section 45(1). Under Section 42 CMHC may provide a loan, secured by a first mortgage or debentures, for up to 90% of the capital cost of acquiring and developing a land project. The interest rate cannot exceed the going rate on federal bonds by more than .5%, and the maximum term is twenty-five years. A term of fifty years is allowed when the land is disposed by lease, rather than sale. Repayment may occur as the land is disposed, and must occur during the term of the loan. Similar loan arrangements are contained in Section 45(2), although annual interest payments are mandatory in the latter, and a 50% "forgiveness" feature applies to loan funds used for planning the community, and providing land for public recreational and social facilities.

The following examination of these alternative

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1. R.S.C., 1973, C-133, Para. 45(1) and 45(2).

financing arrangements applied to a sample, hypothetical land assembly project, illustrates their relative advantages. The sample project is 100 acres, assembled at an average price of $10,000 per acre, which is developed within five years.[1] Development begins in the third year and the project is ready for disposal in the fifth year. Forty per cent of the acreage is dedicated, without charge, for roads, streets, schools, parklands and other public facilities.[2] The remainder provides serviced lots for about 330 houses, 550 row houses and over 200,000 square feet for apartments. Total development costs are $1.8 million. At market prices prevalent in larger cities today, the completed project should have a value exceeding $8 million.

Table 4.22 summarizes the costs, to the province or municipality undertaking this project, under each of the NHA financing schemes. Tables A-11, A-12, and A-13, in the Appendix, show the respective costs in greater detail.

The partnership provisions of Section 40 and 45(1) minimize both the current and total costs of the project, from

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1. While this is a hypothetical project, costs were selected to simulate those found in the larger cities of Canada in 1973.
2. Such dedications of project acreage are common internal allocations within land assemblies and are encouraged by CMHC. Land is provided at cost, or written down, for these public uses, and any expense incurred thereby is shifted to the "marketable" land. This practice is becoming formalized in CMHC's Comprehensive Land Use Management Program.

TABLE: 4.22 SUMMARY OF PROVINCIAL AND TOTAL COSTS - FEDERAL/PROVINCIAL LAND ASSEMBLY
EXAMPLE USING ALTERNATIVE REPAYMENT PROVISIONS

YEAR	PROVINCIAL EXPENDITURES				TOTAL PROJECT COSTS			PROVINCIAL DEBT AFTER FIFTH YEAR ($000's)
	CURRENT ($000's)	YEAR AS % OF CURRENT PROJECT COSTS	ACCUMULATED ($000's)	AS % OF ACCUMULATED PROJECT COSTS	ACCUMULATED ($000's)	% OF TOTAL PROJECT COSTS CURRENT COSTS	% OF TOTAL PROJECT COSTS ACCUMULATED COSTS	
SECTION 40								
1	$275.5	25%	$ 275.5	25%	$1,101.9	29.6%	29.6%	
2	27.9	25	303.4	25	1,213.7	3.0	32.6	
3	192.7	25	496.1	25	1,984.6	20.7	53.3	
4	208.7	25	704.8	25	2,819.4	22.4	75.7	
5	226.0	25	930.8	25	3,723.4	24.3	100.0	NIL
SECTION 42 (INTEREST ONLY)								
1	$201.9	18.3%	$ 201.9	18.3	$1,101.9	29.6	29.6	
2	111.8	100.0	313.7	25.8	1,213.7	3.0	32.6	
3	230.8	29.9	544.6	27.4	1,984.6	20.7	53.3	
4	294.8	35.3	839.4	29.8	2,819.4	22.4	75.7	
5	364.0	40.3	1,203.4	32.3	3,723.4	24.3	100.0	$2,520.0
SECTION 42 (STRAIGHT AMMORTIZATION)								
1	$214.2	19.2	214.2	19.2	$1,114.2	29.0	29.0	
2	125.1	100.0	339.2	27.4	1,239.2	3.3	32.3	
3	252.5	31.9	591.7	29.1	2,031.7	20.6	52.9	
4	325.5	37.6	917.3	31.6	2,897.3	22.5	75.4	
5	404.6	42.8	1,321.8	34.4	3,841.8	24.6	100.0	$2,393.9

SOURCES: SUMMARY OF TABLES A-11 to A-13 inclusive.

the viewpoint of the provincial partner, This is particularly evident in year two, the only pure "holding" period illustrated, when a provincial payment of about $28,000 carries a capital project costing $1.2 million. This high leverage has two prices: the province, as junior partner, loses some measure of control over the project;[1] and any profits realized are shared.[2] These arrangements seem particularly suitable to assist municipalities (through provincial governments) to hold down the costs of land for social housing projects, or to provide land for general housing purposes in smaller places where land markets are less volatile and consequently, the risk of incurring net losses is higher.

The straight ammortization option under Sections 42 and 45(2) is the most widely used financial arrangement. In essence, it is a high ratio loan which gives higher leverage and lower interest rates to provinces, municipalities and their agencies than are available in the private market.[3] While this method is more expensive to the borrowing agency than the other alternatives, the borrower controls the project

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1. In practice, CMHC often acts as the project administrator, paying bills and providing advice, while the province has the operational executive functions within agreed-upon parameters.
2. CMHC usually receives 50% of profits, and bears 75% of losses.
3. See Table 4.21 for some evidence of the lower extent of leveraging and higher interest rates received by several of the largest private developers.

and receives any net profits, in full. As this financing allows public land development to occur at lower costs than comparable private projects, the borrower has the choice of passing the savings on to the local community directly in the form of low cost housing, or indirectly by using the increased revenue to offset other expenses.

Within this option, the loan principal associated with parts of the project is usually repaid as the parts are disposed. Following such pro-rata payments, amortization installments are reduced to reflect the lower principal balance. This increases fiscal flexibility, as borrowers are not locked in a payment schedule. However, a second, extremely beneficial option is available within this alternative, to borrowers who can demonstrate to CMHC that the purchasers of the lots are receiving a direct benefit or saving. This implies that the project is pursuing, at least in part, the price reduction objective. In this case, the borrower may elect to continue the low rate debt service on the full principal while receiving revenue from the disposal of the asset. This is a financial inducement to the extent of the untied declining principal balance of the loan and any interest differential, to encourage other governments to subsidize home buyers.

The final loan alternative is available to provinces or municipalities who intend to dispose of a land

assembly by lease, rather than by sale. In this case the repayment period is lengthened to a maximum of fifty years, and only interest payments are required during the term. This reduces carrying costs during the holding period, and, if the buying power of money continues to decline, should make the eventual principal repayment relatively cheap. Also, this option opens the possibility that, in the future, title to the project land could reside with the local community, perhaps at a neighbourhood level.

In general, it is noted that provinces or municipalities must spend large, but manageable sums of money in order to undertake land assembly projects. In the 100 acre project example, the province's down payment (its spending in the first year) is between 5.4% and 7.4% of the total final project cost, requiring $200,000 to $275,000. Carrying costs are a small proportion of total costs (about 3%), but may require over $100,000 each year. The largest annual cost is, of course, incurred in the years immediately preceeding the project's completion. The highest annual payment in the 100 acre illustration was about $406,000. Comparison of these figures with Table 4.23 indicates Canadian municipalities can afford expenditures, and debt levels, of land assembly magnitude.[1] The provincial averages

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1. Projects could, of course, be much larger or smaller than the illustration.

TABLE 4:23

REVENUE AND EXPENDITURE DATA, SELECTED CANADIAN MUNICIPALITIES

MUNICIPALITIES SURVEYED	TOTAL REVENUE 1969	PROPERTY TAXES	AVERAGE ANNUAL INCREASE TOTAL REVENUE 1961-1969	AVERAGE ANNUAL INCREASE TOTAL EXPENDITURE 1961-1969	EXPENDITURES - 1969 TOTAL ($000s)	PUBLIC WORKS ($000s)	PUBLIC WORKS AS % OF TOTAL	DEBT CHARGES ($000s)	DEBT CHARGES AS % OF TOTAL EXPENDITURE %	DEBT CHARGES AS % OF TOTAL REVENUE %	DEBT CHARGES AS % OF TOTAL PROPERTY TAX %
	(All data in thousands of dollars)										
British Columbia - All Municipalities	425,047	286,213	30,462	31,826	436,226	25,676	5.9	33,197	7.6	7.8	11.6
- Vancouver				8,587	135,797	3,599	2.7	11,610	8.5		
- Victoria				1,187	18,350	889	4.8	1,113	6.1		
- N. Vancouver, New Westminister & Prince George				1,977	27,089	1,606	5.9	2,062	7.6		
Alberta - All Municipalities (to 1967)	314,933	222,039	20,628	21,032	313,801	33,389	10.6	35,236	11.2	11.2	15.9
- Edmonton (to 1969)				6,928	98,934	3,270	3.3	16,451	16.6		
- Red Deer, Lethbridge & Medicine Hat (1969)				1,551	23,271	1,385	6.0	2,802	12.0		
Saskatoon				1,750	25,463	790	3.1	2,323	9.1		
Ontario - All Municipalities (to 1967)	1,571,784	1,244,302	101,445	114,781	1,573,131	195,415	12.4	215,962	13.7	13.7	17.4
- Toronto, Ottawa & Hamilton to (1967)				23,840	370,101	11,416	3.1	44,532	12.0		
- Hamilton (to 1969)				4,488	78,809	6,341	8.0	8,849	11.2		
- 13 others[1] (to 1967)				15,590	195,428	16,452	8.4	26,269	13.4		
Nova Scotia - All Municipalities (to 1969)	101,755	74,153	6,444	7,331	101,453	4,540	4.5	18,264	18.0	17.9	24.6
- Halifax (to 1968)					23,503	1,062	4.5	4,391	18.7		
- Sydney & Glace Bay (to 1969)					8,267	503	6.1	1,050	12.7		

NOTE: 1. Other Ontario Municipalities were: St. Catharines, Kingston, Oshawa, Brantford, Sarnia, Kitchener, Niagara Falls, Peterborough, Guelph, Burlington, Oakville, Sudbury and Sault Ste. Marie.

SOURCE: Plunkett, T.J., The Financial Structure and Decision-Making Process of Canadian Municipal Government Ottawa: CMHC, 1971. Various tables throughout.

indicate that carrying charges on municipal debt are less than 25% of property taxes (the annual charges on municipal assessment) -- a relationship which appears to be far below the recommended maximum total debt to total assessment ratio of 25%.[1]

Several other financial aspects of land assembly projects warrant mention. Down payments, or initial expenditures on land can be lessened by the use of options, delayed sales agreements, or land mortgages. Carrying costs can be offset by revenues obtained from interim uses of all or parts of the project site. Planning costs can be lessened by use of CMHC's experience with similar projects. Development expenditures can be lessened by contracting all or parts of the project to private developers under proposal calls. Development may be undertaken on a phase by phase basis, so the revenue from one phase finances the next phase. It is beneficial to integrate suitable commercial and industrial land uses in residential projects, as these provide services, jobs and assessment for the future community and assist project finances. The use of these various techniques, within the overall parameters of NHA financing, can allow municipalities to engage in relatively large land projects in pursuit of the various objectives described earlier, at

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1. See Hunt, P.T. "The Capital Budget" in The Canadian Institute of Chartered Accountants, Municipal Finance And Administration In Canada, Toronto: the Institute, 1967, p. 15.

reasonable cost.

4.2.6 A Survey of Land Assembly Projects Financed Under The National Housing Act.

In order to review the history, and determine the substantive objectives of public land assembly under the NHA, a complete survey was made of each new project undertaken between the program's initiation in late 1949, and the end of 1972. With the assistance of CMHC officials who were familiar with the projects, each was examined and accorded a variety of classifications. The market in which the project was located was classified as a village (under 20,000 population in 1971); town (20,000 - 100,000) or agglomeration (100,000 plus). The project was deemed to be "large" if its potential production, measured as project area times five lots per acre, exceeded the number of detached starts in that market during the year the project was acquired - otherwise the project was classed "small". The project's phasing, or development strategy, was defined as: "immediate" if, at acquisition, the land was intended for development and marketing immediately (within two to three years); "regular" if the land was intended for development and marketing in several small (relative to the market) regular phases; or "bank" if the land was not to be developed for at least five years. A purpose was assigned to each project, based on the use intended for the majority of the developed acreage.

If this land was intended for sale at or near cost, the project was classified "cost", and similarly, if most of the acreage sold at about market value, it was classified "market". When most of the area was used for public housing, limited dividend housing, or co-op housing it was classed "social". These, and some general descriptive classifications for each project were then coded, the data computerized, and a basic SPSS cross tabulation was produced which is summarized in the tables which follow.

It should be noted that the classifications used allow comparison of the project's substantive activity with the three main land assembly objectives described earlier. The social objective corresponds with the social classification, and can be expected to occur only in small projects except in villages. The price objective would only be realized by projects classified as "cost" and would have little indirect effect on the market if they were "small". They would reach maximum effect in "large" projects which are "banks",or developed in "regular" phases, as other sellers in the market might be forced to compete with the project prices. The revenue objective would be served by "market" projects developed in "regular" phases, or "banks", as quickly developed land would tend to have costs close to market prices. All other project classifications would probably describe break-even type projects which provide developed lots at a cost near market price, and accordingly can be described as land for general housing purposes.

Table 4.24 reports the purpose of all new land assemblies undertaken with NHA financing, and the size of these projects relative to the market in which they were located. Tables A-14 and A-15 contain the same data apportioned between the two financing sections of the Act. When this NHA program began during the housing boom of the early 1950s, it was widely used in towns and villages to create lots for sale at market prices. This usage continued, although the annual uptake declined, until the late 1960s when the Section 42 loan provisions were introduced. Since 1967, more large projects, and projects in larger centres have begun, although overall, in terms of number of projects, 80% of the entire program has occurred in smaller places. While three-quarters of all new projects were funded as partnerships under Section 40, Section 42 has been the main financing vehicle since its amendment. Notably, there are no "cost" projects under Section 42 - indicating that provinces and municipalities do not **borrow** federal money even at preferred rates to subsidize the general home buyer.[1] Over 80% of projects to date have primarily sold lots at market prices, while 7% have sold at cost and 9% have been social housing projects. In terms of the kind of projects it has funded,

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1. In many small municipalities cost and market are about equal - so this distinction is not significant. In some Nova Scotia municipalities lots are sold at market, which equals cost and the provincial government gives a $500 homeowner subsidy in the form of reduced local improvement charges.

TABLE: 4.24 FEDERAL PROVINCIAL LAND ASSEMBLY SURVEY

SUMMARY OF ALL NEW PROJECTS UNDERTAKEN, BY MARKET SIZE, PROJECT SIZE AND PROJECT PURPOSE

SECTIONS 40 AND 42

Market	Relative Size of Project	Project Purpose	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	Totals
Village	Large	Cost																1		2	2			2	1	8
		Social																	1		1		2		2	6
		Market		2	1	1	1	2		1			2				1		4	15	3	7	2	9	9	60
	Small	Cost																			1					1
		Social																1		2	1					4
		Market			3	3		1			1				2					2		2	1	1		16
Town	Large	Cost		1																						1
		Social																								
		Market		2	2	1		1	1		2							1			3				1	14
	Small	Cost																								
		Social																		1						1
		Market	1	1		1	2			2										5	4	1	1	2		20
Agglomeration	Large	Cost	1																							1
		Social																								
		Market					1													1	1	3	1	3	2	12
	Small	Cost																								
		Social																		1			1	2		4
		Market	2	1		1		1	1	1		1								2		1				11
All Markets	Large	Cost	1	1														1		2	2			2	1	10
		Social																	1		1		2		2	6
		Market		4	3	2	2	3	1	1	2		2				1	1	4	16	7	10	3	12	12	86
	Small	Cost																			1					1
		Social																1		4	1		1	2		9
		Market	3	2	3	5	2	2	1	3	1	1			2					9	4	4	2	3		47
All Markets And Project Sizes		Cost	1	1														1		2	3			2	1	11
		Social																1	1	4	2		3	2	2	15
		Market	3	6	6	7	4	5	2	4	3	1	2		2		1	1	4	25	11	14	5	15	12	133
All Projects			4	7	6	7	4	5	2	4	3	1	2		2		1	3	5	31	16	14	8	19	15	159
NET FEDERAL SPENDING (IN $000)			$211	1208	1234	1591	3437	1253	1716	2133	4126	3249	2119	1127	1862	848	2976	2715	3788	6974	7094	14656	20927	12953	19371	117,568

SOURCES: Tables A-14, A-15 and CMHC, Canadian Housing Statistics - 1964 Table 53; 1966 Table 55; 1970 Tables 56, 57; 1973 Table 64.

NHA land assembly has been a supplier of lots, at market prices, in towns and villages with 110 such projects out of its total of 159 projects.[1]

The "net federal spending" row in Table 4.24 demonstrates the outlay by the federal government of annual budgetary funds to support these land assembly activities. A total of about $118 million in federal fiscal expenditure has financed the acquisition of 159 separate projects, and their subsequent planning, development and marketing - and 102 of these projects were large relative to the local housing market. In terms of annual expenditure, the program increased from $211,000 in 1950 to about $6 million in 1967, then climbed to about $20 million in 1972. It acquired new projects steadily through the 1950s and 1960s while developing existing projects, and in the late 1960s with prices rising quickly, tripled its annual volume of new projects at the same time it began buying large projects in the largest cities. With this rapid expansion of the program CMHC is now spending $20 million per annum on land assembly and has budgeted five times this amount in anticipation of increased demand for program funds.[2]

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1. It should be noted that this refers only to absolute numbers of new projects and is irrespective of project costs. Because of differences in cost and scale, one development phase (which would not be recorded in Table 4.24 as it is not a new project) in a large centre might cost as much as a dozen large new projects in smaller places.
2. At the Federal/Provincial Conference in January 1973 the Minister of State for Urban Affairs announced there was $100 million per annum available for land assembly.

Table 4.25 augments Table 4.24 with data concerning the quantity of acres or lots acquired in these new projects.[1] A rough comparison between acres and lots can be made by assuming five lots represents one acre. As described above, the program bought considerable land during its first five years, then added incrementally to this holding through the 1950s and 1960s until, with the change in legislation in 1967, it resumed large scale purchasing. In total, nearly 33,000 acres were purchased in 81 projects while an additional 76 projects were acquired with 13,000 lots. Although 80% of all projects have been in towns and villages, 70% of acres and 20% of lots were in agglomerations, and most of this land was purchased after 1967. Social and cost projects were both small and infrequent in comparison to market projects. While numerically large acreages were acquired in market projects during the early 1950s, it should be noted (referring to Table 4.24) that they were small relative to their locales, except in towns and villages. Thus while many municipalities began land operations during that housing boom, it was primarily smaller places that began on a large scale, while larger places did not increase the scale of their land assemblies until housing prices began rising quickly in the late 1960s.

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1. Table 4.25 and its companion Table 4.26 report those projects for which lot or acreage data was available. This excludes two projects which were reported in Table 4.24.

Table: 4.25

FEDERAL PROVINCIAL LAND ASSEMBLY SURVEY
SUMMARY OF ACREAGE AND LOTS ACQUIRED, CANADA, BY SETTLEMENT TYPE, PURPOSE OF PROJECT, AND TIME

	DATE OF ACQUISITION																							
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	TOTALS
VILLAGES																								
-COST-No. of Projects																			1					1
-No. of Acres																			47					47
-No. of Projects																1		2	2			2	1	8
-No. of Lots																248		146	147			103	131	775
-SOC.-No. of Projects																1		2	2		2		2	9
-No. of Acres																5		3	68		16		42	134
-No. of Projects																	1							1
-No. of Lots																	671							671
-MKT.-No. of Projects		1	1															3	2	6	3	9	7	32
-No. of Acres		1955	54															154	78	519	35	375	1280	4456
-No. of Projects		1	3	4	1	3		1	1		2		2		1		4	14	1	3		1	1	43
-No. of Lots		272	195	181	47	253		158	792		147		174		69		362	1345	156	408		203	121	4883
TOWNS																								
-COST-No. of Projects																								0
-No. of Acres																								0
-No. of Projects		1																						1
-No. of Lots		212																						212
-SOC.-No. of Projects																								0
-No. of Acres																								0
-No. of Projects																								0
-No. of Lots																								0
-MKT.-No. of Projects		1	1	1	1	1												4	5		1	2	1	18
-No. of Acres		171	661	219	153	197												112	3474		5	50	78	5120
-No. of Projects	1	2	1	1	1		1	2	2							1		1	2	1				16
-No. of Lots	207	1254	122	50	54		258	199	447							350		100	491	46				3578
AGGLOMERATIONS																								
-COST-No. or Projects																								0
-No. of Acres																								0
-No. of Projects	1																							1
-No. of Lots	554																							554
-SOC.-No. of Projects																		1			1	2		4
-No. of Acres																		2			28	15		45
-No. of Projects																								0
-No. of Lots																								0
-MKT.-No. of Projects				1	1					1								3	1	4	1	3	2	17
-No. of Acres				1704	1034					635								1922	490	4388	510	1926	10500	23109
-No. of Projects	2	1				1	1	1																6
-No. of Lots	704	676				132	659	271																2442
ALL PLACES																								
-COST-No. of Projects																			1					1
-No. of Acres																			47					47
-No. of Projects	1	1														1		2	2			2	1	10
-No. of Lots	554	212														248		146	147			103	131	1541
-SOC.-No. of Projects																1		3	2		3	2	2	13
-No. of Acres																5		5	68		44	15	42	179
-No. of Projects																	1							1
-No. of Lots																	671							671
-MKT.-No. of Projects		2	2	2	2	1				1								10	8	10	5	14	10	67
-No. of Acres		2126	715	1923	1187	197				635								2188	4042	4907	550	2351	11858	32679
-No. of Projects	3	4	4	5	2	4	2	4	3									15	3	4		1	1	65
-No. of Lots	911	2202	317	231	101	385	917	628	1239		147		174		69	350	362	1445	647	454		203	121	10903
ALL PLACES, ALL PURPOSES																								
-No. of Projects		2	2	2	2	1				1						1		13	11	10	8	16	12	81
-No. of Acres		2126	715	1923	1187	197				635						5		2193	4157	4907	594	2366	11900	32905
-No. of Projects	4	5	4	5	2	4	2	4	3		2		2		1	2	5	17	5	4		3	2	76
-No. of Lots	1465	2414	317	231	101	385	917	628	1239		147		174		69	598	1033	1591	794	454		306	252	13115

Table 4.26 reports the development phasing of the same new projects contained in the previous tables. With the addition of this phasing data, it is possible to see the substance of the public land assembly program. The early acquisitions, regardless of location and project size were developed in regular phases. As most of these projects were small relative to their local markets, the individual phases provided only a fraction of the annual supply. The sustaining funding needed for these partnership projects to complete their development phases required the bulk of the program's funds until the mid 1960s, leaving marginal funds for the assembly of new projects. The coincidence of the introduction of the Section 42 loan provisions, the increase in the program budget, rising housing prices, and the dispersion of information about the experience of the extended development phases in the earlier projects, brought about a new cycle of land buying in the program. Formal land banking began with the second buying cycle, coinciding with the assembly of large land banks by private developers. In total, 75% of the acreage acquired during the entire public program was banked, and 70% of the banked land was in 9 large market projects purchased in the largest cities after 1967. As all of the land banks are intended for sale at market prices, they appear to be following the revenue objective. The few cost projects (the projects which potentially pursue the price reduction objective) are for immediate or phased development,

TABLE: 4.2 6

FEDERAL PROVINCIAL LAND ASSEMBLY SURVEY
SUMMARY OF ACREAGE AND LOTS ACQUIRED, CANADA, BY SETTLEMENT TYPE, PHASING OF DEVELOPMENT, AND TIME

		1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	TOTALS
VILLAGES																									
- IMMEDIATE-	-No. of Projects																		2			3	5	5	15
	-No. of Acres																		56			24	161	116	356
	-No. of Projects				1							1					1								3
	-No. of Lots				31							87					248								366
-REGULAR	-No. of Projects			1													1		3	1	6	1	3	1	17
	-No. of Acres			54													5		102	47	519	13	84	46	870
	-No. of Projects		1	3	3	1	3		1	1		1		2		1		5	14	3	3		3	2	47
	-No. of Lots		272	195	150	47	253		158	792		60		174		69		1033	1417	303	408		306	252	5889
-BANKS	-No. of Projects		1																	4		1	1	3	10
	-No. of Acres		1955																	146		14	130	1160	3405
	-No. of Projects																		2						2
	-No. of Lots																		74						74
TOWN																									
- IMMEDIATE-	-No. of Projects																		1			1	1		3
	-No. of Acres																		1			5	41		47
	-No. of Projects							1	1																2
	-No. of Lots							258	177																435
-REGULAR	-No. of Projects		1	1		1														1					4
	-No. of Acres		171	661		153														400					1385
	-No. of Projects	1	3	1	1	1			1	2							1		1	2	1				15
	-No. of Lots	207	1466	122	50	54			22	447							350		100	491	46				3355
-BANKS	-No. of Projects				1		1												3	4			1	1	11
	-No. of Acres				219		197												111	3074			9	78	3688
	-No. of Projects																								
	-No. of Lots																								
REGIONS																									
-IMMEDIATE	-No. of Projects																		1				2		3
	-No. of Acres																		2				15		17
	-No. of Projects																								
	-No. of Lots																								
-REGULAR	-No. of Projects				1	1					1								2			1	3		9
	-No. of Acres				1704	1034					635								306			28	1926		5633
	-No. of Projects	3	1				1	1	1																7
	-No. of Lots	1258	676				132	659	271																2996
-BANK	-No. of Projects																		1	1	4	1		2	9
	-No. of Acres																		1616	490	4388	510		10500	17504
	-No. of Projects																								
	-No. of Lots																								
ALL PLACES																									
-IMMEDIATE	-No. of Projects																		4			4	8	5	21
	-No. of Acres																		58			29	217	116	420
	-No. of Projects				1			1	1			1					1								5
	-No. of Lots				31			258	177			87					248								801
-REGULAR	-No. of Projects		1	2	1	2					1						1		5	2	6	2	6	1	30
	-No. of Acres		171	715	1704	1187					635						5		408	447	519	41	2010	46	7888
	-No. of Projects	4	5	4	4	2	4	1	3	3		1		2		1	1	5	15	5	4		3	2	69
	-No. of Lots	1465	2414	317	200	101	385	659	451	1239		60		174		69	350	1033	1517	794	454		306	252	12240
-BANK	-No. of Projects		1		1		1												4	9	4	2	2	6	30
	-No. of Acres		1955		219		197												1727	3710	4388	524	139	11738	24597
	-No. of Projects																		2						2
	-No. of Lots																		74						74
ALL PLACES																									
ALL PHASES																									
	-No. of Projects		2	2	2	2	1				1						1		13	11	10	8	16	12	81
	-No. of Acres		2126	715	1923	1187	197				635						5		2193	4157	4907	594	2366	11900	32905
	-No. of Projects	4	5	4	5	2	4	2	4	3		2		2		1	2	5	17	5	4		3	2	76
	-No. of Lots	1465	2414	317	231	101	385	917	628	1239		147		174		69	598	1033	1591	794	454		306	252	13115

are in villages and are "large" projects - therefore their costs are market prices and while they do provide needed serviced land for housing, this is not a price reducing activity.[1] While considerable verbal energy is being expended propounding the notion that public land banking reduces land costs, it appears that for twenty years most public land assembly activity has been producing lots for sale at or near market prices. One wonders why the various housing "experts" and politicians describe the program so incorrectly when it appears to be functioning so well.

Tables 4.27 to 4.30 show the distribution of NHA land assembly activities among four major regions of Canada. Quebec has never used these federal programs, and Manitoba has only used the programs during the past few years.

Table 4.27 reports new projects by region by the size of the settlement in which they were located. It shows that towns and villages in Ontario have always been the major users of the program, accounting for over one-half of all projects. Between 1950 and 1967, 56 projects were started in Canada, 37 of which were in Ontario. After Section 42 was revised in 1967, other regions found the

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1. These projects in small places are both needed and do reduce prices in that they supply a commodity (serviced lots) that the private market is not supplying. However, this is not pursuit of the price reduction goal as defined earlier, but is closer to the social goal.

TABLE: 4.27

FEDERAL - PROVINCIAL LAND ASSEMBLY SURVEY

ALL NEW PROJECTS BY REGION, BY MARKET SIZE, BY TIME

	NUMBER OF NEW PROJECTS STARTED							ATLANTIC					ONTARIO					PRAIRIES					B.C. AND NWT.				
	FINANCING		CAN. TOTAL																								
	SCT 40	SCT 42	V	T	A	ALL	%	V	T	A	ALL	%	V	T	A	ALL	%	V	T	A	ALL	%	V	T	A	ALL	%
1950	4		1	1	3	5	3.1			1	1	2.6		1	2	3	4.5						1			1	7.1
1951	7		1	4	1	6	3.7		1		1	2.6	1	3	1	5	7.6										
1952	6		4	2		6	3.7						4	2		6	9.1										
1953	7		4	2	1	7	4.3						3	2	1	6	9.1						1			1	7.1
1954	4		1	2	1	4	2.5						1	2	1	4	6.1										
1955	5		3	1	1	5	3.1						3	1		4	6.1								1	1	7.1
1956	2			1	1	2	1.2								1	1	1.5		1		1	2.5					
1957	4		1	2	1	4	2.5							1	1	2	3.0						1	1		2	14.3
1958	3		1	2		3	1.9						1	1		2	3.0		1		1	2.5					
1959	1				1	1	.6								1	1	1.5										
1960	2		2			2	1.2						1			1	1.5	1			1	2.5					
1961																											
1962	2		2			2	1.2						1			1	1.5						1			1	7.1
1963																											
1964	1		1			1	.6						1			1	1.5										
1965	3		2	1		3	1.9	2			2	5.1												1		1	7.1
1966	5		5			5	3.1	3			3	7.7						2			2	5.0					
1967	26	5	21	6	4	31	19.3	4			4	10.3	5	6	4	15	22.7	11			11	27.5	1			1	7.1
1968	15	1	8	7		16	9.9	4			4	10.3		5		5	7.6	4	2	1	7	17.5					
1969	9	5	9	1	4	14	8.7	2	1	1	4	10.3	4			4	6.1			2	2	5.0	3		1	4	28.6
1970	2	6	5	1	2	8	5.0	4	1	2	7	17.9	1			1	1.5										
1971	4	15	12	2	5	19	11.8	3	1	2	6	15.4	1	1		2	3.0	7		3	10	25.0	1			1	7.1
1972	5	10	12	1	2	15	10.6	5	1	1	7	17.9	1		1	2	3.0	5			5	12.5	1			1	7.1
TOTALS	117	42	95	36	28	159	100.0	27	5	7	39	100.0	28	25	13	66	100.0	30	4	6	40	100.0	10	2	2	14	99.8
%	73.9	26.1	59.0	22.4	18.6	100.		69.2	12.8	17.9	100.		42.4	37.9	19.7	100.		75.	10.	15.	100.		71.3	14.3	14.3	100.	

NOTES: V - Village, 1971 population less than 20,000.
T - Town, 1971 population 20,000 - 100,000.
A - Agglomeration, 1971 population more than 100,000.

program more attractive, with 35 projects on the prairies, 32 in the Maritimes, 29 in Ontario and 7 in British Columbia and the Northwest Territories. Within regions, 60-70% of all projects have been in villages, 10-15% in towns and 15-20% in agglomerations, although towns in Ontario have given the program slightly more usage, at the expense of villages. Most of the projects in large centres in Ontario occurred in the early 1950s, while the other regions began projects in agglomorations during the programs second cycle. As program funds are limited, the increasing numbers of large projects in large places limit the money available for use in other places, and constitute the major thrust in the current program. Otherwise, new projects in villages in the Atlantic and Prairie regions, particularly in Nova Scotia and Saskatchewan, are the main demand for new program funds.

Table 4.28 shows the distribution of the 133 new market projects which have occurred in Canada to date. Projects are grouped in three periods which correspond with the programs initial cycle during the 1950s, the hiatus before 1967, and the second cycle which began with the introduction of Section 42. In Ontario 94% of all new assemblies were market projects, and these constituted nearly one-half of all market projects in Canada. This emphasis on the market objective was not unique - all projects in British Columbia and the Northwest Territories sold at market price, as did 90% of the projects in the prairie region, and most of the projects

TABLE: 4.28

FEDERAL - PROVINCIAL LAND ASSEMBLY SURVEY

NEW PROJECTS INTENDED FOR SALE AT MARKET PRICES, BY RELATIVE SIZE, REGION, AND SETTLEMENT TYPES

PROJECT SIZE (RELATIVE) AND PERIOD OF ACQUISITION	NUMBER OF PROJECTS																			
	BY SECTION		BY REGION																	
			CANADA				ATLANTIC				ONTARIO				PRAIRIE				B.C. AND NWT			
	40	42	V	T	A	% 40	V	T	A	% 40	V	T	A	% 40	V	T	A	% 40	V	T	A	% 40
1950 - 59 SMALL	23		8	7	8	100%					7	6	7	100%					1	1	1	100%
LARGE	18		8	9	1	100%					6	7	1	100%		2		100%	2			100%
% OF CAN. TOTAL	100%		39%	39%	22%	100%					32%	32%	20%	83%		5%		5%	7%	2%	2%	12%
1960 - 67 SMALL	10	1	4	5	2	91%	1			100%	2	5	2	89%					1			100%
LARGE	24		22	1	1	100%	3			100%	4		1	100%	14			100%	1	1		100%
% OF CAN. TOTAL	97%	3%	74%	17%	9%	97%	11%			12%	17%	14%	8%	38%	40%			41%	6%	3%		9%
1968 - 72 SMALL	7	6	4	8	1	54%		3	1	50%	3	4		57%	1	1		50%				
LARGE	20	24	30	4	10	45%	8	1	4	38%	4	2	1	57%	13	1	4	33%	5		1	83%
% OF CAN. TOTAL	47%	53%	60%	21%	19%	47%	14%	7%	9%	26%	12%	10%	2%	30%	24%	3%	7%	26%	9%		2%	18%
1950 - 72 SMALL	40	7	16	20	11	85%	1	3	1	60%	12	15	9	89%	1	1		50%	2	1	1	100%
LARGE	62	24	60	14	12	72%	11	1	4	50%	14	9	3	88%	27	3	4	65%	8	1	1	90%
% OF CAN. TOTAL	77%	23%	57%	26%	17%	76%	16%	12%	22%	11%	34%	70%	52%	54%	37%	12%	17%	22%	13%	6%	9%	13%

NOTES: "V" indicates village, population in 1971 less than 20,000.
"T" indicates town, population in 1971 between 20,000 and 100,000.
"A" indicates agglomeration, population in 1971 exceeds 100,000.
SMALL projects could not provide one years supply of lots at low density, in their location.
LARGE projects could provide one years supply of lots, at low density, in their location.
This table excludes development phases of projects already acquired.

in towns and agglomerations in the Atlantic region.[1] The only strongly non-market orientation is seen in projects in villages in the Atlantic region, and as public assemblies are the dominant suppliers of developed lots in these places, the assembly price is probably the effective market price in any event. The relative size of projects is increasing, led by the two Western regions and the Maritimes where most projects have always been "large".

Table 4.29 is a summary of all market projects, including both their original and subsequent phases. The pre-eminence of Ontario in the program is again visible, as 70% or more of all market projects were in this province in each period until 1970. Comparison with Table 4.28 demonstrates that Ontario also had nearly as many sustaining phases as new projects, while in the Atlantic region there were one-half as many sustaining phases as new projects, the Prairies had 40% and the British Columbia/Northwest Territories region had only 20%. Thirty-eight of the 87 sustaining market phases were in agglomerations, including 27 in Ontario's larger places, while 28 sustaining projects were

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1. The definition of market projects causes some distortion here. Projects were included in this table if they were classified market or if they were classed "cost" and developed immediately after acquisition, as in the latter case cost would be equivalent to market price. Typically the latter situation occurs in small places, so it may be assumed that most market projects in villages represent the pursuit of a general housing, rather than the revenue objective.

TABLE: 4.29

FEDERAL PROVINCIAL LAND ASSEMBLY SURVEY
SUMMARY OF ALL PROJECTS INTENDED FOR SALE AT MARKET PRICE

PERIOD OF ACQUISITION	NUMBER OF PROJECTS CANADA										PERCENTAGE OF		BY REGION																	
	BY SECTION		SIZE		TYPE			LOCATION					ATLANTIC					ONTARIO					PRAIRIE					BC & NWT				
	40	42	SMALL	LARGE	I	R	B	V	T	A	ALL PROJECTS	ALL MKT PROJECTS	V	T	A	ALL	% CAN	V	T	A	ALL	% CAN	V	T	A	ALL	% CAN	V	T	A	ALL	% CAN
1950-54	31		18	13	1	27	3	11	13	7	12%	14%						9	13	7	29	94						2		2	6
1955-59	23		12	11	2	20	1	8	10	5	9	11						7	7	4	18	78	2		2	9		1	1	3	13
1960-64	12		5	7	1	11		7	3	2	4	5						4	2	2	8	67	1	1	2	17		2		2	17
1965-69	70	9	31	48	3	54	22	40	20	19	30	36	7	2	1	10	13	12	15	12	39	49	16	2	5	23	29	5	1	1	7	9
1970-72	26	49	31	44	18	40	17	31	16	28	29	34	8	7	6	21	28	7	7	14	28	37	14	1	8	23	31	2	1		3	4
1950-72	162	58	97	123	25	152	43	97	62	61	84	100	15	9	7	31		39	44	39	122		31	6	13	50		12	3	2	17	

NOTES - SMALL projects could not provide one years supply of lots, at low density, in their location.
- LARGE projects could provide one years supply of lots, at low density, in their location.
- "I" indicates the project was intended for complete development immediately, within 2 or 3 years of acquisition.
- "R" indicates the project was intended for development in small (relative to the local market) regular phases.
- "B" indicates the project was intended to be held as a land bank for future development.
- "V" indicates village, population in 1971 less than 20,000.
- "T" indicates town, population in 1971 between 20,000 and 100,000.
- "A" indicates agglomeration, population in 1971 exceeds 100,000.
- This table reports all project loans or approvals directed to providing land for eventual sale at market prices.

in towns, 20 of which were in Ontario. Alberta and Saskatchewan had nine sustaining phases to their 4 market projects in agglomerations, while the remaining sustaining phases were spread across the country. The early concentration of sustained projects in Ontario's larger places is not surprising, as these relatively richer municipalities could afford to buy larger acreages. With this example, the other regions have also begun larger projects, and the imbalance in numbers of sustaining projects is diminishing.

Table 4.30 shows the distribution of all non-market projects. Most non-market projects were funded under Section 40, and were relatively large,immediate and phased developments located in villages in Newfoundland and New Brunswick. Non-market projects occurred primarily in the Atlantic region, with 28 projects including 17 in villages and 7 in agglomerations. The latter were the various phases of two projects at St. John's and the North Preston project in the Halifax-Dartmouth region. The Prairie region had 8 non-market projects of which 5 occurred in the Winnipeg region in 1971, one was in Regina in 1972, and the other two were in villages in Alberta. Ontario undertook 5 non-market projects during the late 1960s, primarily in towns and villages in northern parts of the province. All non-market projects in Newfoundland were for sale at cost except one social housing phase of a larger project in Corner Brook, while all other non-market projects in Canada were social

TABLE: 4.30

FEDERAL PROVINCIAL LAND ASSEMBLY SURVEY
SUMMARY OF PROJECTS INTENDED FOR SALE AT NON-MARKET PRICES

PERIOD OF ACQUISITION	NUMBER OF PROJECTS												BY REGION AND LOCATION SIZE														
	CANADA By Section		Size		Type			Location			Percentage of All Projects	All Non Mkt. Projects	Atlantic					Ontario					Prairie				
	40	42	S	L	I	R	B	V	T	A			V	T	A	All	% Can	V	T	A	All	% Can	V	T	A	All	% Can
1950-54	2			2		2			1	1	6	5		1	1	2	100										
1955-59											0	0															
1960-64	2		1	1		2				2	14	5			2	2	100										
1965-69	11	7	10	8	6	9	3	12	4	2	18	44	9	2	1	12	67	2	2	1	5	28	1		1	5	
1970-72	7	12	12	7	9	8	2	9	1	9	20	46	8	1	3	12	63						1	6	7	36	
1950-72	22	19	23	18	15	21	5	21	6	14	16	100	17	4	7.	28	68	2	2	1	5	12	2	6	8	19	

Notes: "S" indicates SMALL projects, which could not provide one years supply of lots, at low density, in their location.
"L" indicates LARGE projects, which could provide one years supply of lots, at low density, in their location.
"I" indicates the project was intended for complete development immediately, within 2 or 3 years of acquisition.
"R" indicates the project was intended for development in small (relative to the local market) regular phases.
"B" indicates the project was intended to be held as a land bank, for future development.
"V" indicates village, population in 1971 less than 20,000.
"T" indicates town, population in 1971 between 20,000 and 100,000.
"A" indicates agglomeration, population in 1971 exceeds 100,000.

This table reports all project loans or approvals directed to providing land which was not intended for sale at market prices (i.e. for development as social housing or for non-immediate development for sale at cost). No projects of these types were found in B. C. or N. W. T.

housing with the exception of one cost project in Charlottetown.

Table 4.31 reports, by region, those projects which were developed in several phases and includes the section of the National Housing Act which financed each stage. In most cases, (86 of 126), the development stage received the same financing as the acquisition stage, however, since Section 42 was introduced in 1967, in each region at least one project changed its method of financing for the development stage. In most of these changes (30 of 40) land acquired under Section 40 was developed by means of a Section 42 loan, thereby securing the maximum financial advantage for the project from the federal programs. In these cases, 75% of the cost of acquiring and holding the site was paid by the federal government, then the provincial partner purchased the land from the partnership at cost and obtained a 90% federal loan to finance the total land and development costs of the ultimate project. Most of these cases occurred in the Maritimes (21 projects) and Ontario (15 projects), and removed parcels from land banks for development as social housing projects or to provide lots for the general market.

Table 4.32 is a report of current holdings in all public land assembly projects financed by the NHA grouped in accordance with the purpose for which the land was acquired. This table does not include all land held under NHA programs as it is based on CMHC's head office records, which are not current in the case of acreage held under Section 42 loans.

TABLE: 4.31

FEDERAL PROVINCIAL LAND ASSEMBLY SURVEY.
PROJECT DEVELOPMENT AND PROJECT ACQUISITION, CHANGES IN LEGISLATION USED

PERIOD DEVELOPED	ACQUISITION UNDER SECTION 40, NHA										ACQUISITION UNDER SECTION 42, NHA									
	DEVELOPED BY SECTION 40					DEVELOPED BY SECTION 42					DEVELOPED BY SECTION 40					DEVELOPED BY SECTION 42				
	Atlantic	Ontario	Prairie	B.C. N.W.T.	Canada	Atlantic	Ontario	Prairie	B.C. N.W.T.	Canada	Atlantic	Ontario	Prairie	B.C. N.W.T.	Canada	Atlantic	Ontario	Prairie	B.C. N.W.T.	Canada
1950-1966	3	23	1	1	28															
1967-1972	6	25	7	1	39	21	15	2	1	39	1				1	11		8		19
1950-1972	9	48	8	2	67	21	15	2	1	39	1				1	11		8		19

NOTE: This reports only those projects which had at least 2 phases under NHA legislation, regardless of whether their development is now complete or is ongoing.

FEDERAL PROVINCIAL LAND ASSEMBLY SURVEY

TABLE: 4.32 SUMMARY OF PRESENT HOLDINGS, CANADA, BY DATE OF ACQUISITION, SETTLEMENT TYPE, AND PURPOSE OF PROJECT.

	DATE OF ACQUISITION																							
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	TOTALS
VILLAGES																								
-COST-No. of Projects																			1					1
-No. of Acres																			29					29
-No. of Projects																1		2	2			1		6
-No. of Lots																2		43	48					93
-SOC.-No. of Projects																			1					1
-No. of Acres																			5					5
-No. of Projects																	1							1
-No. of Lots																	404							404
-MKT.-No. of Projects		1	1															3	2	2			1	10
-No. of Acres		1469	42															63	78	29			300	1981
-No. of Projects		1	3	4	1	3		1	1		1		2		1		4	13	1	3		1		40
-No. of Lots			5						2		60				2		263	327	52	181		170		1062
TOWNS																								
-COST-No. of Projects																								0
-No. of Acres																								0
-No. of Projects																								1
-No. of Lots		1																						0
-SOC.-No. of Projects																								0
-No. of Acres																								0
-No. of Projects																								0
-No. of Lots																								0
-MKT.-No. of Projects		1	1	1	1	1												3	5					13
-No. of Acres		79	238	179	50	197												111	3374					4228
-No. of Projects	1	2	1	1	1			2								1		1	2					12
-No. of Lots																74			136					212
AGGLOMERATIONS																								
-COST-No. of Projects																								0
-No. of Acres																								0
-No. of Projects	1																							1
-No. of Lots																								
-SOC.-No. of Projects																								0
-No. of Acres																								0
-No. of Projects																								0
-No. of Lots																								0
-MKT.-No. of Projects				1	1					1								3	1	2	1		1	11
-No. of Acres				1494	502					305								1855	490	798	510		9000	14954
-No. of Projects	2	1				1	1	1																6
-No. of Lots																								
ALL PLACES																								
-COST-No. of Projects																			1					1
-No. of Acres																			29					29
-No. of Projects	1	1														1		2	2			1		8
-No. of Lots																2		43	48					93
-SOC.-No. of Projects																			1					1
-No. of Acres																			5					5
-No. of Projects																	1							1
-No. of Lots																	404							404
-MKT.-No. of Projects		2	2	2	2	1				1								9	8	4	1		2	34
-No. of Acres		1548	280	1573	552	197				305								2029	3942	827	510		9300	21163
-No. of Projects	3	4	4	5	2	4	1	4	1		1		2		1	1	4	14	3	3		2		58
-No. of Lots			5						2		60				2	74	263	327	190	181		170		1274
ALL PLACES, ALL PURPOSES																								
-No. of Projects		2	2	2	2	1				1								9	8	4	1		2	36
-No. of Acres		1548	280	1673	552	197				305								2029	3924	827	510		9300	21197
-No. of Projects	3	4	4	5	2	4	1	4	1		1		2		1	1	4	14	3	3		1		67
-No. of Lots			5						2		60				2	74	263	327	190	181		170		1771

In spite of this understatement, the table reports a sizeable land holding of 1,771 lots and 21,197 acres in 103 projects, as of the summer of 1973. Virtually all of this acreage and about two-thirds of these lots are in projects intended for sale at market prices. Two-thirds of the acreage is in market projects in agglomerations, most of which are landbanks which were acquired after 1967.

Table 4.33 reports all projects financed under Section 40 which still held land in 1972, by the purpose for which the land was acquired, by the duration of the holding period, and by province. In Canada twenty-seven Section 40 projects still hold land of which 24 are market projects. Seventeen of the market projects are located in Ontario, 12, including 11 in Ontario, are more than 11 years old, and 10 of them, including 5 in Ontario, were acquired after 1968. Four projects have held land in Newfoundland for over eleven years, including one long-term social housing project and two projects which are intended for sale at cost. The other holdings are relatively recent projects in New Brunswick (2), Saskatchewan (2), and the Northwest Territories (1), and the Blair Rifle Range in Vancouver.

Table 4.34 is a report of 21 of the largest public land assemblies financed under the National Housing Act. The table includes, for each project, the acquisition date, acreage acquired and average accumulated cost per acre

TABLE: 4.33

FEDERAL PROVINCIAL LAND ASSEMBLY SURVEY
NUMBER OF PROJECTS UNDER SECTION 40 HOLDING LAND IN
1972 BY PROVINCE, PERIOD HELD, AND PURPOSE OF ACQUISITION

NUMBER OF PROJECTS HOLDING LAND IN 1972, BY PURPOSE OF ACQUISITION

PERIOD SINCE ACQUISITION	CANADA			NFLD			NS			NB			PEI			ONT			MAN			SASK			ALTA			BC			NWT		
	D	C	M	D	C	M	D	C	M	D	C	M	D	C	M	D	C	M	D	C	M	D	C	M	D	C	M	D	C	M	D	C	M
1 - 3 years			10									2						5						2									1
4 - 10 years			2															1												1			
11 - 22 years	1	2	12	1	2	1												11															
All Projects	1	2	24	1	2	1						2						17						2						1			1

Notes: "D" indicates the purpose of the project was dominantly to provide social housing.

"C" indicates the purpose of theproject was to sell at cost.

"M" indicates the purpose of the project was to sell at market price.

TABLE: 4.34

TWENTY-ONE MAJOR LAND ASSEMBLY PROJECTS FINANCED UNDER THE NATIONAL HOUSING ACT, CANADA, 1952-1972

DATE OF ACQUISITION	LOCATION OF PROJECT	SECTION	ACRES ACQUIRED	AVERAGE ACCUMULATED COST PER ACRE	ACRES DEVELOPED	AVERAGE DEVELOPMENT COST PER ACRE	NOTES
1952	Peterborough, Ont.	40	661	$ 538	436	$ 6966	Five sections developed between 1952 and 1970
1953	Malvern, Ont.	40	1704	2767	505	22496	Development began in early 1970's
1954	Hamilton, Ont.	40	1034	967	659	20337	Eleven projects developed between 1957 and 1973
1967	Mount Pearl, Nfld.	40	1118	1178	90	26926	Three sectors developed between 1971 and 1972
1967	Saltfleet, Ont.	40	1616	5078			
1968	Saskatoon, Sask.	40	928	1090			Three projects acquired during 1968
1968	Waterloo, Ont.	40	3000	2146			Project delayed, conflict with regional planning
1968	Brandon, Man.	40	400	4125	100	5000	
1969	North Vancouver, B.C.	40	640	2901			
1969	Edmonton, Alta.	42	4864	2284			
1969	Regina, Sask.	40	895	1573	30	11133	Four projects acquired, one developed
1969	Oakville, Ont.	40	698	1206			
1970	Saint John, N.B.	40	510	1500			
1971	Spryfield, N.S.	40	870	575			
1972	Bedford, N.S.	40	1500	168			
1972	Sackville, N.S.	42			351	14317	
1972	Cole Harbour, N.S.	42	960	2083			
1972	Gunningsville, N.B.	42	531	452			
1972	Fort McMurray, Alta.	42	320	1115			
1972	Gloucester, Ont.	40	9000	1889			Funding not approved as of March 1976
1972	North Pickering, Ont.	40	25000	2133			

SOURCE: CMHC Land and New Communities Division, July 1973

(acquisition costs plus holding costs less any revenues obtained during the holding period), the acreage developed prior to July 1973, and the average actual development cost per acre. Thus, this deceptively simple table reports the acquisition of about 56,000 acres in sixteen different cities at a total cost of about $120 million, and the development of 2,171 of these acres for an additional federal expenditure exceeding $32 million.[1] These simplified figures allow some appreciation of the cost characteristics of public land projects. In the 3 projects acquired in Ontario in the early 1950s, the accumulated costs of acreage, as of the early 1970s, varied from an average of $538 per acre to $2767 per acre. During the interim, the respective cities grew out to the project sites, the land became ripe for development and its value increased to as much as fifteen times its accumulated cost. The projects acquired across Canada in the late 1960s have slightly higher costs - as raw land prices, borrowing costs, taxes and administration costs have risen - but most of these sites are coming "on stream"

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1. The variance between these acreage figures and the data in Table 4.25 occurs because the 25,000 acre North Pickering project is excluded from the earlier table, as is some of the other acreage assembled in acquisition stages subsequent to the initial stage of each project. The variance between federal expenditures in Table 4.24 and project costs in Table 4.34 occurs because the former reports only the federal portion of expenditures and reports these on an annual basis whereas the later reports total costs which may have arisen over several years, as of one date.

more quickly than the land banks from the first cycle did,[1] and their costs are still as low as 20% of the current prices for comparable sites. Lastly, the large acquisitions in 1972 occurred at relatively low average prices, indicating that the general market considers that their potential for early development is slight. If regional planning priorities and infrastructure placement shifts to accelerate the development of this low-cost land, this generation of public purchases would obtain a more sizeable social increment than the earlier cycles, and this revenue could be used to produce a better living environment than competing developments. Development costs are similar to private developers costs, as might be expected since this function is often performed by the same contractors in both cases. However, as the accumulated land costs are lower than comparable costs for private developers, the public projects have both lower total costs and a lower land-to-total cost ratio than those seen in private projects.[2] Finally, the total costs of an acre of developed land appears to be 40-60% of its sale price in southern Ontario, 60-80% of the price of an acre in Brandon and Regina, and about equal to market price in Newfoundland. These varied relationships

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1. The Waterloo and Saskatoon projects are exceptions, as the former is delayed indefinitely while the latter is part of that cities long-term inventory and may not be developed until the 1980s.
2. Some costs for private projects were given in Sections 2.2 and 4.1.

demonstrate that the capacity of public land projects varies with different contemporary market conditions - the economics of projects in fast-growth, high-price markets like Ontario cities allows choice between a variety of project objectives and provides a large profit which cushions experimentation, while in slower markets like St. John's where the private sector is not active public land operations must provide the best possible package of services and site ammenities at the lowest cost with no margin for error.

Table 4.35 provides more information about average project costs in a sample of current projects from across Canada. The consistent division between accumulated land costs and development costs is notable - despite rising prices of raw acreage, land has not exceeded about 11% of total costs in these public projects. Their average costs varied from $130,000 to $6,140,000 with most projects costing less than $500,000. As land costs averaged about 10% of total costs, this indicates that until development occurred, most of these assemblies cost less than $50,000, a manageable expense level for even a small municipality.

Table 4.36, a summary of recent land assembly loans received in the Province of Alberta, reports current costs for large and small projects in various sizes of settlements. The 4865 acre Mill Woods assembly southeast of Edmonton was an expensive project, costing the Alberta Housing Corporation and the City of Edmonton about $1 million

TABLE: 4.35

LAND AND DEVELOPMENT COSTS IN A SAMPLE OF CURRENT PUBLIC LAND ASSEMBLY PROJECTS -- CANADA

PROVINCE	NUMBER OF PROJECTS	TOTAL COST	COST OF MOST EXPENSIVE PROJECT	AVERAGE COST OF OTHER PROJECTS	% LAND	% DEVELOPMENT
NEWFOUNDLAND	4	$ 1,385,436	$ 636,822	$249,538	9.6	90.4
NOVA SCOTIA	1	377,407	377,407		1.9	98.1
NEW BRUNSWICK	2	1,131,790	763,267	368,523	11.2	88.7
ONTARIO	13	16,814,494	6,137,874	889,718	10.7	89.3
SASKATCHEWAN	6	1,397,326	717,541	135,957	10.9	89.0
BRITISH COLUMBIA	4	3,401,831	1,828,876	524,318	8.3	91.6
TOTAL	30	$24,508,283		585,304	10.2	89.8

SOURCE: CMHC Land and New Communities Division, July 1973.

TABLE: 4.36 RECENT LAND ASSEMBLY LOANS IN PROVINCE OF ALBERTA - SECTION 42

	YEAR OF LOAN	NUMBER OF ACRES ACQUIRED	NUMBER OF ACRES SERVICED	LOAN AMOUNT ACQUISITION	LOAN AMOUNT SERVICING	LOAN AMOUNT BOTH	AVERAGE LOAN AMOUNT PER ACRE ACQUISITION	AVERAGE LOAN AMOUNT PER ACRE SERVICING	AVERAGE LOAN AMOUNT PER ACRE BOTH
Claresholme	72	25	25			$381,582			$15,263
Grande Prairie	71	130		$158,535			$1,219		
Edson	72	22	22			311,907			14,178
Ft. McMurray	72	320		321,075			1,003		
Ft. Vermillion	72	39	39			157,613			4,041
High Prairie	71	6.2	6.2			102,114			16,470
Lloydminster	71	28.8	28.8			339,531			11,789
Redwater	71	19.0	19.0			187,036			9,844
Slave Lake	71	285.0	85.			626,870			
Smokey Lake	72	9.0	9.0			111,704			12,412
Spirit River	71		8.6		$65,221			$7,584	
Stoney Plain	71	33.9	33.9			341,339			10,069
Stoney Plain	72	56.0	56.0			453,487			8,098
Strathmore	71	7.1	7.1			78,748			11,091
Edmonton	69	3500		5,334,509			1,524		
Edmonton	70	1028		3,515,760			3,420		
Edmonton	70	336		1,148,030			3,416		
TOTALS									
-Acquisition Only (5)		5314		10,477,909			1,972		
-Servicing Only (1)			8.6		65,221			7,584	
-Both(246 Acres)(11)		(12)531	(12)331			(11)2,465,061			(11)10,020

NOTE: Loans under Section 42 are for a maximum of 90% of actual costs.
This requires that actual costs are at least 111% of the values reported.

SOURCE: CMHC, Land and New Communities Division.

plus CMHC loans which totalled $9.4 million. The assemblies in the towns of Fort McMurray and Slave Lake are also large projects, relatively, yet they cost their initiators about $36,000 and $70,000 respectively, to undertake. The other 12 projects in towns and villages cost between $8,000 and $50,000 to initiate, although 11 of them were developed immediately. This variety of experience demonstrates that diverse projects can be financed under the National Housing Act, and with this financing, can occur at relatively low cost to their initiators.

In summary, this survey demonstrates that a variety and considerable number of public assembly projects have emerged in Canada since 1950, with the assistance of NHA financing. The survey reported the acquisition of about 33,000 acres and 13,000 lots in 157 projects, and a holding of about 21,000 acres and 1771 lots in 103 projects. Most of these projects were relatively small acquisitions which developed quickly for sale at market prices, financed as federal/provincial partnerships under Section 40 during the 1950s and early 1960s in towns and villages in Ontario. Also during this first cycle of the program, a few large projects were acquired in Ontario's agglomerations and their development phases plus the other Ontario projects took the bulk of the slowly rising program budget. By prioritizing its budget and offering increasing flexibility in its administration CMHC encouraged the emergence of other projects, particularly

those of a non-market nature, in towns and villages in Newfoundland and New Brunswick. In 1967 when CMHC's budget was expanded and the land assembly loan provisions were added to the NHA, the program grew enormously. Most of the acreage ever acquired by the program was purchased after 1967, in large land banks for sale at market prices around agglomerations, in Ontario, Alberta, Newfoundland and Nova Scotia. Ontario's predominance in the program shifted somewhat, as many smaller projects were begun in the Maritimes and Prairies, but the large, big city projects in Ontario have continued to take large blocks of the program budget.

The survey was augmented by additional data concerning large projects and project costs which further demonstrated the capabilities of the program. Twenty-one large projects containing 56,000 acres have been assembled in 16 cities, including the 25,000 acre North Pickering project which was excluded from the survey. Many of these big assemblies have costs which, like the private developer's costs for banked land, are far below today's prices, and give their operators considerable flexibility in selecting development and pricing strategies. The accumulated land cost component usually amounts to less than 10% of the total cost of a developed project in contrast to the open market where land costs take up to 40% of the total project costs. Costs vary considerably with size and location of projects, but it is interesting to note that many smaller municipalities

have undertaken sizeable land assembly projects for expenditures (net of borrowing) under $50,000.

4.2.7 Public Land Assembly Projects in Several Municipalities

Several Canadian municipalities have had considerable involvement with their land markets through land assemblies. The five brief case studies which follow describe some of this experience, and add substance to the earlier theoretical, financial and aggregated information about public land projects. The projects reported are in cities and metropolitan areas, are large, and were begun to pursue various objectives.

KINGSTON

The experience of Kingston, Ontario is an example of a public land assembly moderating lot prices in a city for several years. Table 4.37 summarizes land market activity in Kingston since the mid-1950s, and the public land assembly projects there.

The supply of serviced land within Kingston's city limits began to run short in the mid-1950s causing suburban expansion to move to Kingston Township[1], residential

1. Expansion to the south and east is blocked by water.

TABLE: 4.37

LAND MARKET ACTIVITY AND PUBLIC LAND ASSEMBLIES - KINGSTON, ONTARIO

DATE	PUBLIC PROJECTS UNDERTAKEN	ALL SINGLE DETACHED STARTS[1]	PUBLIC LOTS SOLD NO. OF LOTS[2]	PUBLIC LOTS SOLD AS % OF ALL S/D STARTS	NHA FINANCED S/D STARTS AS % OF ALL S/D STARTS[1]	LOT PRICES ALL NHA FINANCED S/D LOTS[1]	% INCREASE	PUBLIC LOTS AVERAGE PRICE	PUBLIC LOTS PRICE RANGE	OTHER PRICES REPORTED
1950		258								
1951		166								
1952		189								
1953		198								
1954		182								$900-1500 unserviced[3]
1955		219								
1956		147				$1320				
1957	Polson Park	114	13	11.4%		1183	-10.4%	$1427	$1400-1450	$2500 unserviced[4]
1958		622	51	8.2		1448	22.4	1418	1400-1450	$4200 serviced[5]
1959		503	77	15.3	46.5%	1516	4.7	1411	1400-1450	
1960		372	76	20.4	25.8	1662	9.6	1412	1400-1450	
1961		462	2	0.4	30.5	1760	5.9	1425	1425	
1962	Calvin Hts.-Phase I	445	49	11.0	72.6	1945	10.5	2177	1750-2650*	
1963	-Phase II	777	174	22.4	64.4	1859	-4.5	2206	1750-2650*	
1964	-Phase III	785	58	7.4	34.3	2594	39.5	2008	1750-2850*	$3200-3800 unserviced[6]
1965	-Phase IV	1203	254	21.1	20.0	2675	3.1	2060	1750-2850*	
1966		654	5	0.7	24.3	2964	10.8	2510	1750-2750*	
1967		384			30.5	3386	14.2			
1968		643			25.5	3626	7.1			
1969		1471			47.6	3924	8.2			
1970	Clark Farm	827			34.9	5667	44.4			$5500-7000 serviced[7]
1971		1243	110	8.8	54.2	6328	11.7		4500-5000	
1972		1144	120	10.5	44.2	7088	12.0		4500-5000	

* Indicates special price for builders only - $800 refund if builder does not mark-up lot price when selling house.

SOURCES:
1. CMHC Statistics Division.
2. Various project files
3. Kingston WHIG-STANDARD, 16 July 1954, p. 13.
4. CMHC memo, Kingston office to Ontario office, 6 May 1957.
5. CMHC report 10 March 1958.
6. CMHC report on 5 private subdivisions, November 1964.
7. CMHC report on Kingston Township - 4 developers activity.

construction to lag, and high-priced sporadic land development.[1] In 1954, most private lots were located in six subdivisions, and sold, unserviced, from $900-$1500.[1] CMHC and the Province of Ontario were holding two land assemblies beyond the city limits which they estimated could be developed to provide lots at cost, for $250 plus servicing on a local improvement basis.[2]

Upon request from the city council, the federal/provincial partners began a land assembly and development program between 1954 and 1956. In 1955, CMHC acquired 43 acres on Portsmouth Avenue from the Federal Department of the Solicitor-General, while Ontario purchased an adjoining 20 acre parcel - both costing $1000 per acre. By 1957, when this land, known as Polson Park, was developed, the price of private, unserviced lots had risen to about $2500.[3] Polson Park was developed as 244 lots, with total costs approximately as follows: acquisition - $63,000; legal work - $1250; survey - $6200; servicing - $725,000. It is notable that the unserviced lot component of these costs was about $300, while private unserviced lots sold at about eight times this price. Sale prices in Polson Park began at $1400 - $1450, including about 50% of the cost of providing lot services

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1. These were cited as problems at a meeting of the Kingston City Council, 28 May 1956.
2. Kingston Whig-Standard, 16 July 1954, p. 13.
3. CMHC correspondence, Kingston Branch Office to Ontario Regional Office, 6 May 1957.

capitalized in the lot price (about $1100 of servicing costs remained for collection through local improvement charges). CMHC placed an additional $1000 second mortgage on each lot sold to discourage speculation. In 1958 and 1959 the Kingston region consumed new lots at about three times the 1956 rate, and Polson Park was providing 15-20% of this enlarged supply. While prices of some private serviced lots reached $4200, the regional average price was held at about $1500.

In 1959 City Council requested a second land assembly, and the federal/provincial partners purchased 250 acres, at about $1860 per acre, later to be named Calvin Heights. Development, costing about $9200 per acre proceeded in the summer of 1962 with the private supply dwindling again, and 228 lots were offered for sale. A split price structure was introduced - lots were sold to individuals for $1780 and $1850 (plus local improvement charges which capitalized, were about $1500), while the builder price was $800 higher.[1]

This first phase of Calvin Heights saw one of the first of Canada's many line-up to acquire publicly produced lots, as people waited for hours to buy 47 lots in the first

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1. This $800 was refunded if the builder did not markup the lot price in the ultimate house price.

45 minutes of sale. The assembly provided 22% of the regional market for lots during 1961 and 1962, then dropped back to smaller phases in 1963 (Phase II - 40 lots priced at $1750 and $1850), and 1964 (Phase III - 29 lots priced at $1950 and $2050). In 1964, five private subdivisions provided most of Kingston's new lots, still mainly unserviced, at prices between $3200 and $3800[1], and the regional average price jumped nearly 40% from $1859 in 1963 to $2594. Development of the final, fourth phase of Calvin Heights was accelerated to provide 243 lots, most of which sold in 1965 for $1750, on the same, partial prepayment basis, for full lot services. The project sold out immediately.[2]

After the public assembly at Calvin Heights was depleated, lot prices in Kingston began a steady upward spiral. Average prices rose between 7% and 44% per annum for the next four years, and by 1970 a CMHC report showed four developers with as many subdivisions controlled most of the land development in Kingston Township. Most of their lots were sold between $6000 and $7000, although the Bayridge subdivision sold a few lots between $5500 and $6000. Lots within Kingston sold at about $8000.

In 1971, Ontario Housing Corporation re-entered

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1. CMHC report, November 1964.
2. Five lots carried over to 1966.

the market with the Clark Farm land assembly.[1] Costs had risen - the 300 lot project cost about $4400 per lot, comprising: 25.2% land acquisition; .1% legal fees; 2.3% salaries; 68.8% servicing and 3.5% interest charges. As the project sold under the HOME program, purchasers could not capitalize the subsidy provided for five years, and the sale prices between $4500-$5000 seem to have again defused the rapid increase in average prices across the region.

The specific purposes of the Kingston assemblies are not clear. As the program began, lot prices were rising quickly and the few private developers were providing a sporadic supply without subdivision services. As the public projects produced serviced lots at cost, the substance of the program reflects at least four objectives: to improve the quality of land development by providing a supply of serviced lots; to provide housing land at the lowest possible price thereby improving access to home ownership for families of sub-average incomes; to minimize speculative re-selling of these low-priced lots; and to moderate regional land prices. While the projects may be commended for achieving these goals, some aspects of this achievement warrant further discussion. The private sector could have supplied serviced lots if it was required to do so - this is

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1. This project was financed under Section 42 of the National Housing Act.

apparent in the shift to serviced lots in the private supply during the late 1960s. The anti-speculative goal was a companion to the "cost-price" policy, and it is not clear that the cost-price policy delivered home ownership to families who could not otherwise afford it. The public pricing policy does appear to have moderated the rise in regional prices during the years the projects sold relatively large volumes, so it appears the price of this moderation was the subsidy given to buyers in the public projects. This pricing policy appears to have gained acceptance as it continued more than a decade, through several projects and governments.

PETERBOROUGH

The Edmison Heights public land assembly in Peterborough provided a considerable supply of land for housing, changed the pattern of that regions growth, increased the level of services provided in new subdivisions, and moderated regional lot prices by underselling the market for a sustained period. Table 4.38 summarizes this activity.

The public project had a life span of nearly fifteen years. It began between 1952 and 1954, when the Ontario government and CMHC acquired large acreages north of Peterborough, in an area which the city had recently annexed.[1]

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1. Peterborough added 2718 acres between 1940 and 1960 by 13 annexations, which increased its land area to about 5566 acres.

TABLE: 4.38

LAND MARKET ACTIVITY AND PUBLIC LAND ASSEMBLIES - PETERBOROUGH, ONTARIO

DATE	PUBLIC PROJECTS UNDERTAKEN	ALL SINGLE DETACHED STARTS	PUBLIC LOTS SOLD No. OF LOTS	PUBLIC LOTS SOLD AS % OF ALL DETACHED STARTS	NHA FINANCED DETACHED STARTS AS % OF ALL DETACHED STARTS	AVERAGE LOT PRICES ALL NHA FINANCED DETACHED LOTS	AVERAGE LOT PRICES % INCREASE	PUBLIC LOTS AVERAGE PRICE	PUBLIC LOTS PRICE RANGE	OTHER PRICES REPORTED
1955		522								
1956		374				$1253				
1957		474				1145	-8.7%			
1958		553				1388	21.2			
1959	Edmison Hts.-Phase I	438	90	20.5%	45.2%	1356	-2.4	$772	$ 770-800	
1960	-Phase II	470	169	35.9	46.1	1153	-15.0	771	770-1134	
1961	-Phase III	289	41	14.1	55.3	1348	16.9	832	770-1400	
1962		192	74	38.5	82.2	1600	18.6	1804	770-2800*	
1963		266	96	36.0	59.3	1536	-4.0	2333	1400-2800*	
1964		390	51	13.0	67.6	1940	26.3	2470	1400-2800*	
1965	-Phase IV	298	87	29.1	57.3	2356	21.4	2896	1400-3400*	
1966		247	114	46.1	73.2	2543	7.9	3159	1400-3800*	
1967		400	125	31.2	44.7	2774	9.0	3139	2600*-3800*	$4000 in adjacent private subdivision[1]
1968		535			53.6	3542	27.6			
1969		444			61.7	3636	2.6			
1970		507			77.1	4296	18.1			
1971		485			74.0	4842	12.7			
1972		800			91.3	5444	12.4			

* Indicates special price for builders

SOURCE: 1. Ontario Housing Corporation Survey of the Need and Demand for Ontario Housing - City of Peterborough, September 1967, p. 24.

2. All other data from CMHC.

Development began in 1957 and the first lots were sold in 1959. The volume of lots sold varied from over 35% of the regional supply in 1960, 1962, 1963 and 1966, to under 15% in 1961 and 1964. The last sales occurred in 1967.

When Edmison Heights came on the market, land development was scattered across the fringes of Peterborough. Private developers sold an average of 480 detached housing lots a year during the four years preceeding 1959, and most lots sold, unserviced, for about $1300. Edmison Heights entered the market with 90 lots, which sold at cost, including partially-prepaid full services, for $770.[1] In that year, 1959, private lot production dropped from 553 lots to 348, and the average lot price declined 2% to $1356. The next year, Phase II of Edmison Heights increased production to 169 lots which sold at the same price,[2] while private production declined to 301 lots. The average lot price in the region dropped 15% to $1153 while the average price of privately produced lots dropped from $1507 in 1959 to $1360 in 1960. In 1961, Edmison sold only 41 lots, while holding its price, and private production had dropped to 252 lots with an average price of $1432, so the regional average price

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1. These lots were sold subject to a second mortgage, to discourage speculation. The remaining 50% of servicing cost was paid on a local improvement basis. Six large lots sold at $800.
2. Fifteen public lots sold for $800, and 3 lots were sold to builders at a higher, conditional refund price.

rose 16%. Private sales collapsed in 1962 to 118 lots at a high average price of $1768, while the new phase of Edmison Heights sold 74 lots at a cost plus, sub-market price of $1400. The regional average price jumped nearly 20% to $1600.

It appears that 1962 was a turning point in Peterborough's land market. In that year, an Ontario government study reported "recent residential construction has taken place almost exclusively in the north part of Peterborough in the federal/provincial land assembly project which is the major area of vacant, zoned residential land".[1] The survey found five active private subdivisions containing 202 lots, and two other private subdivisions in the planning stages, late in the 1962 production season.[2] This indicates that Edmison Heights had quickly redirected the city's growth, but not at the expense of prohibiting private development. The public project had introduced fully serviced lots, which became standard in Peterborough, and had held prices down in spite of the remarkable decline in private lot production.[3]

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1. Research and Finance Section, Housing Branch, Department of Economics and Development, Province of Ontario, City of Peterborough - Report of the Need and Demand for Public Housing, September - December 1962, p. 5.
2. Ibid., p. 9.
3. The Ontario study also indicated demand was not low during 1962. It found 400-500 houses, 150 of which were vacant, available for sale within the city, (about 4% of the total stock of detached houses) and 150 apartments, (about 5% of all duplexes and apartments) vacant and for rent. Ibid., P. 8.

In 1962 the public policy changed and Edmison Heights began selling near, but below market prices. Sales to builders were allowed and accounted for 33% of the 1962 sales, under a special arrangement whereby the builder paid an additional deposit which was refunded if the lower lot price was passed on to individual home-buyers. To this point, Edmison Heights had been a viable restraining force in the local land market.

For the next few years, public and private production rose steadily. In 1963 private developers sold 170 lots averaging $1612, while Edmison Heights sold 96 lots at $1400, so the regional average price declined to $1536. In 1964 the regional price jumped 26% as private production rose to 339 lots averaging $2021, while the public project sold only 51 lots at $1400. Private sales dropped to 211 lots at $2130 in 1965, while the new phase at Edmison Heights sold 87 lots at various prices which averaged $2800. For the next two years, the public assembly held its prices and increased production to 114 and finally, 125 lots while the private competitors dropped to 133 lots at $2071 in 1966 then doubled this figure to 275 lots at $2624 in 1967. This completed the public assembly, and in the following five years private production has not fallen below 440 lots per annum, and average annual prices have risen successively, by 28%, 3%, 18%, 13% and 12%.

The large project at Edmison Heights achieved a number of objectives. It redirected regional growth and added nearly 850 lots with increased services and low prices to the market over nine years, while minimizing speculative resales. It both achieved a larger share of the regional market and undercut market prices more than the Kingston projects, and its moderating effect on average prices in the region is more apparent. Another effect associated with this pricing policy is noted - the supply of privately developed lots declined, although it is not clear whether private developers were forced out of business, or curtailed production to "wait out" the public project. The policy change which began sales to builders in the project's fourth year was partially in response to claims that the private sector could not otherwise compete.[1] As firms did buy and build on the public lots despite the attendant profit limitation, there is some substance to the "couldn't compete" claim. At the same time, the coincidence of the decline and rise in the private supply with the beginning and completion of Edmison Heights, is too obvious to escape the

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1. There were two aspects to the policy change. Significant numbers of families who had purchased public lots were unable to build any or adequate houses on them. Also, it was claimed that builders could not obtain land at costs that would permit competition with the public project. The new pricing policy reflected the original goals modified by these two conditions.

conclusion that some withholding occurred in this concentrated market. In spite of the deep intervention into market prices made by Edmison Height's subsidization of home buyers, the private sector was able to respond, logically, by cutting its losses and thereby accelerating the expiration of the intervention. As described in the theoretical section earlier, complications like these must be anticipated in public land projects directed to lowering lot prices, as artificial price reduction acts against the financial interest of present homeowners and private developers, while providing extraordinary benefits to relatively few current buyers. Edmison Heights appears to have reconciled these conflicting pressures by a pricing policy which began at cost and concluded near market, exercising a restraining influence throughout, and gradually shifting itself and the entire market back to a revenue-generating posture.

HAMILTON[1]

The experience of public land assembly in Hamilton over the past two decades illustrates some problems and successes of major public land program in a large city.

In 1954 the Ontario government and CMHC acquired

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1. Much of the material in this review was disaggregated from Pearson, Norman, Towards a Methodology for Housing and Land Bank Needs Analysis, Toronto: Ontario Housing Corporation, 1973.

about 1034 acres on the upper sections of Hamilton Mountain to be developed for housing purposes. The assembly was a response to the City Council's request, in 1953, for assistance in housing, and was located, in the main, outside the limits of urbanization defined in Hamilton's development plan of 1947.[1] The land was acquired in several non-contiguous parcels south of Mohawk Road, at an average price of approximately $1000 per acre.

Early in 1955 the partners purchased an additional 127 acre parcel north of Mohawk Road from the Ontario Hospital for immediate development.[2] This project, Buchanan Park, was assembled for $1000 per acre, and developed as single detached lots for a total cost of $2700 per lot, fully serviced. Similar private lots were selling at $1000 unserviced, $2400 with partial services, and $4000 with full services.[3] In August 1959, 437 lots were placed on sale at cost, and sold out in a single day.[4] The following winter, thirty-one additional lots were developed and these sold at the same price in February 1960. The remaining 62 lots were not developed until a connecting sewer was completed in 1963,

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1. The City's 1947 plan was growth-oriented, but greatly underestimated the extent of growth. It forecast a population of 250,000 in 1980, a figure that was reached in the mid-1950s.
2. Pearson, op.cit., p. 46.
3. Ibid., p. 37.
4. CMHC files. These lots were sold subject to a second mortgage to discourage speculation.

when total costs had risen to $3400 per lot,[1] and market prices were about $4500. In July 1963 these lots were sold at $4200. To summarize, during its four-year sale period Buchanan Park sold 530 lots, between 1% and 20% of Hamilton's annual supply, at prices which subsidized their purchasers between $300 and $1300. This generated a profit of about $50,000 while foregoing a profit of about $500,000 on a total expenditure of about $1.5 million.

At this point the strategic significance of the partnership's holding began to increase. Private developers were moving to outlying areas,[2] and the public lands, equivalent in size to Hamilton's entire inventory of undeveloped land[3] was posing a real threat to the private firms.[4] For a few years real estate prices remained relatively stable, but as the city expanded and private developers were again operating within the municipal area, land prices began to escalate.[5] In 1965 the city asked the partnership to expedite development of the mountain lands,[6] and the planning of the Rolston, Lawfield Gardens, and Berrisfield areas was begun.

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1. CMHC files. This figure is $1200 above the figure Pearson (op.cit., p. 46) reports from OHC files.
2. Pearson, op.cit., p. 46.
3. Op.cit., p. 35.
4. Op.cit., p. 34.
5. Op.cit., p. 29.
6. Op.cit., p. 24.

The three subdivisions emerged slowly over the next few years. The Lawfield project contained about 48 acres which were developed as 213 lots at a total cost of $5040 per lot.[1] This project, and a smaller phase at Berrisfield, were registered as subdivision plans in October 1966, and sold at sub-market prices in 1967. The Rolston subdivision plan was rejected by the city in 1966, approval and development occurred in 1967, and the project sold 164 lots costing $6404[2] at prices from $8250 to $9075.[3]

At this point a variety of complications were joined on the public lands. The Ontario Housing Corporation was founded and the same legislation created the HOME[4] program. In 1968 the new Corporation took over the junior partner role on Hamilton Mountain and also acquired some 1600 acres a few miles beyond the mountain lands in Saltfleet Township, and began pressing for their development.[5] The mountain lands had nearly run out of servicing capacity, although the City of Hamilton had placed adequate capacity near the site boundary to develop the entire mountain, public and private, when these trunks extended. The city,

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1. Pearson, op.cit., p. 49.
2. Op.cit., p. 64.
3. Op.cit., p. 65.
4. The Home Ownership Made Easy program allowed lot purchasers to lease the lots, on a cost basis, for 50 years, with an option to purchase after five years at the market price determined at the beginning of the lease term.
5. This acquisition was funded under Section 42, NHA.

under pressure from the local chapter of the Urban Development Institute, wanted the mountain lands developed before growth proceeded out to Saltfleet. CMHC had agreed to fund the extension of services across the mountain site, and was reluctant to fund the second set of services needed to develop Saltfleet,at the same time. OHC was asked to prepare a clear development plan for the mountain lands. Meanwhile, in 1969, the production of lots on the public lands had dropped to about 8% of the region's supply.[1]

While these were real concerns, a more fundamental issue lay below the surface. The 500 remaining acres of public land on Hamilton Mountain, which had been acquired about 15 years earlier at $1000 per acre, had book values in 1968-1970 in the order of $2000 per acre.[2] As development costs were about $30,000 per acre,[3] the partnership could produce lots, at about five lots to the acre, for approximately $6400. Market prices for acreage were in the area of $20,000,[4] so private developers costs were about $10,000 per lot, and market prices for lots were $10,000 to $11,000. While this

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1. The Gilbert subdivision sold 122 lots under the HOME plan in the summer of 1969. These lots cost $96.73 per front foot, and sold, on the lease to sale arrangement, at $165 per front foot.
2. Examples of book values quoted by Pearson include: Berrisfield, 1967 - $1453 per acre (op.cit., p. 52); Rolston, 1969 - $1800 per acre (p. 105); Gilkson, 1969 - $1790 per acre (p. 105); Thorner, 1969 - $1500 per acre (p. 71); and Lisgar, 1970 - $2100 per acre (p. 75).
3. Pearson, op.cit., p. 107.
4. Op.cit., p. 64.

approximation identifies the range available to the public partnership in setting prices, two other factors produced crucial complications. In federal/provincial partnership, the junior partner controls the temporal scale of a project, as CMHC acts, essentially, in support of provincial requests. However, at any given scale, each partner has a veto on pricing policy. After examining OHC files, Dr. Pearson concludes that CMHC was insisting on a market price policy which OHC resisted.[1] A cursory review of CMHC files indicates that agency was interested in increasing the scale of public development, and in the absence of a large scale marketing effort, limiting the ability of land purchasers to capitalize the subsidy entailed in sub-market prices.[2] Both agencies indicated an intention to provide land for low to middle income buyers. Essentially, then, CMHC was willing to sell low priced lots on a large (but not on a small) scale, while OHC wanted to sell low, but not on a large scale.

All parties compromised to allow development to proceed. OHC prepared an accelerated plan to develop the mountain lands entirely by 1975, at an increased scale which would constitute 20%-30% of the regions anticipated annual lot supply. CMHC agreed to fund OHC's development plan on the

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1. Op.cit., p. 23, 34, 35, 36, 49, 56 and 67.
2. This is demonstrated in CMHC's preference for the second mortgage technique, and the HOME plan, as methods of disposal at sub-market prices.

mountain, as well as acquisition and planning expenses for Saltfleet and future trunk services for the latter. CMHC and OHC agreed that the mountain lands would be transferred to OHC ownership under a special financing arrangement for development under the HOME plan, supported by NHA loans under Section 42. Both corporations supported the cities sewer, paid higher taxes and special municipal imposts, and provided land for a new freeway across the mountain site. The city reduced some standards to facilitate HOME subdivisions, and agreed to extend the freeway into Saltfleet and expedite consideration of the Saltfleet development plan.

The two public projects are now under continuous development, primarily for disposal under the HOME plan. Hamilton mountain is producing about 1000 dwelling units each year, approximately 40% of which are detached houses. Saltfleet is being developed at a slightly slower rate, and the two public projects produce nearly one-third of the regions housing starts. At this scale of activity, the public lands appear to be capable of affecting market prices. However, as the HOME plan is designed to make housing available near cost price, without actually selling land below market price, it does not directly challenge prices in the market place. Accordingly, while the public sector provides the land for nearly one in three new detached houses produced in Hamilton each year, that city shows among the highest average house and lot prices, and price increases of any Canadian city.

As this example noted a divergence in policy concerning the central pricing mechanism (and objectives) in the Hamilton project, it seems desirable that the example and issue receive further study. Dr. Pearson has already examined the OHC files in detail. It is recommended that CMHC open it's files, and fund a parallel study of the Hamilton experience, focussing on the central pricing policy issues. This should be undertaken jointly with OHC and requires the support and assistance of the City of Hamilton.

SASKATOON

Since 1920, approximately 80% of land development in the Saskatoon urban region has occurred on public land.[1] This experience is often cited in the opinionated literature of land banking as a "model" - in fact it is an interesting, unique, parochial, success story.

Saskatoon entered the land business to clean up the debris of a boom of private market activity. Like most prairie cities, the city experienced a speculative land binge before World War I, which left considerable tax forfeits in its wake. A second land boom came in the twenties and the city sold $800,000[2] in tax titles before 1929 when the cycle

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1. Ravis, Donald Advance Land Acquisition by Local Government: The Saskatoon Experience. Saskatoon: City Planning Department, 1972, p. 46.
2. Ibid., p. 39.

reversed, the Depression set in, and tax forfeits soared. By 1945, Saskatoon held 8,500 building sites, there was little developable private land within the city limits, and city sales had reached $290,000 per annum.[1] The influx of veterans and students created a housing shortage after World War II, and the city executed a building program which involved total land sales of $950,428.54 between 1945 and 1950.[2] Through this, essentially ad hoc activity, it became apparent that municipal land holding was providing a variety of social benefits, including orderly planning, assistance to social programs, and large revenues. Also, the program had become legitimized, as both buyers and sellers, including private developers, came to the city to do business in land.[3]

Saskatoon began the modern phase of its land program in the early 1950s. The Real Estate Committee of City Council, chaired by Alderman W. E. Gray, recommended that the city acquire land for future development.[4] A professional planner was hired, and the Planning Department was established in 1952.[5] In 1953 the city began replotting the undeveloped, gridiron subdivisions from earlier eras, the

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1. Ibid., p. 39.
2. Loc.cit.
3. Hamilton, S. W. Municipal Land Banks: A Case Study of Saskatoon. Mimeographed manuscript. Vancouver: University of British Columbia Faculty of Commerce and Business Administration, no date, p. 5.
4. Ravis, op.cit., p. 45.
5. Ibid., p. 44.

first of 40 replot schemes undertaken to date.[1] In 1955 the city annexed 2,683 acres, formerly in the Rural Municipality of Cory, including the purchase of 4300 lots for $100,000.[2] A year later 3,684 acres, formerly the Town of Sutherland, was annexed, and a large land exchange with the University of Saskatchewan provided industrial property.[3] In 1957, the city began buying rural land.

By 1969, Saskatoon had made 36 individual land purchases, involving 7,033 acres, for a total cost just over $3,000,000.[4] At present, the city has assured a land supply, for open space, residential and industrial use, for 15 to 20 years,[5] has a controlling interest in development in any direction,[6] and its latest purchases are for development 15 years in the future.[7] The city has gross land sales averaging over $700,000 per annum which totalled $9.7 million between 1958 and 1971.[8] Sales, except for specific social purposes, are at market price as determined by the city, primarily on the basis of last year's sales price and any changes in the local economic situation.[9] Land banking is

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1. Ibid., pp. 113-118.
2. Ibid., pages 52 and 61.
3. Ibid., p. 61.
4. Ibid., p. 52. It is noted that none of this land was acquired by expropriation.
5. Ibid., p. 69.
6. Ibid., p. 76.
7. Hamilton, op.cit., p. 7.
8. Ravis, op.cit., p. 83.
9. Hamilton, op.cit., pp. 21, 22.

a firmly established function of the municipality, and is a profitable venture.[1]

This large scale program has been implemented by the regular city staff. Under the direction of the City Commissioner, the offices of the City Clerk and City Solicitor acquire, lease,[2] and dispose of the property and the Planning Department determines its use. All report to the Real Estate Committee of the City Council, the latter having the authority to make all relevant decisions.[3] Subdivision design and development are responsibilities of the Planning and Engineering Departments, using the same standards and approval process as are required of private developers. As the program operates quite informally with no central office and single set of accounts it is difficult to assess its performance except in a general way.

It is clear that the land program has had a range of effects. Saskatoon has a high growth rate, exceeding that in many of the larger centres, yet its average land and housing price have stayed among the lowest in Canada.[4] The land component of the price of a house is less than 20%,

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1. Hamilton, op.cit., p. 23.
2. The city leases about 9000 acres, primarily to farmers. Ravis, op.cit., p. 63.
3. Ibid., pp. 63, 69, 70.
4. It is often noted that Saskatoon prices are similar to those in Regina, which has not used public land assembly as extensively. The two cities are in the same economic milieu, generally and have similar growth rates although Regina's has been marginally lower.

and Saskatoon has had one of the highest proportion of detached houses (66%) in its housing stock of any metropolitan centre. The private sector is active in this market - five private developers have remained in operation since the early 1950s,[1] and ten speculators hold about 1700 acres beyond the city limits.[2] Finally, planners suggest the program has improved the social environment - pointing to comprehensively designed residential neighbourhoods, focussed on school sites, with suitable mixes of commercial and industrial facilities.

The replot provisions of Saskatchewan's Community Planning Act are a vital component of Saskatoon's land program. These allow the cancellation of all or parts of existing subdivisions, and the resubdivision and redistribution of the land, upon consent from the owners of at least two-thirds of a land area. The Saskatoon Planning Department estimates that in 70% of the 40 replots to date, the city has been the majority land owner,[3] so the resubdivision proceeded expeditiously. Upon replotting, land is returned to the original owners by prorating the new, marketable area. In the event that a specific owners former title has been replotted for a particularly remunerative use, (i.e. a shopping centre) that owner receives the new site and the

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1. Ravis, op.cit., pp 55 and 98.
2. Ibid., p. 97.
3. Ibid., p. 115.

value increment. It appears, then, that replotting gives the municipality extraordinary powers to subdivide private holdings, but also gives the land owners any windfall gains that may arise as a result of the subdivision. In the process, the city maintains orderly development, and integrates its land with adjacent private holdings.

Analysts have had mixed reactions to the Saskatoon experience. Ravis's study concluded with five recommendations for municipalities interested in land assembly. These were:

1) Land bank programs should be increased, even if their benefits are not visible in the short run. Present programs are not adequate for the low income sector alone, yet social and economic problems associated with land are growing each year.
2) Municipalities should not be reluctant to sink capital in land without immediate returns. Capital can be obtained on the money market or through CMHC, and the investment will be recovered upon the land's disposition.
3) Land assembly programs need better planning. If one-third of the urban fringe were in public ownership, and the uncertainties concerning time, place and type of development were lessened, the extreme variance in land prices would be limited.

4) Land use must be brought under centralized control, at the regional level.

5) The use of CMHC funding should be limited to small scale acquisitions to provide housing for people of low to moderate incomes.[1]

The Bureau of Municipal Research summarized its analysis of Saskatoon with the observation "...past North American Techniques have not been particularly successful in guiding urban development and public land ownership and land banking provides the surest method of plan implementation."[2]

Kermit Parsons and Harriet Budke concluded "Saskatoon has succeeded in driving down land costs and producing a substantial number of low cost housing units. It has also guided its rapid growth in an orderly fashion."[3]

Hamilton concluded that the success of Saskatoon's program"...is principally due to the enlightened planning provisions (i.e. the control) rather than the mere ownership of land."[4]

The divergence between the analyses above focusses on the central question in the debate about public land

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1. Ravis, op.cit., pp. 128-130. Paraphrased.
2. Bureau of Municipal Research Land Banking: Investment in the Future. Toronto: Civic Affairs Bulletin No. 1, 1973, p. 26.
3. Parsons, Kermit C. and Harriet L. Budke, Canadian Municipal Land Acquisition and Development Control, A.S.P.O. Planners Advisory Service Report (October 1972), p. 10.
4. Hamilton, op.cit., p. 33.

assembly - is public ownership necessary? The data provided in the Saskatoon example does not conclusively prove either case, but from the viewpoint of Saskatoon's citizens, businesses and their government, the experience has been satisfactory. What is really at issue? Orderly development and comprehensive planning are difficult to quantify, but it is clear that these qualities are improved, from the viewpoint of developers and planners, by the ownership of land. Saskatoon has extraordinarily strong planning powers evident in its replot function - and the entry to this power is land ownership. The co-operative relationship between Saskatoon's private and public sectors obviously contributes to the success of the city's land program - while this is atypical today it could become the norm if more municipalities involved themselves in local land markets. Saskatoon's current role in land is a product of a historical experience - other municipalities could enter the land market due to other historical experiences. Finally, on the central monetary question, both Ravis and Hamilton found that Saskatoon's program is generating a profit;[1] is subsidizing social housing, public works, and recreation programs by delivering low-cost or no-cost land;[2] is producing lots at lower prices than are prevalent in

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1. Ravis, p. 86 and Hamilton, p. 23.
2. Ravis, pp. 56-57, 80,118-122, and Hamilton, pp. 19 and 22.

other prairie cities;[1] and is maintaining relatively stable prices.[2]

Due to the lack of data it is not possible to determine the extent of profit the program generates, so economists can claim dissatisfaction with the "opportunity cost" forgone in public expenditures on land. A slight indication of the profit level is seen in Ravis' data on Westview Heights, where in 1970 lots were sold to a CMHC/ Province of Saskatchewan partnership to provide low income housing, at $10.00 per front foot.[3] As Ravis reports, this sale "made a very marginal profit,"[4] and as other sales in Westview Heights that year occurred at $18.00 per front foot,[5] it appears the project was returning profits of at least 80%.

While Saskatoon's experience does not establish that public land solves all urban land problems, it certainly demonstrates that a land assembly program can assist many other municipal functions, and constitute a useful intervention in private land markets.

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1. Ravis, p. 95, and Hamilton p. 25.
2. Ravis, p. 97, and Hamilton p. 29.
3. Ravis, op.cit., p. 120.
4. Loc. cit.
5. Ravis, op.cit, p. 87

RED DEER[1]

In Red Deer, Alberta, the municipality appears to have taken over the land development function. Red Deer had the usual prairie experience with tax forfeits during the Depression, and a building and speculative boom following World War Two, both of which progressively increased the city's involvement with land markets. In the mid 1950s, a regional planning commission was formed with a large geographical jurisdiction, and a 20 year growth plan was prepared. In accordance with this plan, the municipality began buying and developing land and as the program gained momentum, it gradually eliminated private land development.

Direct involvement with the land market began in January 1958 when Red Deer bought its first parcel of land. Since then, it has spent over $1.3 million in acquiring by negotiation large parcels intended for future development.[2] Land has also been optioned for as long as seven years - current optioned holdings have a value of approximately $200,000. Acquisition prices have varied between $750 and $1200 per acre while prairie farmland is valued between $75

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1. This section is based on data included in Parsons, Kermit C. and Harriet L. Budke, op.cit., and Cole, Dennis "The City of Red Deer" pp. 28-33 inclusive in Habitat, Volume 6, Number 4, 1963. A much more detailed examination of this experience is in Watson, Kenneth F. Landbanking in Red Deer, Thesis, Vancouver: University of British Columbia School of Community and Regional Planning, 1974.
2. Most acquisitions have been at least 160 acres (one quarter section).

and $500 per acre. Some of the land bank is leased to farmers, to offset holding costs.

To date, Red Deer has serviced, subdivided and sold over 750 acres in a market which until recently involved one of Alberta's highest growth rates.[1] Some elements of the development policy include: land is developed for sale within 18 months; development occurs at opposite sides of the city simultaneously, to provide choice; both industrial and residential subdivisions are produced; a standing inventory of about 100 lots is maintained;[2] sales occur at prices which return costs and generate some profit; 10% of lots are sold to individuals on a first-come, first serve basis; all other lots are sold to builders, on the basis of "best" development design, and it is mandatory that construction begin within one year.[3] According to Parsons and Budke, the city has received $9 million from land sales costing $5 million, with $3.7 million from each figure going to servicing. The current investment in the land program is about $400,000, of which less than 4% is capital expended on improvements. As this program is continuously supplying local builders with good, serviced lots at low prices (about $100 per front foot, fully

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1. Red Deer Regional Planning Commission Provincial Setting of the Red Deer Regional Planning Commission, 1972, p. 29.
2. This is about one-half of current annual consuption.
3. Builders obtain land on a conditional sales agreement which requires construction within one year, and cannot be resold unimproved.

serviced) private developers have gradually withdrawn from competition.

Dennis Cole, the former Director of Planning in Red Deer, suggests the following major benefits are achieved through the program:[1]

1. The City now services some 300 lots a year at a cost of about $900,000 per annum.[2] This sum is recovered within 12 months in cash and is reinvested the following year in more land and services. Expansion, therefore, does not involve any city borrowing.

2. At the time of the NHA construction, the capital cost of the installation of services is recognized by Central Mortgage and Housing Corporation and in the determination of lending value. Using the same ratios, which are made establishing insurable loan amounts for housing indicates that from 70% to 95% of the cost of services is financed by approved lenders on a long-term basis rather than by the city.

3. Owing to the fact that all contractors build at the same time in the two areas the city develops, all competition is concentrated on providing the best house for the money. The purchaser has a choice of homes built by 10 to 15 builders in each area.

4. The builders are happy with the arrangement as they do not have to tie up capital in land or services and they are assured of adequate serviced lots at no greater price than is paid by their competitor.

5. By city ownership of the land, more generous open space, parks and school sites can be provided and generally the opportunity for improved design layout cannot be underestimated.

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1. Cole, op.cit., pp. 32-33.
2. This cost information is now dated.

6. Through the city's large land holdings, 150 to 200 acres can be designed at a time and it is proving possible to bring about many desirable innovations which could not be achieved by regulation or by-law.

7. Land speculation in the residential field has been virtually eliminated.

8. The growth has now engulfed almost all the earlier fringe areas and a clear line defines the boundary between the built-up, serviced urban community and the surrounding farm land.

9. Land is not out of agricultural use until needed for servicing and concentrated urban development.

Red Deer's public land program is probably Canada's most inclusive, and approximates a model of public ownership of a city's land development function. Through this intensive interaction with the land market, the city is firmly in charge of its growth, the quality and price of new housing, and the provision of site amenities while minimizing costs from the viewpoint of home buyers, builders, and municipal borrowing. As the program administrators have virtually eliminated competition in land development, they are free, and responsible to provide a superior urban environment and housing product.

These summaries of land programs in five Canadian municipalities have demonstrated that, while the various governments have achieved several objectives by the use of land projects, the central issue which each such program must ultimately resolve is its pricing policy. In general, it appears that each city's program has been successful -

each provided a considerable supply of serviced lots for housing, and in this process directed the respective city's spatial growth in a planned manner. Each has provided land for social housing projects at low or no cost to those programs, and contributed land for parks and other public needs more generously than normal area and cost requirements. Finally, each has been able to produce developed lots at lower costs than their current market value, and, therefore, has provided the respective project administrators with a choice between obtaining revenue from the land or subsidizing purchasers. In general the decisions have been to compromise by selling at a profit which still undercuts market prices, or to obscure the issue by disguising the visibility of the subsidies given. Both pragmatic approaches appear successful as neither has generated particular criticism and in general, the experience of public land assembly in Canada has a good, albeit slightly uninformed, public image. However, this central issue of pricing policy has not been clearly resolved.

The case studies represent, in microcosm, the range of approaches to the price policy issue. In Kingston, the public projects produced between 1% and 20% of the annual lot supply, which was sold at a compromise price during a period of relatively slow price inflation in housing, with the price obscurred by the introduction of lot services and the second mortgage, anti-speculation technique. It appears to have dampened market prices without other effects, and

prices rose quickly as the project expired. In Peterborough the same pricing policy was used and similar obscurring conditions prevailed but the project scale was larger, comprising as much as 45% of the annual lot supply. Other effects emerged, as people bought land who were unable to build houses, at least some smaller developers were unable to compete in the land supply, and the volume of privately developed lots declined progressively. In response the pricing policy was shifted to an implicit pursuit of the revenue objective, after which the HOME plan was introduced. The Hamilton projects also began with a price reduction objective, as they provided a home ownership subsidy of up to $1300, on a first come, first serve basis at a small scale with the anti-speculation second mortgage in a relatively uninflating market. As the public lands became more valuable, the policy changed to an implicit revenue objective and the projects sold slightly below market prices until the HOME plan began. These cases seem to indicate an inherent instability in the price reduction objective, unless it occurs at a small scale or with a small subsidy. Notably when the policy is stable, it has little effect on the market.

In each of the Ontario projects and all other assemblies in that province, the existing objectives were largely replaced by the HOME plan in 1968. Under this plan families of the eligible income level who enter, and succeed at a lottery, obtain a lot on a cost-based leasehold, and

must purchase a house constructed on it by a builder under a previously arranged, controlled-price proposal call. The buyer faces some price control impediments if the property is resold, but after the fifth year can purchase the lot at its market value as of the date the leasehold contract began. Because of the large number of resales of these lots, the program was changed to 1973 to make the lot purchase price current market value. The program has not been used in any city on a large scale, although it has considerable merit as a vehicle to deliver a home-purchasing subsidy. However, this has been a very large subsidy in many cases, which has been extremely advantageous for those who could capitalize on it, directly or indirectly, and both the family income limitations and resale control provisions are difficult to administer equitably. While these aspects constitute difficulties in the program it has other more absolute limitations. If it expands to a large scale while maintaining its income limits, it delivers a significant advantage to all lower middle-income families that is not available to the more numerous middle-income families, and thus contains seeds of a major conflict. If it expands and raises its income limits it would be providing an unpopular progressive subsidy, and would have to provide a large proportion of the new housing stock in an ownership form, thereby running into the form/cost/scale problem described in Section 2.4. Thus, the HOME program can be seen as a subsidizing delivery

system, designed within the overall revenue objective to place home ownership within the price range of a roughly defined moderate-income group, on a small to medium scale. In conclusion, then, the pricing policy issue in land assembly projects in Ontario has evolved the program into a specialized form of home ownership subsidy program which, at best is complex to administer and confined to a limited income group and modest scale.[1]

The other case studies described public land operations of a majority and monopoly scale in Saskatoon and Red Deer, respectively. Both operate their large programs autonomously,[2] and both have adopted a compromise price strategy which generates revenue while exercising some price restraint.

In Saskatoon, land and housing prices have risen steadily but not dramatically, with the city supplying about

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1. It should be noted that the Ontario government is discussing a range of programs to provide lots to families of middle and above-average income although the pricing policies in these new programs have not been described. It may be assumed that the pricing alternatives under consideration are a declining ownership subsidy, or a straightforward market price.
2. Saskatoon has used NHA financing for land projects four times, however, these arrangements appear to have been expedients rather than essential parts of the city's program. Similarly, Red Deer has not used NHA land funds, and while the Alberta Housing Corporation recently added a medium-sized bank of public land near the city, the municipality has demonstrated its ability to operate without outside assistance.

80% of new lots and obtaining considerable revenue from their sales. The development climate has been sufficiently attractive to the private sector that private developers and speculators have remained in the market, and relations between government and private owners appear good. These relations are probably encouraged by the apparently beneficial and arbitrary provisions within the city's vital replotting function. However, while the land program certainly emphasizes revenue, it is not charging exhorbitant prices, and it is using the revenue to provide better housing and a superior urban environment. In 1973, out of the total of 1057 detached houses which were started in Saskatoon, at least 690 sold for under $20,000 including 489 which were financed under NHA Assisted Home Ownership programs, and at least 557 families with incomes below $9000 per annum were able to buy houses.[1] Since 1970, Saskatoon ranks sixth among Canadian cities in terms of provision of units under the Assisted Home Ownership program led by Montreal, Toronto, Ottawa-Hull, Regina and Quebec. In addition to undertaking special low cost housing programs, the city uses land revenue to subsidize its schools, roads, parks, reforestation and recreational programs.

While Red Deer monopolizes land development and controls about a seven-year land supply, it is difficult to

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1. All data, except total detached starts concern NHA financed detached dwellings. See Canadian Housing Statistics, 1973, Tables 16, 61, 86 and 98.

determine the city's pricing policy. The program operates on a cost-plus basis, thus the mark-up is the substantive pricing policy. The city's development is gold-plated - current subdivisions have complete underground services, curbs, sidewalks, lanes, paved streets, street lighting, generous park space and buffers. All of these costs are prorated to the lots along with proportions of the trunk servicing and gross land costs associated with each subdivision. The mark-up on these costs is then selected to offset acquisition costs of replacement land, and further service extension, thereby sustaining the program. In usage then, the objectives of the program appear to be the provision of land for housing and price control. However, since these objectives could be realized without the mark-up and future land acquisition and trunk services could be financed from general revenues and repaid by future buyers, this mark-up constitutes a secondary objective, the restrained pursuit of revenue. In absolute terms, this sub-objective does not appear unduly expensive for Red Deer's home buyers - prices of these fully serviced lots are in the $5,000 to $8,000 range, which are less than half the prices extant 100 miles away in either Edmonton or Calgary. Through its low prices Red Deer has provided houses under the Assisted Home Ownership Program to families with incomes as low as $8,500,[1] and while existing houses are selling near new house

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1. Discussion with G.R. Wood, Manager, CMHC Office, Red Deer.

price levels and all house prices are rising, this market is operating at relatively low price levels.

In conclusion, it is possible to observe some implications of alternative land assembly objectives for projects in various types of markets. The pricing policy, which is the defining purpose of public land projects, is a complex issue determined by absolute and relative price, scale, and conditions of sale. The price control objective requires a cost-based, or project-perpetuating price and projects that operate continuously at a large scale. In a market where owner-occupied houses are not the dominant form of residence, and particularly when these markets are also large cities, a price control policy would require, at best, a long period of sustained subsidization[1] of new home-buyers in order to dampen general housing prices. In the largest cities, the expense entailed in monopolizing the land supply, the anti-redistributive nature of the subsidy, the speculation opportunity, the unfavourable stock conditions, and its growth-promoting attributes, combine to severely limit the feasibility of a price control program. As most of these characteristics are reversed in smaller centres where incomes are usually more homogenous at moderate levels, public land

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1. This subsidy would be progressive in nature as most buyers would have higher incomes, and the situation would contain a strong inducement to speculative resale.

programs directed to control prices could provide good serviced lots for housing, at cost, with minimal disadvantages. Similarly, a land program intended to produce revenue is less likely to succeed in small centres where most households already have a house, land and housing prices increase more slowly than in the bigger cities, and production costs, particularly of materials, exceed big city levels. In the larger centres, revenue-seeking public land projects can obtain the social increment created by high demand and inflating prices, and use this gain for redistribution within the projects, for program perpetuation, and to offset other municipal expenses within the entire community. The provision of low-cost, or no-cost land to support social housing projects is possible and desirable in projects under either pricing policy and in all places. As these implications of the alternative pricing policies in urban places of different sizes are both logical and the product of experience, they may serve as guidelines for municipalities in considering public land projects.

4.2.8 Several Current Issues in Public Land Assembly

This section contains brief outlines of several significant aspects of public land assembly programs which were not described earlier and are of current relevance. The use of leasehold as a method of disposition in public projects is widely advocated, although the substance of this proposal

has not been clearly defined. Also as the National Housing Act finances most provincial and municipal land projects,and the federal government and CMHC have made this program a major thrust within the federal housing policy - the objectives and operations of land assembly, as a federal program warrant further examination.

The disposal of public lots by lease rather than sale has both advantages and disadvantages. It is proposed that lots be leased at cost so that home ownership (the leased lot plus an owned house) is financially accessible to families who cannot afford current market prices. Over time, the accumulation of leased lots in public ownership becomes a sufficiently large proportion of the total housing stock that the low rents begin to force down private owner's prices. While this simplistic presentation of the proposal appears beneficial and easily undertaken, in practice each aspect of implementation is complex and contains both advantages and disadvantages.

The central objective, and technique in this proposal concerns the pricing policy used in disposing of the lots. A range of lease prices would be available to the public authority, with the lowest price returning actual costs, and the highest price being economic rent.[1] Notably,

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1. In this case economic rent would be an income stream which when capitalized would be equal to the market value of the entire property less the depreciated capital value of the house.

any rent which is less than economic would constitute a home-ownership subsidy which the lessee could convert to a capital sum by selling the house. Since the purpose of the leasing proposal is to give a home-ownership subsidy, the eligibility for this subsidy and the desirability of allowing recipients to capitalize the gain, while divesting themselves of the home, require consideration.

If it was decided to limit the subsidy to lower income families, this would have major implications for the scale and nature of the program. If lots were leased only to lower income groups, the program scale would be limited and the "build-up" period before the public leasehold portfolio became a critical proportion of the housing stock would be very long.[1] Also, as this limited subsidy would be delivered with an opportunity to receive a large speculative gain on resale, it might become unpopular if resales became frequent.

If the program supplied all or a large proportion of the market, and the subsidy rents were limited to lower

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1. To illustrate, in most metropolitan areas, if the entire supply of new detached houses was provided on publicly leased lots for a decade, the public landlord would then control about 27% of the total detached stock. If lot leasing was limited to families with low to moderate incomes, this proportion would be much lower, perhaps in the 5-10% range, and these lots would contain a specialized, relatively inexpensive type of house which would be atypical in the overall market.

income families,[1] the program administrators would be faced with the complex administrative task of determining various fair economic rents for all non-subsidy leaseholds. This method might accumulate a critical mass of the stock of owned houses[2] within twenty to forty years, assuming the public sector begins supplying all new lots as soon as the current generation of private supply is exhausted. However, as it is extremely complex and contains considerable potential for conflict both between landowner and tenant, and among classes of landowners, classes of public tenants, and peripheral financing agencies, it seems likely that the program would break down before it achieved sufficient scale that it could affect the overall market. If the program did continue and began to approach this critical mass, a further price problem would be encountered. The majority of public lots would be rented at economic rates - these would have to be reduced to a cost-based, subsidizing rent to control market values generally, yet this action would reintroduce the opportunity for speculative resales which would allow major private gains during the market's downward adjustment. Then, if a price

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1. If the subsidy was given to all tenants it would constitute a progressive subsidy since most buyers of new houses would have relatively high incomes.
2. The proportion of supply required to achieve this "critical mass" is debatable. In many cities of Great Britain over one-third of the total housing stock is in public ownership, and rents and prices in the remaining private supply and stock are not curtailed.

equilibrium was achieved, the entire question of public or private ownership would have to be confronted, as the public sector would own, have contractual obligations on, and lease on a cost basis, a large proportion of the stock of urban land in residential use, while private owners would hold most of the remaining land area, distributed in accordance with its value in use, and constrained by the alternative, low public lease rates. It is difficult to conceive of a rational land distribution functioning in this scenario, yet the expense required to assume complete public ownership with compensation would remain prohibitive, confiscation would be inequitable, and it is unlikely that the entire portfolio could be returned to private ownership at a price which would justify the expense of the multi-generational program. It appears, then, that a leasing program would not succeed as an incrementalist approach to achieving price control, or nationalization of urban land, so these are not realizable objectives. As such, public land leasing might be undertaken as a limited subsidy program, or a revenue program, or a mix of the two like Ontario's HOME plan, but cannot be expected to achieve other objectives in the private land market.[1]

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1. It should also be noted that, in the long term leasehold tenure is a contractual relationship between the public landlord and the private tenant, which is probably a more onerous constraint on land use succession than private ownership.

A different situation would occur in complete "new communities" built on publicly-leased land. In this case, a publicly-controlled land distribution system including economic rents would require intensive administration. The experience in eastern Europe seems to be that public land ownership fails in urban areas because of the inequities created by shifting concentrations of production, and thus profitability, which differentially affect sites controlled by various users. In order to detect these shifts and alter rents and permitted land uses in response, the public landlord must continually analyse all financial and other aspects of all tenants' production functions (business and residences). The utility of maintaining this enormous public administration to perform essentially the same social function provided by a private market, seems to be a net disadvantage.

To complete this examination of public land development, several aspects of the public land assembly program financed under the National Housing Act warrant discussion. Insofar as most municipalities are concerned, the future of their public land programs will involve the NHA, as it offers them the best financing terms available. The federal program is a curious mixture of initiative and response - the federal government, the Minister of State for Urban Affairs and CMHC all actively promote the establishment of public land projects by municipalities and provinces, allocate substantial budgets to pay project costs, and

provide research support and technical advise to these ends. However, the initiative to undertake land projects rests with the other governments, and the federal role is, at best, facilitative. Also, as the overall federal redistributive function, the relative weight given to land assembly among other federal programs, and federal program objectives prioritize the land assembly budget, it may effect individual projects negatively. This section reviews the development of the federal program, in relation to the general objectives and project operations described earlier, to provide a more complete picture of the federal role in public land development.

In general, it appears correct to state that the federal government, through CMHC, has continually encouraged municipalities to undertake land assembly projects. While the land assembly program used to be a low priority, residual item in the federal housing budget, it always maintained sufficient funds to meet requests. One significant exception occurred in the late 1960s when Ontario, the major program user to that point, wanted a greatly increased partnership budget to begin public land projects at a large scale. Instead the federal government provided funds for a 90% loan for land assembly which attracted municipalities across Canada into land operations and met the needs of Ontario's new HOME program.

Otherwise, CMHC administrators claim the program has never turned down a request for project funding.[1]

The financial history of the NHA land assembly programs is summarized in Table 4.39. This reports actual cash expended and recovered in Canada by the calendar year, from 1950 to 1973 inclusive. In total the program has spent $140 million, including over $100 million spent since 1968, has recovered $45 million, and as described earlier, finances a current land inventory of about 57,000 acres. From the viewpoint of CMHC, the program is not self-sustaining as its budget must be voted by parliament each year, and revenues are returned to the Consolidated Revenue Fund. However, comparison of the Net New Spending and the Annual Expenditure columns of Table 4.39 shows that, from the viewpoint of federal taxpayers, public land assembly pays its way. During the twenty years from 1954 to 1973, recoveries offset expenditures by at least 20% in eighteen years, by at least 50% in nine years, and in 1963, the program realized a net gain of $1.4 million. As this program is geared to

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1. In part, this claim may occur because of the extended process by which land assembly funds are actually delivered. CMHC may approve a request for funds under the program in one year, and include this committment in the budget for following years until the proponent requests actual cash disbursements. Also, advances may occur on the committed sum over several years, and all or parts of this process may be delayed by changing federal and provincial fiscal priorities.

TABLE: 4.39 FINANCIAL SUMMARY, NHA LAND ASSEMBLY PROGRAM, 1950-1973

YEAR REPORTED	ANNUAL EXPENDITURES			ANNUAL RECOVERIES (NET OF INTEREST)			NET NEW SPENDING			ACCUMULATED BALANCE (RECOVERIES INCLUDED)		
	SECTION 40	SECTION 42	BOTH	SECTION 40	SECTION 42	BOTH	SECTION 40	SECTION 42	BOTH	SECTION 40	SECTION 42	BOTH
1950	$270,870		$270,870				$270,870		$270,870	$270,870		$270,870
1951	1,359,756		1,359,756	$189,823		$189,823	1,169,933		1,169,933	1,440,803		1,440,803
1952	345,476		345,476				345,476		345,476	1,786,280		1,786,280
1953	494,912		494,912				494,912		494,912	2,281,192		2,281,192
1954	4,003,471		4,003,471	1,232,731		1,232,731	2,770,740		2,770,740	5,051,932		5,051,932
1955	1,206,826		1,206,826	351,609		351,609	855,217		855,217	5,907,149		5,907,149
1956	897,061		897,061	227,158		227,158	669,903		669,903	6,577,053*		6,577,053*
1957	828,238		828,238	426,490		426,490	401,748		401,748	7,080,294		7,080,294
1958	3,361,133		3,361,133	771,560		771,560	2,589,573		2,589,573	9,669,867		9,669,867
1959	2,106,497		2,106,497	1,473,585		1,473,585	632,912		632,912	10,302,779		10,302,779
1960	2,056,880		2,056,880	1,239,224		1,239,224	817,656		817,656	11,120,435		11,120,435
1961	858,615		858,615	668,731		668,731	189,884		189,884	11,310,319		11,310,319
1962	663,283		663,283	574,231		574,231	89,052		89,052	11,399,371		11,399,371
1963	332,548		332,548	1,748,194		1,748,194	-1,415,646		-1,415,646	9,983,725		9,983,725
1964	2,834,629		2,834,629	1,065,265		1,065,265	1,769,364		1,769,364	11,753,089		11,753,089
1965	2,506,056		2,506,056	2,049,102		2,049,102	456,954		456,954	12,210,043		12,210,043
1966	3,672,637		3,672,637	2,289,596		2,289,596	1,383,041		1,383,041	13,593,084		13,593,084
1967	6,370,654		6,370,654	2,619,627		2,619,627	3,751,027		3,751,027	17,344,111		17,344,111
1968	9,322,921	$34,078	9,356,999	1,942,896		1,942,896	7,380,025	$34,078	7,414,103	24,724,136	$34,078	24,758,214
1969	22,231,011	4,095,481	26,326,492	7,143,814	$16,358	4,160,172	18,087,197	4,079,123	22,166,320	42,811,333**	4,113,201	46,924,534
1970	8,911,183	1,592,172	10,503,355	5,147,253	73,075	5,220,328	3,763,930	1,519,097	5,283,027	46,253,009	5,632,298	51,885,307
1971	11,133,461	9,406,936	20,540,397	5,342,546	1,237,762	6,580,308	5,790,915	8,169,174	13,960,089	52,043,924	13,801,472	65,845,396
1972	11,464,943	6,813,709	18,278,652	4,411,141	1,481,416	5,892,557	7,053,802	5,332,293	12,386,095	59,097,726	19,133,765	78,231,491
1973	17,543,261	4,057,146	21,600,407	1,740,298	2,557,503	4,297,801	15,802,963	1,499,643	17,302,606	74,900,689	20,633,408	95,534,097
1950-1973	114,776,322	25,999,522	140,775,844	39,654,874	5,366,114	45,020,988	75,121,448	20,633,408	95,754,856			

* In 1957 Annual Report, balance for 1956 is listed as $6,678,546.
** In 1970 Annual Report, balance for 1969 is listed as $42,489,079.

SOURCE: CMHC Annual Reports, various years.

return costs rather than realizing net profits, these levels of offsetting recoveries indicate the federal investment in public land development has been sound. With this base of operating experience, it seems clear that the recent increase in program funding is well justified.

The current federal policy on land assembly is a blend of flexible and facilitative instruments, and constraining guidelines. As described earlier, Sections 40 and 42 of the National Housing Act offer high ratio financing of a partnership or loan form for broadly defined land projects initiated by another government. In addition, CMHC could undertake land projects itself, under Section 55 of the NHA, although to date, it has only used this legislative authority to acquire its office sites.[1] To implement this legislation, CMHC has a land assembly budget of about $100 million per annum, administered by the Land and New Communities Division which has twenty-five years of experience in funding several hundred projects of all types. If a proposed project qualifies under these broad objectives,

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1. A number of factors constrain CMHC from exercising this direct land development capability. Land and urban planning operations tend to be closer to local and provincial spheres of activity, both constitutionally and in terms of immediacy of constituency. If the federal agency did undertake a project in one city or province, it would be difficult to reject requests to act elsewhere, so there is an "all or nothing" aspect to this capability.

and is feasible, the only constraints on it receiving funds are financial priorities. At the provincial government level and within CMHC such priorities might affect the timing, but not the absolute acceptance or rejection of the project.

The current federal policy on land assembly has added some criteria which may constitute more substantive limitations on eligibility for federal funds. This policy, termed the Comprehensive Land Use Management Program, is directed to the following objectives:

1) to stabilize and where possible reduce serviced land prices by increasing supply;

2) to change the basic nature of the land development process by making it less financially onerous to the municipalities;

3) to develop more efficient land use and servicing concepts for residential development.

In addition, the program contains guidelines which require that: any profits be used within the project to pay for community facilities; all social housing land will be provided at cost; and project funds may include financing for connecting trunk sanitary and water services. In effect, CMHC is broadening the eligible uses for program funds, increasing its budget, and adding some definition of the kind of projects it will support.[1]

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1. This outline of Comprehensive Land Use Management was synthesized from CMHC correspondence and William Teron's speech to the Toronto Home-Builders Association, 10 April, 1974.

As these are broad and indistinct objectives, most public land projects pursuing any of the theoretical objectives discussed earlier would qualify for program funds. The supply objective bears some resemblance to the theoretical price objective, although it accepts price stabilization as a goal rather than requiring price reduction. The theoretical revenue objective also fits this policy, although it is required that the revenue be used specifically to offset other public costs in the new community. This is not an innovation, as internal reallocation of project revenues has occurred, historically, in land assemblies throughout Canada - the significance of the policy change is that it must occur in all projects which receive NHA funds. Of course social projects remain eligible for NHA support. Lastly, CMHC encourages other governments to assess and plan for longer term land supply. So, while the revenue objective is modified, and the price objective includes a compromise, the new federal policy continues to support all major land assembly objectives.

Comprehensive Land Use Management involves some priorities and inducements which provide better definition of the substance of this policy. It has been stated that funding priority will be given to projects which can place land on the market within three years of the date it is acquired. Ostensibily, this is intended to increase the supply of serviced land on the market. As the

development approval process typically requires one to three years in the high-price markets, and occurs more rapidly in lower-price areas, this proposal appears to be aimed at the fastest possible development of lots in the high-price centres. However, as demand for any raw land meeting this three-year criterion is strong, and the degree of certainty concerning the form and timing of its development will also be clear, the land will have a very high residual value,[1] and will not yield large profits to a buyer/developer. Accordingly, the program is proposing that new projects operate with the full costs of the marginal developer, offset slightly by federal financing benefits - while performing internal financial reallocations to subsidize community facilities. To encourage such projects, CMHC will defer principal repayments on all land assemblies until the land is sold, and defer interest for three years or until sale whichever is the lesser. While this can produce good communities and may yield some low cost housing, its capacity to provide deep offsets for community facilities or have anything but a marginal volume effect on land price, is more illustrative than real. In the case of existing assemblies, however, the program may have immediate benefits at the municipal, provincial, and project levels. The deferral of carrying

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1. The residual pricing mechanism was described in Section 2.1.

charges frees capital in provincial and municipal budgets so they can finance land development at an increased rate. Land now held in public assemblies has a relatively low book value and can yield considerable revenues to offset internal project costs, servicing costs, and provide subsidized housing. In general, then, the current federal priority under the land assembly program is to encourage other governments: to develop land; to use the revenues entailed in developing existing public assemblies to create superior communities; and to compete with private developers in short-term, high-cost projects.

This appears to be a transitional policy. It utilizes and demonstrates the advantage of advance land acquisition to other governments and the general public, encourages the assessment of long-term needs for urban land supply, and accepts that the current supply remains, essentially, in private hands. It furthers the precedent set in public assemblies of the late 1950s,[1] in encouraging municipalities to continue shifting the costs of community services forward to developers (and thence to the new residents), rather than financing the physical infrastructure

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1. In the late 1950s and early 1960s, public assemblies began providing fully serviced subdivisions in which all servicing costs were included in the lot price. As this assured consumers of top-quality environments from the outset, the practice gradually became widespread, then mandatory for all developers in many municipalities.

for future residents through taxation of the existing community. Finally, it emphasizes short-term development, both in new projects and in depleting current public land inventories - which implies that an accompanying public land policy for the longer term must emerge before the current inventories are exhausted.

While Comprehensive Land Use Management is a limited short-term and transitional land policy, its substance and nature yields considerable insight into the ultimate federal policy as it is developing. The continuing government-led shift of the costs of urban growth forward to developers has implications for urban form, urban planning, and the nature of the land development function. This shift, combined with the evolution of regional governments,[1] will gradually remove much of the financial squeeze now constraining local governments, so this most immediate and responsible level of government will have money to provide qualitative, community amenities. The land developers, faced with this added interim financing responsibility, will have to assemble and hold large acreages

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1. While at the project level, developers are being required to provide interim financing and landowners are assuming long-term financing for urban growth, regional governments are becoming responsible for major municipal capital costs such as pollution control, transportation and basic recreational facilities, as well as larger operating costs such as policing, firefighting, social welfare and public works.

and secure capital for development and marketing at scale, to minimize the impact of the added production costs on the selling price of new units. This situation demands that sites be acquired far in advance of development, with virtual certainty concerning the timing and nature of development - thereby strengthening regional planning and eliminating raw land speculation in its present form. Also, this clearly excludes small suburban land developers from metropolitan land markets - small firms would not have the capital or management resources to assemble large sites, hold them for extended periods, and develop them as complete communities with all major services and facilities. As new developments would have to occur at scale in order to turn over the huge capital costs quickly, developers would have to produce compact and integrated communities. These would offer desirable locations for residents and businesses and thus be more valuable than alternatives, while obtaining scale economies in production and maintenance. Notably, this compaction would force and facilitate greater protection for the natural environment than more sprawling forms of urbanization. Also as this policy provides for qualitative improvement of both existing urban centres and their newly-developed periphery, it appears to favor the continuing concentration of the national population in large metropolitan areas. Finally, as both governments and the largest developers have now assembled the first generation of such

sites, and the federal transitional policy is to emphasize the qualitative and fiscal benefits of the public developments to municipalities and the general public, it appears the Federal government intends to demonstrate the public sector's capacity to be the urban developer of the future.

This brief examination of public land development in Canada has described a large and growing government activity which is very similar to the actions of the private developers. Public land assembly began in many municipalities as a result of tax forfeits during the 1930s, but this fortuitous land supply was exhausted by the general building boom of the 1950s. As these independent municipal programs were lapsing, the federal partnership land assembly program was introduced. Fifty-six new projects were started in Canada between 1950 and 1967, with the Federal government paying 75% of their costs. Most of these contained several years' supply of land, two-thirds were in Ontario, 80% were in towns and villages, and 90% were sold at market prices. Many of the projects actually sold at cost price, but because they had initiated the inclusion of prepaid services in their costs to lessen development expenses for municipalities, their costs were the market prices of the time. In the 1960s, rising demand for detached houses in the larger cities pulled the value of housing far above costs and a

contentious issue arose in the public projects in these markets. The excess of value over cost created a large potential subsidy for the lot purchaser under a cost price policy, or considerable revenues for governments under a market price policy. As these projects were seldom able to supply a large share of the local market, when the subsidy grew it could provide major benefits for a few buyers but was unable to affect overall prices. By the mid 1960s, most projects had adopted a compromise policy, providing some subsidy and some revenue. In 1967 the Federal government added more funds and the 90% loan section to the land assembly program, and governments in all regions except Quebec[1] took renewed interest. Notably, loan financing implies that any gains or losses are realized by the borrower, so under this arrangement the Federal government became somewhat disinterested in the vital pricing decision. The Hellyer, Lithwick and Dennis task forces, politicians at all levels of government, and many housing analysts propounded public land assembly as a response to rising prices of housing, (usually described as costs) and use of the program, and particularly the loan provisions, spread quickly. Most of the land ever acquired under the NHA was purchased after 1967, primarily in land banks across metropolitan Canada, and secondarily in a number of projects to be sold at cost in

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1. As described in Sections 2.1 and 2.2, land prices in urban Quebec remained relatively low longer than in other regions.

smaller places in the Maritimes. As they are emerging, the city projects are not significantly different from private developer's projects except in their larger proportions of public housing and Assisted Home Ownership projects, and their limited ability to employ non-market prices. Public developments occur in smaller places largely because serviced lots are needed for environmental and social reasons, and there are no private developers. Current indications, seen in the Federal Comprehensive Land Use Management policy, are that public assemblies will internalize virtually all public costs associated with new developments while adding to the short-term land supply, as a transitional stage leading to the socialization of land development in the largest cities.

4.3 Metropolitan Land Development - A Conclusion

During the last twenty years the nature of land development in urban Canada has been fundamentally altered. In the major cities continually rising populations and incomes and an accompanying demand for housing has led to increased housing values, particularly of detached houses. New construction has more than doubled both the total housing stock and the number of detached houses and enormous acreages have been developed on the urban periphery. Through this process the form of development, the type of developer, and the output product have undergone accelerating, complex,

and mutually reinforcing changes which, synergistically, have assumed a momentum that is a major force in contemporary urban affairs.

The first phase of this massive development, the suburbanization of the 1950s, occurred on land in widespread ownership across the urban periphery. It involved numerous independent builder/developers who produced small subdivisions of detached houses, with minimal services at the lot and community level. These practices caused considerable problems and expense for both the new and existing residents, and all municipalities concerned, fostered land speculation, and consequently precipated a series of responses from governments. Municipalities specified higher development standards as a condition of project approvals, and began shifting the responsibility for subdivision-level services to developers, led by the public land assembly projects. Regional planning agencies were created to co-ordinate growth designations and the provision of trunk infrastructure, municipalities shared the costs of major cross-jurisdictional services, and provincial governments assumed a larger share of infrastructure costs. These first responses to massive suburbanization accelerated during the 1960s, and by the mid-1960s, a consequent change had emerged in the private sector.

In this second phase, the scale of suburban

development projects increased, their form changed, and the number of developers decreased. The "baby boom" population bulge began to leave home, forming non-family and young married households, and leaving childless family households. This created pronounced demand for a variety of urban rental accommodation which was not available in adequate numbers in the existing city, and which both planners and the larger developers wanted to supply in larger suburban projects where homes for ownership could be integrated with rental residences, schools and basic shopping facilities. Planners wanted these well-located concentrations of growth in order to provide better living environments to residents, to obtain an economic concentration of public services, to meet a wider range of housing and social needs,[1] and to secure increased tax revenues from the income property. Relatively few developers, usually larger firms, had assembled longer term land inventories in logical growth locales during the late 1950s, and these were often designated as sites for the new integrated communities. Mixed projects are beneficial to their developers as the fast turnover of ownership property repays costs and creates revenue to finance the construction of the more expensive income property, while establishing a character for the entire project which makes the rental

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1. At the time, the segregation of neighbourhoods by class and age was becoming recognized as a social problem which would be diminished if new communities were less homogenous.

units more attractive. Once established, the income property secures the firm's asset and revenue base, thereby improving the firm's ability to borrow, while providing a tax shelter for other corporate income.[1] Firms which were able to obtain these benefits achieved a comparative advantage over competitors, while the latter were further constrained by the high capital costs entailed in the new responsibility for subdivision services. In consequence, the larger firms attained progressively greater shares of the market, and were able to secure further capital by "going public" as developer shares sold actively on the stock markets. The advantages compounded as rising market prices brought all developers higher profits, with which the larger firms bought more land as well as competing firms and suppliers, to the extent that, by the late 1960s, several dozen massive new vertically-integrated organizations dominated current and future land development in most metropolitan areas.

As the second phase progressed it became generally apparent that the key to this structural evolution, and thus the future of urban land development lay in the long-term ownership of large developable sites. In the largest cities of Ontario, small private firms were hard pressed to

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1. This tax shelter was substantially lessened after 1971.

find sites they could develop profitably, and many were forced to become merchant builders on the larger holdings. Observation of this experience, as well as the few public assemblies which had been acquired during the first phase and were still developing during the 1960s, demonstrated the cost advantages of advance land purchases to public authorities. Accompanying this awareness, the shift of responsibility for development to regional level government structures was continuing, and this furthered the concentration of urban expansion on relatively few, intensively planned projects. Finally, longer term urban plans with budget forecasts were beginning to emerge. As a result of all of these conditions, a new round of land buying for the medium to long term began in both sectors - private firms bought in the fast growth metropolitan areas of Ontario, Manitoba and Alberta while governments were buying in slower growth centres in the Maritimes, Saskatchewan, some Ontario cities and Edmonton. In effect, while the 1960s saw metropolitan land development begin concentrating in relatively few developers integrated projects, governments and developers were actively planning to increase this concentration in the future.

At present the evolution to few massive projects is consolidating, and extending itself into the foreseeable future. The largest firms hold substantial acreage now -

forty-seven firms have at least 120,000 acres in 21 cities and sixteen of these firms have plans to house at least 1,000,000 people over the next twenty years. Huge public assemblies have occurred off the mainstream path of growth in Edmonton, Toronto and Ottawa during the last five years, bringing the total public inventory to about 60,000 acres. In most metropolitan areas and many of the other major eastern cities, large firms are producing 80% of all new detached lots, and their production and market share is increasing each year. Much of this development occurs in long-term projects, sometimes joint ventures by several firms, anchored by a central area containing major shopping and other commercial functions, as well as some office, recreational and industrial facilities. Regional governments exist in most metropolitan areas and are planning growth locations and phasing into the twenty-first century. Zoning is being replaced by more flexible development controls, high standards are being required in all developments, and moves are underway to regularize the lengthy complex process of development approvals. Suburban densities are rising as the street-oriented detached house is giving way to clusters of detached dwellings, and the various forms of row housing.[1] Both public and private projects have paid

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1. As these higher densities will yield more saleable units per acre than traditional detached house zoning, they will cause raw land values to rise.

for major local public works in order to expedite development and current indications in public policy are that these practices will become standard. While all of these factors facilitate the increased production of serviced lots at scale, they also increase the absolute costs of land development, and are thereby terminating small independent land projects.

Finally, because this evolution towards large scale production involves considerable interdependence between the various actors, elements and functions, it is difficult to alter. As the large developers are now the major suppliers of serviced lots, and their land holdings and development plans are geared to regional growth plans and budgets, this mutually dependent structure tends to set the minimum, short-term parameters of land supply. While it would be possible to increase the supply of lots towards the end of the short term by interventions throughout the inter-related system, any partial interventions would merely cause shifts within these supply parameters.[1]

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1. Specifically, to accelerate supply would require additional land owned by developers, designated for development, provided with trunk services, possessing appropriate development designs and the requisite approvals, and backed by sufficient capital to pay all necessary production expenses. If the land, willingness, development design, capital and trunk services were available today, it is estimated the approval process would require about three years in most eastern metropolises and about two years in western centres.

Moreover, as short-term acceleration would occur at the concentrated sites, or by some peripheral in-filling where excess servicing capacity exists, the effect of this action would be to increase the structural concentration, in the short or longer term, respectively. Ultimately, in all of its aspects, metropolitan land development is geared to provide aggregate social benefits - to produce the largest number of units possessing the greatest array of services and ammenities with the least environmental disturbance for the lowest unit cost. The basic nature of the city is not just a place where a lot of people can live - it is a place where large numbers of people live efficiently - and the contemporary form of efficient mass living is the huge integrated medium density concentration. Within the basic system for production at scale, it is possible to "spin off" limited development of economic units at a smaller scale. This can provide short-term increases in supply and perhaps some innovation and competition, but the small projects cannot provide as much benefit to as many people at a lower net cost. Inasmuch as urbanites are "economic" people who seek more for less - the present and apparent future in land development is a concentrated, interlocked private and public system geared to these needs.

5.0 ALTERNATIVE LAND POLICY OPTIONS AND CONCLUSIONS

The purpose of this section is to examine some implications of alternative public policies on the land markets of metropolitan Canada, to summarize the observation of these markets, and to present recommendations.

5.1 Alternative Urban Land Policies

There is considerable interest in reforms intended to solve various urban land "problems". A variety of ill-defined things have been identified as land problems and have attracted individual solutions. To examine each of these "solutions" in a comprehensive way, it is useful to first approximate the basic parameters within which the present and reformed land control system functions. These approximations or assumptions can be used as criteria for the evaluation of relative merits of alternative reforms and can serve as conceptual boundaries within which the reforms must function.

It is assumed that urban land must be distinguished from rural land. Land in rural areas remains in generally natural conditions, wherein ecological systems in complicated balances regenerate the materials needed to sustain life forms. In cities, artificial concentrations of people and industry demand massive intakes of natural materials and exhaust intensified wastes to the degree that the regenerative

systems are altered and cannot deal with the flows. As most Canadians have accepted an industralized urban society, it is further assumed that the optimal method of minimizing the environmental damage caused by this acceptance is to "seal" the cities from surrounding natural environments. This entails defining artificial limits to urbanness and maintaining the land outside these boundaries in various natural states.[1] Such boundaries allow the regulation or at least monitoring of the flows of natural inputs such as fresh air, clean water or more manufactured forms of energy to the urban place, and the emission of various pollutants into the rural areas. While it is also necessary to lessen the amount of pollution created within cities, it must be recognized that "in-city" actions are essentially cosmetics applied to a cancerous system, and are not an alternative to input/output controls.

It is assumed that any relatively free economy is a concentrative force, and that governments support economic forces. In economic terms, distance is a cost and an economy tends to minimize unit costs in providing the

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1. This approach is apparent in British Columbia's "Bill 42" which defines urban boundaries and zones exterior areas in "natural" uses such as agriculture, parkland, and forests. A similar approach is explicit in regional official or master plans, and implicit in regional planning co-ordination in other provinces, although the "seals" are successively weaker.

optimal quantity of goods and services by placing production and consumption together proximate to their sources of supplies. Concentration provides increased opportunity for more workers, producers and consumers, so cities grow and the growth is self-sustaining. Public policies basically support urban growth as most Canadians are urbanites, even though this support appears in several anti-concentrative forms such as: dispersive - restricting the expansion of the concentrated places to limited locations; decentralist - providing subsidies and incentives for limited numbers of elements which voluntarily locate in smaller communities; or redistributive - using the concentrations to finance disproportionate public expenditures for the hinterland population. The few public policies, in London, Moscow and Paris, which attempted to stop urban growth during this century, broke down against the force of the respective markets' continuing concentration. It seems likely, then, that Canadian public policy will support continuing urbanization of the national population.

There is a conflict within these two general assumptions which is at the core of urban land policy. Dr. Colin Clark's benchmark study of urban land use throughout the world described this basic dynamic

> "The macro-location of industry and population tends towards an ever increasing concentration in a limited number of areas; their micro-location, on the other hand, towards an ever-increasing diffusion, or sprawl"[1]

1. Clark, Colin, Population Growth and Land Use (London: MacMillan, 1968), p. 280.

This empirical behavior and the two basic conditions which create and constrain it, lead to several corollaries. At the urban level, "no growth" is an unrealistic policy - it is necessary to plan to control growth while, if desired, minimizing the creation of new "basic" industry which tends to produce growth as an output.[1] Within an urban area "no growth" policies in any member municipality or neighbourhood means growth is shifted to neighbouring areas which are less able to resist it. Thus regional land policies must control growth both to protect the natural environment and to protect weaker neighbourhoods from unwarranted proportions of new development. While the easiest way to protect neighbourhoods is to focus growth on raw fringe lands, this accelerates the destruction of the natural environment and increases the total cost of development. To avoid these costs and disadvantages, it is necessary that significant amounts of growth occur in the form of compact developments in both fringe and existing areas. It appears, then, that the basic dimensions of urban land policy must protect the natural environment, limit urban sprawl, and encourage growth to occur through densification across the existing cities.

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1. Prohibition of new industry which historically has been shown to be "basic" (i.e. a net exporter) is probably the best growth limiting technique known but is deficient in that technological shifts can change the "basicness" of existing industry.

Notably, land price is not included in these basic dimensions, yet price is often regarded as the central land problem. The price of land is a residual function of the market value of developed property. As sustained urbanization is assumed, this entails high demand for developed property, while the environmental protection, expansion-limiting assumption involves constraining the land supply. Another by-product of these assumptions, then, is the increase of land prices unless the limited land supply is developed at sufficient density that the supply of developed property is maintained in equilibrium with demand. A further requirement within this need for higher equilibrating densities, is that large proportions of the stock of developed property must be owner-occupied. This implies increased use of joint forms of tenure, such as condominiums and co-operatives.

In summary, four basic and two additional assumptions are identified which form the functional parameters of the present, and can serve as requirements for a reformed, urban land control system. The basic assumptions are:

1) urban land must be limited and the life-supporting natural environment outside the urban boundary must be protected;

2) the national economy is a concentrative force which is supported by governments;

3) no-growth policies are unrealistic at the metropolitan level and are exploitative power relationships at the community level;

4) urban development must occur both on raw land and within the existing cities.

If it is considered a social objective that land prices should be relatively low, an equilibrium must be maintained in the supply of, and demand for, developed property. This entails two further assumptions:

5) urban development must occur at higher densities than current practices (medium densities);

6) new development must contain a high proportion of ownership-type property, probably in the form of condominiums and co-operatives.

With these assumptions, and the data reported in other parts of this study, it is possible to examine the various policies which are proposed, from time to time, as land reforms.

5.1.1 Nationalization

Nationalization is the most sweeping of the current land reform proposals and probably the least understood. It intends that land be brought into public ownership to increase public control over its use, and that social need rather than the ability to pay, should be the rationale for land distribution. It is generally regarded as a radical policy although over one-half of all urbanites do not own land now, and 90% of the land area of Canada, and between 20% and 50% of urban areas, are now in public ownership. While the proposal is based on good intentions and has a superficial appearance of feasibility, ultimately, it cannot provide a systematic basis for distributing land.

There are three variations of the nationalization policy based on the method of acquisition. Overnight nationalization with complete or partial compensation appears unfeasible. Financial resources are not available for complete compensation[1] and partial compensation to owners (assuming it was equitably distributed among classes of owners) would both be inequitable to owners (relative to tenant people and businesses), and inequitable to tenants (who would have to pay about one-half of the cost of compensating the owners). Gradual purchase or overnight expropriation without compensation are the only feasible methods of acquisition for use in a nationalization policy.

If it were assumed that one of these acquisition techniques brought all urban land into public ownership, it would then be necessary for governments to operate a land distribution system with or without rent. It is assumed, initially, all land would stay with its present users.

If land was allocated without rent there would be no financial pressure to encourage full utilization of land, so lower densities and the spatial expansion of cities

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1. In metropolitan areas alone, considering only residential, detached lots, and assuming a low average lot value of $5000, compensation would cost $7.8 billion, which is 40% of total federal spending in 1973-74.

would be encouraged. The present municipal tax base would disappear as an equitable "building only" assessment system has never been devised. Owners in superior locations would obtain disproportionately high incomes from their buildings and the goods sold there. Building owners could also capitalize the value of their location by selling or mortgaging their buildings and anyone buying a building or constructing a new building would want security of tenure in their land lease. Thus the distribution of buildings would still be based on the ability to pay. Also the public property managers would be hard pressed to find any, much less a systematic and equitable way to distribute land among users, with some claiming special needs, some demanding security of tenure, and some achieving disproportionate profits on the use or trading of buildings. Public planners, meanwhile, would be trying to restrain urban sprawl, increase densities and maintain public services with an eroded tax base, little idea of location value, and a built-in incentive for low density growth. It seems obvious that public ownership coupled with a rent-free distribution system would quickly break down.

If land was to be allocated on a rental basis, an equitable rent administration would have to be based on the ability to pay. This opposes the goal of nationalization, and would be unworkable. As was described in Section 4.2.8, an equitable rent would have to be a sum which, capitalized,

equalled the current residual value of the land in its most lucrative permitted use. Otherwise, land would be under-utilized and some tenants would receive uncontrolled subsidies. To obtain the equitable rent figure, the public property managers would have to reconstruct the revenues and costs of each developed property, (whether it is a store, a factory or a private home), allocate fair profits and assign the residual revenues as land rent.[1] This would amount to a deep-seated central control over all wages, prices, capital costs, household spending and production decisions which government simply does not have the ability to perform. While no program can be expected to function perfectly, if the specific purpose of the nationalization is to provide a socially equitable land distribution and it cannot do that, then nationalization is not a reform.

The central weakness in the nationalization proposal lies in its attempt to create a general separation between the ownership of land and improvements. In the main, urban land is developed and is physically, emotionally, and

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1. The techniques for determining fair economic values have been established in the legislation and precedent pertaining to expropriation in Canada. While these techniques would be the basis for any publicly administered price or rent control scheme, the unpopularity and complexity of expropriation settlements provides some indication that basically fair administrative procedures to determine values are not readily accepted by the society at large.

economically integral to the improvements it supports. Technically, then, the nationalization policy which seems to be most suitable for implementation is confiscation of all real property. It is far beyond the limit of this study to consider the advisability of this policy - let it suffice to say that I doubt that this society contains the individual or collective discipline or lethargy to become a centrally controlled state.

5.1.2 Land Price Control

It is sometimes proposed that land prices could be controlled directly by an administrative board to assure that prices are fair, and cannot rise quickly. Controls could take one of two general forms - rate of increase controls or absolute price controls. In either case, the control concept is predicated on the shaky assumption that land values can be distinguished from total property values.

Rate of increase controls function as though it was assumed that the distribution of urban land values was static. They require the establishment of a base year (when values are assumed to be in equilibrium) and allow a maximum annual rate of increase after that base year (a further assumption that all values increase at a uniform rate). As the controls only restrict land prices, they can discourage owners from developing and selling vacant land, while owners of improved land can probably get around the

controls by including prohibited components of the land value in the price or rent of the improvements. Notably, this does not encourage qualitative or more dense improvements - just higher prices of buildings. Thus, while rate of increase controls can, through complex administration, limit the rise of land prices - they inhibit the development and sale of property (thereby increasing land values) and allow the controls to be avoided by shifting land value into the price of inferior improvements.

Absolute land price controls would have similar short-comings to the rate controls. A land price control board with a large skilled staff could determine fair land values on a property by property basis. These might be consistently related to total property values (which are not controlled) in which case this expensive board would be providing a compulsory referee service. Alternatively, the values might be some other independent formulation. If the land values were independent of total property values, they would have the same inutility as the "rate of increase" controls - limiting land prices while property values and prices vary with supply and demand.

In summary, then, land price controls seem to have few merits but require an expensive administration. If it was considered desirable to increase employment of appraisers, lawyers and accountants in the public sector, with little

direct effect on the land market, a land price control policy might be a useful vehicle. However, the added costs to the private sector of interacting with this board would constitute large aggregate dis-economies.

5.1.3 Capital Gains Taxation

Capital gains taxation is often considered to be a desirable land reform as it may affect property value and does return some of the social increment in value to the society. Since December 31, 1971, one-half of any net increase in the value of Canadian real estate is subject to taxation as income, with the exclusion of land held as inventory, depreciable property which has declined below its original value, and principal residences.[1] This partial application of capital gains taxation creates at least five different tax treatments applicable to various sectors of residential real estate. Most residential land is in use as owner-occupied detached houses which pay only property taxes. Rented residences form the next largest category, and these pay property taxes, net rental income is taxable each year, and one-half of net gains from their sale is taxable as a capital gain. Undeveloped land held by a developer is

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1. This summary of tax provisions describes the taxation methods in broad terms and should not be misconstrued as a statement of the specific regulations. The regulations are the Income Tax Act and the Income Tax Application Rules and are paraphrased in the booklet Capital Gains, all published by the Department of National Revenue, Taxation, in 1971.

treated as inventory and pays property taxes annually and regular income taxes when it is sold. Farms pay property taxes, and upon sale, the farmhouse and one acre of land are tax exempt while capital gains taxation affects the remaining acreage. Speculators pay property taxes and capital gains taxes on their entire holding. As this variable tax treatment must provide differential costs to various classes of landowners, thereby creating more or less remunerative investments, it is useful to examine the effect of expanding capital gains taxation to include all residential property.

If developers were required to pay capital gains taxes on land, as well as income taxes, this added cost would lower their rates of return, but the tax reform would have a destructive impact on the smaller firms and in the most competitive markets.

In the land operations of large, land-banking firms, land costs may constitute 10% of total costs, and costs may be only 60% of current or sale values. Income taxes, at the 50% rate would add about 33% to total costs, and reduce after tax profits to about 25% Capital gains taxes would add about 17% to total costs, while regular income taxes would decline to about 21% and after-tax profits would decline to about 17%.

In the case of the small developers, land may constitute 30% of total costs, and costs may be 90% of

of current or sale values. In this case, income taxes at the 50% rate add only 5% to total costs and reduce after tax profits to about 5%. Capital gains taxes would add a further 3% to total costs, regular taxes would decline to 3%, and after tax profits would fall to 3%.

This simplified approximation indicates the adverse effect of this (or any other) additional marginal cost on small developer's land operations, and that the effect on larger firm's operations would be less significant. This expansion of capital gains taxation would create some revenues for government, about 10% of the sale price of large developer's lots, declining to about 3% of the smaller developer's sale price. Small firms might pass on the higher costs but this would still increase the comparative advantage held by the large firms. This would also have differential effects among cities, as the large firms produce most new lots in the biggest eastern and prairie cities, while small to medium size firms are the dominant producers in smaller cities, in Quebec, and on the two coasts. In consequence, to avoid adverse effects on development in most cities, and on industry structure, it would be necessary that an expanded capital gains tax include a special progressive application limited to developer's land operations. There are sufficient complications involved in defining, administering, and evaluating such a tax that this does not appear to be a viable reform proposal.

If the capital gains tax was expanded to include owner-occupied houses, it could generate public revenue in an inflating market, and depending on whether or not mortgage interest was a deductable expense, could constitute a major expense to sellers which might dampen the inflation of house prices.

To illustrate, if a house carrying a 100% mortgage[1] bearing interest at 9% per annum was sold after fifteen years,[2] during which its value increased at an average rate of 12% per annum, its sale price would exceed the acquisition price by about 450% and its cost would have risen by about 250%, producing a gain on cost of about 50%. If the seller paid income tax at an average rate of 30%, the capital gains tax would add either 7% or 18% to the cost of the house, depending on whether interest was, or was not, deductible in the tax calculations. In the respective cases, the after-tax gain would decline to 40% or 27% of total costs, and the gains tax would constitute 5% or 12% of sale price of the house. The same seller, in a market where the values of houses increased at about the same rate as the mortgage interest rate would have no gains tax payable if the interest was deductable, and if it was not, would pay

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1. As most houses do not have a 100% mortgage, and have a more expensive second mortgage, this simplifying assumption understates costs and slightly exaggerates revenues.
2. This period is chosen as it appears to be the average turnover period for detached houses.

a tax that became an increasing proportion of the total cost (or price) as the mortgage rate increases. If the rate of increase in market values was lower than the mortgage rate, a capital gains tax with an interest deduction would produce tax losses, while with no interest deduction, as the difference in rates increased the tax payable would decline as a proportion of total costs. In any of these cases, unless the rate of increase in property values was more than 5% more than the mortgage rate, the capital gains tax would not add more than 20% to the sellers cost.

There appear to be a number of advantages entailed in extending capital gains taxes to principal residences. The varying impact of the tax appears capable of serving a useful regulative function in that as the seller's net pre-tax gains increase the burden of the tax increases. This effect is strengthened if mortgage interest is not an allowable deduction, although disallowing this deduction would constitute inequitable treatment of residences, relative to income property and developing land. The tax could also generate considerable revenue, perhaps 5% to 12% of the sale price of a house, and this revenue would automatically increase and decrease with changing market conditions. The tax can be administered relatively easily, and does return socially created value to the society.

The disadvantages of this reform reflect uncertainty

about its unproven aspects. While the illustration showed the tax would raise seller's costs, it seldom constituted more than 10-15% of sale prices and accordingly, in an inflating market, it might serve to further escalate prices.[1] It removes some investment returns from home-ownership, and whether or not such returns are considered desirable, it remains true that they are deeply related to the widely held ideal of home-ownership. Also, widespread home-ownership, although perhaps not of detached houses, is assumed to be necessary to ensure a competitive, and low-priced urban land market. While the tax is not regressive, it does partially close one of the only remaining, and not heavily travelled, routes for upward mobility for those people who might be termed the "landed poor". Finally, it is unlikely that it would become a major source of revenue as, if it succeeded the increase in property values would be minimized, and if it failed the rise in housing prices (costs of shelter) would necessitate rising wages and prices which would yield higher direct taxes. A rough estimate of its current revenue capacity would be $50 - $100 million per annum, which is less than one-half of one percent of current federal spending.

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1. It is notable that Table A-4 showed large average price increasing without declines in sales volumes.

The reform of capital gains taxation to include both developer's land operations and principal residences remains a questionable proposal. The expanded tax would produce more, but not major amounts of public revenue, and would, ultimately be paid by buyers. To the extent that the real estate market is elastic with respect to price, sellers would have to use part of their profits to pay the tax. This presents a conundrum for the marginal (i.e. small) developer, who cannot profitably internalize the tax, yet already has a price disadvantage which would be exacerbated if the tax was passed on. For the homeowner, the tax reduces the profitability of home ownership or in an inelastic, inflating market, it raises prices. In summary, the extension of capital gains taxation to all residential property does not appear to be an advantageous land reform.

5.1.4 Public Land Assembly

It has been proposed that governments should own most of the land supply on which future urban development will be permitted. This would entail the advance purchase and holding by the public sector of enormous acreages in planned urban growth locales. Development could be undertaken by governments directly, or through developers proposals in forms and densities appropriate to social, environmental and market needs, while the public sector would obtain the social increment in the value of land as it is disposed. This would constitute

a major expansion and alteration of existing local, provincial and federal land assembly programs, and appears to be a useful land reform which operates within the general parameters defined previously.

As this proposal has not been clearly defined by its advocates, it is necessary to further outline the reform before examining it. The regional governments which are becoming standard among larger cities periodically examine location, area, timing, budgetary and organizational aspects of anticipated urban expansion within their jurisdictions, and define these as reasonably specific requirements for the short to mid-term (three to seven years). Developers and speculators assemble and trade in the defined growth areas and as the time for development approaches, the larger firms have consolidated major sites and traders have built up the value of smaller holdings. If during the planning stages, governments assembled all land which received development designation, their acquisition costs would be close to the land's agricultural value, the predevelopment land trading and concentrated ownership structure would be eliminated, and the appreciation in the land's value over the government's low purchase price and carrying cost would accrue, and provide revenues for the society upon the land's development.

The central problem in this proposal lies in the method of acquiring the land. It is clearly important to minimize the cost to the present tax payers of acquiring this

future land supply, and it is also important that the acquisition treat all present owners fairly. There are two general methods of acquisition - purchase by government negotiators or contracted assembly agents, or expropriation. In terms of price, the federal and most provincial expropriation acts are designed to deliver scrupulously fair compensation, but expropriation carries the stigma of government coercion. While purchase is probably the cheapest method of acquisition, and is fair in the sense that people agree to sell, it can produce complaints that government negotiators and contracted agents have misled sellers, and can leave "pockets" of unassembled land which remain to be acquired. Land could be purchased before, during or after the designation process, at progressively higher prices and with increasing numbers of "pockets", whereas expropriation probably cannot preceed designation as the latter establishes the requirement for the forcible taking. The combination of these factors produces an apparent conundrum - if the land is acquired when it is cheapest, before it is designated for development, the opportunity for direct public involvement in planning the region's growth is lessened, but if the acquisition accompanies or follows the designation, unproductive speculation will have bid up land values.

Two other techniques might be employed to limit change in land values during the designation period. Land can be "frozen" in its present use - meaning no building

permits, subdivision plans, severances or zoning changes will be allowed during the freeze. While this stops major changes in land values, it does not deny land trading which can also increase values. A more effective measure would be a single buyer system whereby any owner in the defined urban fringe area who intended to sell property must first offer the property to the regional government, which must accept the offer within a brief period (say thirty days) or else the owner is free to sell at the offer price on the open market.[1] In the event that the regional government could not process the volume of offers received during the consideration period allowed, as might occur during the growth designation process, the consideration period might be extended and thereby constitute an effective freeze on land trading and consequently, value. Through this first refusal technique, governments could monitor the land market, freeze land value during the growth designation process, open up a new avenue for acquiring land, while leaving land ownership and the right to trade in land, in the private domain.

With these facilities for acquiring the designated land, the next problem would be the financing necessary to

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1. All registered owners in the areas affected by this legislation would be notified of this requirement. Registrars would not be allowed to register any conveyances concerning the property until the regional government's rejection certificate was presented. Any illegal conveyances could be declared "null and void" by court order.

pay for it. The appropriate assembly authority would be the regional government as it is most directly involved with regional growth control, yet locally responsible, and could perform the acquisition functions with powers delegated from provincial governments. As the representative of the regional community, this body should receive the revenues generated by the development of the public land. However, because of the scale of expenditures involved and the lengthly holding period during which this money remains dormant, it is unlikely that regional governments can afford the program themselves. It appears that the new communities legislation in Section 45 of the National Housing Act offer suitable financial backing for such regional programs,either as 75% partnerships or 90% loans. The latter appears to be the more useful as it provides higher leveraging, less federal involvement, and leaves the entire gain on land appreciation to the borrower.

With financing secured and the land assembled, the program would move a holding and predevelopment stage. Public authorities would prepare and begin to implement the detailed development design for the land, both independently and in conjunction with private developers. Ultimately, it is likely that the latter would undertake most of the physical development. This design phase would be more complicated than is now typical, as the assembly site would probably be marginal agricultural land which is either not

well drained, or is rocky or forested. The new community it must support will be intensely used by all forms of occupants, and when it comes "on stream" it must meet all of their needs as there will be few alternatives within the region. At the same time these major design problems are being resolved, the trunk infrastructure which will connect the site to existing areas must be evolving, the site must be managed to minimize its carrying costs and allow the resettlement of the former owners, and the investigation, designation and assembly of future public sites must be underway. Also, as this preparation proceeds, the servicing and other support for existing development areas must be sustained. Thus this monopolization of the land development function entails a concomitant increase in government activity and responsibility for the urban land supply, although these actions and responsibilities are merely extensions of present practices.

As the public land comes "on stream" the project could use a number of methods of development and marketing. It is unlikely that a "government-only" development would be attempted in addition to the other heavy public expenditures on trunk infrastructure, planning, and land. If the public authority planned the basic community design, phasing, and project co-ordination it could contract the physical development, divided into various packages for sale to private developers on a proposal call basis. This would allow

the private firms to use their entrepreneurial skills and market knowledge in competition with each other, within the same type of planning parameters as exist now. In some cases firms might initiate development proposals, particularly when their analysis determined that the supply contemplated by public planners was not adequate to meet market demands, and thus a potential for higher profits would be available. The proposal call technique could be used to limit final land prices, or could maximize public revenues by allowing only "cost-plus" revenues to the private developers. In either case, the public project would obtain all or most of the appreciation of the land value as the land is disposed.

At the national level, this proposal has a number of implications. It would be an expensive program in the sense that it would require five to ten years of sustained expenditure with little return, thereafter program recoveries could be expected to largely offset expenditures. Table 4.10 showed that large developers hold major proportions of the future supply in Toronto, Ottawa-Hull, Kitchener-Waterloo, Thunder Bay, Winnipeg, Calgary, and Edmonton. Table 4.34 showed that governments now hold a five to ten year land supply in Toronto, Ottawa-Hull, and Edmonton. In the four other very concentrated markets, it is estimated that a ten year land supply at current densities, five to ten years from development, would involve a total of about 30,000 acres

costing about $100 million. In the other major cities[1], the large developers surveyed have less than four years aggregate supply, major public assemblies are available in Halifax, St. John's, Hamilton and Saskatoon, and it appears about 100,000 acres would be required, at a cost of about $350 million. As the metropolitan areas attract between two-thirds and three-quarters of the population growth in Canada, it appears that about 50,000 additional acres would be required in smaller urban areas, bringing the total acquisition needs to about 180,000 acres costing about $550 million. As land costs have been about 10% of total project costs, and lot-level services (most of which would be provided by private developers) constitute about 60% of total costs, other site development costs might amount to $2.2 billion, exclusive of interest and inflation, over the life of the project. It appears then, that federal program budgets in the area of $100 million per annum[2] during the 1970s could finance the acquisition of the land supply for urban Canada in the 1980s. In the late 1970s, the budget would have to double to finance the land's development, and more than triple to also finance the acquisition of future land, but at that

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1. Other cities considered were Halifax, St. John's, Saint John, Chicoutimi-Jonquiere, Quebec, Montreal, Hamilton, St. Catharines-Niagara, Windsor, London, Sudbury, Saskatoon, Regina, Vancouver, and Victoria.
2. This assumes a federal share of 90% of total costs, apportioned over five years, and would be net of development expenditures and purchases of short term projects.

point, if repayment was mandatory upon disposition, recoveries might offset expenditures by as much as one-half. It appears then, that this supply control program is an alternative, at the present federal budget levels, to the present emphasis on "quick start" land assembly and internal re-allocations of project revenues. It would also be possible, at higher funding levels, to undertake both.

There would be a number of advantages and few disadvantages to the takeover, by means of an expanded public land assembly program, of all urban land development. This reform would not occur overnight, and would neither worsten nor greatly alleviate current "land problems". However, once the reform was operational and governments owned the supply of developing land, there would be financial benefits to existing taxpayers and new urban residents, governments, and most builders and developers. In the longer run, the reform would constitute a major advance in the protection of the natural environment through the containment of urban areas, and a qualitative improvement in urban living through increased community control, economic efficiency and social equality.

When the public assemblies begin providing the majority of the regional land supply, the advantages of the reform would begin to emerge across the urban community.

- the accrued appreciation in the land value would produce revenue for the regional government upon the

land's development, (including federal financing and internal project subsidies) and providing net gains which could offset the need for tax revenues. This direct method would replace and provide greater local revenues than the present system whereby private firms collect the appreciation, parts of it are obtained by governments through levies and income taxes, and some of the latter is returned to the local government through complex inter-governmental programs.

- land speculation would be curtailed on the entire urban fringe, and eliminated from developing areas. As governments would acquire any land which is being designated for future growth, speculation could only occur before the designation process, and on land which is a decade or more from development. The attendant low potential for speculative gains would be further reduced if the public acquisition occurred by expropriation, as compensation would then be based on the highest permitted use, which would probably be restricted to agriculture by the extant zoning. In the rest of the fringe, there would be little reason to speculate, as little development would be permitted, and the "first refusal" requirement would alert public authorities to any speculative trading.
- land developers, and private capital generally, would not need to hold capital dormant in land supplies or spend on growth promotion, as these functions would be

performed by government. This would free private capital for immediately productive physical development. Firms of all sizes would have equal access to the right to develop public land on the basis of their competitive design and price proposals.

- overall risk would be lessened in the fringe land market causing less price fluctuation and lower prices. This would occur because of the improved reliability of zoning as a long term determinant of land use (as zoning would not be continually changed to permit scattered development), and on the publicly-owned land the timing of development would become particularly certain.
- the new developments would have more comprehensive designs and better co-ordination than current subdivisions because the integration of the planning and physical development functions would require and facilitate the ordered creation of communities having the full range of services from the outset, and discourage short-term and cost-raising variations.
- a number of pricing policies might be used in the public developments, ranging from a cost base to a profit-maximizing market price. New residents could expect to enter a superior community with at least moderate prices and perhaps with lower prices than would prevail in the existing city.

- the land supply function should be improved with appropriate volumes of land reaching the market at lower unit costs. This would occur because planning authorities would concentrate on maintaining an adequate and integrated pace of development without diverting scarce resources to service dispersed private holdings, while developers could concentrate on evaluating market needs and pushing the public authorities to release more land whenever they detected an impending shortfall.

Over a longer period, a number of more fundamental advantages could emerge

- this reallocation of functions between the public and private sectors uses present experience to improve the functioning of both, and create a better living environment for urbanites. Each sector functions in the area of its real expertise - private firms engage in competitive production and marketing while governments determine social needs, and plan and co-ordinate private production to meet them. This is the lesson of the experience of the large public and private "new towns" which have emerged across metropolitan Canada during the last decade.
- the strengthened urban planning function and concentration of growth on large, intensively-used public developments would protect the natural

environment from sustained urbanization. This protection implies both the negative aspect of being better than its alternatives, and the positive aspects of this explicit move to bring people together in well-designed, limited facilities for intensive use, so that the urban intake of resources and exhaustion of pollutants is minimized.

The proposal appears to have several short-term disadvantages to existing identifiable interests

- in developing areas, land ownership would no longer be a source of equity for use in securing development capital. This is not a real disadvantage, as the provision of capital would then be decided on the basis of the viability of the project itself, the competance of the developer, and perhaps, the firm's other assets. While these criteria still favour the larger firms, this effect would be less severe than it is under present circumstances.
- the reform would not improve the land market immediately. This is not a valid criticism as there is no reform which can meet this criterion.
- The reform, because it would strengthen zoning and control developing land would remove much of the appreciation in value which characterizes farmland on the urban fringe. As this land would be zoned, taxed, and valued for agricultural use it would receive fair

treatment, but any owners who expected a great appreciation in its value would be disappointed, particularly if they bought the land at a high price in the expectation of this appreciation. A similar situation would apply to speculators and any ex-urbanite owners who bought in the expectation of long term capital gains.

- in the event that technological changes or new public demands shift national or urban growth patterns, or the project managers fail to provide adequate quantities or qualities of land, governments alone will receive the blame for the resulting surplus or shortfall in development. This may be seen as a disadvantage to politicians and bureaucrats, who now can use private developers as scapegoats when supply is inadequate. However, it is apparent that under the reform, as now, the public sector controls supply, and must take the responsibility for this control.
- the reform would further concentrate regional spatial growth, thereby limiting the creation of new revenue sources in the non-growth municipalities. This is a convoluted argument as it also entails less costs in the non-growth areas, and is a regional financial problem which can be solved by cost and revenue sharing arrangements.

In conclusion, it seems apparent that it would be beneficial, if urban growth must continue, to confine spatial expansion to large, publicly owned sites selected on the basis of environmental protection. This is a workable reform, with numerous advantages, which draws on existing experience and trends, contains minimal disadvantages, and is a major step towards a better relationship between cities and the declining planet which must support them.

5.2 Conclusions and Research Recommendation

This brief conclusion highlights major findings of the report from a national perspective. It does not describe the land situation in any particular city.

The aspect of urban land which is most frequently identified as a problem, is price. This report has shown that residential lot prices have increased at very high rates in most metropolitan areas since the late 1960s. In the metropolises of central and western Canada which are experiencing the nation's highest absolute and relative population growth, the levels of and increases in lot prices are also highest. These rates of increases have regularly exceeded the inflationary limits proposed by the Federal government in the early 1970s, and have escalated lot prices far above the earlier standards of 20% and later 25% of the total price of a detached house. Lot price increases do appear to be slowing somewhat in 1974.

However, the observation of these high and quickly rising prices does not, in itself, define a land problem because lot prices and related land prices do not exist independently but are completely dependent on the value of developed property.

Most people's concern with urban land prices is in relation to the price of houses, and most raw land which is brought into urban use each year is developed into lots for detached houses. A number of factors contribute to making ownership of detached houses particularly desirable at present: urban populations contain large proportions of young families; rising family incomes, high ratio mortgages, extended repayment periods and people's increasing willingness to incur debt facilitate high demand for ownership housing; the inflation throughout the economy encourages people to acquire real property to protect their savings; and ownership housing has declined to about 60% of the urban housing stock. In the face of this high relative demand for ownership and all housing, new residential construction is doubling the housing stock in major cities every generation, however, to achieve this pace the building industry has shifted to multiple forms of housing which have lower costs per unit. Thus, while the demand for detached housing is high, most new construction is of the multiple form, and the proportion of houses in the total stock is declining. Faced with this imbalance, the value of detached housing has risen quickly, and in the annual housing market, where sales constitute 10-12% of the

total detached stock, existing houses outsell new houses by at least 3 to 1. As sales of existing houses both greatly out number new house sales and occur at prices which appear to be rising more quickly than new house prices, it appears that the thousands of homeowners who sell their houses in each city and the eager young families which buy them are the dominant forces which create the rapidly inflating prices of all housing. When house prices rise, lot prices are elevated commensurately, as the market values of lots are a direct residual function of the value of the housing they may support. Similarly, the value of raw residential land is a function of the value of the lots it may yield. Thus while it is not inaccurate to regard high land prices as the outcome of an imbalance between supply and demand, ultimately, they are caused by the inflated prices at which urbanites buy and sell houses. This causation has implications throughout the land market, and land development process - including the following conclusions:

- despite widespread suggestions to the contrary, incremental additions to the land supply, and volume of lots produced, will not reduce land or house prices;

- claims that speculators and greedy developers are the cause of current land and housing prices are incorrect. Conditions in the land market provide an opportunity for these classes of landowners, and many private homeowners, to realize large gains by selling their property. The rapid escalation of prices in relatively competitive markets such as Vancouver demonstrate that removal of the concentrated structure of land ownership and development does not, in itself, lower housing prices;

- it is largely irrelevant, and probably counter productive, to undertake cost-reducing measures such as decreasing lot sizes or services, as an artificial means of reducing land prices. While this may produce a lower price for a few buyers in the short run, the price applies to a sub-standard lot, and as its price rises the value of a standard lot will be pushed up disproportionately. From the viewpoint of housing producers and public policy, cost reduction may be useful in that it allows increased volume at a given level of expenditure. However, as prices are rising quickly in the high growth prairie cities in spite of high proportions of detached houses in both the housing stock and new production, it seems clear that an increased supply of new houses does not, in itself, reduce prices. If cost reduction increases supply without influencing prices, then it must be recognized that the consequences of cost reduction are to provide more people with houses, and to increase the amount and rate of profit received by producers.

A number of conclusions concern the public and private land development process:

- in most of the largest centres in Ontario, Alberta, Saskatchewan and Manitoba, over 75% of new residential lots are produced by a small minority of all developers, which are the largest firms, or are governments.

- most of these large developer's production occurs on land which has been held for five to ten years, and bears accumulated costs which are as low as 50-60% of current land values. Accordingly, the majority of lots developed in these centres yield large profits to their developers. These profits can also be identified as returns to scarcity or the social increment in land value.

- the minority of the new lot supply in these centres, and the majority of supply in the large cities of British Columbia, Quebec, and the Maritimes, is developed by firms soon after its acquisition, and bears costs which relate closely to current prices, yielding lesser profit.

- in most large Canadian cities, residential land development is concentrated with relatively few,

large integrated firms. It is estimated that 120-140 larger developers account for 75% of metropolitan lot production. The Development Corporations Survey found 47 firms hold 119,000 acres of land, while the public land assembly survey disclosed governments hold over 50,000 acres in about 100 different projects. This concentration of urban land development in relatively few large developer's massive projects is a deep-seated structural situation, reinforced by consumer needs for housing, environmental needs, urban planning, and development financing. While a more dispersed development pattern may be temporarily expedient for those who can afford it, the dominating economic pressures at the household, community, producer and financial levels favour the efficiency of large, compact forms of urban habitation. The quantification and exposition of the differences between these economic imperatives in housing and popular expectations and preferences is a major task and responsibility which must be assumed by the various urban and housing technocrats.

- there does not appear to be an absolute shortage in the urban land supply as lot production is rising, lot surpluses are frequent, and the major developers hold large stocks of future land supply, in most centres. From the viewpoint of consumers, builders and small developers, the "land shortage" refers to their desire to obtain non-existant, low-priced lots and acreage. While these groups decry the high prices when they are buying, it is their actions when selling and their willingness to pay the high price ultimately, that creates today's high market values.

- maintenance of current levels of residential construction is estimated to require about 220,000 acres of raw land in the 19 metropolitan areas during the 1971-1986 period -- larger acreages would be entailed if the volume of house construction increases.

- there is a widespread public expectation that public land assembly and development projects, popularly known as "public land banking", can reduce land prices. While advance assembly of land often results in total costs of developed lots which are well below current market values, it is difficult to pass this cost saving on to

consumers. The difficulty arises because this differential amounts to a substantial home ownership subsidy which would only be available to the limited number of buyers who could purchase publicly-developed lots, and the experience has been that significant numbers of these buyers resell their new homes to capitalize this subsidy. In consequence, most publicly-developed lots have been sold at or slightly below their market values, thereby minimizing the subsidy problem while maintaining some credibility in the claim that public projects can produce lots at low prices. This is, however, paying lip service to the price reduction goal while the project's major consequence is to provide serviced lots for housing (which private developers could have done) and to produce revenue for the project's operators (which can be viewed as a tax offset). In light of this experience, it seems necessary to improve public information about government land assembly programs in practice. A preliminary conclusion from this study's observation of public land projects is that while government's pricing policies may demonstrate price restraint, the pursuit of price control or major price reduction is an unstable policy which breaks down and becomes price restraint.

- it is a minimum requirement that the federal land assembly program continues to finance land projects in small centres where there is no supply of privately developed, serviced lots. This refers particularly to smaller places in the Maritimes, northern Ontario and the western provinces and excludes Quebec only because this province has not used the federal program.

- the primary impact of the present federal land assembly policy which emphasizes "quick start" land projects, and requires that any project profits be internally reallocated on community facilities, is to direct the nature of development of existing public land holdings. This may influence municipalities to require similar actions by private developers, which would be a further concentrative force on the development industry.

- governments now own land in several of Canada's largest centres which has the potential to dominate the respective region's land supply within two to five years. If federal land assembly expenditures and recoveries are considered to be a revolving funds (which they are from the viewpoint of the tax payers) it appears that a program budget through the 1970's of about $100 million per annum, directed exclusively to land acquisition, could assemble the effective land supply for the urban Canada of the 1980's. While this budget would have to double in the late 1970's to finance development, and triple to finance future land acquisition, this would be offset by recoveries of about $150 million per annum in the early 1980's. As a government monopoly in urban land development appears advantageous from the viewpoint of environmental protection, comprehensive urban planning, community facilities, housing production, the allocation of functions between government and industry, land market stability, and municipal finances, and the capacity to finance such a program exists at funding levels close to present federal spending on land assembly, it is recommended that provincial and regional governments consider establishing programs to take over the land supply and development functions within their jurisdictions.

The study has identified a number of areas of land and housing policy which are recommended as research priorities for CMHC and the urban research community generally, as existing knowledge is particularly inadequate, or further study would be of immediate value.

- in spite of the widespread discussion of land problems, the land markets of urban Canada, city by city, remain unstudied. Notable and commendable partial studies have been undertaken in Vancouver, Edmonton, Red Deer, Saskatoon, Hamilton, and Toronto - but in general, academics and planning agencies have not attempted integrated, comprehensive analysis of behaviour in the land market of a Canadian urban region. This form of pure research is needed to familiarize public officials with market activities and functions, to identify real problems in the present and future land supply, and to formulate and test land policy at all levels of government.

- it is necessary to improve the methodology behind, and collection of land use and market data so that governments, private interests and researchers at various levels of analysis have access to a useable, consistent series of information about land use, value, ownership, and trading. This need would be met by a national standard in land use classification and coding, implemented through a series of provincially operated market value assessment systems, with compatible, computerized assessments linked to census data. To meet this need, the first step would be the detailed field research necessary to design a national standard land use classification and coding system.

- foreign ownership of urban real estate warrants investigation to determine the significance of the widespread charges that foreign property owners are detrimental to urban Canadian's interests. The investigation should include foreign holdings of undeveloped land, land development companies, and income property and should examine any relationships between the buying, holding, development, operation and sale of such property and both the local market and the national economy. It is anticipated that this type of research could be undertaken by academies, in conjunction with local real estate professionals in various cities, and could occur through a series of co-ordinated grants under the National Housing Act.

- as non-profit projects financed under the National Housing Act appear to have both higher average land costs, and higher average property taxes, on a per-unit basis, than buildings constructed for profit, it seems that these aspects of site and property values warrant further comparative investigation. The research should determine whether the publicly operated or subsidized properties are superior habitations, or inordinately costly.

- as lot prices now constitute as much as 40% of the price of a new house, and housing prices are major determinate of people's ability to acquire housing, it seems essential that CMHC establish the capacity to monitor and analyze lot production and pricing in urban Canada. This would require an investigative unit that continuously assembled, analyzed, and disseminated systematic information about land development, development costs, lot prices and developers operations and plans in the major Canadian cities.

- the study of the experience of public land assembly in Hamilton, Ontario by Norman Pearson provided an introductory insight into the problem of pricing in public land projects, and indicated a conflict between federal and provincial policy in this regard. This central question of pricing warrants a full and frank public consideration which could be facilitated by a thorough analysis of the market situation, and a clear depiction of the respective government's stances, in the Hamilton case. It is recommended, therefore, that CMHC or CMHC and the Ontario Housing Corporation jointly, undertake and publish a thorough economic study of the Hamilton experience. This study should focus on the regional market situation and the lot pricing decisions in the public projects through the 1960's, to delineate as clearly as possible, the costs and benefits to the public, of the alternative prices which were available to the respective governments. As the Hamilton situation appears typical of a many large scale public land assembly projects, the study should recommend pricing policies for use in similar future projects.

- it would be useful, and would not be difficult, to develop data about the differential costs of various typical forms of urban dwellings and tenure, from the viewpoint of environmental costs (resource consumption in construction and maintenance per unit), urban-level costs (construction and public infra-structure costs per unit), and user costs (capital costs of ownership, rent, and maintenance). This would be pure research, without immediate "pay-off", which would quantify average expenses associated with various personal needs and tastes in housing and urban form and would, therefore, be a useful contribution to the knowledge of people throughout the society.

In conclusion, the study has found a pervasive lacking in useable and systematic information which would be the basis of a thorough analysis of urban land policy. This lacking has lead to many widely-held, but incorrect conclusions about aspects of urban land, most of which revolve around the central relationship between land value and property value. It is sincerely hoped that this study, and its shortcomings will challenge other people to learn more about the use, ownership, distribution

and price of, and production processes within, the limited amount of urban space upon which most Canadians are chosing to live.

APPENDIX A

ANCILLIARY TABLES

The following tables were referred to, but not included in the text. This list includes the numbers of pages which referred to the respective tables.

APPENDIX A (Con't)

TABLE: A-I TRENDS IN NHA FINANCING OF DETACHED STARTS, ALL 1971 METROPOLITAN AREAS, 1961 to 1973.

AREA REPORTED	DETACHED STARTS (2) AS % OF ALL STARTS (1)													NHA - FINANCED DETACHED STARTS (3) AS % OF ALL DETACHED STARTS									
	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
ST. JOHN'S	100.0	100.0	98.1	95.5	80.2	29.0	47.6	60.4	68.0	70.0	52.3	64.6	73.8	16.8	23.5	37.7	41.4	22.5	26.1	32.1	61.5	44.8	12.1	6.0
HALIFAX	65.3	43.0	27.6	25.1	25.5	33.2	33.0	25.5	13.0	17.1	21.6	42.8	29.2	42.6	42.8	32.2	34.6	22.2	13.3	26.2	46.6	22.3	19.9	42.2
SAINT JOHN	78.8	72.8	66.4	38.3	53.7	73.1	72.1	50.6	62.9	57.8	36.4	34.9	58.1	29.3	31.3	28.9	22.1	25.2	25.2	30.8	31.2	26.2	12.3	3.3
QUEBEC	66.0	53.5	45.3	44.0	53.0	64.6	53.5	24.4	20.0	33.6	32.6	38.5	52.2	56.0	58.6	59.6	69.2	68.2	58.2	61.8	50.3	60.2	48.3	33.9
CHICOUTIMI - J.	68.1	53.6	54.2	57.5	55.9	63.9	57.8	33.0	31.2	42.5	39.1	62.0	68.2	71.8	64.2	76.0	86.0	78.6	81.9	83.7	86.3	-	82.1	62.1
MONTREAL	22.0	32.4	27.1	24.9	21.8	27.3	17.3	13.8	15.3	21.5	23.7	37.7	30.7	71.1	72.1	68.7	76.5	71.9	62.8	69.3	66.1	78.4	60.3	55.7
OTT-HULL	59.8	41.4	28.0	31.7	33.5	37.6	45.0	42.5	35.3	19.4	24.5	20.2	21.8	71.1	62.9	50.8	65.2	61.9	40.1	49.5	40.5	42.7	43.0	48.0
TORONTO	24.2	35.2	33.9	27.8	21.8	31.3	20.7	16.7	18.5	11.0	19.8	23.5	21.3	59.4	47.4	28.0	33.1	21.6	7.2	10.4	22.1	24.7	18.5	2.9
HAMILTON	59.6	53.0	52.1	35.7	45.5	49.1	42.8	39.2	35.1	21.9	39.8	33.9	32.9	66.7	55.6	55.5	54.3	51.8	22.7	19.7	32.1	54.3	50.1	16.6
KITCHENER	-	62.1	45.0	39.7	41.4	51.1	35.6	35.0	36.7	27.6	33.9	33.1	31.5	70.8	70.9	66.7	62.9	57.7	55.2	48.0	51.5	68.6	55.0	43.7
ST. CAT.-NIAG.**	95.1	84.1	76.8	51.7	63.3	75.8	48.2	56.0	52.8	54.9	52.1	43.4	53.3	66.3	63.4	64.9	60.1	64.3	61.2	59.9	67.4	71.1	65.4	43.1
WINDSOR	71.1	70.1	55.6	61.2	56.7	54.6	52.9	38.3	42.6	36.8	38.5	36.5	50.0	61.2	48.6	24.6	34.1	37.7	15.9	29.1	43.4	36.7	20.8	15.2
LONDON	59.5	42.8	47.8	40.1	42.1	51.2	33.8	31.9	31.2	28.3	25.8	35.8	45.7	70.8	70.9	66.7	62.9	57.7	55.2	48.0	51.5	68.6	55.0	18.5
SUDBURY	-	42.2	63.2	95.9	89.5	66.5	43.1	83.3	63.2	50.7	33.7	35.1	55.2	63.1	65.0	67.5	64.5	55.4	37.8	32.9	35.9	30.1	19.5	9.1
THUNDER BAY	83.4	74.6	91.4	90.6	93.7	94.1	79.5	57.7	32.1	39.5	53.4	35.4	44.1	74.0	76.9	84.1	79.0	72.1	63.2	66.7	69.1	62.2	47.6	54.2
WINNIPEG	56.0	62.0	45.5	51.9	47.4	48.0	40.4	32.3	23.6	25.3	27.6	32.0	39.8	75.7	74.2	73.6	75.3	65.8	67.9	62.2	52.0	83.4	68.1	48.1
REGINA	90.7	72.4	62.4	47.9	62.5	68.6	47.6	37.3	38.4	94.0	67.3	79.1	64.6	65.9	62.6	66.5	66.4	60.5	64.9	64.7	85.5	103.1	101.6	94.6
SASKATOON	76.6	78.1	61.1	51.2	51.3	61.2	37.2	39.6	33.1	97.7	100.0	88.9	78.8	81.9	74.6	77.9	79.6	77.1	66.7	72.8	89.7	115.3	79.1	79.8
CALGARY	68.1	53.6	54.2	57.6	55.9	63.9	57.8	33.1	31.3	42.5	39.1	62.0	67.0	80.6	83.0	79.4	78.3	70.3	79.1	65.1	70.2	95.2	84.3	43.2
EDMONTON	62.3	61.8	59.2	58.2	60.6	56.7	31.2	29.0	24.1	30.3	27.9	41.6	62.9	88.5	80.3	81.7	77.6	77.6	63.7	69.6	84.4	81.5	64.9	21.9
VANCOUVER	57.5	47.7	42.4	32.3	33.6	47.3	43.0	32.8	26.9	33.4	34.0	45.1	50.4	20.2	23.4	20.2	31.7	24.4	7.3	12.8	13.2	15.2	8.9	3.3
VICTORIA	52.9	50.8	55.1	33.5	30.9	44.3	56.8	40.7	26.9	29.0	32.2	29.6	35.6	40.8	41.0	32.8	35.7	26.2	10.6	10.1	7.0	14.3	13.8	6.2
ALL CMA'S	45.3	44.4	39.3	34.8	33.6	40.8	31.4	25.9	25.3	24.8	29.0	35.1	36.9	62.6	58.3	53.1	56.2	47.5	37.9	41.1	47.2	54.9	45.8	30.0
ALL MUA'S	68.1	67.5	57.0	51.9	50.7	69.8	58.0	49.0	38.0	38.0	43.9	54.1	49.7	59.8	52.3	50.7	44.3	53.4	57.1	40.1	47.4	61.4	44.6	29.4
CANADA	60.9	57.2	51.9	46.5	45.3	52.5	44.2	38.3	37.3	37.1	42.0	46.2	49.0	47.4	44.4	42.0	45.3	39.9	31.0	31.9	37.8	44.6	37.2	23.0

NOTE: * After 1969, NHA detached data is for approvals, which may exceed starts.
** St. Catherines - Niagara excludes Welland until 1966.

SOURCE: Calculated from
CMHC, CANADIAN HOUSING STATISTICS,
1961 - 1973 editions.

TABLE A-2 OCCUPIED DWELLING UNITS BY PERIOD OF CONSTRUCTION AND AVERAGE ROOM COUNT

METROPOLITAN CANADA

	TOTAL STOCK OF OCCUPIED DWELLINGS								Age of Structure of 1971 Stock in Percentages				Averages, Per Housing Unit			
	1971 Stock	1971 Stock By Period of Construction and as % of 1961 Stock From Each Period											Bedrooms		Non Bedrooms	
		1961 - 1971[1]	1946-1960	% of 1961 Stock	1920-1945	% of 1961 Stock	Pre-1920	% of 1961 Stock	0- -10 Years	11- -25 Years	26- -51 Years	51 Years Plus	1961	1971	1961	1971
				%		%		%	%	%	%	%				
St. John's	28,645	9,375	9,550	117.1	5,255	118.9	5,460	102.2	31.6	32.2	17.7	18.4	3.0	3.0	2.7	2.9
Halifax	59,505	19,820	19,530	107.4	10,300	95.0	10,395	77.9	32.4	32.8	17.3	17.5	2.5	2.5	2.6	2.9
Saint John	28,645	6,410	6,840	105.5	4,530	116.1	10,860	78.9	22.4	23.9	15.8	37.9	2.6	2.7	2.8	2.9
Chicoutimi - J.	29,706	6,670	12,010	126.3	7,395	101.4	3,535	147.7	22.8	40.5	24.9	11.9	3.0	3.1	2.5	2.4
Quebec	127,240	44,840	37,640	114.7	20,750	101.7	24,015	92.7	35.2	29.6	16.3	18.9	2.6	2.6	2.7	2.5
Montreal	805,435	261,290	293,395	105.3	130,345	99.6	120,400	85.9	32.4	36.4	16.2	14.9	2.3	2.4	2.6	2.5
Ottawa-Hull	170,015	63,605	57,595	107.0	23,380	112.6	25,440	77.2	37.4	33.8	13.8	15.0	2.6	2.6	2.7	2.9
Toronto	773,830	253,340	273,255	109.7	127,325	108.2	109,915	94.9	32.7	35.3	16.5	14.2	2.6	2.5	2.9	3.1
Hamilton	146,255	41,515	49,880	105.7	25,215	108.0	29,640	85.4	28.4	34.1	17.2	20.3	2.6	2.6	2.8	3.0
Kitchener	66,570	24,790	19,905	101.3	9,040	109.1	12,845	90.3	37.2	29.9	13.6	19.3	2.6	2.6	2.8	3.0
St.Catharines-Niagara	88,885	19,905	31,805	167.2	18,920	169.3	18,250	168.6	22.4	35.8	21.3	20.5	2.6	2.7	2.9	3.0
Windsor	74,090	14,290	23,410	120.5	22,690	108.1	13,700	106.1	19.3	31.6	30.6	18.5	2.6	2.6	2.8	3.0
London	87,160	26,925	25,925	113.9	12,435	135.0	21,885	118.2	30.9	29.7	14.3	25.1	2.5	2.6	2.8	3.1
Sudbury	39,145	11,070	16,305	121.3	8,450	88.5	3,595	109.9	28.1	41.4	21.4	9.1	2.3	2.6	2.3	2.5
Thunder Bay	32,245	6,525	11,395	117.6	8,515	103.6	5,805	95.3	20.2	35.4	26.4	18.0	2.5	2.6	2.4	2.6
Winnipeg	166,220	41,750	55,470	100.7	35,650	109.0	33,360	81.9	25.1	33.4	21.4	20.1	2.4	2.4	2.5	2.7
Regina	42,585	14,340	15,270	95.1	8,430	99.9	4,545	80.8	33.7	35.9	19.8	10.7	2.3	2.5	2.5	2.8
Saskatoon	38,610	14,420	13,520	98.7	7,020	93.7	3,655	77.5	37.3	35.0	18.2	9.5	2.4	2.6	2.6	2.8
Calgary	121,100	48,045	49,225	97.2	12,505	101.0	11,325	73.7	39.6	40.7	10.3	9.3	2.4	2.6	2.6	3.0
Edmonton	144,505	59,035	59,530	100.9	16,955	93.2	9,000	76.3	40.9	41.2	11.7	6.2	2.5	2.6	2.5	2.8
Vancouver	345,870	116,600	122,630	108.1	74,145	94.8	32,495	88.0	33.7	35.5	21.4	9.4	2.4	2.4	2.6	2.8
Victoria	66,255	20,460	21,795	100.8	13,275	95.1	10,730	90.1	30.9	32.9	20.0	16.2	2.3	2.4	2.7	2.9

SOURCES: Statistics Canada, Census of Canada, 1951, 1961 and 1971, Vols. 2.2-1, 2.2-2.

NOTE: (1) This includes construction to June 1971

TABLE: A-3 METROPOLITAN POPULATIONS AND POPULATION GROWTH, 1951 to 1971

METROPOLITAN AREAS IN DESCENDING ORDER OF THEIR 1961-1971 GROWTH RATE	POPULATION (WITHIN 1971 CENSUS AREAS)			POPULATION GROWTH									
				1951-1961					1961-1971				
				NUMERICAL	AS GROWTH RATE	AS PERCENTAGE OF ALL POPULATION GROWTH IN			NUMERICAL	AS GROWTH RATE	AS PERCENTAGE OF ALL POPULATION GROWTH IN		
						CANADA	URBAN PLACES	METRO AREAS			CANADA	URBAN PLACES	METRO AREAS
	1951	1961	1971										
KITCHENER	107,474	154,864	226,846	47,390	44.1%	1.1%	1.2%	1.6%	71,982	46.5%	2.2%	1.9%	2.8%
CALGARY	142,315	279,062	403,319	136,747	96.1	3.2	3.5	4.6	124,257	44.5	3.7	3.3	4.8
EDMONTON	193,622	359,821	495,702	166,199	85.8	3.9	4.3	5.6	135,881	37.8	4.1	3.7	5.3
TORONTO	1,261,861	1,919,409	2,628,043	657,548	52.1	15.5	16.9	22.0	708,634	36.9	21.3	19.1	27.4
SASKATOON	55,679	95,564	126,449	39,885	71.6	.9	1.0	1.3	30,885	32.3	.9	.8	1.2
OTTAWA-HULL	311,587	457,038	602,510	145,451	46.7	3.4	3.7	4.9	145,472	31.8	4.4	3.9	5.6
VANCOUVER	486,172	826,798	1,082,352	340,626	70.1	8.1	8.8	11.4	255,554	30.9	7.7	6.9	9.9
QUEBEC	289,294	379,067	480,502	89,773	31.0	2.1	2.3	3.0	101,435	26.8	3.0	2.7	3.9
LONDON	167,724	226,669	286,011	58,945	35.1	1.4	1.5	2.0	59,342	26.2	1.8	1.6	2.3
VICTORIA	114,829	155,763	195,800	40,934	35.6	1.0	1.1	1.4	40,037	25.7	1.2	1.1	1.5
HAMILTON	281,901	401,071	498,523	119,170	42.3	2.8	3.1	4.0	97,452	24.3	2.9	2.6	3.8
MONTREAL	1,539,308	2,215,627	2,743,208	676,319	43.9	16.0	17.4	22.6	527,581	23.8	15.8	14.2	20.4
REGINA	72,731	113,749	140,734	41,018	56.4	1.0	1.1	1.4	26,985	23.7	.8	.7	1.0
ST. JOHNS	80,869	106,666	131,814	25,797	31.9	.6	.7	.9	25,148	23.6	.8	.7	1.0
SUDBURY	80,543	127,446	155,424	46,903	58.2	1.1	1.2	1.6	27,978	22.0	.8	.8	1.1
WINDSOR	182,619	217,215	258,643	34,596	18.9	.8	.9	1.2	41,428	19.1	1.2	1.1	1.6
ST. CATHARINES-NIAGARA	189,046	257,796	303,429	68,750	36.4	1.6	1.8	2.3	45,633	17.7	1.4	1.2	1.8
HALIFAX	138,427	193,353	222,637	54,926	39.7	1.3	1.4	1.8	29,284	15.1	.9	.8	1.1
WINNIPEG	357,229	476,543	540,262	119,314	33.4	2.8	3.1	4.0	63,719	13.4	1.9	1.7	2.5
THUNDER BAY	73,713	102,085	112,093	28,372	38.5	.7	.7	.9	10,008	9.8	1.2	.3	.4
SAINT JOHN	80,689	98,083	106,744	17,394	21.6	.4	.4	.6	8,661	8.8	.3	.2	.4
CHICOUTIMI-JONQUIERE	91,161	127,616	133,703	36,455	40.0	.9	.9	1.2	6,087	4.8	.2	.2	.2
ALL METROPOLITAN AREAS	6,298,793	9,291,305	11,874,748	2,992,512	47.5	70.8	77.1	100.0	2,583,443	27.8	77.6	69.6	100.0
ALL URBAN PLACES[1]	8,817,637	12,700,390	16,410,785	3,882,753	44.0	91.8	100.0	129.7	3,710,395	29.2	111.4	100.0	143.6
CANADA	14,009,429	18,238,247	21,568,316	4,228,818	30.2	100.0	108.9	141.3	3,330,064	18.3	100.0	89.7	128.9

SOURCE: Statistics Canada

NOTES: The definition of "urban" changed slightly over this period. Generally, it includes all incorporated or unincorporated places having populations of 1000 or more, or population densities of 1000 per square mile, and the fringe areas with populations of 1000 or more, surrounding larger settlements.

1. The "urban" population figures for 1951 and 1961 were generated by the use of 1961 census definitions. The 1971 definition was broadened slightly.

TABLE: A-4 ANNUAL PERCENTAGE CHANGES IN THE VOLUME AND AVERAGE PRICE OF RESIDENTIAL LOTS IN METROPOLITAN AREAS, 1965 to 1972.

CHANGE IN VOLUME	CHANGE IN PRICE							ROW TOTALS
	Price Increases			Price Decreases			No Price Change	
	10-20%	20-30%	30% Plus	10-20%	20-30%	30% Plus		
Volume Increases 20-30%	8	2	1				7	18
30-40%	5	2			1		8	16
40% Plus	3	3	2	1	1		9	19
Volume Decreases 20-30%			1				5	6
30-40%	1			1			5	7
40% Plus	2	1						3
No Volume Change	22	11	7	1		1		42
Column Totals	41	19	11	3	2	1	34	111

SOURCE: Table 2.0 (Price) and Table 2.6 (Volume).

NOTE: This table reports an examination of percentage changes in the annual volume of lots sold (indicated by house starts) and percentage changes in average annual lot prices, in each of the 19 metropolitan areas, between 1965 and 1972 inclusive. Price changes of less than 10%, and volume changes of less than 20% are considered to be normal, or "no change" for the purpose of this analysis. This excluded 41 of the potential total of 152 changes. To illustrate the use of this table - during the period 1965 to 1972, in metropolitan Canada, there were 111 significant changes in lot supply or price, of which 53 included increases in volume, and 3 of the latter were accompanied by decreases in price. Volume fell 16 times, including 3 declines exceeding 40%, however, only 4 of the volume decreases were accompanied by price increases.

TABLE A-5

ESTIMATED VALUE OF ALL DETACHED DWELLINGS

METROPOLITAN CANADA, 1961 AND 1971

	MEDIAN VALUE		PROPORTIONS OF ALL HOUSES IN EACH VALUE RANGE						AVERAGE ANNUAL VALUE INCREASE (INCREASE IN MEDIAN), EXPRESSED AS SEMI-ANNUAL COMPOUND INTEREST RATE
			0 - $22,500		$22,500 - $32,500		$32,500 Plus		
	1961	1971	1961	1971	1961	1971	1961	1971	
St. John's	$12,704	$19,945	90.9%	59.0%	7.7%	29.0%	1.4%	12.0%	4½%
Halifax	14,716	22,820	88.0	48.7	8.3	33.0	3.7	18.3	4½%
Saint John	9,899	15,528	97.1	80.8	2.9	13.3		5.9	4½%
Chicoutimi-J.	12,109	15,489	95.4	87.6	4.6	9.4		3.0	2½%
Quebec	13,673	19,422	88.3	66.7	7.6	23.4	4.1	9.9	3½%
Montreal	15,305	18,603	82.2	70.7	9.4	19.0	8.4	10.3	2 %
Ottawa-Hull	16,433	25,758	84.6	34.2	10.5	42.4	4.9	23.4	4½%
Toronto	17,301	32,408	80.4	9.4	13.7	41.1	5.9	49.5	6¼%
Hamilton	14,078	25,172	93.7	35.5	4.5	46.3	1.8	18.2	5¾%
Kitchener	12,396	23,968	95.0	41.9	3.6	41.9	1.4	16.2	6½%
St.Catharines-Niagara	11,227	19,966	96.8	63.4	2.4	28.2	.8	8.4	5¾%
Windsor	10,349	22,327	96.4	50.9	2.5	34.0	1.1	15.1	7¾%
London	13,128	20,916	92.5	58.2	5.1	30.2	2.4	11.6	4¾%
Sudbury	13,269	22,306	95.3	51.0	4.7	35.6		13.4	5¼%
Thunder Bay	10,093	16,212	98.2	75.8	1.8	19.5		4.7	4¾%
Winnipeg	12,999	17,780	94.6	73.1	3.9	20.7	1.5	6.2	3 %
Regina	12,190	16,443	96.7	82.0	2.7	13.7	.6	4.3	2¾%
Saskatoon	11,752	17,230	96.0	80.0	3.2	15.5	.8	4.5	3¾%
Calgary	14,850	22,461	90.6	62.8	6.6	37.2	2.8	12.6	4¼%
Edmonton	14,517	23,665	92.7	43.3	5.2	43.5	2.1	13.2	5%
Vancouver	13,932	26,702	90.0	30.7	7.1	41.2	2.9	28.1	6½%
Victoria	11,656	22,327	94.2	50.9	4.0	34.0	1.8	15.1	6½%

SOURCES: Statistics Canada, Census of Canada, 1961, Volume 2.2-6, Tables 62,63 and 64.
Statistics Canada, Census of Canada, 1971, Volume 2.3-7, Table 42.

TABLE: A-6 URBAN EXPANSION LAND - FACTORS DETERMINING EFFECTIVE SUPPLY

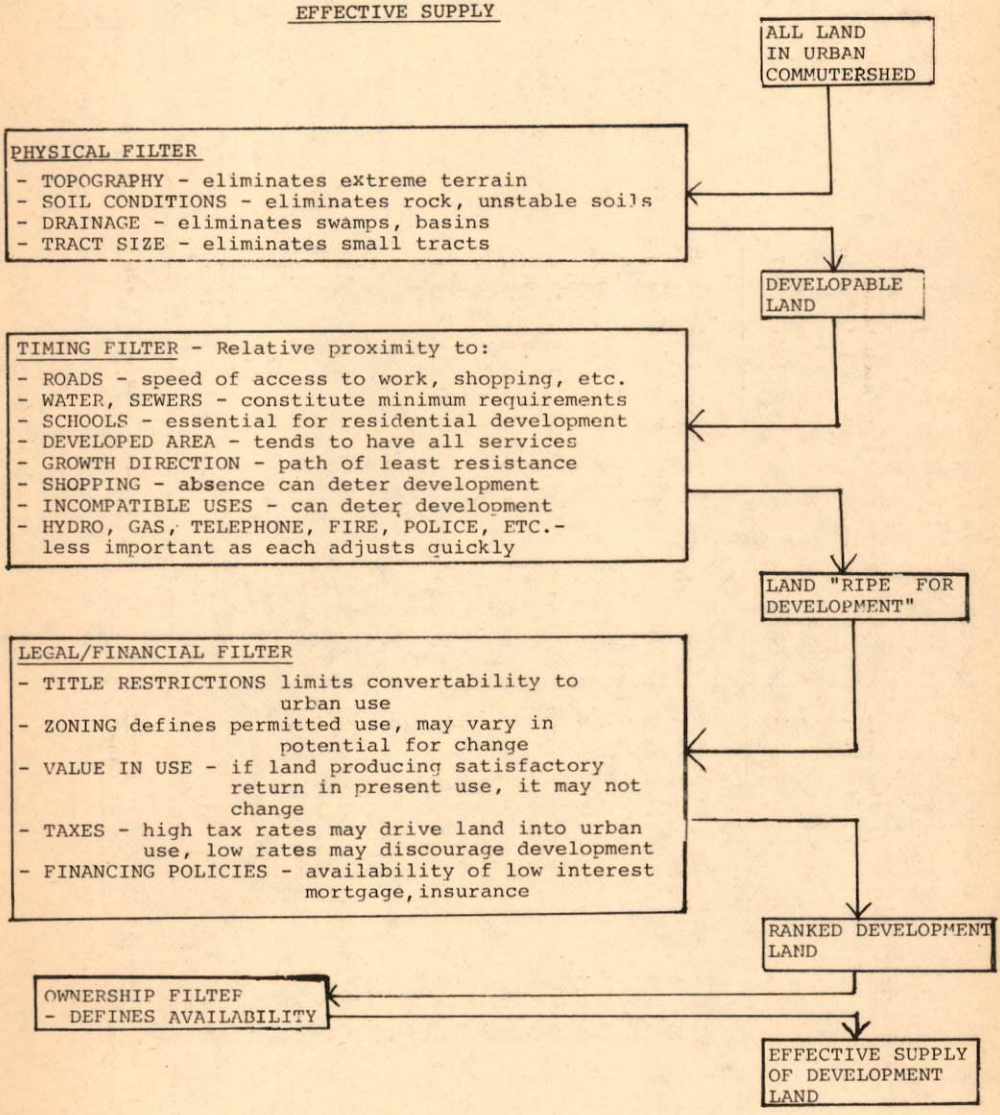

Table :A-7 Survey Of Unserviced Raw Land Holdings, Borough of Scarborough, Metropolitan Toronto, 1971.

(All Tracts Are Located North Of McDonald-Cartier Freeway)

Name of Firm (Abbreviated)	Acres
Scarborough York Developments	55
Keystone Developments	159
*Verity Investments (Cadillac Development Corporation, Subsidiary)	100
Lenat Holdings	74
Birmount Holdings Limited	74
Troon Holdings (Frazer Group Properties Ltd.)	84
*Markborough Properties Limited	253
*Wimpey Homes Limited	328
*Monarch Construction Limited	378
Great Falls Agencies Ltd.	85
Post Road Realty	86
*Runnymede Development Corporation Limited	140
Golf Leaseholds Limited	136
M.T.R.C.A. (Regional Conservation Authority)	912
Shield & Snow Limited	103
J. F. Leckie and Bruce F. Summers	105
529 Bloor Street West, Toronto	85
Mark Steeles Investments Limited	112
S. Greenwood and H. Silver	76
P. McGoey	56
Campbell C. Homes	112
R. Reesor	182
R. Wells	89
Silwell Developments	68
Bayshire Investments	69
L. Diller	60
*K. A. B. Prop. Ltd. & Westhill Redevelopment Ltd.	82
J. Graham	67

Total Owners-28 Total acres- 4,030

* known developers

TABLE: A- 8

SURVEY OF BUSINESS-OWNED UNSERVICED
RAW LAND, TOWNSHIP OF MARKHAM
TORONTO REGION, 1971

NAME OF FIRM (Abbreviated)	CONCESSION	LOT(S)	ACRES
Crossmar Investments	1	57&58	306
Schickednaz Developments Ltd., 3311 Bayview	2	6&7	75
Rugged Const. Ltd., 3311 Bayview	2	26	132
Galmark Holding Ltd., 3311 Bayview	4	-	100
Galton Farms Ltd., 3311 Bayview	4	-	100
Leslie Estates Ltd.	2	8&9	93
Litch Transport Ltd.	2	9&10	389
Bayriver Develop'ts Ltd./Domarco Property Ltd.	2		97
Glen Ash Develop'ts/Wenchelle Realty Ltd.	2	14,15,16,17	324
Pickin Chicken Bar-B-Q	2	18	123
Markham 18-20 Ltd.	2		290
Myrella Investm'ts. Ltd./Edelstein Const.	2		94
Burnhamthorpe Holdings Ltd.	2		100
Canada Permanent Mortgage Corp.	2	30	99
All Province Contractors Ltd.	3		145
Strasser Ltd./Lorenzett & Co.	3	15	130
Toronto Airways Ltd.	3		125
Gold King Investments	3		93
Blue Orchid Holdings	3		94
Forest Glen (Dixie) Ltd. (Cadillac Develop't. Corporation Subsidiary)	4	14	125
Jamieson Properties	4		103
Romandale Farms Ltd., 4 King St. W.	4		100
Romandale Farms Ltd., 4 King St. W.	5		264
Angus Glen Farms Ltd. 11 King St. W.	5		200
Massey Ferguson Ltd.	5		597
Karmin Land Corp.	5		100
Trammel Investments Ltd.	7		94
Kanata Holdings Limited	7		97
Coniferous Investments Ltd.	7		152
Deacon Investments Ltd.	7		152
Taranake Investments Ltd.	7		104
Motob Investments Ltd.	7		120
Janray Investments Ltd.	9		100
Baronspike Holdings Ltd., 85 Richmond St. W.	9		100
Queen Spike Holdings, 85 Richmond St. W.	9		154
Mark-Ten Holdings Ltd.	9		100
Markborough Properties Ltd.*	9		128
Markborough Properties Ltd.*	10&11		187
Regin Properties Ltd.	9		428
Regin Properties Ltd.	10&11		190
Marie Garden Apt. Ltd.	10&11		130
Ellata Properties & Investments Ltd.	10&11		150
DIFFERENT OWNERS - (35)		ACRES	7,144

*Known Developers

TABLE A-9 DEVELOPMENT CORPORATIONS SURVEY, LIST OF FIRMS, OWNERS, LOCATIONS, DATA AND SOURCES

1. NAMES OF FIRMS SURVEYED

Allarco Developments Ltd.
Alliance Building Corporation Limited
BACM Industries Limited
Block Bros. Industries Ltd.*
Bramalea Consolidated Developments Limited
British Pacific Building Limited
Buildevco Limited
Cadillac Development Corp.
Caledon Mountain Estates Limited
Cambridge Leaseholds Limited*
Campeau Corporation
Canadian Equity & Development Company Limited
Carma Developers Ltd.
Cemp Investments Ltd./Fairview Corporation of Canada Limited
City Parking Ltd.*
Clayton Developments Limited
Concord Group
Concordia Estates Limited
Consolidated Building Corporation Limited
Corporate Properties Limited
Daon Development Corporation
George Wimpey Canada Limited
Great Northern Capital Corporation Limited
Greater York Properties Ltd.
Greenwin Group
Grosvenor International Holdings Limited
Halifax Developments Limited
Hambro Canada (1972) Ltd.
Headway Corporation Limited
Kaufman & Broad, Inc.
Ladco Co. Ltd.
MacLab Enterprises Ltd.
Major Holdings & Developments Limited
Manufacturers Life Insurance Company
Marathon Realty Company Limited
Markborough Properties Limited
Melton Real Estate Ltd.*
Metro Structures of Canada Ltd.
Minto Construction Limited
Monarch Investments Limited
Morenish Land Developments Ltd.*
North American Life Assurance Company
Nu West Development Corporation Ltd.
Olympia & York Developments Limited*
Orlando Realty Corporation Limited
Paragon Properties Limited
Pinetree Development Co. Limited
Qualico Developments Ltd.
Revenue Properties Company Limited
Runnymede Development Corp. Ltd.
Richard Costain (Canada) Ltd.
S. B. McLaughlin Associates Limited
St. Lawrence Diversified Company
Sifton Properties Limited
Thomas C. Assaly Corporation Ltd.) *
Trans-Nation Land Corporation (Toronto) Limited
Trizec Corporation Ltd.
Wall & Redekop Corporation Ltd.
Western Realty Projects Ltd.
Y & R Properties Limited*

* Firm added since last survey.

Table Continues

2. NAMES OF PRINCIPAL OWNERS OF DEVELOPMENT CORPORATIONS

Dr. C. A. Allard
Slater Walker Ltd.
Thomas and Ernest Assaly
Genstar Ltd.
A. J. and J. H. Block
Bansco Ltd.
Eagle Star Ltd.
Guinness Family
Dutchman Homes Ltd.
Harold Freure Ltd.
British Electric Ltd. & Kayser Ltd.
Tabachnick Family
Eastern Construction Ltd.
R. Campeau
Bronfman Trust
Bernard Herman
L. E. Shaw
Concordia Inc.
Bovis Ltd.
L. Shankman
Vincent Paul
J. Poole
G.R. Dawson
George Wimpey Ltd.
Capital Counties & Property Ltd.
G. Shefsky and E. Cogan
Grosvenor-Laing Holdings Ltd.
J. Jodrey and F. Sobey
Hambros Ltd.
R. Keenan and H. Ganja
Kaufman and Broad Inc.
Borger Family
J. de La Bruyere & S. MacTaggart
Vavasseur & Co.
CPR
B. McLaughlin
Metropolitan Structures Inc.
Greenberg Family
Taylor Woodrow Ltd.
Lehndorff Group
R. Scurfield and C. McConnell
Reichmann Family
C. Smith and N. Steinberg
Tanenbaum Family
Richard Costain (Holdings) Ltd.
Mowbray Sifton
Star Holdings Ltd.
P.Wall, P. & J. Redekop, B. Lee
Belzberg Family

3. LOCATIONS CODED FOR USE IN SURVEY OF DEVELOPERS ACTIVITIES

Halifax-Dartmouth
Quebec
Montreal
Ottawa-Hull
Peterborough
Kingston
Oshawa
Guelph
St. Catharines
Hamilton
Kitchener-Waterloo
London
Windsor
Sarnia
Thunder Bay
Winnipeg
Brandon
Saskatoon
Regina
Edmonton
Calgary
Lethbridge
Vancouver
Victoria
Toronto-General
Toronto-Pickering
Toronto-Ajax
Toronto-Uxbridge
Toronto-Richmond Hill
Toronto-Brampton
Toronto-Port Credit
Toronto-Caredon Hills
Toronto-Oakville
Toronto-Etobicoke
Toronto-Markham
Toronto-Unionville
Toronto-Streetsville
Toronto-Mississauga
Toronto-Georgetown
Toronto-Scarborough
Toronto-Central Business District

TABLE CONTINUED

TABLE A-9 CONTINUED

4. DATA INCLUDED IN SURVEY

Land - Number of Plots
Land - Number of Acres
Houses Owned
Apartment Buildings Owned
Apartment Units Owned
Projected Construction - Houses
Projected Construction - Residential Units
Projected Population
Office Buildings Owned (Or Retail)
Commercial Square Feet
Hotels Owned
Shopping Centres Owned

5. LIST OF SOURCES USED IN SURVEY

1972 Annual Report or Financial Statement - same firm
Canadian Real Estate Annual, 1973
Canadian Real Estate Annual, 1972
Canadian Real Estate Annual, 1971
Canadian Real Estate Annual, 1970
Canadian Real Estate Annual, 1969
Dubois, R. The Impact of Public Investments on Urban Land Values, Thesis.
Toronto Globe and Mail, 25 August 1972
Hamilton, S. W. Land Price Movements in West Vancouver, Thesis
City of Kitchener registration map, 1973
Discussion with principals
Survey by Local CMHC Office
Toronto Globe and Mail, 28 April 1972
Toronto Star, 19 May 1973
Toronto Globe and Mail, 25 August 1972
Toronto Globe and Mail, 23 February 1972
Vancouver Province, 6 March 1973
Canadian Building, May 1973
Toronto Globe and Mail, 9 March 1973
Toronto Globe and Mail, 12 January 1972
Toronto Star, 18 March 1972
Toronto Globe and Mail, 14 April 1972
Toronto Globe and Mail, 25 March 1972
Financial Post, 16 June 1973
Toronto Globe and Mail, 25 August 1972
Toronto Globe and Mail, 16 January 1973
Toronto Star, 4 August 1972
Toronto Globe and Mail, 1 February 1973
Toronto Globe and Mail, 13 April 1973
Research by K. Rovinelli at CMHC
Vancouver Sun, 15 July, 1973
Edmonton Journal, 24 May 1973
Toronto Star, 18 April 1972
Financial Post, 5 June 1973
Montreal Star, 13 January 1973
Toronto Globe and Mail, 11 April 1973
Canadian Building, January 1973
Toronto Star, 15 January 1972
Bureau of Municipal Research, Toronto Region's Privately-Developed New Communities
Toronto Globe and Mail,7 April, 1972
Toronto Globe and Mail, 15 December 1972

TABLE: A-10 AVERAGE GROSS AND NET PENTAL INCOME RECEIVED BY INDIVIDUALS, BY OCCUPATION, CANADA, 1970

OCCUPATION OF PROPERTY OWNER	AVERAGE OPERATING STATISTICS			RATIO OF EXPENSE TO GROSS INCOME	GROSS RENT RECEIVED AS % OF ALL GROSS
	GROSS INCOME	EXPENSES	NET INCOME		
Entertainers & Artists	$2,583	$4,329	- $1,746	168%	-
Real Estate Agency	10,990	16,421	- 5,431	149	-
Engineers & Architects	8,503	12,421	- 3,918	146	-
Doctors & Surgeons	8,576	12,337	- 3,761	144	2%
Dentists	6,276	8,510	- 2,234	136	-
Lawyers & Notaries	7,488	9,872	- 2,384	132	1%
Other Professional	4,027	5,214	- 1,187	129	-
Accountants	5,138	6,346	- 1,208	124	-
Schools & Colleges	1,914	2,305	- 391	120	1%
Business Services	2,058	2,366	- 308	115	-
Salesmen	2,796	3,144	- 348	112	-
Provincial Gov't.	1,863	2,087	- 224	112	1%
Federal Gov't.	1,789	1,963	- 174	110	1%
Municipal Gov't.	1,765	1,950	- 185	110	1%
All Others	1,654	1,823	- 169	110	-
Institutes & Schools	1,781	1,947	- 166	109	1%
Companies	2,196	2,366	- 170	108	21%
Unclassified	1,534	1,657	- 123	108	-
Other Finance	15,774	16,459	- 685	104	-
Construction	2,683	2,680	3	100	1%
Transportation & Comm.	2,668	2,655	13	100	1%
Other Services	3,231	3,029	202	94	2%
Manufacturers	3,549	3,311	238	93	-
Insurance	2,413	2,200	213	91	-
Wholesale	3,802	3,346	456	88	-
Pensioners	1,321	1,168	153	88	2%
Property Owners	9,443	8,251	1,192	87	51%
Other Business	2,187	1,902	285	87	-
Retail	3,253	2,811	442	86	4%
Fishermen	1,814	1,558	256	86	-
Recreation	5,225	4,448	777	85	-
Forestry	1,551	1,288	263	83	-
Investors	2,317	1,899	418	82	4%
Farmers	1,673	1,252	421	75	1%

SOURCE: Department of National Revenue, Taxation, Taxation Statistics - Analyzing the Returns of Individuals, 1970, and supplementary material provided by the Department.

NOTE: Total gross rent received by individuals was $1,774,808,000. In right-hand column (-) dash indicates less than 1% of total gross was received by this category.

TABLE: A-11

PROVINCE'S COSTS IN A HYPOTHETICAL PUBLIC LAND ASSEMBLY
PROJECT FUNDED UNDER SECTION 40 - NATIONAL HOUSING ACT

YEAR	ITEM	COST	ACCUMULATED PROJECT COST	COST TO PROVINCE		COST TO CMHC	
				CURRENT	ACCUMULATED	CURRENT	ACCUMULATED
1	Acqusition	$1000,000	$1000,000	$250,000	$250,000	$750,000	$750,000
	Property Tax	20,000	1020,000	5,000	255,000	15,000	765,000
	Carrying Chg.	81,906	1101,906	20,476	275,476	61,430	826,430
YEAR END			1101,906	275,476	275,476	826,430	826,430
2	Carry In		1101,906	275,476	275,476	826,430	826,430
	Property Tax	21,606	1123,512	5,401	280,877	16,205	842,635
	Carrying Chg.	90,218	1213,730	22,554	303,431	67,664	910,299
YEAR END			111,824	27,955	27,955	83,869	83,869
3	Carry In		1213,730	303,431	303,431	910,299	910,299
	Development	600,000	1813,730	150,000	453,431	450,000	1360,299
	Property Tax	23,340	1837,070	5,835	459,266	17,505	1377,804
	Carrying Chg.	147,516	1984,586	36,879	496,145	110,637	1488,441
YEAR END			770,856	192,714	192,714	578,142	578,142
4	Carry In		1984,586	496,145	496,145	1488,441	1488,441
	Development	600,000	2584,586	150,000	646,145	450,000	1938,441
	Property Tax	25,215	2609,801	6,304	652,449	18,911	195,732
	Carrying Chg.		2819,368	52,392	704,841	157,175	2114,527
YEAR END			834,782	208,696	208,696	622,086	622,086
5	Carry In		2819,368	704,841	704,841	2114,527	2114,527
	Development	600,000	3419,368	150,000	854,841	450,000	2564,527
	Property Tax	27,240	3446,608	6,810	861,651	20,430	2584,957
	Carrying Chg.		3723,370	69,190	930,841	207,572	2792,529
YEAR END			904,002	226,000	226,000	678,002	678,002
TOTAL PROJECT COST			$3723,370				
TOTAL COST TO PROVINCE					$930,841		
TOTAL COST TO CMHC							$2792,529

NOTES: For simplicity; all loans and expenditures occur at the beginning of the year; the province pays full acquisition price for the land immediately; the province pays property taxes at the beginning of each year, at 2% of raw land value (which appreciates at 7 7/8% per annum). These assumptions tend to maximize project costs.

TABLE: A-12

PROVINCE'S COSTS IN A HYPOTHETICAL PUBLIC LAND ASSEMBLY PROJECT FUNDED UNDER SECTION 42 (INTEREST ONLY OPTION)-NATIONAL HOUSING ACT

YEAR	ITEM	COST	COST TO PROVINCE CURRENT	COST TO PROVINCE LOAN	PROJECT COST ACCUMULATED
1	Acquisition	$1000,000	$1000,000	$900,000	$1000,000
	Property Tax	20,000	20,000		1020,000
	Carrying Chg.		9,636		1029,636
	Interest	72,270	72,270		1101,906
YEAR END			201,906	900,000	1101,906
2	Carry In		201,906		1101,906
	Property Tax	21,606	21,606		1123,512
	Carrying Chg.		17,948		1141,460
	Interest	72,270	72,270		1213,730
YEAR END			111,824		111,824
3	Carry In		317,730		1213,730
	Development	600,000	60,000	540,000	1813,730
	Property Tax	23,340	23,340		1837,070
	Carrying Chg.		31,884		1868,954
	Interest	115,632	115,632		1984,586
YEAR END			230,856	540,000	770,856
4	Carry In		544,586		1984,586
	Development	600,000	60,000	540,000	2584,586
	Property Tax	25,215	25,215		2609,801
	Carrying Chg.		50,573		2660,374
	Interest	158,994	158,994		2819,368
YEAR END			294,782	540,000	834,782
5	Carry In		839,368		2819,368
	Development	600,000	60,000	540,000	3419,368
	Property Tax	27,240	27,240		3446,608
	Carrying Chg.		74,406		3521,014
	Interest	202,356	202,356		3723,370
YEAR END			364,002	540,000	904,002
TOTAL PROJECT COST					$3723,370
PROVINCE'S EXPENDITURE		$1203,370			
PROVINCES DEBT				$2520,000	

NOTES: For simplicity: All loans and expenditures occur at the beginning of the year;
-The province pays full acquisition price for the land immediately;
-The province pays property taxes at the beginning of each year, at 2% of raw land value (which appreciates at 7 7/8% per annum).
-These assumptions tend to maximize project costs.

TABLE: A-13

PROVINCE'S COSTS IN A HYPOTHETICAL PUBLIC LAND ASSEMBLY PROJECT - FUNDED UNDER SECTION 42 (STRAIGHT AMMORTIZATION OPTION) - NATIONAL HOUSING ACT

YEAR	ITEM	COST	COST TO PROVINCE CURRENT	COST TO PROVINCE LOAN	PROJECT COST ACCUMULATED
1	Acquisition	$1000,000	$100,000	$900,000	$1000,000
	Property Tax	20,000	20,000		1020,000
	Carrying Chg.		9,636		1029,636
	Ammortization	84,527	84,527		1114,163
YEAR END			214,163	900,000	1114,163
2	Carry In		214,163	900,000	1114,163
	Property Tax	21,606	21,606		1135,769
	Carrying Chg.	18,932	18,932		1154,701
	Ammortization	84,527	84,527		1239,228
YEAR END			125,065		125,065
3	Carry In		339,228		1239,228
	Development	600,000	60,000	540,000	1839,228
	Property Tax	23,340	23,340		1862,568
	Carrying Chg.	33,932	33,932		1896,500
	Ammortization	135,243	135,243		2031,743
YEAR END			252,515	540,000	792,515
4	Carry In		591,743	1440,000	2031,743
	Development	600,000	60,000	540,000	2631,743
	Property Tax	25,215	25,215		2656,958
	Carrying Chg.	54,359	54,359		2711,317
	Ammortization	185,959	185,959		2897,276
YEAR END			325,533	540,000	865,533
5	Carry In		917,276	1980,000	2897,276
	Development	600,000	60,000	540,000	3497,276
	Property Tax	27,240	27,240		3524,516
	Carrying Chg.	80,662	80,662		3605,178
	Ammortization	236,675	236,675		3841,853
YEAR END			404,572	540,000	944,577
			1321,853	2520,000	3841,853

PROVINCES EQUITY 1321,853

PROVINCES DEBT -PRESENT VALUE OF LOANS
84,527 for 20 years - 828,046.71
50,716 for 22 years - 513,238.28
50,716 for 23 years - 521,857.81
50,716 for 24 years - 530,771.86
2393,914.60

TOTAL PROVINCIAL EQUITY AND DEBT $3,715,767
TOTAL PROJECT COST $3,841,853.

NOTES: For simplicity: all loans and expenditures occur at the beginning of the year.
-The Province pays full acquisition price for the land, immediately
-The Province pays property taxes at the beginning of each year, at 2% of raw land value (which appreciates at 7 7/8% per annum).
-These assumptions tend to maximize project costs.

TABLE: A-14

FEDERAL PROVINCIAL LAND ASSEMBLY SURVEY,
SUMMARY OF ALL NEW PROJECTS UNDERTAKEN, BY MARKET SIZE, PROJECT SIZE, AND PURPOSE
SECTION 40
PROJECTS UNDERTAKEN BY YEAR

Relative Market	Size Project	Project Purposes	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	TOTAL
Village	Large	Cost																1		2	2			2	1	8
		Social																	1		1					2
		Market		2	1	1	1	2		1			2				1		4	15	3	4		1	2	40
	Small	Cost																			1					1
		Social																1								1
		Market			3	3		1			1				2					2		1				13
Town	Large	Cost		1																						1
		Social																								
		Market		2	2	1		1	1		2							1			3					13
	Small	Cost																								
		Social																								
		Market	1	1		1	2			2										4	4	1				16
Agglo-meration	Large	Cost	1																							1
		Social																								
		Market					1													1	1	2	1	1	2	9
	Small	Cost																								
		Social																					1			1
		Market	2	1		1		1	1	1		1								2		1				11
All Markets	Large	Cost	1	1														1		2	2			2	1	10
		Social																	1		1					2
		Market	9	4	3	2	2	3	1	1	2		2				1	1	4	16	7	6	1	2	4	62
	Small	Cost																			1					1
		Social																1					1			2
		Market	3	2	3	5	2	2	1	3	1	1			2					8	4	3				40
All Markets and Project Sizes		Cost	1	1														1		2	3			2	1	11
		Social																1	1	1		1				4
		Market	3	6	6	7	4	5	2	4	3	1	2		2		2	1	4	24	11	9	1	2	4	102
All Markets All Projects			4	7	6	7	4	5	2	4	3	1	2		2		1	3	5	26	15	9	2	4	5	117

FEDERAL PROVINCIAL LAND ASSEMBLY SURVEY
SUMMARY OF ALL NEW PROJECTS UNDERTAKEN, BY MARKET SIZE, PROJECT SIZE AND PROJECT PURPOSE
SECTION 42
PROJECTS UNDERTAKEN BY YEAR

Relative Market	Size Project	Project Purpose	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	TOTAL
Village	Large	Cost																					2		2	4
		Social																				3	2	8	7	20
		Market																								
	Small	Cost																		2	1					3
		Social																				1	1	1		3
		Market																								
Town	Large	Cost																								
		Social																								
		Market																							1	1
	Small	Cost																		1						1
		Social																		1			1	2		4
		Market																								
Agglo-meration	Large	Cost																								
		Social																				1		2		3
		Market																								
	Small	Cost																								
		Social																		1				2		3
		Market																								
All Markets	Large	Cost																					2		2	4
		Social																				4	2	10	8	24
		Market																								
	Small	Cost																		4	1			2		7
		Social																		1		1	2	3		7
		Market																								
All Markets and Project Sizes		Cost																		4	1		2	2	2	11
		Social																		1		5	4	13	8	31
		Market																								
All Markets All Projects																				5	1	5	6	15	10	42

APPENDIX B

THE COSTS OF URBAN FORM

APPENDIX B

THE COSTS OF URBAN FORM

There has not been adequate analysis in Canada, or elsewhere, to support definite conclusions about the relative costs of different forms or sizes of human settlement. It is a fact, and an operational principle in public and private enterprise that economics of scale can be achieved in the provision of all types of hard and soft urban services. Indeed it seems that the optimalization of effort to realize the greatest benefit through the least expenditure of material and human energy, is a primary characteristic of all human endeavour.

Within urban planning technology, the extreme pursuit of this principle on a grand scale has led to numerous attempts, using varying degrees of coercion, to create or halt a settlement at a definite,ostensibly optimal,size or form. Underlying these attempts is an assumption that a city can be treated as a closed, or finite, system so optimal facilities can be designed in a present, or "planned future" static context. Scale economies, or cost effectiveness, can then be achieved in providing all types of service to this static place. Unfortunately, urban settlement is not static, and the degree of regimentation which would be necessary to make it static is absolutely irreconcilable with human liberty. A closed system city is an impossibility.

It is possible to control and perhaps optimize some aspects of an open urban system. A growing city could be confined spatially, parts of it's mass could be frozen, or any aspect of urban change could be halted, for a time - as in a situation of urban growth these constraints simultaneously create pressure and contain a built-in escape outlet. Within this context of directing or focussing pressure, it is possible to consider suboptimalization in urban form and the provision of services. It should be noted, from the outset, that even the suboptimalization notions in urban policy is precarious, as it is still based on the assumption of a finite partial system which can break down. For instance, if a sewer system or an apartment building is designed to be optimal when used at 100% capacity, and due to a demographic shift its use drops back to 70%, costs sunk in the system become excessive and the system becomes inefficient. Alternatively, if demand rises above the system capacity, as often occurs with technological changes, the marginal cost of additional capacity will be disproportionately high and thus system improvement, while necessary, will entail inefficient, redundant effort. In a simplistic way, this summarizes the core problem regularly faced by urban policy makers in deciding the design capacities of real and very expensive urban facilities like sewers, streets, hospitals, offices and apartment buildings.

There are indications that some types of urban residential structures are more efficient than others from the viewpoint of production cost and public (i.e. municipal) and operating maintenance costs. If further research establishes that these indications are correct, and these structures are beneficial in a personal and social as well as in an economic sense, it would seem advisable to promote their production. With more efficient forms of housing, urbanites could obtain their basic shelter needs at the minimum cost, freeing a larger proportion of household income for other needs. Simultaneously, urban government would minimize budgetary demands related to system maintenance and thereby free fiscal monies for more qualitative social goods, and housing producers could obtain higher volumes at a given level of expenditure or borrowing power. It should be remembered, however, that while an optimum type of residential structure or urban form is a desirable goal, this concept is predicated on an assumed closed system which can only be approximated.

Tables B-1, B-2 and B-3 contain data concerning, respectively, production costs, operating costs and costs of public (municipal) maintenance, associated with several types of residential structures. From the viewpoint of production cost, medium density structures and particularly

TABLE: B-1 CONSTRUCTION COSTS FOR VARIOUS TYPES OF RESIDENTIAL BUILDINGS, CANADA, 1971

	TYPE OF RESIDENTIAL BUILDING SAMPLED				
	SINGLE AND SEMI-DETACHED HOUSES	ROW HOUSES	DUPLEXES AND TRIPLEXES	WALK-UP APARTMENTS	ELEVATOR APARTMENTS
DENSITY	LOW DENSITY		MEDIUM DENSITY		HIGH DENSITY
BUILDINGS SAMPLED	291	179	79	722	277
AVERAGE BUILDING CHARACTERISTICS					
- Persons Per Unit	5.4	4.7	4.1	3.4	2.7
- Persons Per Acre	43.	90.	95.	113.	205.
- Units Per Acre	8.	19.	23.	33.	76.
AVERAGE COST CHARACTERISTICS					
- Per Person - Land	$615	$545	$386	$361	$826
- Building	$3458	$3092	$3028	$3110	$4564
- Total	$4073	$3637	$3414	$3471	$5390
- % Land	15.10%	14.98%	11.31%	10.40%	15.32%
- Per Unit - Land	$3304	$2580	$1597	$1235	$2228
- Building	$18047	$14887	$12471	$10475	$12875
- Total	$21351	$17467	$14068	$11713	$15103
- % Land	15.47%	14.77%	11.35%	10.54%	14.75%
- Per Acre - Land	$26432	$49020	$36731	$40755	$169398
- Building	$144376	$282853	$286833	$345774	$978430
- Total	$170808	$331873	$323564	$386529	$1147828

SOURCE: CMHC Appraisal Division

NOTE: This is a summary of data gathered in applications from across Canada, for loans for commercial housing. It excludes non-profit housing under Sections 15, 40 and 43, National Housing Act and all special housing for students and the elderly.

TABLE B-2 OPERATING EXPENSES FOR VARIOUS TYPES OF RESIDENTIAL BUILDINGS, CANADA, 1970-1972

DENSITY	TYPE OF RESIDENTIAL BUILDING SAMPLED ROW-TYPE DWELLINGS	WALK-UP APARTMENTS UNDER 24 UNITS	 OVER 24 UNITS	 ALL SIZES	ELEVATOR APARTMENTS
BOMA SURVEY,[1] CANADA, 1970	MEDIUM		DENSITY		HIGH DENSITY
- Buildings Surveyed	10	16	16		20
- Av. Units Per Building	144.7	17.1	49.3		117
- Av. Rooms Per Unit	4.3	3.3	3.6		3.7
- Av. Net Annual Income Per Unit	$1185.38	$804.44	$1021.21		$1247.75
- Av. %, Expenses to Gross Income	41.6%	45.6%	40.7%		42.1%
CMHC SURVEY,[2] CANADA, 1971-72					
- Buildings Surveyed	149			574	288
- Av. Units Per Building	40			23	140
- Av. Rooms Per Unit	5.3			4.4	4.0
- Av. Net Annual Income Per Unit	$1560.			$1001.	$1218.
- Av. %, Expenses to Gross Income	32.3%			37.4%	40.4%
- Owners Estimate, Average Costs					
- Land Cost Per Unit	$2807.			$1355.	$2160.
- Land Cost as % of Total Cost	16%			11%	14%
- Average Return on Equity	12%			14%	12%

SOURCES:
1. Institute of Real Estate Management, Apartment Building Income/Expense Analysis, 1971 Edition. Net income excludes parking, and does not deduct debt service or income tax.
2. CMHC Appraisal Division. This is a summary of data in applications for loans, for commercial housing (excludes non-profit, senior citizens and student housing) from across Canada, between September 1971 to September 1972. Return on equity calculations are performed by CMHC appraisers.

TABLE: B-3

MUNICIPAL COSTS AND REVENUES FOR VARIOUS TYPES OF RESIDENTIAL BUILDINGS

BOROUGH OF YORK, 1971

	TYPE OF RESIDENTIAL BUILDINGS SURVEYED, AND PROJECT LOCATION						
	SINGLE DETACHED HOUSES		DUPLEX AND SEMI-DETACHED DWELLINGS				ELEVATOR APARTMENT
	OTONABEE REGIS-MAYOME	SANDALE-WILMINGTON	SOMBRERO-BRAZIL	GREYHOUND FOX HOUND	RIVERTON DELLBROOK	MAGELLAN-COQUETTE	WYNFORD-EGLINTON
DENSITY	LOW DENSITY		MEDIUM DENSITY				HIGH DENSITY
- Persons Per Acre	16.9	23.4	25.9	29.8	34.8	39.4	59.0
MUNICIPAL FISCAL DATA, DOLLARS PER ACRE							
- Assessment	$49168.	$59964.	$31358.	$39942.	$43145.	$48276.	$118218.
- Marginal Revenue	5264.11	6399.76	3641.67	4513.90	4963.58	5254.58	12519.73
- As % of Assessment	10.71	10.67	11.61	11.30	11.50	10.88	10.59
- Marginal Cost	5439.11	6695.77	4927.68	5832.89	6566.58	7068.55	12541.74
- Net Loss	175.	296.	1268.	1319.	1603.	1814.	22.
- As % of Cost	3.22%	4.42%	26.10%	22.61%	24.41%	25.66%	0.18%
MUNICIPAL FISCAL DATA, DOLLARS PER PERSON							
- Assessment	2909.3	2558.	1210.7	1340.3	1239.8	1225.3	2003.7
- Marginal Revenue	300.81	281.07	141.59	150.58	142.44	133.25	212.20
- As % of Assessment	10.34%	10.99%	11.69%	11.23%	11.49%	10.87%	10.59%
- Marginal Cost	310.81	294.07	191.59	194.58	188.44	179.25	212.57
- Net Loss	10.	13.	50.	44.	46.	46.	38.
- As % of Cost	3.22%	4.42%	26.10%	22.61%	24.41%	25.66%	.17%

SOURCE: Summary of data developed by Marshall, Peter J., Impact of Alternative Residential Land Uses on Municipal Government Finances: A Cost-Revenue Model and Case Study. Ottawa: Ministry of State for Urban Affairs, unpublished draft, 1972. This was based on a previous study by Price Waterhouse Associates and Marshall, Macklin Monaghan Limited, The Corporation of the Borough of York Cost Benefit Study on Land Use Within the Borough, Toronto: the firms, 1971.

walk-up apartments, are the most efficient residential form.[1] At a given expenditure, housing can be provided in duplex, triplex or walk-up forms, for about 10% more people than could be provided in row houses, 20% more than in detached houses, and nearly 60% more than in elevator apartments. In terms of land use, the medium densities accommodate twice the population per acre that detached houses provide, at one-half the intensity of use associated with high rise buildings. Land costs, per capita, in duplex, triplex and walk-up apartment buildings are 30% lower than in row houses, 40% lower than in single and semi-detached houses, and 55% lower than in elevator apartments. In terms of operating costs, Table B-2 indicates row houses have the lowest expense to gross income ratio, although this advantage may be offset by the higher returns on invested capital indicated for walk-up apartments. High rise buildings appear to have higher operating costs, which combined with their high land and construction costs, and extreme density indicate that this is not, generally, an efficient form of residence. From the viewpoint of municipal maintenance costs, the survey in the Borough of York indicated the medium density projects were taxed at slightly higher rates, but still produced a larger net loss than the other types of residence.

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1. The calculations in Table B-1 allow only 3.4 people per walk-up unit, indicating this housing form is not widely used by families. If more families occupied these dwellings, average costs per capita would be lowered considerably.

However, in terms of cost per capita, medium density dwellings caused the lowest costs to the municipality, while the basically childless high rises created and paid for medium expenses, and detached houses produced twice the maintenance expense of medium densities, and probably account for most of the municipal deficits.[1] In summary, it appears that there could be considerable improvement to the efficiency of urban form with larger quantities of medium density housing.

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1. This would occur because the majority of dwellings in York are detached houses, so their net loss would exceed the loss created by the fewer medium density dwellings which produce losses at a high rate.

APPENDIX C

URBANIZATION AND AGRICULTURAL LAND

APPENDIX C

URBANIZATION AND AGRICULTURAL LAND

While Canada is an urban nation in terms of population, in terms of land use it is essentially unsettled. The bulk of Canada's land area (89.3%) is federal or provincial Crown land, primarily forests and tundra. The remaining 10.7% is privately owned, or public land which is in the process of alienation.[1] It is estimated that urban areas which contained 76.1% of Canadians in 1971[2], comprise less than one-fifth of one per cent of the national area.[3] Fifty-five per cent of the population lives in 22 metropolitan areas comprising about 11,000 square miles, or three one thousands of the national area.[4] Canadians are concentrated on a very small proportion of the nations land, and this concentration is increasing.[5] At the national level, then, there is no land shortage.

Land, however, is not an abstract, national resource but a set of discrete, specialized locations on the surface of this planet. Landforms which are relatively smooth with fertile

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1. Statistics Canada, Canada Year Book 1972, (Ottawa: Information Canada, 1972), pp. 55-56.
2. Statistics Canada, Census of Canada 1971, Catalogue 92-708.
3. Brocklebank, R. A. "Urban Maps" pp. 51-56 in Plan Canada, Special Issue, May 1971, p. 51.
4. Table C-2.
5. This rough data indicates the average metropolitan density in Canada in 700 acres for each 1,000 people, which in world terms, is an extremely high figure. While this is partially caused by inaccurate data, it is also a reflection of the very low densities (in world terms) which characterize Canadian cities.

topsoil and good drainage, which receive moderate climates and have water nearby, are particularly valuable to human life as they lend themselves to agriculture. While this combination of characteristics is not necessary to grow cities, it is unfortunate that they facilitate urbanization as the presence of each of them lowers development costs, so cities tend to consume farmland. This identifies the context for examining one specific kind of land shortage in parts of Canada.

The quantity of agricultural land is limited, varying from approximately 30% of the land areas of Saskatchewan and Alberta, to less than .5% of British Columbia.[1] The norm, which occurs in Ontario, Manitoba, New Brunswick and Nova Scotia, is about 10%.[2] Urbanization is gobbling small, but steady chunks of this irreplaceable resource.

The Province of Quebec has approximately 8,900,000 acres of agricultural land, and 960,000 urban acres.[3] Land absorption rates of 1000 acres, and 382 acres of farmland for each 1,000 increase in population have been determined in the

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1. Calculated from data in Canadian Council of Resource and Environment Ministers, The Administration of Crown Lands in Canada, Montreal: the Council, 1972, pp 45-59.
2. CCREM, op.cit., pp. 12, 31, 32, and 40 and the Report of the Special Committee on Farm Income in Ontario, The Challenge of Abundance, Toronto: Queen's Printer, 1969, p. 59.
3. CCREM, op. cit., p. 18.

metropolitan areas of Quebec and Montreal, respectively.[1] During the period 1966-1971, these cities grew by 43,584 and 172,226 people, respectively, [2] which indicates they absorbed over 109,374 acres. As these regions contain about one-half of Quebec's urban population, the total consumption of agricultural land may have been 200,000 acres or about 40,000 acres per annum. At this rate, all agricultural land in Quebec would be developed within 200 years, but due to the Malthusian relationship between urban needs for food, and food production, a critical lack of farmland would occur much more rapidly.

In Ontario, better data provides a similar indication. The 1966 Census of Agriculture determined that Ontario had 17,639,000 acres of agricultural land.[3] The Special Committee on Farm Income in Ontario estimated 872,000 acres will be removed from agriculture use between 1966 and 1981, a rate of 58,133 acres per annum.[4] This implies the elimination of Ontario's farmland in 300 years, with the critical period beginning in about 50 years. However, as Ontario's urbanization is concentrated south of Georgian Bay, as is its best agricultural land,[5] further research may show

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1. Science Council of Canada, Two Blades of Grass: The Challenge Facing Agriculture. Ottawa: the Council, p. 61.
2. 1971 Census, op. cit., p. 7-10.
3. Challenge of Abundance, op. cit., p. 59.
4. Loc. cit., About one-half of this is marginal land returning to forest. Over one-half of the remainder is the take-over of farms by non-farming, ex-urban people.
5. Loc. cit.

that the province is already approaching diminishing agricultural returns as urbanization advances.

It is notable that, in the last five years, the Provinces of British Columbia, Saskatchewan and Prince Edward Island have enacted legislation which attempts to hold land in agricultural use, and the Governments of Ontario and Quebec have announced similar intentions.

These indicators have some serious implications for the relatively carefree populace of urban Canada. Unless Canada changes urbanization, or eating patterns now, this society will become progressively unable to feed itself. Three broad alternatives, each of which has direct implications for individuals, are seen:

1) Increase the density of urban living and stop the expansion of cities onto agricultural land. This entails the end of the single detached house as the urban dream;
2) Create new cities, of any form including low density, in more northerly, rocky soils and forested areas;
3) Radically change eating habits so less food is consumed, or perhaps, it becomes more synthetic.

It is apparent that each of these implies increasing government planning and regulation, and an accompanying decline in individuals freedom.

TABLE : C-1 Land Ownership In Canada - 1967

(expressed in percentages)

DIMENSIONS OF OWNERSHIP	NFLD.	P.E.I.	N.S.	N.B.	MARITIMES SUBTOTAL	QUE.	ONT.	MAN.	SASK.	ALTA.	PRAIRIES SUBTOTAL	B.C.	YUKON & NWT	CANADA
DISTRIBUTION: Land in areal unit as % of all land in Canada	4.0	0.1	0.6	0.7	5.4	15.4	10.7	6.5	6.5	6.6	19.7	9.5	39.2	100.0
PUBLICNESS: Public land in areal unit as % of all land in that unit	95.6	6.0	25.9	45.5	80.7	92.7	88.9	79.5	58.0	61.2	66.2	94.4	99.9	89.5
FEDERALNESS: Federal land in areal unit as % of all land in that unit	0.1	3.6	3.3	2.7	0.8	0.1	0.8	1.2	3.4	10.2	4.9	0.9	99.9	40.5
FEDERAL IMPACT: Federal land in areal unit as % of provincial land in that unit	0.1	149.0	14.5	6.3	1.0	0.1	0.9	1.6	6.2	20.1	8.1	0.9	--	82.6
FEDERAL CONCENTRATION: Federal land in areal unit as % of all federal land	0.01	0.005	0.04	0.04	0.1	0.4	0.2	0.2	0.5	1.7	2.4	0.2	96.9	100.0

SOURCE: Statistics Canada, Canada Year Book - 1969, (Ottawa: Queens Printer, 1969) Table 1, p. 26.

TABLE: C-2 LAND OWNERSHIP IN CANADA - 1967 (IN SQUARE MILES)

DESCRIPTION AND OWNERSHIP	NFLD.	P.E.I.	N.S.	N.B.	MARITIMES	QUEBEC	ONTARIO	MAN.	SASK.	ALTA.	PRAIRIE	B.C.	YUKON & N.W.T.	CANADA
PUBLIC														
FEDERAL														
NAT. PARKS	153	7	517	79	756	-	12	1,148	1,496	20,717	23,361	1,671	3,625	29,425
IND. RESV.	-	4	40	59	103	294	2,408	846	1,964	2,512	5,322	1,316	15	9,458
FOREST ST.	-	-	-	35	35	7	38	26	-	23	49	-	12	141
OTHER	55	68	145	590	858	470	1,129	1,077	5,187	2,860	9,124	434	1,508,234	1,520,249
ALL FED.	208	79	702	763	1,752	771	3,587	3,097	8,647	26,112	37,856	3,421	1,511,886	1,559,273
PROVINCIAL														
PARKS	95	3	16	5	119	53,081	13,144	2,858	1,803	2,321	6,982	10,038	-	83,364
FORESTS	117	6	-	1,407	1,530	6,478	-	5,177	119,948	9,267	134,392	80,378	-	222,778
OTHER	148,950	44	4,825	10,714	164,533	491,030	350,325	188,459	15,706	118,547	322,712	252,062	-	1,580,662
ALL PROV.	149,162	53	4,841	12,126	166,182	550,589	363,469	196,494	137,457	130,135	464,086	342,478	-	1,886,804
ALL PUBLIC	149,370	132	5,543	12,889	167,934	551,360	367,056	199,591	146,104	156,247	501,942	345,899	1,511,886	3,446,077
PRIVATE	6,815	2,052	15,882	15,465	40,214	43,500	45,526	53,380	105,596	99,038	258,014	20,356	93	407,703
TOTAL	156,185	2,184	21,425	28,354	208,148	594,860	412,582	251,000	251,700	255,285	757,985	366,255	1,511,979	3,851,809

SOURCE: Statistics Canada, Canada Year Book - 1969 , (Ottawa: Queens Printer, 1969) Table 1, p.26.

PETER SPURR

Land and Urban Development

Released for publication after months of public pressure and a personal intervention by Urban Affairs Minister Barney Danson, this is the full text of what has been known as the Spurr report.

This document was originally prepared for Central Mortgage and Housing Corp. Author Peter Spurr had access to the data resources of CMHC in writing the report.

He has produced the first comprehensive study of the land development and housing industry in Canada which

- details the ownership of major development corporations
- analyzes the massive land banks these corporations control around 21 Canadian cities
- dissects the profits being made from turning farm land into house lots
- describes the successes and failures of public land bankings in five locations
- offers case studies of the land market in Ottawa, Toronto, Kitchener, Winnipeg, Edmonton and Vancouver

Some of his findings:

- speculative profits in land development are enormous, sometimes amounting to two-thirds of the price of a $22,000 lot
- the development industry is quickly being organized into a few enormous, wealthy corporations
- non-profit and co-op housing groups are producing housing with rent levels substantially below private development

Spurr's conclusions and policy recommendations have already been the subject of much debate. But the information contained in this report is invaluable to anyone interested in housing and land development in Canada.

Peter Spurr has worked for the National Capital Commission in Ottawa and is now employed in research at CMHC's head office.

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